

## Appendices

# **Appendix D      Biological Resources Assessment and MSHCP Consistency Analysis**

## Appendices

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## General Biological Resources Assessment

Agua Mansa Commerce Park Project Site  
Jurupa Valley, Riverside County, California



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## List of Abbreviated Terms

AMSL	Above Mean Sea Level
AWRS	Arid West Regional Supplement
BMP	Best Management Practice
BUOW	Burrowing Owl
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranking
CSC	California Species of Special Concern
CWA	Clean Water Act
DSF	Delhi Sands Flower-Loving Fly
DBESP	Determination of Biologically Equivalent or Superior Preservation
EPA	Environmental Protection Agency
EPD	Environmental Programs Division
FAC	Facultative Species
FACU	Facultative Upland Species
FACW	Facultative Wetland Species
FE	Federally Endangered
FT	Federally Threatened
FESA	Federal Endangered Species Act
GPS	Global Positioning System
HCP	Habitat Conservation Plan
JPR	Joint Project Review
LBV	Least Bell's Vireo
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MSHCP	Western Riverside Multiple Species Habitat Conservation Plan
MOU	Memorandum of Understanding
NCCP	Natural Community Conservation Planning
NPDES	National Pollutant Discharge Elimination System
NOAA	National Oceanic and Atmospheric Administrations
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWP	Nationwide Permit
OBL	Obligate Wetland Species
OHWM	Ordinary High Water Mark
RCA	Regional Conservation Authority
RCIP	Riverside County Integrated Project
RPW	Relatively Permanent Waterway

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RWQCB	Regional Water Quality Control Board
SCS	Soil Conservation Service
SE	State Endangered
ST	State Threatened
SU	Sub Unit
SWFL	Southwestern Willow Flycatcher
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TNW	Traditionally Navigable Water
UPL	Upland
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Report
WSS	Web Soil Survey





## 1.0 INTRODUCTION

This report presents the results of MIG's Biological Resource Assessment and Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis of the Agua Mansa Commerce Park Project Site (Project Site). The purpose of this report is to verify the type, location, and extent of potential sensitive biological resources on and around the Project Site based on an initial habitat evaluation by MIG biologists on July 7, 2016 and additional field surveys conducted during 2016-2017. These surveys include a jurisdictional wetlands delineation and MSHCP riparian/riverine analysis (July and October 2016), tree survey (September and October 2016), burrowing owl (*Athene cunicularia*) survey (July 2016 and March, April, and May 2017), sensitive bird species habitat analysis (October 2016), focused special status plant surveys (July and October 2016 and April 2017), and protocol-level surveys for least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) (April-July 2017). Based on information gathered from the field surveys listed above, this draft report provides a description of the biological setting of the Project Site, as well as a description of vegetation communities, wildlife, potential movement/migration corridors, special-status plant and animal species, sensitive natural communities including riparian/riverine resources, and potentially jurisdictional waters and wetlands. An assessment of the project impacts and recommended mitigation measures to avoid, minimize, or compensate for potential adverse impacts to onsite biological resources is also included in the report. The evaluation of potential project impacts follows the checklist items from Appendix G of CEQA guidelines and has been prepared in a format suitable to support CEQA and ensure compliance and consistency with all MSHCP conservation goals and guidelines.

### 1.1 Project Location

The 302.12-acre<sup>1</sup> Project Site is located south of El Rivino Road, east of Rubidoux Boulevard, north of the North Riverside & Jurupa Company canal and Market Street, and west of Hall Avenue in the City of Jurupa Valley (City), Riverside County, California, APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009 (Figure 1 and Figure 2). The Project Site occurs within the U.S. Geological Survey (USGS) 7.5' series Fontana Quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986).

The Project Site is located entirely within the MSHCP Jurupa Area Plan and contains MSHCP Criteria Cells 21, 22, and 55, all of which occur within Sub Unit (SU) SU3-Delhi Sands Area (Figure 2).

### 1.2 Project Description

The Agua Mansa Commerce Park Specific Plan (Project) is a proposed industrial business park with retail overlay and open space development located on the former Riverside Cement facility. The Site has previously been utilized for mining and cement production, until operations ceased in 2014. The brownfield site is being decommissioned and prepared for environmental remediation and successful redevelopment under the

<sup>1</sup> The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

requirements of the Specific Plan. The Specific Plan will allow for the development of approximately 4,500,000 square feet of total building area and a 70.96-acre Open Space/Recreation Park (Figure 3a). The Specific Plan area (heretofore referred to as “Project Site”) encompasses 302.12 acres of land in the City of Jurupa Valley. The Project will consist of three primary land uses, discussed in more detail below: 1) an Industrial Park, 2) a Business Park (with possible retail component) and 3) Open Space with Recreation Park.

### Industrial Park

The Industrial Park area will be 189.7 acres in size and is planned for approximately 4,216,000 square feet (3,452,000 square feet of building footprint and up to 764,000 square feet of mezzanine area) of industrial park uses, such as manufacturing, research and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution, and cross-dock facilities (Figure 3b).

### Business Park

The Business Park with Retail Overlay district is 42.2 acres that will support 200,000 square feet of business park uses along with an existing 23,000 square-foot research and development building (CalPortland area). The Business Park with Retail Overlay district includes an option to build up to 25,000 square feet of retail and/or food service uses along with 170,000 of business park square footage in lieu of the 200,000 square feet of business park uses. The Specific Plan allows for an additional 41,000 square feet of business park use(s) in the CalPortland area – either through expansion of the existing building or new construction (Figure 3b). A Union Pacific Railroad right-of-way and a portion of the North Riverside and Jurupa Canal bisect the Specific Plan and accounts for 8.4 acres within the Specific Plan boundary.

### Open Space/Recreation Park

There is a proposed approximately 70.9-acre Open Space/Recreation Park area in the southern portion of the Specific Plan area (Figure 3c). Portions of the Open Space area may be developed as a recreation area, contingent upon successful remediation of the Site. Recreational and cultural facilities that are planned within the Open Space area would include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children’s play areas, and cultural interpretive facilities to highlight the history of the Site and cement industry. Any proposed trail or activity would be separated from the Open Space area by fencing, signage, and/or other means of buffering, while still allowing visitors to experience the view of the unique landscape the Site has to offer. The commercial quarry and area surrounding Crestmore Lake are habitat areas that lay approximately 80-100 feet below grade and will be inaccessible to visitors and undisturbed.

Table 1 below includes a breakdown and summary of the allowable development within the land use areas.

**Table 1. Land Use Summary**

<b>Specific Plan Land Use Designation</b>	<b>Total Building Area (Square Feet)</b>	<b>Gross Site Area (Acres)</b>
Industrial Park (IP)	4,216,000 sf	189.698

<b>Specific Plan Land Use Designation</b>	<b>Total Building Area (Square Feet)</b>	<b>Gross Site Area (Acres)</b>
Business Park with Retail Overlay (BP)	Alternative Layout for Building 6 (Parcels 14 and 15): A) Up to 25,000 sf of Retail with 170,000 sf of Business Park or B) 200,000 sf of industrial with no retail and 64,000 sf of Business Park, including an existing research and development building approximately 23,000 sf in size	42.162
Open Space/ Recreation Park (OS)	N/A	70.963
<b>TOTAL</b>	<b>4,475,000 sf with option A) 4,480,000 sf with option B)</b>	<b>302.823<sup>2</sup></b>

Consistent with the project applicant's objective to redevelop the site for viable and economically productive re-use, the land will need to be remediated in accordance with all applicable laws. Site remediation will address fugitive dust, former cement kiln dust disposal areas and potential releases from operations. In addition, proposed project improvements, including buildings, parking facilities, and landscaped common areas, will incorporate design features to ensure the ongoing effectiveness of site remediation measures.

### 1.3 Site History

The Project Site is occupied by the former Riverside Cement Plant and Crestmore mine, which had been in operation from the early 1900s. The Crestmore mine consisted of a mine and four quarries. Quarrying of limestone and of silicate rock began at the Crestmore mine in 1909. The mining of limestone was conducted by a block-caving method, a mass mining process that allows for the bulk mining of large, relatively lower-grade materials. An underground mine was opened in 1930 and furnished most of the plant's requirements until 1939. During the 1940s, hundreds of thousands of tons of rock were removed from the Crestmore operations. Mining of limestone ceased in the late 1980s when the mining operations intersected aquifers and released huge amounts of water so quickly that pumping became cost prohibitive. The underground mine is now completely flooded, creating a deep open water feature referred to as "Crestmore Lake." Mining operations stopped in the 1980s and Cement Plant manufacturing and operations continued until 2014.

<sup>2</sup> Acreages in Table 1 are based on the August 2018 Tentative Parcel Map (DRC 2018) and the Agua Mansa Commerce Park Specific Plan and as such the total project area will not add up to the APN/engineering survey data-calculated 302.12-acre Project Site boundary. Please refer to footnote 1

## 2.0 REGULATORY SETTING

The following discussion identifies federal, state, and local environmental regulations that serve to protect sensitive biological resources relevant to the proposed Project Site, as well as the MSHCP and CEQA review process.

### 2.1 Federal

#### **2.1.1 Federal Endangered Species Act**

The Federal Endangered Species Act (FESA) of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take". The FESA also discusses recovery plans and the designation of critical habitat for listed species. Section 7 requires federal agencies, in consultation with, and with the assistance of the USFWS or NOAA NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Both the USFWS and NOAA NMFS share the responsibility for administration of FESA.

For purposes of this assessment, the following acronyms are used for federally-listed species: federally endangered (FE) and federally threatened (FT).

The MSHCP serves as a Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the FESA of 1973, allowing participating jurisdictions to authorize "take" of plant and wildlife species. The MSHCP has been issued under this Section and provides incidental "take" for all covered species.

#### **2.1.2 The Migratory Bird Treaty Act**

The Federal Migratory Bird Treaty Act (MBTA) (16 USC. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that cause nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

#### **2.1.3 Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act that was first passed in 1940 regulates take, possession, sale, purchase, barter, transport, import and export of any bald or golden eagle or their parts (e.g., nests, eggs, young) unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). Take was broadly defined to include shoot,

wound, kill, capture, collect, molest, or disturb. In the 1972 amendments, penalties for violations were raised to a maximum of fine \$250,000 for an individual or a maximum of two years in prison for a felony conviction, with a doubling for organizations instead of individuals.

## **2.1.4 Wetlands and Waters of the US**

### ***Section 404 of the Clean Water Act***

The objective of the Clean Water Act (CWA) is to maintain and restore the chemical, physical, and biological integrity of the waters of the US (33 CFR Part 328 Section 328.4). “Waters of the US” is the encompassing term for areas that qualify for federal regulation under Section 404 of the CWA. Section 404 of the CWA gives the US Environmental Protection Agency (EPA) and the US Army Corps of Engineers (USACE) regulatory and permitting authority regarding discharge of dredged or fill material into “navigable waters of the US.” Section 502(7) of the CWA defines navigable waters as “waters of the US, including territorial seas.” Section 328 of Chapter 33 in the CFR defines the term “waters of the US” as it applies to the jurisdictional limits of the authority of the USACE under the CWA. A summary of this definition of “waters of the US” in 33 CFR 328.3 includes: (1) waters used for commerce and subject to tides; (2) interstate waters and wetlands; (3) “other waters” such as intrastate lakes, rivers, streams, and wetlands; (4) impoundments of waters; (5) tributaries of waters; (6) territorial seas; and (7) wetlands adjacent to waters. Therefore, for purposes of determining USACE jurisdiction under the CWA, “navigable waters” as defined in the CWA are the same as “waters of the US” defined in the CFR above. Waters of the US include non-isolated “wetlands” and “other waters of the US”

The term “wetlands” (a subset of “waters of the US”) is defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” The USACE developed field methods for identifying the location and extent of jurisdictional wetlands (a subset of waters of the US) using the USACE Wetland Delineation Manual (Environmental Laboratory 1987) Arid West Regional Supplement (AWRS) (USACE 2008a). This supplement was intended to address specific wetland issues within the arid west and supersedes much of the 1987 Wetland Delineation Manual in arid regions.

In the absence of wetlands, other waters of the US refer to unvegetated waterways and other water bodies with a defined bed and bank, such as drainages, creeks, rivers, and lakes. This approximately translates to the bank-to-bank portion of water bodies, up to the ordinary high water mark (OHWM). The limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(6) as: “...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.”

The OHWM in the Arid West Region is consistent with the physical and biological signature established and maintained at the boundaries of the active channel. Delineation of the active channel signature, and thus the OHWM, is based largely on identification of three primary physical or biological indicators—topographic break in slope, change in sediment characteristics, and change in vegetation characteristics. A break in slope refers to a localized and distinct change in the lateral topographic gradient (i.e., perpendicular to the principal direction of flow) within a stream system. Changes in sediment characteristics include any transition in the physical, chemical, or biological qualities of the sediments within and adjacent to a stream channel. For the purposes of OHWM identification, changes in vegetation characteristics include any lateral transition (i.e.,

perpendicular to the principal direction of flow) in the abundance, growth stage, or plant cover and composition within and adjacent to a stream channel. Supporting features including drift/wrack (i.e., debris deposits), signs of erosion/scour, bank undercutting, root exposure, point bars (meanders), silt deposits, and shelving (“benches” and breaks in slope along the active channel), were also used to help determine the location of the OHWM.

### ***Isolated Areas Excluded from Section 404 Jurisdiction***

In addition to areas that may be exempt from Section 404 jurisdiction, some isolated wetlands and waters may also be considered outside of USACE jurisdiction as a result of the Supreme Court’s decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. USACE* (531 US 159 [2001]). Isolated wetlands and waters are those areas that do not have a surface or groundwater connection to and are not adjacent to a navigable waters of the US, and do not otherwise exhibit an interstate commerce connection.

### ***Rapanos v. United States and Carabell v. United States***

On June 5, 2007, the USACE and the EPA issued joint guidance on implementing the June 19, 2006 US Supreme Court opinions resulting from *Rapanos v. United States* and *Carabell v. United States* (Rapanos) cases. The agencies received 66,047 public comments on the Rapanos Guidance (65,765 form letters, 282 non-form letters), from states, environmental and conservation organizations, regulated entities, industry associations, and the general public. EPA and the USACE jointly reviewed the comments and released a revised version of the guidance on December 2, 2008 (USACE 2008b). The revised guidance states that the agencies will assert jurisdiction over:

- Non-navigable tributaries that are not relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (i.e., typically three months)
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters (TNW)
- Significant nexus includes consideration of hydrologic and ecologic factors

### **2.1.5 Executive Order 11990 for Protection of Wetlands**

Executive Order 11990 for the Protection of Wetlands (May 24, 1977) establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On federally funded projects, impacts on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must



be included. This must be documented in a specific “Wetlands Only Practicable Alternative Finding” in the final environmental document. An additional requirement is to provide early public involvement in projects affecting wetlands.

## **2.2 State**

### **2.2.1 California Endangered Species Act**

The State of California enacted similar laws to FESA including the California Native Plant Protection Act (NPPA) in 1977 and the California Endangered Species Act (CESA) in 1984. CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code. To align with FESA, CESA created the categories of “threatened” and “endangered” species. It converted all “rare” animals into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The California Department of Fish and Wildlife (CDFW) implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural Diversity Database (CNDDB), a computerized inventory of information on the general location and status of California’s rarest plants, animals, and natural communities. During the CEQA review process, the CDFW is given the opportunity to comment on the potential of the proposed project to affect listed plants and animals.

For purposes of this assessment, the following acronyms are used for state-listed species: state endangered (SE) and state threatened (ST).

### **2.2.2 Native Plant Protection Act**

The NPPA of 1977 (California Fish and Game Code, §§ 1900 through 1913) directed CDFW to carry out the Legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from “take.”

### **2.2.3 California Environmental Quality Act**

CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a permit by state and local public agencies. CEQA (Public Resources Code Sections 21000 et. seq.) requires public agencies to review activities which may affect the quality of the environment so that consideration is given to preventing damage to the environment. When a lead agency issues a permit for development that could affect the environment, it must disclose the potential environmental effects of the project. This is done with an Initial Study and Negative Declaration (or Mitigated Negative Declaration) or with an Environmental Impact Report. Certain classes of projects are exempt from detailed analysis under CEQA. CEQA Guidelines Section 15380 defines endangered, threatened, and rare species for purposes of CEQA and clarifies that CEQA review extends to other species that are not formally listed under the state or federal Endangered Species Acts but that meet specified criteria.

### **2.2.4 Fully Protected Species and Species of Special Concern**

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians, reptiles,

birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibian and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with “fully protected” species states that these species “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species,” (CDFW Fish and Game Commission 1998) although “take” may be authorized for necessary scientific research. This language makes the “fully protected” designation the strongest and most restrictive regarding the “take” of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

Species of special concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or because they historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under the CEQA during project review.

### **2.2.5 California Fish and Game Code Sections 3503 and 3513**

According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (with limited exceptions). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by the CDFW.

### **2.2.6 Other Special-Status Plants – California Native Plant Society**

The California Native Plant Society (CNPS), a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version (<http://www.cnps.org/cnps/rareplants/inventory/>).

The Inventory employs the California Rare Plant Ranking (CRPR) to assign plants to the following categories:

- 1A Presumed extinct in California
- 1B Rare, threatened, or endangered in California and elsewhere
- 2 Rare, threatened, or endangered in California, but more common elsewhere
- 3 Plants for which more information is needed – A review list
- 4 Plants of limited distribution – A watch list

Additional endangerment codes are assigned to each taxon as follows:

- 1 Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat)
- 2 Fairly endangered in California (20-80% occurrences threatened)



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

CRPR 1A, 1B, and 2 plants consist of individuals that may qualify for listing by state and federal agencies. As part of the CEQA process, such species should be fully considered, as they meet the definition of threatened or endangered under the NPPA and Sections 2062 and 2067 of the California Fish and Game Code. CRPR 3 and 4 species are considered to be plants about which more information is needed or are uncommon enough that their status should be regularly monitored. Such plants may be eligible or may become eligible for state listing, and CNPS and CDFW recommend that these species be evaluated for consideration during the preparation of CEQA documents (CNPS 2001, 2016).

### **2.2.7 National Pollutant Discharge Elimination System**

The National Pollutant Discharge Elimination System (NPDES) program requires permitting for activities that discharge pollutants into waters of the US. This includes discharges from municipal, industrial, and construction sources. These are considered point-sources from a regulatory standpoint. Generally, these permits are issued and monitored under the oversight of the State Water Resources Control Board (SWRCB) and administered by each regional water quality control board. Construction activities that disturb one acre or more (whether a single project or part of a larger development) are required to obtain coverage under the state's General Permit for Dischargers of Storm Water Associated with Construction Activity. All dischargers are required to obtain coverage under the Construction General Permit. The activities covered under the Construction General Permit include clearing, grading, and other disturbances. The permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) with a monitoring program. The project will require coverage under the Construction General Permit.

### **2.2.8 Sensitive Natural Communities**

Sensitive natural communities are vegetation communities and habitats that are either unique in constituent components, of relatively limited distribution in the region, or of particularly high wildlife value. These communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFW (i.e., CNDDDB) or the USFWS. The CNDDDB identifies a number of natural communities as rare, which are given the highest inventory priority (Holland 1986; CNDDDB 2017). Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA California Code of Regulations (CCR): Title 14, Div. 6, Chap. 3, Appendix G.

### **2.2.9 Waters of the State**

#### ***Section 401 of the Clean Water Act***

The Regional Water Quality Control Board (RWQCB) regulates activities in "waters of the state", including wetlands, through Section 401 of the CWA. "Waters of the state" are defined by the Porter-Cologne Control Act (see below) as "any surface water or groundwater, including saline waters, within the boundaries of the state." While the USACE administers permitting programs that authorize impacts to "waters of the US", any USACE permit authorized for a project would be invalid unless the RWQCB has issued a project-specific water quality certification or waiver of water quality. A water quality certification requires a finding by the

RWQCB that the activities permitted by the USACE will not violate water quality standards individually or cumulatively over the term of the issued USACE permit.

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

The Porter-Cologne Water Quality Act (Porter-Cologne Act) (California Water Code Section 13260) requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the “waters of the state” to file a report of discharge” with the RWQCB through an application for waste discharge. The RWQCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs (e.g. Section 404 of the CWA).

### ***California Fish and Game Code Section 1600-1603***

Under Section 1602 of California Fish and Game Code, CDFW has authority over any proposed activity that may substantially modify a river, stream, or lake. CDFW requires notification for any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. The CDFW typically considers a river, stream, or lake to include its riparian vegetation, but it may also extend to its floodplain. The term “stream”, which includes creeks and rivers, is defined in the CCR as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life”. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as “on, or pertaining to, the banks of a stream”; therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFW 1994).

If the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be prepared, which includes reasonable conditions necessary to protect those resources. The applicant may then proceed with the activity in accordance with the final LSAA. Section 1602 does not extend to isolated wetlands and waters, such as small ponds not located on drainages.

## **2.3 Local**

### **2.3.1 Western Riverside County MSHCP**

The proposed Project Site is located completely within the MSHCP, which is a comprehensive multi-jurisdictional effort that includes western Riverside County (County) and eighteen (18) cities. Rather than addressing sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, including those listed at the federal and state levels and those that could become listed in the future. The MSHCP provides mitigation for project-specific impacts to these species so that the impacts would be

reduced to below a level of significance pursuant to the California Environmental Quality Act (CEQA). The MSHCP proposes a reserve system of approximately 500,000 acres, of which 347,000 acres are currently within public ownership and 153,000 acres will need to be assembled from lands currently in private ownership. On June 7th, 2003, the County Board of Supervisors certified the Environmental Impact Report/Environmental Impact Statement, adopted the MSHCP, and authorized the Chairman to sign the Implementing Agreement with USFWS and CDFW, the respective Wildlife Agencies. The Incidental Take Permit was issued by the Wildlife Agencies on June 22, 2004.

In order to meet overall conservation goals of the MSHCP, some of the 146 species have additional survey requirements based on a project's occurrence within a predetermined survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species and Criteria Area Plant Species; animal species identified by Survey Areas (burrowing owl, mammals, and amphibians); species associated with riparian/riverine areas and vernal pool habitats, including the least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and listed fairy shrimp; and an additional 28 species (Table 9.3 of the MSHCP document) that are not yet adequately conserved. If portions of a property occur within Criteria Areas (areas that may be needed for inclusion in the MSHCP Conservation Area), and/or contain riparian/riverine areas and/or vernal pools, development of the property is subject to the Joint Project Review (JPR) process of the MSHCP. Through the JPR process, the City will determine whether the portions of the subject property within the Criteria Areas (and/or supporting the above-mentioned habitats) will need to be acquired for inclusion in the MSHCP Conservation Area.

### **MSHCP Sensitive Species Surveys**

The Project Site is not located within an MSHCP Amphibian Species, Mammal Species or Criteria Area Plant Species Survey Area. Therefore, surveys for these species are not required (Riverside County Integrated Project [RCIP] Conservation Summary Report Generator 2016; Appendix A). The Project Site occurs within a predetermined Survey Area for the burrowing owl. If suitable habitat is documented onsite during the habitat assessment within and adjacent to the Project Site, focused surveys are required. The Project Site also occurs within a predetermined Survey Area for the following Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Clinopodium chandleri*). A Narrow Endemic is a species that is confined to a specific geographic region, soil type, or habitat and require additional assessment to determine their presence or absence. If suitable habitat for Narrow Endemic species is documented onsite during the habitat assessment within and adjacent to the Project Site, focused surveys are required.

### **MSHCP Riparian/Riverine and Vernal Pool Surveys**

Regulated activities within inland streams, wetlands and riparian areas in Western Riverside County fall under the jurisdiction of the MSHCP. Riparian/riverine areas are defined 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 that flows during all or a portion of the year. Vernal pools are defined as seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetland plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season (Riverside County 2003). As projects are proposed within the MSHCP Plan Area, an assessment of the potentially significant effects of those projects on riparian/riverine

areas and vernal pools will be performed as currently required by CEQA, using available information supported by project-specific mapping and evaluation.

### **MSHCP Reserve Design & Criteria Area Objectives**

Regions within the MHSCP have been organized into Area Plans that generally coincide with logical political boundaries, including city limits or long-standing unincorporated communities. The Project Site is located within the Jurupa Area Plan. The Project Site contains three (3) Criteria Cells and one (1) Area Plan SU. Specifically, portions of the Project Site are located within Criteria Cells 21, 22, and 55 and SU3-Delhi Sands Area (Riverside County 2003) as illustrated in Figure 2.

### **Jurupa Area Plan – Cell Group Independent**

The Jurupa Area Plan is divided into three Subunits. For each Subunit, target conservation acreages are established along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit. The target conservation range for the Jurupa Area Plan is 4,230 – 5,210 acres. It is composed of approximately 3,340 acres of existing Public/Quasi-Public Lands and 890 – 1,870 acres of Additional Reserve Lands that still need to be acquired to meet the MSHCP conservation goals and objectives.

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages and Non-Contiguous Habitat Blocks (referred to here as "cores and linkages"). The Project Site does not occur within a Special Linkage Area that would serve as a connection between Core Areas with adequate size, configuration and vegetation characteristics to generally provide for genetic exchange and movement for some species. However, the Jurupa Area Plan contains a small portion of Existing Core A and all of Proposed Non-Contiguous Habitat Blocks 1, 2, and 3 (Riverside County 2003).

### **Cell 21 Independent – SU3 – Delhi Sands Area**

All or portions of Project Site APN's 175-170-005, 175-170-036, 175-170-040, 175-170-045, 175-170-046, 175-200-001, 175-200-008, and 175-200-009 are located within Cell 21 Independent – SU3 Delhi Sands Area (Figure 2). As stated by the MSHCP, Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2 (Riverside County 2003), described as follows in the MSHCP:

"Included within the MSHCP Conservation Area, Delhi Sands soils are mapped in at least three Core Areas, totaling 220 acres of Additional Reserve Lands. Areas to be conserved may include suitable dispersal and/or movement habitat and interconnecting linkages within the Core Areas themselves or be contiguous to areas that have already been conserved within and outside of the Jurupa Area Plan, including locations outside the MSHCP Criteria Area or within San Bernardino County in the situation noted below.

The first priority for conservation will be within Core Areas including the three known occupied areas that include the known localities of Delhi Sands flower-loving fly in the Plan Area. These locations include one in the northwestern corner of the Plan Area near Hamner Avenue and SR-60 (Mira Loma), one in the Jurupa Hills, and one in the Agua Mansa Industrial Center. If conservation is not feasible in these areas, those acres may be conserved in other locations within the MSHCP Plan Area and outside the Criteria Area or within San Bernardino County, subject to approval by the Wildlife Agencies and provided the other location has long-

term conservation value for the species. Long-term conservation value of lands to be conserved for Delhi Sands flower-loving fly will be determined by factors such as occupation by the species, presence of Delhi Sands soils and suitable vegetation communities, and opportunities for connectivity to other areas conserved for the species. Conservation within Riverside or San Bernardino County will be within Service identified recovery units as set forth in the Recovery Plan for Delhi Sands flower-loving fly.

Progress toward achieving this objective will be measured and reported on an annual basis as part of the annual reporting required in Section 6.11 of the Plan. Annual reporting with respect to this Objective 1A will be in accordance with the Rough Step analysis parameters described in Section 6.7 of the Plan. For purposes of Reserve Assembly accounting in accordance with the Rough Step procedures, the baseline for analysis will be suitable habitat for Delhi Sands flower-loving fly within the Criteria Area. Suitable habitat for this species is defined as Delhi Sands soils co-occurring with coastal sage scrub, grassland and alluvial fan sage scrub (prime habitat) and Delhi Sands soils co-occurring with agriculture (restorable habitat). In accordance with the requirements of Section 6.7 of the Plan, if Objective 1A is selected by the Local Permittees and the Rough Step rule is not met for this species during any analysis period, the Permittees must conserve appropriate lands supporting suitable habitat to bring the Plan back into the parameters of the rule prior to authorizing additional loss of suitable habitat. The total private lands acreage of suitable habitat within the Criteria Area ("TA" in rough step rule) is 810 acres. The Additional Reserve Lands acreage goal for suitable habitat "c" in rough step rule) is 220 acres. Loss of suitable habitat will be measured only within the Criteria Area. Conservation of suitable habitat will be measured inside and outside the Criteria Area as long as the Conservation meets the configuration parameters of Objective 1A as stated in the first paragraph of this Objective (Riverside County 2003)."

#### **Cell 22 Independent – SU3 – Delhi Sands Area**

All or portions of Project Site APN's 175-200-001, 175-200-002, 175-200-003, 175-200-004, 175-200-005, 175-200-007, 175-200-008, and 175-200-009 are located within Cell 22 Independent – SU3 Delhi Sands Area (Figure 2). As stated by the MSHCP, Delhi Sands flower-loving fly surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A (see above) of Table 9-2 (Riverside County 2003).

#### **Cell 55 Independent – SU3 – Delhi Sands Area**

A portion of Project Site APN 175-180-001 is located within Cell 55 Independent – SU3 Delhi Sands Area (Figure 2). As stated by the MSHCP, Delhi Sands flower-loving fly surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A (see above) of Table 9-2 (Riverside County 2003).

### **2.3.3 Agua Mansa Industrial Corridor Specific Plan**

The Project Site occurs within the existing Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986) area and is zoned as Heavy Industrial. According to this Specific Plan, areas designated for Heavy Industrial will be utilized for manufacturing, resource extraction, compounding of material, packaging, treatment, processing, or assembly of goods. Heavy industrial uses generally are more land intensive than lighter industrial uses and usually employ processes that produce more measurable externalities. Activities in the heavy industrial areas are likely to have frequent rail and/or truck traffic and the transportation of heavy, large-scale products. Activities related to heavy industrial uses may generate noise,



odor, vibration, illumination, or release of particulates and may generally be incompatible with less intense land uses. Characteristics of the types of uses permitted within this designation may include massive appurtenant structures outside of enclosed buildings such as conveyor systems, cranes, cooling towers and outside storage of large quantities of raw, refined or finished products.

The Agua Mansa Industrial Corridor Specific Plan further states that the area should be developed in a manner that maximizes the potential for intensive industrial development while at the same time creating a harmonious relationship with the existing development and environment. The Agua Mansa Industrial Corridor will be a location where industry can operate with minimal intrusion from other land uses. Conversely, the Corridor will also function to contain industrial development in a manner and location that will not encroach onto more sensitive land uses in the vicinity.

The following goals and strategies were established as a guide in developing the implementation program for the 4,285-acre Agua Mansa Industrial Corridor Specific Plan with respect to environmental values:

1. To maximize the productive use of the study area for heavy industrial development while at the same time minimizing adverse impacts on the environment by avoiding the placement of heavy industrial uses at sensitive locations.
2. To maximize the generation of employment opportunities in a region that has a significant imbalance of housing versus employment opportunities. Significant numbers of the residents in the surrounding communities are presently commuting to Los Angeles and Orange Counties for employment, thus having a severe adverse impact on regional air quality due to the numbers of vehicle miles traveled.
3. To respect the scenic quality and natural beauty of the Santa Ana River floodplain and portions of Agua Mansa Road located alongside the bluff that defines the floodplain by maintaining these areas in the present agricultural and equestrian uses.
4. To encourage the use of alternative modes of transportation for employees by encouraging the use of car and vanpooling and public transit and to reduce the length of commuter trips in the region by providing inland employment opportunities.
5. To develop an industrial area which provides a safe and healthy environment for workers including adequate levels of police and fire protection.
6. To ensure the compliance of all HUD-funded developments with the Federal environmental standards discussed in Section 6.3 of the accompanying Environmental Impact Report.

The proposed Specific Plan will replace the Agua Mansa Industrial Corridor Specific Plan on the Project Site.

#### **2.3.4 2017 City of Jurupa Valley General Plan**

The 2017 City of Jurupa Valley General Plan (City of Jurupa Valley 2017) Conservation and Open Space Element (COS) outlines the following conservation goals and policies developed to protect sensitive habitats and species.

### Biological Resources

The 2017 General Plan includes goals and policies that protect the biological resources of Jurupa Valley in conjunction with the MSHCP. The habitat requirements of sensitive and listed species, combined with sound habitat-management practices, help shape the following policies and guide the City's conservation efforts.

- COS 1.1 Habitat Conservation. Conserve key habitats, including existing wetlands and California native plant communities, with a focus on protecting and restoring the following endangered species habitats:
  1. Conserve alluvial fan sage scrub associated with the Santa Ana River to support key populations of Santa Ana River woollystar (*Eriastrum densifolium sanctorum*).
  2. Conserve clay soils to support key populations of many-stemmed liveforever plants (*Dudleya multicaulis*) known to occur along the Jurupa Valley portion of the Santa Ana River.
  3. Conserve known populations of least Bell's vireo and southwestern willow flycatcher (along the Santa Ana River).
  4. Conserve large intact habitat areas consisting of coastal sage scrub, chaparral, and grasslands to support known locations of coastal California gnatcatcher (*Polioptila californica*).
  5. Conserve grassland and coastal sage scrub supporting known populations of San Bernardino kangaroo rat (*Dipodomys merriami parvus*) in the Jurupa Mountains.
  6. Conserve grasslands adjacent to sage scrub for foraging habitat for raptors.
  7. Conserve riparian areas, including river basin, creeks, streams, vernal springs, seeps and other natural water features.
- COS 1.2 Protection of Significant Trees. Protect and preserve significant trees, as determined by the City Council upon the recommendation of the Planning Commission. Significant trees are those trees that make substantial contributions to natural habitat or to the urban landscape due to their species, size, or rarity. In particular, California native trees should be protected.
- COS 1.3 Other Significant Vegetation. Maintain and conserve superior examples of vegetation, including: agricultural wind screen plantings, street trees, stands of mature native and non-native trees, and other features of ecological, aesthetic, and conservation value.

### Wildlife Habitats

The following policies seek to preserve wildlife habitat that supports many wildlife species in Jurupa Valley, including some that are listed as threatened, endangered, and species of concern.

- COS 2.1 MSHCP Implementation. Implement provisions of the MSHCP when conducting review of development applications, General Plan amendments/zoning changes, transportation, or other infrastructure projects that are covered activities in the MSHCP.
- COS 2.2 Wildlife Corridors. Identify and maintain a continuous wildlife corridor along the City's northern boundary through the Jurupa Mountains and along the Santa Ana River from the northern boundary to the City's western boundary. Condition development approvals to ensure that important corridors for wildlife movement and dispersal are protected and not interrupted by walls, fences, roadways or other obstructions. Features of particular importance to wildlife include riparian corridors, wetlands, streams, springs, and protected natural areas with cover and water. Linkages and corridors shall be provided to maintain connections between habitat areas.
- COS 2.3 Biological Reports. Require the preparation of biological reports to assess the impacts of development and provide mitigation for impacts to biological resources when reviewing discretionary development projects with the potential to affect adversely wildlife habitat.

**Water Resources - Floodplain and Riparian Area Management**

Policies in the Water Resources section of the COS address broad water planning issues and their relationship to land use decisions. The following policies in this section that pertain to sensitive biological resources seek to protect and enhance Jurupa Valley's watercourses, floodplains, and associated riparian, wetland, and aquatic habitats.

- COS 3.16 Floodway Modification. Encourage other agencies to limit floodway modification or channelization only as a "last resort," and limit the alteration to:
  1. That necessary for the protection of public health and safety, only after all other options are exhausted,
  2. Essential public service projects where no other feasible construction method or alternative project location exists,
  3. Projects where the primary function is improvement of fish and wildlife habitat, or
  4. Private development entitlements shall be required to design floodplain and river edge treatments to simulate and ultimately regenerate natural terrain and riparian habitat, using techniques such as covering and re-planting over rip-rap embankments, and utilizing gentle contoured slopes that do not exceed 8:1 slope ratio.
- COS 3.17 Environmental Mitigation. Encourage and, where possible, require that substantial modifications of a floodplain be designed to reduce adverse environmental effects to the maximum extent feasible, considering the following factors:
  1. Stream scour
  2. Erosion protection and sedimentation
  3. Wildlife habitat and linkages
  4. Groundwater recharge capability
  5. Adjacent property
  6. Designed to achieve a natural effect. Examples could include soft riparian bottoms, riparian corridors within the floodway, and gentle and modulating bank slopes, wide and shallow flood- ways, minimization of visible use of concrete, and landscaping with California native plants to the maximum extent possible. A site-specific hydrologic study may be required.
- COS 3.18 Setbacks. Based upon site-specific study, all development shall be set back from the designated floodway boundary or top of bank, whichever is most appropriate, a distance adequate to address the following issues:
  1. Public safety,
  2. Erosion,
  3. Riparian or wetland buffer,
  4. Wildlife movement corridor or linkage, and
  5. Slopes.
- COS 3.19 Trails. Consider designating floodway setbacks to accommodate greenways, trails, and recreation opportunities and allowing such uses within floodways, where appropriate.
- COS 3.20 Riparian Area Preservation. Require development projects to preserve and enhance native riparian habitat and prevent obstruction of natural watercourses. Zoning incentives, such as transfer of development credits, should be used to the maximum extent possible.
- COS 3.21 Ecotones. Identify and, to the maximum extent possible, conserve remaining upland habitat areas, or "ecotones" adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species.



### 3.0 METHODS

This analysis of potential biological resources located on the Project Site includes a review of available background information in and around the vicinity of the Project Site and completion of multiple field surveys conducted from July – October 2016 and April – July 2017.

#### 3.1 Literature Review

Prior to conducting field surveys, MIG biologists reviewed available background information pertaining to biological resources on and in the vicinity of the Project Site. Available literature and resource mapping reviewed included the occurrence records for special-status species and sensitive natural communities and numerous other information sources listed below:

- CNDDDB record search of the San Bernardino South and surrounding USGS 7.5' Quadrangles (CNDDDB 2017)
- CNPS Online Inventory (CNPS 2017)
- Soil Survey Staff, Natural Resource Conservation Service (NRCS), United States Department of Agricultural (USDA) (Soil Survey Staff 2016)
- State & Federally Listed Endangered, & Threatened Animals of California (CDFW 2017a)
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2017b)
- USFWS National Wetlands Inventory (USFWS 2017a)
- USFWS, Carlsbad Office, Threatened and Endangered Species (USFWS 2017b)
- Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012)
- RCIP Conservation Report Summary Generator (RCIP 2015)
- Western Riverside County MSHCP Burrowing Owl Survey Instructions (MSHCP 2006)

#### 3.2 Field Surveys

Several biological field surveys were conducted to assess the existing conditions of the Project Site, record observed plant and wildlife species, characterize and delineate onsite vegetation communities and associated wildlife habitats, habitat for special-status species, and sensitive natural communities. MIG biologists conducted an initial biological field survey on July 21, 2016. Additional field surveys conducted in in summer/fall 2016 and spring/summer 2017 include a jurisdictional wetlands delineation and MSHCP riparian/riverine analysis, tree survey, riparian bird habitat suitability assessment, Delhi-Sands Flower Loving Fly (DSF) habitat evaluation, and resource agency mandated protocol-level surveys for burrowing owl (BUOW), rare plants, least Bell's vireo (LBV), and southwestern willow flycatcher (SWFL). The biological field surveys were conducted according to the schedule shown in Table 2.

**Table 2. Summary of Survey Dates and Personnel**

Survey Type	Date	Personnel <sup>3</sup>
Biological site reconnaissance	July 21, 2016	JC, LM, AP, SR
Jurisdictional delineation and MSHCP riparian/riverine analysis	July 21 and October 11-12, 2016	LM, AP, IP

<sup>3</sup> HAW=Hayden Agnew-Wieland, JC=Jon Campbell, TM=Tom McGill, LM=Laura Moran, AP=Amy Parravano, IP=Ivy Poisson, SR=Savannah Richards, TR=Tom Ryan

Survey Type	Date	Personnel <sup>3</sup>
Tree survey	September 12-16 and October 10-12, 2016	HAW, JC, LM, AP, IP
BUOW survey	July 7 and 21, 2016 and March 30-31, April 13, 25, and 28, and May 12 and 18, 2017	HAW, JC, SR
Rare plant survey	July 21 and October 11-12, 2016 and April 17-18, 2017	SR, LM, AP
Riparian bird habitat suitability assessment	October 11, 2016	TR
LBV survey	April 13, 26, May 8 and 24, June 9 and 22, and July 5 and 15, 2017	TR
SWFL survey	May 24, June 9 and 22, and July 5 and 15, 2017	TR
DSF habitat evaluation	April 18, 2017	TM

### **3.2.1 Vegetation Communities**

During the field surveys, MIG biologists traversed the entire Project Site by foot and evaluated the suitability of onsite vegetation communities to support special-status species or sensitive natural communities documented in the vicinity of the Project Site. Vegetation communities were preliminarily mapped on aerial photography per A Manual of California Vegetation (MCV), 2<sup>nd</sup> Edition (Sawyer et. al 2009) or Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) vegetation community classification systems when appropriate. When a vegetation community could not be accurately characterized using the cited literature, an updated community classification was developed to represent onsite habitat types more accurately.

### **3.2.2 Special-Status Species Habitat Assessment**

The potential occurrence of special-status plant and animal species on the Project Site was initially evaluated by developing a list of special-status species that are known to or have the potential to occur in the vicinity of the Project Site based on: (1) a review of past studies including species-specific studies; (2) a search of current database records (e.g., CNDDDB and CNPS Electronic Inventory records); and (3) a review of the USFWS list of federal endangered and threatened species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field survey conducted by MIG biologists. Each species was evaluated for its potential to occur on or in the immediate vicinity of the Project Site per the following criteria:

**Not Expected.** There is no suitable habitat present on the Project Site (i.e., habitats on the Project Site are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation, hydrology, vegetation community, disturbance regime, etc.]). Additionally, there are no recent known records of occurrence in the vicinity of the Project Site. The species has no potential of being found on the Project Site.

**Low Potential.** Limited suitable habitat is present on the Project Site (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat on the

Project Site is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the Project Site. The species has a low probability of being found on the Project Site.

**Moderate Potential.** Suitable habitat is present on the Project Site (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat on the Project Site is suitable or of marginal quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project Site. The species has a moderate probability of being found on the Project Site.

**High Potential.** Highly suitable habitat is present on the Project Site (i.e., all habitat components meeting the species requirements are present and/or all of the habitat on the Project Site is highly suitable or of high quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project Site. This species has a high probability of being found on the Project Site.

**Present.** Species was observed on the Project Site (i.e., species was either observed during recent surveys or has a recorded observation in the CNDDB on the Project Site).

Appendices D and E present the list of special-status plants and animals (respectively) that have the potential to occur in the vicinity of the Project Site, their habitat requirements, and a ranking of potential for occurrence on the Project Site. Nomenclature used for plant names follows the Second Edition of the Jepson Manual (Baldwin, B.G., et al. 2012). Nomenclature for wildlife follows CDFW's Complete List of Amphibian, Reptile, Bird, And Mammal Species in California (CDFW 2016c) and any changes made to species nomenclature as published in scientific journals since the publication of CDFW's list were updated accordingly.

### **3.2.3 Focused Special-Status Plant Surveys**

The Project Site does not occur within a predetermined MSHCP Survey Area for Criteria Area plant species. The Project Site occurs within a predetermined MSHCP Survey Area for the following three (3) Narrow Endemic plant species (RCIP Conservation Report Summary Generator 2016):

- San Diego ambrosia (*Ambrosia pumila*) FE, CRPR 1B.1.
- Brand's phacelia (*Phacelia stellaris*) CRPR 1B.1.
- San Miguel savory (*Clinopodium chandleri*) CRPR 1B.2.

According to the MSHCP guidelines, focused surveys are required to be conducted during the appropriate flowering season as follows: San Diego ambrosia (April-October), Brand's star phacelia (March-June), and San Miguel savory (March-May), to document the presence/absence of these species. Although suitable habitat for Narrow Endemic species was not observed during an initial habitat assessment, focused special status plant surveys were conducted in the unlikely event that San Diego ambrosia, Brand's star phacelia, and San Miguel savory could be present, and to detect all other special status species not covered by the MSHCP. Surveys were conducted on July 21 and October 11-12, 2016 and April 17-18, 2017 of the 302.12-acre Project Site by botanists from MIG that have specific experience with identifying Narrow Endemic and all other special-status plant species that could occur in the area. The surveys coincided with peak blooming periods for the special-status plant species with potential to occur within the Project Site. These surveys were

conducted according to CNPS (2001), CDFW (2009) and USFWS (2002) protocols. The Project Site was systematically examined for 28 special status plant species with potential to occupy the site based on a review of nearby species occurrence records, which include the three Narrow Endemic plant species (Appendix D). Site coverage consisted of slowly walking along parallel transects over undeveloped portions of the site where intact vegetation was present to allow accurate identification of plants detectable at the time of the site visits. Each observed plant species was identified to species and/or subspecies level and recorded. All plant species encountered were identified using dichotomous keys and other resources listed in the previous section to the taxonomic level necessary to determine whether or not they were special-status.

### **3.2.4 Focused Special-Status Wildlife Surveys**

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

The Project Site is situated within a predetermined MSHCP Burrowing Owl Survey Area (RCIP Conservation Report Summary Generator 2016). Conducted by MIG biologists on July 7 and 21, 2016, a BUOW habitat assessment confirmed the presence of potentially suitable habitat on the Project Site (Appendix F). Subsequently, focused surveys were conducted on March 30-31, April 13, 25, and 28, and May 12 and 18, 2017 within the Project Site. The surveys were conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (Riverside County 2003). The protocol consists of three parts: habitat assessment, burrow mapping, and owl detection. The burrow search was conducted utilizing 100-foot belt transects to ensure 100 percent coverage of the site.

#### ***Least Bell's Vireo***

A focused survey for LBV was conducted according to *Least Bell's Vireo Survey Guidelines* (USFWS 2001). In accordance with USFWS guidelines, the protocol consists of eight (8) surveys undertaken by a qualified biologist between April and July 2017 with a ten (10) day interval between each site visit. Surveys were conducted by Mr. Thomas Ryan, who holds Recovery Permit TE-097516-6 issued by USFWS under Section 10(a)(1)(A) of the Endangered Species Act and State Scientific Collecting Permit SC-003409 and CDFW Memorandum of Understandings (MOU) for LBV. Notification of the intent to survey for these species was sent to USFWS and CDFW on April 5, 2017. The surveys for LBV were conducted on April 13 and 26, May 8 and 24, June 9 and 22, and July 5 and 15, 2017. Mr. Ryan traversed potentially suitable habitats including southern willow scrub (3.3 acres), mulefat stands (0.6 acre), and cattail marsh (1.5 acre) to listen for calls and used binoculars to aid in visual identification. No LBV calls were used. All surveys were conducted within the prescribed time, temperature, and wind conditions as outlined in the survey guidelines (USFWS 2001).

#### ***Southwestern Willow Flycatcher***

Focused protocol surveys for SWFL were conducted by Mr. Thomas Ryan, who holds Recovery Permit TE-097516-6 issued by USFWS under Section 10(a)(1)(A) of the Endangered Species Act for southwestern willow flycatcher, to determine presence or absence of this species within areas of suitable habitat located on the Project Site. Suitable habitat areas include mulefat stands (0.6 acre), southern willow scrub (3.3 acres), and cattail marsh (1.5 acre). The protocol surveys consisted of five (5) surveys undertaken at least one week apart by a USFWS permitted biologist and followed the accepted USFWS protocol (Sogge et al 2010). The surveys were conducted on May 24, June 9 and 22, and July 5 and 15, 2017. Mr. Ryan traversed potentially suitable habitats to listen for calls and used binoculars to aid in visual identification.

### **3.2.5 Delhi Sands Flower-Loving Fly Habitat Assessment**

Focused surveys are not required for DSF (RCIP Conservation Report Summary Generator 2016). Instead, the goal of the MSHCP is to acquire 50 acres of Additional Reserve Lands within the geographic areas identified in Objective 1A of Table 9-2 (Riverside County 2003). A DSF habitat assessment was conducted on the Project Site by Dr. Thomas J. McGill on April 18, 2017 to evaluate the potential occupation by DSF and the suitability of potential habitat identified by the MSHCP on the Project Site (see Appendix H). In support of this habitat evaluation, soil samples were collected from a known DSF-occupied habitat site known as the “King-is-Coming Site” located in Colton, California, and also from an area mapped as Delhi Sands by USDA Soils Conservation Service (1980) on an undeveloped portion of the Project Site that supports disturbed non-native annual grassland (see Appendix B). Soil texture of these samples was analyzed in a laboratory and test results were compared between the two sites to determine if the Project Site contains Delhi Sands that would be suitable to support breeding DSF. In order to evaluate the site’s conservation value for DSF, aerial photographs from 1948 to the present were reviewed to assess the historic and current roles of the Project Site in providing open Delhi soils and habitat for DSF, as well as movement opportunities between other areas of conserved habitat for this species.

### **3.2.6 Jurisdictional Wetlands and Waters Delineation**

MIG certified wetland delineators Laura Moran and Amy Parravano conducted a jurisdictional delineation on July 21, October 11, and October 12, 2016 (MIG 2016a). The delineation survey area included the 302.12-acre Project Site. The wetlands delineation was completed per the USACE’s 1987 Wetland Delineation Manual (Environmental Laboratory 1987) in conjunction with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement) (USACE 2008a). Vegetation, hydrology, and soils information were taken at ten (10) locations within the Project Site to determine whether any wetlands were present. Locations were mapped on an aerial photograph. For an area to be defined as a wetland under normal circumstances, the USACE’s routine, onsite determination methods call for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The methods of assessing each of these parameters is discussed in the subsections that follow.

#### ***Hydrophytic Vegetation***

Hydrophytic vegetation is generally defined as plant species that are adapted to grow in wet, oxygen-poor soils. Hydrophytic vegetation is determined to be present when the plant community is dominated by species that can tolerate prolonged inundations or soil saturation during the growing season. The National Wetland Plant List (Lichvar et al. 2016) provides a wetland indicator status for all hydrophytic plant species in the US. The wetland indicator status is a predictor of the likelihood of the plant to occur in wetlands, and is defined as follows:

- Obligate Plant (OBL): a plant that almost always occurs in wetlands
- Facultative Wetland Plant (FACW): a plant that usually occurs in wetlands, but may occur in non-wetlands
- Facultative Plant (FAC): a plant that occurs in wetlands and non-wetlands
- Facultative Upland Plant (FACU): a plant that usually occurs in non-wetlands, but may occur in wetlands
- Upland Plant (UPL): a plant that almost never occurs in wetlands

The Arid West Supplement (USACE 2008a) requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the “50/20 rule” (Indicator 1) described in the manual. For each sampling point, the biologists visually estimated absolute



percent cover of plant species within an approximately 10-foot radius and the wetland indicator status (i.e., OBL, FACW, FAC, FACU, and UPL) of the species was recorded. For species not on the 2016 National Wetland Plant List for the Arid West Region, the indicator status was assumed to be UPL (USACE 2008a). To apply the “50/20 rule”, dominant species are evaluated within each herb, shrub, and tree stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50% of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20% of the total. If greater than 50% of the dominant species can be classified by an OBL, FACW, or FAC wetland indicator status, ignoring + and - qualifiers, hydrophytic vegetation is present. If the community passes Indicator 1, then the community is hydrophytic. If the community fails Indicator 1 and both hydric soils and wetland hydrology are not present, then hydrophytic vegetation is not present, unless the Project Site is a problematic wetland situation. However, if the plant community fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator applies Indicator 2.

Indicator 2 is known as the Prevalence Index. The Prevalence Index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. All species are then organized into groups according to their wetland indicator status and the Prevalence Index is calculated using the following formula:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal to or less than 3, hydrophytic vegetation is present. However, if the community fails Indicator 2, the delineator must proceed to Indicator 3.

Indicator 3 is known as Morphological Adaptations. Some hydrophytes in the Arid West Region develop easily recognized physical characteristics (or morphological adaptations) when they occur in wetland areas. Some of these adaptations may include, but are not necessarily limited to, adventitious roots and shallow root systems developed on or near the soil surface. If more than 50% of the individuals of a FACU species exhibit morphological adaptations for life in wetlands, that species is considered to be a hydrophyte and its wetland indicator status should be reassigned to FAC. If such observations are made, the delineator must recalculate Indicator 1 and 2 using a FAC indicator status for this species. The vegetation is hydrophytic if either test is satisfied.

### **Hydric Soils**

The National Technical Committee for Hydric Soils (NTCHS) defines hydric soils as “a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” USDA Soil Conservation Service (1994). Nearly all hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation for more than a few days, including redoximorphic features such as orange oxidized mottles or light-colored (high value, low chroma) reduced matrix or mottle colors. The AWRS (USACE 2008a) contains a list of 23 hydric soil indicators that are known to occur in the Arid West region. Soil samples were collected and described according to the methodology provided in the AWRS. Soil chroma and values were determined by utilizing a standard Munsell soil color chart (Munsell 2000). Hydric soils were determined to be present if any of the soil

samples met one or more of the 23 hydric soil indicators described in the AWRS (USACE 2008a). Characteristic field indicators of hydric soils include the presence of a histic epipedon, the presence of sulfidic material, the presence of an aquic or peraquic moisture regime, reducing soil conditions, soil color (including gleyed soils or soils with a low matrix chroma, with or without bright mottles), iron or manganese concretions, and soils listed as hydric by the USDA on the National Hydric Soils List (Soil Survey Staff 2016).

### ***Wetland Hydrology***

Wetland hydrology is indicated by an area that is inundated or saturated for a period long enough to create anaerobic vegetation and soil conditions during the growing season. Primary field indicators of wetland hydrology are described in the Arid West Supplement (USACE 2008a) and include surface water, soil saturation, sediment deposits, drift deposits, surface soil cracks, and oxidized rhizospheres along living roots. Secondary indicators include drainage patterns. Wetland hydrology was determined to be present if one or more primary indicators or two or more secondary indicators were observed. During the wetland delineation, the hydrological setting of the Project Site was evaluated to identify the jurisdictional boundaries of wetlands and “waters of the US” and their connection to offsite navigable waters. In addition, the overall landforms and climatic/hydrological conditions were assessed.

### ***Jurisdictional Other Waters Delineation***

For non-wetland, “other water” features, the extent of USACE jurisdiction is defined by the OHWM. Delineation of other waters was based on observing indicators for the OHWM (33 CFR 328.3), following established USACE criteria and considering hydrological connectivity or isolation. The OHWM was determined through an examination of both recent and past physical evidence of surface flows. Common physical characteristics that indicate the presence of an OHWM include, but are not limited to, a clear natural line impressed on the bank; evidence of scour; recent bank erosion; destruction of native terrestrial vegetation; sediment deposition; and the presence of litter and debris. The bank-to-bank extent (i.e., bankfull width) of drainages and ponds that contain the water-flow during a normal rainfall year generally serves as a reliable approximation of the lateral limit of USACE jurisdiction.

The limit of the OHWM was recorded in the field based on observations of changes in vegetation and break in bank slope. The upper limit of flow fluctuations by a sharp break in the bank slope, with a corresponding change in vegetation and/or scour, was typically mapped as the OHWM. In a few areas where this line was less clear in cases where the drainage split and braided around raised mounds with mature shrubs, the OHWM was mapped at the upslope edge of clear sediment and drift deposits. A sub-meter Global Positioning System (GPS) unit was used to map the OHWM in the field. These GPS readings, photographs, and notes were then used to identify the OHWM on high resolution, geo-rectified aerial photography.

### **3.2.7 Mapping CDFW Jurisdictional Lakes and Streambeds**

CDFW streambeds include unvegetated waterways and other water bodies with a defined bed and bank, such as streams, lakes, drainages and rivers. Evaluation of CDFW jurisdiction followed guidance in the California Fish and Game Code and standard field practices by CDFW personnel. CDFW jurisdiction was delineated by measuring outer width boundaries of state jurisdiction (lakes or streambeds), consisting of the greater of either the “top of bank” (TOB) measurement or the extent of associated riparian vegetation. Delineation of CDFW jurisdiction was based on indicators of ephemeral, intermittent or perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. In the Project Site, the TOB was identified as a distinct break in the bank slope and corresponding change in vegetation from riparian woodland/scrub to ruderal vegetation or

unvegetated rock walls. A sub-meter GPS unit was used to map the top of bank in the field where access was feasible. Remaining areas were digitized onto an aerial photograph. These data were then displayed on high resolution, geo-rectified aerial photography using ArcGIS software.

### **3.2.7 MSHCP Riparian/Riverine Resources, Vernal Pools, and Jurisdictional Resources**

Pursuant to Section 6.1.2 of the MSHCP (Riverside County 2003), habitats were assessed to determine if MSHCP riparian/riverine resources and/or vernal pools are present onsite. The purpose of this assessment is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for riparian/riverine species inside the MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the effect of those projects on riparian/riverine areas and vernal pools must be addressed. Riparian/riverine resources are those lands that 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. Vernal pools are seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. In addition, stock ponds, ephemeral pools, and other areas of potential fairy shrimp habitat were noted, if applicable.

### **3.2.8 Tree Survey**

Tree surveys were conducted throughout the 302.12-acre Project Site on September 12-16 and October 10-12, 2016 by MIG senior biologists Laura Moran and Jon Campbell and biologists Ivy Ku and Hayden Agnew-Wieland. Trees were surveyed in the following manner:

1. Assign an identification number to each tree (numbered aluminum tag nailed to tree)
2. Geo-reference every 25th tree's location within the project footprint.
3. Identify the tree species.
4. Measure the diameter at breast height (DBH) at 4.5 feet above grade level or measure the DBH for each trunk in a multi-trunk tree.
5. Measure the diameter below the lowest branch on a multi-trunk tree, if appropriate.
6. Estimate the height of the tree using a clinometer.
7. Evaluate the structure, health, and overall condition of the tree using the guidelines set forth in the tree report (Appendix A).



## 4.0 EXISTING CONDITIONS

The following provides a description of the soils, vegetation communities, wildlife, and wildlife movement corridors present on the Project Site.

### 4.1 Physical Characteristics

The 302.34-acre Project Site includes APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009 (Figure 2). The Project Site occurs within the USGS 7.5' series Fontana Quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986). The Project Site is located entirely within the MSHCP Jurupa Area Plan and contains MSHCP Criteria Cells 21, 22, and 55, all of which occur within SU3-Delhi Sands Area (Figure 2).

The Project Site has been extensively disturbed and utilized since 1906 for limestone mining and cement production and manufacturing. The site is currently occupied by the former Riverside Cement Plant and includes various decommissioned facilities, heavy machinery, and support buildings related to the cement manufacturing plant and limestone quarrying and mining operations. A 23,000-square foot research and development building also remains between Rubidoux Drive and the railroad spur. The northern extent of the Project Site that used to operate the cement plant is relatively flat, with elevations ranging between approximately 900-960 feet above mean sea level (AMSL). The southern extent of the Project Site contains a large hill and the former quarry, which is now filled with water, forming Crestmore Lake. The topography in this area is rugged with elevations ranging between approximately 820 and 1,160 feet. The Santa Ana River floodplain is situated approximately 3,500 feet to the southeast of the Project Site. Land uses bordering the Project Site include light industrial, residential, and vacant properties to the west. Land uses to the east and south are primarily manufacturing, while land uses to the north are vacant and residential.

### 4.2 Soils

The USDA NRCS Web Soil Survey maps the following soils within the boundary of the Project Site (given with the percent coverage of each soil type within the Project Site area) as shown on Figure 4 (Soil Survey Staff, NRCS, USDA 2016) and described in detail below. Although these soils were originally mapped by the USDA Soils Conservation Service in 1980, the site has been nearly 100% developed for over 100 years and the soils mapping does not reflect existing soil conditions. The underlying aerial shows the general extent of development at present. Langan Engineering conducted soils testing to identify and map existing soil conditions at the site. Refer to Appendix B for the complete soils report and mapping compiled by Langan.

**Cieneba sandy loam, 15 to 50 percent slopes, eroded (ChF2; 4.81 ac).** This map unit occurs in the southwestern corner of the Project Site. The Cieneba series consists of somewhat excessively drained, strongly sloping to steep soils. This soil type formed in residuum weathered from igneous rock on uplands. Typical vegetation is chaparral, chamise, and annual grasses and forbs.

**Delhi fine sand, 2 to 15 percent slopes, wind-eroded (DaD2; 113.32 ac) and Delhi fine sand (Db; 74.95 ac).** These soil types are mapped in the northern half of the Project Site. The Delhi series consist of excessively drained soils on dunes and alluvial fans, with slopes ranging from 0 to 15 percent. All of the DaD2

map unit has been developed with roads, buildings, and cement processing facilities. The Db map unit supports disked non-native annual grassland, eucalyptus groves, graded earthen berms, paved roads, and buildings that are part of the cement processing facilities.

**Hanford coarse sandy loam, 8 to 15 percent slopes, eroded (HcD2; 4.72 ac) and Hanford coarse sandy loam, 2 to 8 percent slopes (HcC; 1.88 ac).** These map units occur in the southwestern corner of the Project Site along Rubidoux Blvd. Hanford series consists of well-drained, nearly level to strongly sloping soils that formed in recent granitic alluvium on valley floors and alluvial fans.

**Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2; 12.42 ac).** This map unit occurs in the northeastern corner and southern corner of the Project Site. This gently to moderately sloping soil occurs on alluvial fans and terraces. This well-drained soil developed in alluvium consisting mainly of granitic materials. The vegetation is chiefly annual grasses, forbs, sumac, and chamise but includes some scattered oak trees.

**Pachappa fine sandy loam, 2 to 8 percent slopes, eroded (PaC2; 3.03 ac).** These soils are located in the northeastern corner of the Project Site, between the eastern boundary and the Greenfield sandy loam soils. This gently to moderately sloping soil occurs on alluvial fans. These soils developed in predominantly granitic alluvium. Vegetation is chiefly annual grasses, forbs, and chamise. In a typical profile, the surface layer is brown fine sandy loam and very fine sandy loam about 29 inches thick.

**Quarries (QU; 85.58 ac).** Approximately one third of the Project Site is classified by the USDA Soils Conservation Service (1980) as Quarry, including Crestmore Lake in the south-central portion. This area has undergone extensive disturbance due to mining activities and thus might include other soil materials.

**Ramona sandy loam, 0 to 2 percent slopes (RaA; 0.29 ac) and Ramona sandy loam, 2 to 5 percent slopes, eroded (RaB2; 1.15 ac).** These map units are located in the southeastern corner of the Project Site. The Ramona series consist of well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting mainly of granitic materials. The vegetation consists chiefly of annual grasses, forbs, chamise, salvia, and flat-top buckwheat.

### 4.3 Vegetation Communities

As described in Section 3 (Methods), vegetation communities were mapped in the field onto a color aerial photograph (Figure 5) and were evaluated to determine if they are considered sensitive under federal, state, or local regulations or policies. Vegetation communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations. Vegetation community names and hierarchical structure follows the CDFW “List of California Terrestrial Natural Communities” or Holland (1986) classification systems. A summary of the acreages of each mapped vegetation community or land cover type is provided in Table 3. Representative photographs of each vegetation community or land cover type are provided as Figure 6 (a-f). The species listed below represent those individuals identified onsite during the field surveys listed in this report.

**Table 3. Project Site Plant Communities and Land Cover Types**

Plant Communities/Land Cover Type	Area (acres)
Developed	119.45
Disturbed	54.86
Brittlebush Scrub Alliance	56.27

Non-Native Grassland	24.67
Eucalyptus Grove	19.20
Rock Outcrop	7.79
Ornamental	8.15
Southern Willow Scrub	3.30
Cattail Alliance	1.53
Mulefat Stand	0.60
Open Water	6.30
<b>Total</b>	<b>302.12</b>

### **Developed (119.45 acres)**

The center of the Project Site is a former cement plant and thus is dominated by paved areas, abandoned buildings and derelict industrial machinery (Figure 5 and Figure 6a). Vegetation in these areas consists primarily of non-native, disturbance-adapted plant species such as wild lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), oleander (*Nerium oleander*), Russian thistle (*Salsola tragus*), white sweet clover (*Melilotus albus*), castor bean (*Ricinus communis*), tamarisk (*Tamarix ramosissima*), summer mustard (*Hirschfeldia incana*), tree of heaven (*Ailanthus altissima*), Mexican fan palm (*Washingtonia robusta*), and African fountain grass (*Pennisetum setaceum*). Native species such as horseweed (*Erigeron canadensis*) are occasional as well.

### **Disturbed (54.86 acres)**

The northern portion of the Project Site has received continuous disturbance from disking in recent years and remains sparsely vegetated (Figure 5 and Figure 6a). Vegetation that does grow in these areas consists primarily of weedy, non-native, disturbance-adapted, and ruderal plant species such as red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), London rocket (*Sisymbrium irio*), Russian thistle, and tree tobacco (*Nicotiana glauca*).

### **Brittlebush Scrub Alliance (56.27 acres)**

Brittlebush (*Encelia farinosa*) scrub (Figure 5 and Figure 6b) occurs on steep, often vertical, excavated slopes of the Crestmore Quarry in the southern portion of the Project Site and in scattered patches on excavated spoils covered with concrete rubble and cement slurry in the cement processing operations area. Ruderal species including London rocket, summer mustard, Russian thistle, wild oat (*Avena barbata*), tocalote (*Centaurea melitensis*), annual ragweed (*Ambrosia artemisiifolia*), and red brome (*Bromus madritensis*) are common associates throughout this community. Occasional co-dominant native shrub and/or succulent species occur in low numbers and include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), coastal prickly pear (*Opuntia littoralis*), cholla (*Cylindropuntia echinocarpa*), and lanceleaf liveforever (*Dudleya lanceolata*).

### **Non-Native Grassland (24.67 acres)**

Patches of non-native grassland (Figure 5 and Figure 6b) are found scattered throughout the Project Site. These areas have been disturbed by quarry and cement processing operations and are characterized primarily by non-native species such as red brome, ripgut brome, wild oat, Russian thistle, jimsonweed (*Datura stramonium*), Peruvian peppertree (*Schinus molle*), fountain grass, and Bermuda grass (*Cynodon dactylon*). Native species are occasional in this community and include common sunflower (*Helianthus annuus*) and common fiddleneck (*Amsinckia intermedia*).

### ***Eucalyptus* Grove (19.20 acres)**

Eucalyptus groves have been planted throughout the northern portions of the Project Site (Figure 5 and Figure 6c). Based on the tree surveys conducted in September 12-16 and October 10-12, 2016, red gum (*Eucalyptus camaldulensis*) and red ironbark (*Eucalyptus sideroxylon*) are the most commonly observed here, although blue gum (*Eucalyptus globulus*) and silver dollar gum (*Eucalyptus polyanthemos*) are occasional. Red gum consisted of 67.8% of the total 2,316 trees. The understory of these groves is dominated by non-native species such as London rocket, Russian thistle, lamb's quarters (*Chenopodium album*), red brome, ripgut brome, and wild oat. Detailed information on all trees mapped onsite can be found in the *Tree Survey Report for the Agua Mansa Commerce Park Project Site* (refer to Appendix C).

### **Rock Outcrop (7.79 acres)**

Rock outcrops are found around the former cement plant and the large central hill on the Project Site (Figure 5 and Figure 6c). These areas are generally devoid of vegetation.

### **Ornamental (8.15 acres)**

Ornamental plants are found primarily along the western portion of the Project Site, planted near buildings, parking lots, and roads (Figure 5 and Figure 6d). Ornamental plant species observed here include California fan palm (*Washingtonia filifera*), pine trees (*Pinus* sp.), oleander (*Nerium oleander*), silk tree (*Albizia julibrissin*), agapanthus (*Agapanthus africanus*), and English ivy (*Hedera helix*).

### **Open Water (6.30 acres)**

The southern portion of the site supports a large depression created by quarry operations, known as Crestmore Lake, an area that was excavated to a depth that intersects the ground water table and is surrounded on all sides by steep rock wall (Figure 5 and Figure 6d). This open water body is ringed by intermittent patches of cattails and southern willow scrub vegetation, as described below.

### **Southern Willow Scrub (3.30 acres)**

Southern willow scrub (Figure 5 and Figure 6e) occurs as dense, multilayered stands supported by groundwater within the quarry pit surrounding Crestmore Lake to the south, and within two large borrow areas in the southeast corner of the site. Black willow (*Salix gooddingii*) and yellow willow (*Salix lasiandra*) tends to dominate in these areas, with other common associated tree species including red willow (*Salix laevigata*) and Fremont cottonwood (*Populus fremontii*). Other common native species in this community include mulefat (*Baccharis salicifolia*), willow baccharis (*Baccharis salicina*), branching phacelia (*Phacelia ramosissima*), willow herb (*Epilobium ciliatum*), California everlasting (*Pseudognaphalium californicum*), and common sunflower. Non-native species commonly observed in these communities include tree tobacco, summer mustard, castor bean, tocalote, horehound (*Marrubium vulgare*), Mexican fan palm, London rocket, African fountain grass, red gum, bull thistle (*Cirsium vulgare*), and tamarisk.

Due to its limited distribution in Southern California, Southern willow scrub qualifies as a sensitive natural community by CDFW and CNPS definition and would be regulated as riparian habitat by CDFW.

### **Cattail Alliance (1.53 acres)**

Cattail Alliance (Figure 5 and Figure 6e), dominated by southern cattail (*Typha domingensis*) and occasional broad leaf cattail (*Typha latifolia*), forms pure stands in the wettest low-lying areas, including the fringe of Crestmore Lake, near leaking water control structures, and in the large depression at the southern extent of the Project Site created by quarry operations.

#### **Mulefat Stands (0.60 acres)**

Similar to the Cattail Alliance community, mulefat stands (Figure 5 and Figure 6f) occur in small (consisting of 2-10 individual plants), widely scattered, and isolated monocultures in mesic, depressional areas created by spoils within the cement processing facility and adjacent to dirt roads and parking areas.

#### **4.4 Wildlife**

General wildlife species documented onsite or within the vicinity of the Project Site include but are not limited to western fence lizard (*Sceloporus occidentalis*), American coot (*Fulica americana*), double-crested cormorant (*Phalacrocorax auritus*) (WL), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*) (WL), Cooper's hawk (*Accipiter cooperii*) (WL), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), white-throated swift (*Aeronautes saxatalis*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), western scrub-jay (*Aphelocoma californica*), bushtit (*Psaltirparus minimus*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), California towhee (*Pipilo crissalis*), blue-gray gnatcatcher (*Polioptila caerulea*), lesser goldfinch (*Spinus psaltria*), house finch (*Haemorrhous mexicanus*), California ground squirrel (*Otospermophilus beecheyi*), Botta pocket gopher (*Thomomys bottae*), desert cottontail (*Sylvilagus audubonii*), raccoon (*Procyon lotor*), domestic dog (*Canis lupus familiaris*), and coyote (*Canis latrans*).

#### **4.5 Sensitive Natural Communities**

CDFW and CNPS have identified native vegetation communities that are rare and unique to California. While they have no legal, protective status, impacts to these natural communities may be considered "significant" under CEQA. Sensitive natural communities identified by CDFW on and/or in the vicinity of the Project Site include Riversidean alluvial fan sage scrub, southern cottonwood willow riparian forest, southern riparian scrub, southern riparian forest, southern willow scrub, and southern sycamore alder riparian woodland (CNDDDB 2017). A total of 3.30 acres of southern willow scrub (G3 S2.1) is present on the Project Site (Figure 5 and Figure 6e) that would qualify as a sensitive natural community. These features would be regulated as CDFW riparian habitat pursuant to Division 2, Chapter 6, Section 1600-1603 of the California Fish and Game Code. This topic is addressed in more detail in Section 4.8.5 (CDFW Jurisdictional Features) below.

#### **4.6 Special-Status Plants**

To determine presence/absence of special status species, focused plant surveys were conducted on July 21 and October 11-12, 2016 and April 17-18, 2017 (Appendix J). The survey dates aligned with peak blooming periods for all surveyed species. In the course of these surveys, no Narrow Endemic, USFWS/CDFW special-status, or CNPS-ranked species were observed.

Special-status plants are defined here to include: (1) plants that are federal- or state-listed as rare, threatened or endangered, (2) federal and state candidates for listing, (3) plants assigned a Rank of 1 through 4 by the CNPS Inventory, and (4) plants that qualify under the definition of "rare" in the California Environmental Quality Act, section 15380. The Project Site was initially determined to provide potentially suitable habitat for a total of 28 special-status plant species based on the proximity of the project to previously recorded occurrences in the region, vegetation types and habitat quality, topography, elevation, soil types, and other



species-specific habitat requirements, and geographic ranges of special-status plant species known to occur in the region. A table of special-status plant species with the potential to occur on the Project Site is provided in Appendix D. Due to the presence of potentially suitable habitat for special status plants on the Project Site, focused surveys were conducted during the documented blooming periods of all potentially occurring species. A special status survey report is provided in Appendix J.

The Project Site occurs within a predetermined Survey Area for Narrow Endemic Plant Species. A habitat assessment was conducted for the following three Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Satureja chandleri*). Although suitable habitat was not found for Narrow Endemic Plant Species, focused surveys were conducted for other special status species that had a low potential for occurrence. Results of the habitat assessment for Narrow Endemic species are discussed below.

### **San Diego Ambrosia**

San Diego ambrosia is designated as a Group 3 species in the MSHCP (Riverside County 2003), a federally listed endangered species, and a CNPS Rare Plant Rank 1B species. This perennial herb occurs in open habitats in coarse substrates on floodplain terraces or on the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated with open, gently sloped grasslands and is generally associated with alkaline soils. San Diego ambrosia is distributed from western Riverside County and western San Diego County, south in widely scattered populations along the west coast of Baja California, Mexico to the vicinity of Cabo Colonet (Munz 1974; Reiser 2001 in Riverside County 2003). The species is threatened by habitat loss, due to urbanization, fragmentation, isolation, and associated impacts from non-native species competition. While it is considered tenacious in appropriate habitat, it is thought to be a weak competitor with invasive herbaceous and non-native grass species. No floodplain terraces, vernal pools, vernal pool conditions, or alkaline conditions occur within the Project Site and this species was not observed during protocol level surveys that focused on mesic undeveloped portions of the Project Site. Therefore, the Project Site does not support suitable habitat for San Diego ambrosia and this species is not expected to be present.

### **Brand's Phacelia**

Brand's phacelia is designated as a Group 3 species in the MSHCP (Riverside County 2003) and a CNPS Rare Plant Rank 1B.1 species. Suitable habitat for this annual herb includes coastal dunes and /or coastal scrub in sandy openings, sandy benches, dunes, sandy washes, or flood plains of rivers and is restricted to clay soils at elevations between 0 and 400 meters usually near the coast (CNDDB 2017, CNPS 2017, and Wilken *et al.* 1993 in Riverside County 2003). Brand's phacelia historically occurred from Los Angeles, Riverside, and San Diego counties and northern Baja California, Mexico (CNPS 2017). This species blooms from March to June (CNPS 2017). Within Riverside County, Brand's phacelia is restricted to sandy benches along the Santa Ana River terrace. This species is considered extremely rare as there is only one known extant occurrence in Riverside County. The Project Site does not contain any suitable habitat such as sandy washes or river floodplains, and this species was not observed during protocol surveys for non-covered species that were conducted in all in undeveloped portions of the site. Therefore, Brand's phacelia is not expected to occur within the Project Site.

### **San Miguel Savory**

San Miguel savory is designated as a Group 3 species in the MSHCP (Riverside County 2003) and a CNPS Rare Plant Rank 1B.2 species. Suitable habitat for this perennial herb includes rocky, gabbroic and

metavolcanic substrates in coastal sage scrub, chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands between 120 and 1,005 meters. In San Diego County and Northern Baja California, this species is associated with open, chamise-dominated slopes. However, in the Santa Ana Mountains, it may occur in more mesic habitat. No chaparral, foothill woodland, or coastal sage scrub communities are located within the Project Site. San Miguel savory was not observed on the Project Site within undeveloped portions of the site, including brittlebush scrub or non-native grassland communities in the industrial business park development area, and riparian scrub located within the limestone quarry pits located in the Open Space area. Therefore, San Miguel savory is not expected to be present within the Project Site.

Suitable habitat to support Brand's phacelia, San Miguel savory, or San Diego ambrosia was not observed on site during the initial habitat assessment conducted during July 2016. Given the site's absence of sandy washes and/or benches associated with alluvial flood plains, and extreme rarity of the species in the site vicinity, Brand's phacelia is not expected to occur on the Project Site. Likewise, due to the absence of rocky, gabbroic woodlands and valley and foothill grasslands, San Miguel savory is not expected to occur on site. Finally, given the absence of sandy floodplain terraces, vernal pools, sparse non-native grasslands or ruderal habitats in association with river terraces, vernal pools, and/or alkali playas, San Diego ambrosia is also not expected to occur on site.

## 4.7 Special-Status Animals

Special-status wildlife species include those species listed as endangered or threatened under the FESA or CESA; candidates for listing by the USFWS or CDFW; and species of special concern to the CDFW. A list of all special-status animal species with the potential to occur on the Project Site is provided in Appendix E. A total of 61 special-status wildlife species were reported within the 9-quadrangle CNDDDB survey area. Of the species reported, 28 species were identified as having a moderate potential to occur within the Project Site. Of these 28 species, all but seven are covered under the MSHCP (refer to Appendix E). These non-covered species include: silvery legless lizard (*Anniella pulchra pulchra*), rufous-crowned sparrow (*Aimophila ruficeps*), Western mastiff bat (*Eumops perotis californicus*), Western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), southern grasshopper mouse (*Onychomys torridus ramona*), and American badger (*Taxidea taxus*). The following five bird species were confirmed present on the Project Site during surveys: Cooper's hawk (*Accipiter cooperii*), great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*), double-crested cormorant (*Phalacrocorax auritus*), and LBV. With the exception of LBV, special status wildlife species observed during the surveys are covered (i.e., adequately conserved) under the MSHCP.

Additional habitat assessments and surveys were conducted in order to meet the MSHCP's conservation requirements for riparian/riverine species (LBV and SWFL), BUOW, and Delhi sand flower-loving fly. The following discussion addresses focused survey and/or habitat assessment results for these species.

### **Burrowing Owl**

The Project Site occurs within a predetermined MSHCP Survey Area for BUOW (RCIP Conservation Report Summary Generator 2016). Based on the presence of suitable habitat documented during the July 7 and 21, 2016 habitat assessment<sup>4</sup> within and adjacent to the Project Site, focused surveys for BUOW were conducted. No BUOW or their sign (e.g., molted feathers, pellets with characteristic prey remains, or

<sup>4</sup> Personnel: Jon Campbell



excrement (wash) near a burrow entrance) was observed. In compliance with the conservation goals outlined in the MSHCP, a 30-day preconstruction survey will be conducted prior to the initiation of construction to ensure protection for this species (Mitigation Measure BIO-2). The *Burrowing Owl Survey Report for the Agua Mansa Commerce Park Project Site* is provided in Appendix F.

### ***Southwestern Willow Flycatcher***

Suitable habitat for SWFL is present onsite in the southern willow scrub vegetation community (Figure 5). However, this species was not detected during protocol surveys conducted in spring/summer 2017 by permitted biologist Tom Ryan to determine the presence/absence of this species on the Project Site (Appendix G). The Project is not expected to impact SWFL and no additional surveys or impact mitigation measures would be required for this species.

### ***Least Bell's Vireo***

Suitable habitat for LBV was initially identified onsite in the southern willow scrub community (Figure 5). Focused protocol surveys were conducted in spring/summer 2017 by permitted biologist Tom Ryan to determine the presence/absence of this species on the Project Site. Two individual LBV were detected during the spring 2017 surveys; therefore, avoidance and minimization measures will be implemented in accordance with the species-specific objectives to reduce impacts to this species to less than significant with mitigation incorporated (Mitigation Measure BIO-3). The *Least Bell's Vireo and Southwestern Willow Flycatcher Survey Report for the Agua Mansa Commerce Park Project Site* is provided in Appendix G.

### ***Delhi Sands Flower-Loving Fly***

The Project Site is located within the MSHCP Jurupa Area Plan and specifically within Noncontiguous Habitat Block 3 (NCH-3) related to the Delhi Sands Flower Loving Fly (DSF). NCH-3 contains three (3) Criteria Cells (21, 22 and 55) within Area Plan Subunit 3 (SU3). The Project Site is located within portions of Criteria Cells 21, 22, and 55, within SU3 (Figure 2). Specifically:

- Criteria Cell 21 includes all or portions of the following APNs: 175-170-005, 175-170-036, 175-170-040, 175-170-045, 175-170-046, 175-200-001, 175-200-008, and 175-200-009
- Criteria Cell 22 includes all or portions of the following APNs: 175-200-009, 175-200-008, 175-200-001, 175-200-002, 175-200-007, 175-200-003, 175-200-004, 175-200-005
- Criteria Cell 55 includes a portion of the following APN: 175-180-001

The MSHCP identifies a need to conserve at least 50 acres of habitat for DSF (Additional Reserve Lands). Areas to be conserved under the Plan are to include suitable dispersal habitat and/or movement habitat and interconnecting linkages within Core Areas or that are contiguous to areas that have already been conserved within and outside the Plan Area, including locations outside the Criteria Area or within San Bernardino County. Suitable habitat for this species is defined as Delhi Sands soils co-occurring with coastal sage scrub, grassland and alluvial fan sage scrub (prime habitat) and Delhi Sands soils co-occurring with agriculture (restorable habitat).

A habitat assessment was conducted by invertebrate biologist Dr. Thomas J. McGill during April 2017 to evaluate the site's potential to support DSF (Appendix H). The assessment focused on the northern portion of the Project Site in areas mapped by the USDA Soils Conservation Service (1980) as Delhi fine sand (DaD2; refer to Figure 4) within an MSHCP core area identified within Criteria Cells 21 and 22 (Non-Contiguous Habitat Block 3 [NCH-3]). However, the habitat assessment determined that the site was either incorrectly

mapped as Delhi Sands (or eolian soils<sup>5</sup>) or the soils onsite have been disturbed by placement of non-eolian fill soils and/or by routine disking of the site, based on the observed presence of organic matter and silts. Furthermore, current NRCS Soils Survey Geographic Data Viewer (SSURGO version 6.1) maps soils on the Project Site as Urban Land, indicating the placement of imported fill soils associated with development of the cement plant over many years. Development and/or disking activities would have contaminated any clean surface Delhi Sands with non-eolian fill soils, thereby diminishing the habitat suitability for DSF. Although the site was initially given a habitat quality rating of low to very low due to the presence of organic matter and silts, a soil gradation analysis was conducted by Langan Engineering and Environmental Services, Inc. on April 13, 2017 (refer to Appendix B) in areas mapped as Delhi Sands by USDA to confirm the initial habitat assessment findings. The samples from the Project Site were classified as silty sands, consisting of fine sands with some silt and trace clay, which is indicative of alluvial deposition. The King-is-Coming site soils were classified as sands consisting of fine sands, which is indicative of eolian (or wind) deposition. Based on the results of the gradation tests, the soils are not derived from the same geologic depositional process. The soils at the Project Site are derived from alluvium while the fine sands of the King-is-Coming site are comprised of eolian sands. Without the presence of Delhi Sands, the Project Site is considered unsuitable DSF habitat, and therefore this species can be presumed absent from the site.

In order to further evaluate the site's potential conservation value for DSF, aerial photographs from 1948 to the present were reviewed to assess the historic and current roles of the Project Site in providing Delhi Sands and/or available habitat for DSF that could provide movement opportunities. In the years between 1948 and 1974, there were no impacts to the 94.6 acres of suitable DSF habitat in Criteria Cells 21, 22 and 55 mapped by RCA. All available habitat remained open and available for DSF (refer to Exhibits 3 and 4 of Appendix H). A review of an aerial from 2008 shows that the amount of undeveloped and available DSF habitat had decreased to 64.4 acres, or 68% of the originally identified 94.6 acres (refer to Exhibit 5 of Appendix H). In 2017, the amount of Delhi soils/suitable DSF habitat dropped to 10.0 acres or 11% of the originally identified 94.6 acres of DSF habitat (refer to Exhibit 6 of Appendix H). The identified loss of areas mapped as Delhi Sands suitable to support DSF in 2017 includes the 39.5 acres of potentially suitable DSF habitat mapped on the Project Site that have subsequently been determined through the habitat assessment and soil gradation analysis to not support Delhi Sands. The loss of a minimum of 84.6 acres of suitable DSF habitat out of the original 94.6 acres of identified habitat within NCH-3 suggests that NCH-3 does not meet the identified goal of providing long-term conservation value for DSF within the Agua Mansa Industrial Center Area.

Based on the absence of Delhi Sands and lack of habitat for DSF, the Project Site does not provide conservation values for this species (i.e., dispersal habitat or opportunities for connectivity to other conservation areas) that would fulfill MSHCP goals for acquisition of Additional Reserve Lands (Riverside County 2003). Therefore, the long-term protection of habitat on the Project Site would not result in an overall benefit for the species.

### ***California Species of Special Concern***

While not observed during the field surveys, the Project Site contains suitable habitat for several California Species of Special Concern (CSC) that are not covered by the MSHCP (Riverside County 2003), including: silvery legless lizard, rufous-crowned sparrow, western mastiff bat, western yellow bat, pocketed free-tailed bat, southern grasshopper mouse, and American badger. The life history and habitat requirements for these species are discussed below.

<sup>5</sup> Eolian soils are developed from sandy parent material that is transported and deposited by wind action.

### Silvery legless lizard

The silvery legless lizard is designated by CDFW as a California Species of Special Concern. This species is nearly endemic to California and is found from Contra Costa County south to northern Baja Mexico, and from the coast to the Sierra Nevada foothills. This species occurs in sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, and pine-oak woodland or under sycamores, cottonwoods and oaks along stream terraces. The sandy loam soils of stabilized dunes supporting native coastal shrubs are especially favorable habitat. Silvery legless lizards also occur in desert scrub at the western edge of the Mojave Desert. This species is often found under or near rocks, boards, logs and compacted woodrat nests. The silvery legless lizard is dependent on soils with relatively high moisture content. Due to the presence of 56.92 acres of marginally suitable desert scrub (brittlebush) habitat, gravelly loam substrate in the quarry pit and borrow areas, and the location of a reported occurrence within 3.8 miles south of the site, this species is considered to have a moderate potential to occur in the undeveloped portions of the Project Site.

### Rufous-Crowned Sparrow

Rufous-crowned sparrow is a California Species of Concern that inhabits Southern California coastal sage scrub and sparse mixed chaparral communities. This species frequents relatively steep, often rocky hillsides with grass and forb patches. The nearest recorded CNDDB nesting occurrence of this species to the Project Site is two miles to the east. Marginally suitable habitat is present on the Project Site within brittlebush scrub.

### Western Mastiff Bat

The Western mastiff bat is designated as a California Species of Concern and identified as a high priority species by the Western Bat Working Group (WBWG). The distribution of the western mastiff bat is likely geomorphically determined, with the species being present only where there are significant rock features offering suitable roosting habitat. It is found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. In general, the long-term persistence of North American bat species is threatened by the loss of clean, open water; modification or destruction of roosting and foraging habitat; and, for hibernating species, disturbance or destruction of hibernacula associated with urban expansion. Potential habitat for the western mastiff bat occurs within trees within the former cement processing facility. Within the portion of the Project as Open Space, western mastiff bat may roost on steep rock walls that are not accessible by humans due to the rugged terrain in these areas. There are recent occurrence records for Western mastiff bat in the vicinity of the Project Site (approximately 2.7 miles northeast).

### Western Yellow Bat

The Western yellow bat is designated as a California Species of Concern and identified as a high priority species by the WBWG. The western yellow bat is uncommon in California, known only in Los Angeles and San Bernardino Cos. south to the Mexican border. This species has been recorded below 600 m (2000 ft) in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. They are commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees and have also been documented roosting in cottonwood trees. The Project Site contains palm trees and eucalyptus trees in the former cement processing facility, which have the potential to support roosting western yellow bat. This

species may also roost in the riparian fringe surrounding Crestmore Lake. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.8 miles east).

### Pocketed Free-Tailed Bat

The pocketed free-tailed bat is found in Riverside, San Diego, and Imperial Counties. This species is rare in California but is more common in Mexico. Habitats used by this species include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. This species breeds in rock crevices, caverns, or buildings. Pocketed free-tailed bat give birth to one young per year, usually in early July. Suitable roost habitat is present on the Project Site within abandoned buildings and rock crevices on vertical quarry walls that are not accessible by humans due to the rugged terrain in these areas. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.5 miles northeast).

### Southern Grasshopper Mouse

The southern grasshopper mouse is designated as a California Species of Concern. Range-wide, the southern grasshopper mouse is found in low arid scrub and semi-scrub vegetation and found in grasslands and sparse coastal sage scrub habitats within the MSHCP Plan Area. They nest in burrows, and while they may dig their own burrows in sandy or other friable substrates, they often use burrows dug by other rodents such as pocket gophers (*Thomomys* spp.) and kangaroo rats (*Dipodomys* spp.). The southern grasshopper mouse has the potential to occur on site in marginally suitable non-native grassland and brittlebush scrub communities. However, not all portions of these communities are suitable to support rodent burrows due to a lack of friable soils for digging. The placement of fill, pavement, and cement slurry from cement processing activities have substantially altered native soil composition and texture. According to the BUOW survey report (Appendix F, Exhibit 4), there are approximately 15.29 acres of small mammal burrow complexes that provide potentially suitable habitat for southern grasshopper mouse. There are recent records of occurrence in the vicinity of the Project Site (approximately 4.5 miles east).

### American Badger

The American badger is a highly specialized fossorial mustelid that is a designated California Species of Concern. In California, its range extends practically all over the state except the humid coastal belt, from sea level to alpine meadows, from dry deserts to dense red fir forest. The badger prefers open areas and may also frequent brushlands with little groundcover. Although badger tend to prefer habitats with more friable soils for digging burrows, which are used for dens, escape, and predation, the hard-baked earth in the middle of an unpaved road is no obstacle. Badgers are mainly active at night and tend to be inactive during the winter months. When inactive, this species occupies underground burrows that are elliptical shaped and eight or more inches in diameter. Burrows are typically around the dens of ground squirrels (*Spermophilus* sp.) – its chief food – or chipmunks (*Tamias* sp.) and they generally have a single entrance. Badgers use multiple burrows within their home range, and they may not use the same burrow more than once a month. However, in the summer badgers may dig a new burrow each day. Mating occurs in late summer or early autumn and is followed by delayed implantation. Typically, badgers have one litter averaging 2 to 3 young.

Although no dens were observed during the field surveys, the Project Site supports habitat types where American badger occur, including brittlebush scrub, eucalyptus grove, and southern willow scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 5 miles east).

## Nesting Songbirds and Raptors

Onsite vegetation communities represent suitable nesting habitat for common, as well as special-status resident and migratory bird/raptor species with the potential to occur within the Project Site. Typically, migratory birds and raptors nest within trees and other vegetation in areas that are removed from human disturbance; however, some species such as great horned owl (*Bubo virginianus*) and red-tailed hawk are known to nest in and adjacent to developed areas where there is nearby undeveloped land supporting an abundance of prey. The Project Site provides potential foraging and/or nesting habitat for migratory birds and raptors, including northern harrier (*Circus cyaneus*), prairie falcon (*Falco mexicanus*), red-tailed hawk, sharp-shinned hawk (*Accipiter striatus*), yellow warbler (*Dendroica petechia*), and rufous-crowned sparrow (*Aimophila ruficeps*). The loss of an active nest of common or special-status bird species would be considered a violation of the CDFW Code, Section 3503, 3503.5, 3513, and the federal MBTA.

## **4.8 Jurisdictional Wetlands and Waters Delineation**

All wetland and other water features delineated within the Study Area were determined to be potentially isolated from Clean Water Act Section 404 jurisdiction. As detailed below, the Project Site contains 10.641 acres of features regulated by RWQCB (including 4.337 acres of isolated wetlands and 6.304 acres of isolated waters) and 10.973 acres of CDFW regulated lakes and riparian habitat (Figure 7a-e). The following results are considered preliminary until verified by the appropriate regulating agencies and/or until any permits are issued by federal and state agencies authorizing activities within this area. The conclusion of this delineation is based on conditions observed at the time of the field surveys conducted on July 21, October 11, and October 12, 2016. The *Jurisdictional Delineation Report for the Agua Mansa Commerce Park Project Site* is provided in Appendix I. Table 6 at the end of this section provides a summary of the acreages of all features and their jurisdictional status within the Project Site.

### **4.8.1 Isolated from CWA Section 404 Jurisdiction and/or Non-Jurisdictional**

Features A through F met the USACE wetlands and/or other water criteria but are isolated from USACE jurisdiction or are artificially created, non-jurisdictional features within the cement processing facility. None of the wetland or other water features meet the definition of Traditional Navigable Waters (TNWs), Relatively Permanent Waters (RPWs) that are tributary to a TNW, or wetlands abutting a TNW or RPW; therefore, they would not be considered jurisdictional under Section 404 of the CWA. All wetland and other water features mapped on the Project Site are hydrologically confined and isolated by steep and rugged terrain in the former quarry operations area in the southern portion of the site, and by existing development (buildings, parking lots, paved roads, railroad tracks, and landscaped hillsides) in the northern and central portions. However, these features may be considered Waters of the State and therefore regulated by the RWQCB pursuant to the Porter-Cologne Act.

### ***Isolated Wetlands***

All wetlands and other water features were artificially created, either by excavation to the water table depth through quarry operations or by nuisance flows created by failed water infrastructure associated with cement plant facilities. A total of 8 sample points were taken at various locations within the Project Site to determine the location and extent of areas that meet USACE wetlands and waters criteria (i.e., contained hydric soils, hydrology, and hydrophytic vegetation). Six out of 8 data points met wetlands criteria: WL-1 through WL-6



(Figure 7a-e). Approximately 4.337 acres of isolated wetlands were mapped within the Study Area. These features include riparian and emergent wetland fringes around Crestmore Lake and a low-lying wet area within a smaller quarry borrow area to the east. The dominance test (>50% FAC, FACW, OBL) and prevalence index ( $\leq 3.0h$ ) hydrophytic vegetation indicators were met at most of the wetland sample points. These features are described in detail below and depicted on Figure 7 (a-e) and summarized in Table 4 below.

**Riparian Wetland (1.536 acres).** Feature A (Figure 7e) is a riparian wetland that occupies the remaining portion of the quarry pit surrounding Feature B (refer to WL2). Although situated 1-2 feet above Feature A, the area is still at a low enough elevation to be supported by groundwater fluctuations on a seasonal basis (saturation in the upper 12 inches for at least two weeks during the growing season). Arroyo willow, black willow, and yellow willow are co-dominants within this feature. Sampled soils are similar to those found in Feature B. Wetland hydrology was evidenced by the presence of sediment deposits (B2) on October 11, 2016. A high water table (A2) and saturation (A3) was observed on July 21, 2016.

**Freshwater Emergent Wetland (1.005 acre).** Feature B (Figure 7e) is a freshwater emergent wetland at the base of a limestone quarry pit dominated by a nearly monotypic stand of southern cattail (OBL). This wetland is associated with sample point WL1 (Appendix I). The pit is an artificial impoundment that has been excavated to a depth that intersects the groundwater table. Hydrologic conditions are characterized by semi-permanent to permanent saturation to inundation in the upper 12 inches of soil, supporting a predominance of obligate hydrophytes. The wetland is bordered to the west by a vertical rock wall. Soils at the sampled location (WL1) consist of light brownish gray (10YR6/2) to light gray (2.5Y 7/2) depositional quarry process spoils with brownish yellow (10YR 6/6) iron masses in the upper 12 inches of the matrix. A 3-inch-thick layer of undecomposed organic matter was present on the soil surface, indicating prolonged anaerobic conditions. Large pore spaces were observed in the upper 4 inches, possibly from aquatic invertebrates. The sampled soil exhibits indicators of a depleted matrix (F3).

**Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.796 acre).** Features C, D, E, and F (Figure 7d) are lacustrine freshwater emergent-riparian fringe wetlands around the perimeter of Crestmore Lake. These features have an herbaceous layer dominated by nearly pure stands of cattail with submerged root systems and an intermittent riparian canopy. Shrub and tree layers are composed of shining willow, black willow, California fan palm, Fremont cottonwood, mulefat, and willow baccharis. Because the wetlands were inundated or saturated to the surface, soils were presumed to function as hydric at WL-5. Sampled soils at WL-6 had a high undecomposed organic matter content and had a depleted matrix (F3) in the upper 8 inches of the soil profile and exhibited sandy mucky mineral (S1) and sandy gleyed matrix (S4) below 8 inches.

### ***Isolated Waters***

**Perennial Other Waters (Crestmore Lake (6.304 acres).** Crestmore Lake (Feature G; Figure 7d) is a water filled quarry pit with a 200-ft maximum depth created by decades of limestone mining. The OHWM is mapped along the distinctly defined water's edge surrounded by nearly vertical rock walls.

### ***Non-Jurisdictional Artificial Wetlands***

**Artificially Created Freshwater Emergent Wetland (0.417 acre).** The Study Area contains three small wetland patches, Features H, I, and J (Figure 7a-b), that are non-jurisdictional, artificially created freshwater



emergent wetlands supported solely by nuisance flows resulting from failed water infrastructure (below and above ground) associated with the cement processing facility. The features are underlain by pavement and other imported fill materials. These wetlands are characterized by sample points WL3 and WL4. A mix of cattails, willows, tamarisk, mulefat, willow herb were found at Feature H. Feature I supported cattails and willows. Feature J is located adjacent to a well house and above ground broken water pipes. This feature supports an intermittent canopy composed of individual Fremont cottonwood, California fan palm, and white alder trees with an emergent herbaceous layer of broad-leaved cattail. These wetlands were located on gravel and/or concrete with disturbed/non-native soils. The problematic hydric soil criterion was met due to the presence of primary indicators of wetland hydrology (surface water and/or saturation) and a predominance of hydrophytic vegetation.

#### 4.8.2 RWQCB Jurisdictional Features

The RWQCB protects all waters in its regulatory scope but has special responsibility for regulating isolated wetlands and headwaters that may not be regulated by Section 404 of the CWA. Therefore, in addition to all features potentially regulated by Section 404 of the CWA, all wetlands and other water features identified as isolated from CWA 404 jurisdiction may be considered jurisdictional by RWQCB pursuant to the Section 401 of the Clean Water Act and/or Porter-Cologne Act. There is a total of 10.641 acres in the Project Site that may be regulated by RWQCB as Waters of the State (Table 4).

**Table 4. Summary of Features Regulated by RWQCB**

Feature	RWQCB Regulated Feature Type	Acres
A	Isolated Riparian Wetland	1.536
B	Isolated Freshwater Emergent Wetland	1.005
C, D, E, F	Isolated Freshwater Emergent-Riparian Lacustrine Fringe Wetland	1.796
	<i>Wetlands Subtotal</i>	<i>4.337</i>
G	Isolated Perennial Other Waters (Crestmore Lake)	6.304
	<i>Other Waters Subtotal</i>	<i>6.304</i>
	<b>Total</b>	<b>10.641</b>

#### 4.8.3 CDFW Jurisdictional Features

Pursuant to Division 2, Chapter 6, Section 1600-1603 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife. CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. Approximately 10.973 acres of CDFW jurisdictional areas were

mapped on the Project Site and include lake features measured from the top of bank and riparian vegetation associated with these features, measured from the dripline (Figure 7a-e and Table 5).

**Table 5. Summary of Features Regulated by CDFW**

Feature	CDFW Feature Type	Acres
A, B, C, D, E, F, K	CDFW Riparian	4.669
G	CDFW Lake (Crestmore Lake)	6.304
	<b>Total</b>	<b>10.973</b>

Scattered monotypic stands of mulefat within the cement plant processing facility (Figure 5) would not be subject to CDFW jurisdiction because they: 1) occur in artificially-constructed quarry borrow areas on disturbed soils that were graded/excavated during past cement processing or quarry operations, 2) lack the attributes of a natural waterway; 3) provide no habitat for fish, wildlife, aquatic insects, or riparian species; 4) receive ephemeral upland flows from stormwater runoff; and/or 5) do not contain a defined bed, bank, or channel.

Feature A consists of riparian vegetation in an excavated depression that does not have a well-defined bed and bank, but provides important habitat for wildlife, including LBV (Figure 7e). Features B, C, D, E, and F support a predominance of riparian vegetation with an emergent wetland vegetation understory along the well-defined banks of Crestmore Lake/Feature G (Figure 7d) and within two quarry borrow areas. Feature K is a small riparian woodland at the bottom of a quarry pit. This feature is not associated with a streambed or lake; however, it does support LBV, a riparian bird species. These ecological systems are expected to be regulated by CDFW.

#### **4.9 MSHCP Riparian/Riverine Resources and Vernal Pool Analysis**

The MSHCP defines Riparian/Riverine areas as natural "...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" (Riverside County 2003)". The MSHCP further describes, "...areas demonstrating characteristics as described above which are artificially created are not included" in the above referenced definitions.

The MSHCP defines Vernal Pools as "...seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season." (Riverside County 2003).

There are no Riparian/Riverine resources or vernal pools on or adjacent to the Project Site. All on-site wetland features (Features A through J, and Feature K) were artificially created through development and

excavation related to cement plant operations. The southeastern commercial quarry borrow area (Features A and B) and Crestmore Lake (Features C through G) were pits created for mining and mineral extraction. Crestmore Lake was formed when excavations encountered unanticipated groundwater. Three of the wetlands in the northern part of the site (Features H, I, and J) were created by artificial water sources on imported fill soils, remnant building foundations, and/or within pavement cracks on parking lots and access roads. These features support an overstory of a mix of woody species such as eucalyptus (*Eucalyptus globulus*), fan palm (*Washingtonia filifera*), tamarisk (*Tamarix ramosissima*), and occasional willows (*Salix* spp.) and a freshwater emergent wetland understory dominated by cattail. These features are wholly supported by nuisance flows originating from leaking water infrastructure associated with the cement processing facility. These features would revert to uplands in the absence of this artificial water source. These artificial wetlands are not underlain by a clay hardpan nor do they occur on a land formation that would support clay soils. This area was previously mapped as Delhi Sands but has been identified during site analysis as mostly fill soils overlying remnant alluvial soils (Langan 2017, Appendix B). These areas do not have a seasonal hydroperiod; they do not support typical vernal pool plant species indicators (e.g., *Downingia* spp., *Lasthenia* spp., and *Plagiobothrys* spp.); and these areas do not exhibit any other habitat feature that would be suitable to support federally listed vernal pool fairy shrimp (*Branchinecta lynchi*) or other special status invertebrate species including Riverside fairy shrimp (*Streptocephalus woottoni*) that are associated with vernal pool habitats. No wetland or water features within the Project Site meet the MSHCP definition of a vernal pool. Furthermore, these features are not confluent (i.e. no hydrologic or other physical connection) with downstream conservation area resources associated with the Santa Ana River. Therefore, these features do not meet the definition of a MSHCP Riparian/Riverine Resource. The RCA and regulatory agencies gave concurrence that the man-made areas may not meet the MSHCP definition of "riparian" but that any impacts (direct or indirect) to the LBV under Section 6.1.2 would still have to be addressed (refer to Impact BIO-3).

**Table 6. Summary of Federal and State Jurisdictional Features and MSHCP Riparian/Riverine Resources Within the Project Site**

Feature	Potential USACE Jurisdiction (Acres)	RWQCB Jurisdiction (Acres)	CDFW Jurisdiction (Acres)	MSHCP Riparian /Riverine (Acres)
A	N/A	1.536	1.536	N/A
B	N/A	1.005	1.005	N/A
C	N/A	0.771	0.771	N/A
D	N/A	0.177	0.177	N/A
E	N/A	0.158	0.158	N/A
F	N/A	0.690	0.690	N/A
G	N/A	6.304	6.304	N/A
H	N/A	N/A	N/A	N/A
I	N/A	N/A	N/A	N/A
J	N/A	N/A	N/A	N/A
K	N/A	N/A	0.332	N/A
<b>TOTAL</b>	<b>0.000</b>	<b>10.641</b>	<b>10.973</b>	<b>0.000</b>

## 4.10 Wildlife Movement Corridors

Providing functional habitat connectivity between natural areas is essential to sustaining healthy wildlife populations and allowing for the continued dispersal of native plant and animal species. The regional movement and migration of wildlife species has been substantially altered due to habitat fragmentation over the past century. This fragmentation is most commonly caused by development of open areas, which can result in large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas. Roads associated with development, although narrow, may result in barriers to smaller or less mobile wildlife species. Habitat fragmentation results in isolated islands of habitat, which affects wildlife behavior, foraging activity, reproductive patterns, immigration and emigration or dispersal capabilities, and survivability. Wildlife corridors can consist of a sequence of stepping-stones across the landscape (i.e., discontinuous areas of habitat such as isolated wetlands), continuous lineal strips of vegetation and habitat (e.g., riparian strips and ridge lines), or they may be parts of larger habitat areas selected for their known or likely importance to local wildlife.

The Project Site is expected to be utilized by wildlife for foraging, breeding, and local movement both locally and between surrounding open space areas. However, the Project Site does not represent a wildlife movement corridor because it is bound to the east, west and south by residential, commercial, and industrial land uses. The Project Site does not occur within a Special Linkage Area (RCIP Conservation Report Summary Generator 2016). The Project Site is not within or proximate to any other designated wildlife linkages. However, as noted in Section 4.7 above, the Project Site may support special status bat maternity roosts in abandoned buildings and trees onsite and therefore may function as a nursery site.

The Project Site is bordered by urban development and entirely surrounded by major roads with fast moving traffic including El Rivino Road, Agua Mansa Road, Hall Road, Market Road, and Rubidoux Boulevard. Extensive development surrounding the Project Site limits opportunities for wildlife movement via undeveloped properties to the southwest of the Project Site. Regional wildlife movement to and from the Project Site is further restricted by vicinity freeways and additional major roads that would discourage wildlife movement to or through the Project Site. Specifically, the I-15 freeway, approximately 2.5 miles east of the Project Site impedes wildlife movement, as does I-10, which is approximately 2.4 miles north of the Project Site boundary. Furthermore, the Project Site is fully encompassed by an 8-foot-tall chain link fence that would allow for only the occasional movement of wildlife through holes in the fence and would preclude the regular passage of larger mammals (i.e., mountain lion or coyote).

Although limited wildlife movement may infrequently occur between the Project Site and undeveloped space to the southeast, such movement is very unlikely to result in eventual movement of wildlife populations to intact, preserved habitats; therefore, the site does not act as a true wildlife corridor, movement pathway, or linkage of note between larger habitat areas for terrestrial wildlife. Undeveloped portions of the Project Site support disturbed vegetation communities that may accommodate localized wildlife movement. The home range and average dispersal of many of these wildlife species may be entirely constrained within the Project Site and immediate vicinity. Populations of animals such as insects, reptiles, small mammals, and a few bird species may find all their resource requirements within or proximate to the Project Site. Only occasional individuals may venture beyond the Project Site as they expand their home range and/or disperse from their parental range.

In summary, the Project Site likely supports habitat for resident and transient species locally and would not facilitate regional wildlife movement. Regional movement through the Project Site is substantively

constrained by unfavorable topography, proximate urban development, major roads and freeways, and marginal habitat. The Project Site is not within an MSHCP Core Area or Linkage and is not otherwise identified as a regionally important wildlife movement corridor but may function as a native wildlife nursery site if maternity bat roosts are present.

## 5.0 ENVIRONMENTAL IMPACTS

This section describes potential impacts to sensitive biological resources, including special-status plants, animals, and aquatic resources that may occur on the Project Site. Each impact discussion includes mitigation measures that would be implemented during the project to avoid, minimize, and/or compensate for direct and indirect impacts to each resource. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the species that occupy those habitats. Direct impacts also include the destruction of individual plants or wildlife, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability. Indirect impacts pertain to those impacts that have the potential to occur along urban/wildland interface of the proposed project. Indirect impacts involve the effects of increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on site. Indirect impacts may be associated with the subsequent day-to-day activities associated with project build-out, such as increased traffic use, permanent concrete barrier walls or chain-link fences, exotic ornamental plantings that provide a local source of seed, etc., which may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in a slow replacement of native plants by exotics, and changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Potential significant adverse impacts, either directly or through habitat modifications, to any special-status plant, animal, or habitat that could occur as a result of Project development, are discussed below. With the implementation of all mitigation measures, impacts to biological resources are anticipated to be reduced to less than significant pursuant to CEQA and the Western Riverside MSHCP.

### 5.1 Thresholds of Significance

This section describes potential direct and indirect impacts to biological resources that may occur as a result of the construction of the proposed project. Development of the project as proposed would result in conversion of some of the natural habitat into structures and improved surfaces including roads and parking lots. These proposed improvements would have impacts on the area’s biological resources, which may constitute significant adverse effects. CEQA Guidelines provide guidance in evaluating project impacts and determining whether impacts may be significant. CEQA defines “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” In accordance with Appendix G of the CEQA Guidelines, a project could have a significant environmental impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means;



- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

## 5.2 Impacts and Mitigation Measures

Consistent with the requirements of CEQA and local regulations, the significance of potential impacts is evaluated through the application of the significance criteria described above. The objective of the biological resources analysis is to identify potential adverse effects and/or significant impacts on biological resources. Avoidance is often the preferred approach for the management of biological resources; however, it is not always possible to completely avoid impacts. Mitigation measures to avoid or minimize impacts are identified, as appropriate, including procedures to be followed if significant biological resources are identified prior to the initiation of construction.

Construction of the business and industrial parks includes development of approximately 222 acres of land, of which approximately 120 acres is currently developed as a cement processing facility. The construction of this project will involve a number of potential impacts to sensitive biological resources. The following discussion provides an overview of the direct and indirect impacts to special status species, sensitive habitats, and other resources present at the site that are expected to occur with the development footprint.

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFW or USFWS;*

### Special Status Plants

The Project Site occurs within a predetermined Survey Area for the following Narrow Endemic Plant Species: San Diego ambrosia, Brand's star phacelia, and San Miguel savory. Despite the lack of suitable habitat for Narrow Endemic species, focused protocol plant surveys were conducted for 25 additional special-status species that were initially determined to have a low potential to be present. No Narrow Endemic Plant Species or any other special status species were detected on the Project Site; therefore, no impacts to special status plants (including Narrow Endemic Species) are anticipated as a result of Project implementation, and no further mitigation is required.

### Special Status Wildlife Species

Impact BIO-1 (and respective mitigation measure, MM BIO-1) focuses on special status wildlife species that are covered under the MSHCP, and action(s) that have to be taken to mitigate any project impacts. Impact BIO-2 through BIO-8 (and respective mitigation measures MM BIO-2 through MM BIO-8) focuses on sensitive biological resources that do not have adequate coverage by the MSHCP and require further surveys and/or compensatory mitigation to reduce potential project-related impacts to a less-than-significant level.

### Impact BIO-1: MSHCP Covered Species

USFWS and CDFW have issued permits pursuant to the federal Endangered Species Act and the California Natural Community Conservation Planning Act authorizing “take” of certain species in accordance with the terms and conditions of the Acts, the Western Riverside County MSHCP, and the associated Implementing Agreement (Riverside County 2003). Under the Acts, certain activities will be authorized to “take” some species, provided all applicable terms and conditions of the MSHCP and the associated Implementing Agreement are met. As a project condition of approval, the Applicant will be required to pay a Development Mitigation Fee and comply with all requirements of the MSHCP. Implementation of Mitigation Measure BIO-1a is intended to provide full mitigation under CEQA to mitigate direct, indirect, and cumulative impacts to adequately conserved species that are covered by the MSHCP. The MSHCP Species Conservation plan identifies species-specific requirements for habitat conservation (see MSHCP Table 9-2-Species Conservation Summary) consistent with Objective 1B. Within Criteria Cells 21, 22 and 55 of SU3 (Agua Mansa), Objective 1B does not require DSF focused surveys, but does require that 50 acres of DSF reserve lands shall be acquired within the geographic areas identified in Objective 1A and according to the reserve configuration guidance included in Objective 1A. Per Objective 1A “These locations include one in the northwestern corner of the Plan Area near Hamner Avenue and SR-60 (Mira Loma), one in the Jurupa Hills, and one in the Agua Mansa Industrial Center. If conservation is not feasible in these areas, those acres may be conserved in other locations within the MSHCP Plan Area and outside the Criteria Area or within San Bernardino County, subject to approval by the Wildlife Agencies and provided the other location has long-term conservation value for the species.” The areas to be conserved under the MSHCP must either include suitable dispersal habitat and/or movement habitat and interconnecting linkages within Core Areas or be contiguous to areas that have already been conserved within and outside the Plan Area, including locations outside the Criteria Area and within San Bernardino County. Conservation value is measured (assessed) by such factors as occupation by DSF and opportunities for connectivity to other areas conserved for the species.

The current rough step analysis prepared by the RCA confirms that, to date, only 7 acres of DSF habitat have been conserved in support of species conservation goals. An additional 43 acres of DSF habitat are needed to complete the entire 50-acre DSF mitigation requirement for Criteria Cells 21, 22 and 55 of SU3 and to keep the MSHCP in rough step.

As mentioned in Section 4, focused assessments of potential habitat for DSF at the Project Site have been prepared, including a Soils Investigation (soil mapping and gradation analysis) and a Habitat Suitability Assessment. The focused assessments demonstrate that DSF is not present at the Project Site because the Project Site does not contain eolian sands and therefore cannot support DSF. The Project Site also does not provide dispersal habitat or serve as an interconnected habitat linkage to conservation areas for DSF, because there are no eolian sands on the Project Site and there is no DSF habitat within close proximity to the Project Site. At the JPR Project Introduction meeting on September 21, 2017, the Applicant, RCA, and USFWS discussed the above-mentioned focused assessments, as well as the planned environmental remediation work at the Project Site.

The Project is required to comply with all applicable NCH-3/Agua Mansa mitigation requirements, as defined by the MSHCP. However, due to the lack of onsite DSF habitat and the need to remediate hexavalent chromium and other heavy metals at the Project Site, on-site mitigation is not feasible and off-site mitigation

is the only feasible alternative. On March 15, 2018, the Applicant met with the RCA, the USFWS, and the City of Jurupa Valley to discuss potential mitigation scenarios.

The City of Jurupa Valley, RCA, and the USFWS have agreed to cooperate with the Applicant in acquiring suitable DSF habitat to fulfill the NCH-3 mitigation requirement in a manner that is consistent with the mitigation goals for DSF habitat conservation under the MSHCP and keeps the MSHCP in rough step.

The MSHCP does not require mitigation to occur solely within Riverside County and the area of allowed mitigation extends into San Bernardino County. The USFWS and the RCA have identified approximately 472 acres of land located within San Bernardino County which are feasible mitigation sites. The land includes both contiguous and non-contiguous DSF habitat within existing DSF mitigation banks, public land, and private land. The RCA, the USFWS, and the Applicant are evaluating these sites for acquisition as DSF mitigation. The Applicant, the City of Jurupa Valley, the RCA, and the USFWS are also working collaboratively to develop DSF mitigation options to complete the NCH-3 mitigation requirements and maintain the MSHCP in rough step. Mitigation may include, but is not limited to, the funding or purchase of suitable DSF habitat or purchasing conservation credits from an existing DSF mitigation bank.

Final DSF mitigation will be determined through the JPR process (separate, but related procedure outlined in MM BIO-12), by agreement among the Applicant, RCA, and USFWS, with the goal of providing the Applicant several mitigation options that comply and are consistent with the MSHCP goals for DSF habitat conservation. The final mitigation options and the rights and obligations of the parties will be the subject of a cooperative agreement among the Applicant, the RCA, and the USFWS. Compliance with the MSHCP will be demonstrated through the implementation of mitigation Option 1 or Option 2 as described in MM BIO-1b and will be the subject of the JPR process and cooperative agreement.

Implementation of one of the options outlined in MM BIO-1b would make the project consistent with goals set forth in the MSHCP and therefore reduce impacts to DSF as a result of project implementation to less than significant levels.

#### Impact BIO-2: Burrowing Owl

The Project Site occurs within a predetermined Survey Area for BUOW. Although this species was not observed during protocol level surveys, suitable habitat was determined to be present onsite in several vegetation communities (Figure 5). There is potential for BUOW to colonize the site prior to construction. Therefore, in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (Riverside County 2006), a 30-day preconstruction survey will be conducted prior to the initiation of construction to ensure protection for this species (Mitigation Measure BIO-2). This survey is required and is proposed to be conducted by MIG biologists prior to construction to determine the presence/absence of this species on the Project Site. If it is determined that BUOW have colonized the Project Site prior to the initiation of construction, the project proponent shall immediately inform RCA and the Wildlife Agencies and will be required to prepare a Burrowing Owl Protection and Relocation Plan for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to BUOW to a less-than-significant level.

### Impact BIO-3: Least Bell's Vireo

Suitable habitat for LBV is present onsite in southern willow scrub vegetation communities in the 71-acre Open Space area in the southern portion of the Project Site (Figure 5). This species was detected on the Project Site during focused protocol surveys for this species during the spring of 2017 by permitted biologist Tom Ryan. The Open Space area may be partially developed and utilized as a recreation park, contingent upon successful remediation of the Project Site in the future. Potential direct and indirect impacts may result from installation of fencing and trails and the operation of recreational and cultural facilities that are planned within the Open Space area. Future planned activities in the Open Space/Recreation Park may include but are not limited to: active and passive recreation (walking and hiking paths) and construction of ecological and cultural interpretive facilities. To avoid potential adverse impacts that may result in substantial interference with normal LBV breeding, feeding, or sheltering behavior, the City of Jurupa Valley (City) or Open Space/Recreation Park developer and industrial business park developer will be responsible for implementing impact avoidance measures (Mitigation Measure BIO-3).

### Impact BIO-4: Silvery Legless Lizard

The Project Site contains suitable habitat for reptile species silvery legless lizard (*Anniella pulchra pulchra*), a California Species of Special Concern (CSC) that is not covered by the MSHCP (Riverside County 2003). Potential direct impacts to this species as a result of Project construction would involve individuals being injured or killed due to collision or crushing by heavy equipment during grading and excavation (e.g., bulldozers, trucks, etc.), entombment in burrows, and destruction of eggs as a result of soil compaction during grading activities. Post project indirect impacts include the risk of road kill on access roads and parking lots, the spread of noxious weeds, and disturbance due to increased human presence. To reduce these impacts to a less-than-significant level, the Applicant would be required to implement Mitigation Measure BIO-4.

### Impact BIO-5: American Badger

Although evidence of American badgers (observations, tracks, and active and potential den sites) were not observed on the Project Site, suitable habitat is present. There is potential for the American badger to occupy the site prior to construction of the business and industrial parks. Project development has the potential to directly impact American badger individuals and alter or destroy occupied habitat. In addition, potential indirect impacts to badger would be similar to those described for silvery legless lizard. However, with implementation of Mitigation Measure BIO-5, this impact would be less than significant.

### Impact BIO-6: Southern Grasshopper Mouse

The southern grasshopper mouse could occur within 81.34 acres of marginal non-native grassland and brittlebush scrub habitat within the proposed Project Site; therefore, development of the proposed industrial business park would eliminate potentially suitable habitat for these species. Direct impacts to southern grasshopper mouse include mechanical crushing by vehicles and construction equipment, trampling, dust, and loss of habitat. Construction disturbance can also result in the flushing of this species from refugia which increases the predation risk for small rodents. Indirect impacts include alteration of soils, such as compaction that could preclude burrowing, and the spread of exotic weeds. In addition, potential indirect impacts to southern grasshopper mouse would be similar to those described for American badger and silvery legless lizard. However, with implementation of Mitigation Measure BIO-6, these impacts will not substantially reduce

regional populations below self-sustaining levels or restrict the range of these species and will not result in a significant impact.

#### Impact BIO-7: Special Status Bat Species

A variety of bat species are known within the Jurupa Valley Area. Three of these bat species, including western mastiff bat, western yellow bat, and pocketed free-tailed bat, are California Species of Special Concern that are not covered under the MSHCP. The abandoned cement processing buildings and structures and the grove of mature eucalyptus trees within the industrial business park development area provide suitable roost locations for bats. While not all of these structures would be expected to provide the conditions appropriate for maternity colonies or hibernaculum, they may nonetheless support bat use (i.e., day roosts).

As part of the commercial business park development, building demolition and removal of 1,700 of 1,900 trees could result in the direct loss of roosting and habitat, mortality of individuals during construction activities, and permanent loss of foraging habitat due to construction of permanent structures (e.g., buildings or access roads), and temporary disturbance during construction including noise, air turbulence, dust, and ground vibration. Bats that forage near the ground could be subject to crushing or disturbance by vehicles driving at dusk, dawn, or during the night. The construction and use of access roads could also disturb bats.

Because the vertical cliff areas surrounding the quarry are inaccessible to humans, indirect effects to roosts or maternal colonies are not expected to occur in the vicinity of the Open Space area planned for potential City park development. However, direct impacts to these species would be considered significant. To reduce effects of the Proposed Project on special status bat species, the Applicant shall implement Mitigation Measures BIO-7a (Pre-construction Maternity colony or hibernaculum surveys for sensitive bats), BIO-7b (Substitute roosting habitat), and BIO-7c (Exclusion of bats prior to eviction from roosts). Implementation of these measures would reduce impacts to sensitive bats to a less-than-significant level.

#### Impact BIO-8: Nesting Songbirds and Raptors

Onsite vegetation communities represent suitable nesting habitat for common, as well as special-status resident and migratory songbird and raptor species with the potential to occur within the Project Site. This includes potentially suitable habitat for rufous crowned sparrow, a California Species of Concern. Construction activities associated with the development of the industrial business park, including tree removal, other vegetation clearing, and noise and vibration have a potential to result in direct (i.e., death or physical harm) and indirect (i.e., nest abandonment) significant impacts to nesting birds. The loss of an active nest of common or special-status bird species would be considered a violation of the CDFW Code, Section 3503, 3503.5, 3513, and the federal MBTA. Therefore, the loss of any bird species nest is considered a potentially significant impact. Implementation of Mitigation Measure BIO-8 would reduce this impact to less than significant.

The proposed Project would result in the loss of foraging habitat for raptors, including special-status raptors that have the potential to occur onsite; however, the permanent loss of potentially suitable foraging habitat, including brittlebush scrub (56.67 acres), non-native grassland (24.36 acres), and disturbed lands (53.70 acres) is not expected to affect the long-term conservation of raptors within the region significantly. Additionally, the Western Riverside County MSHCP will result in the conservation of significant regional blocks of suitable habitat providing for the persistence of core populations into the future. Impacts to raptor habitat associated with the proposed project would be less than significant.

## Mitigation Measures

### BIO-1 MSHCP Covered Species

#### BIO-1a: Payment of Local Development Mitigation Fee for Conservation of Covered Species

In Volume 3 of the MSHCP (Implementing Agreement), a Local Development Mitigation Fee (Section 4) has been established to assist in providing revenue to acquire and preserve vegetation communities and natural areas within Riverside County which are known to support threatened, endangered or key sensitive populations of plant and wildlife species. Acquisition and preservation of these vegetation communities and natural areas will also benefit common species. The Applicant will pay the Local Development Mitigation Fee for the development of proposed Project, estimated to be \$1,500,000, in coordination with the City and RCA.

#### BIO-1b: DSF Mitigation Options

Final DSF mitigation will be determined through the JPR process, by agreement among the Applicant, RCA and USFWS, with the goal of providing the Applicant mitigation options that comply and are consistent with the MSHCP goals for DSF habitat conservation. The final mitigation options, and the rights and obligations of the parties, will be the subject of a cooperative agreement among the Applicant, the RCA and the USFWS. Following are the mitigation options which will be the subject of the JPR process and cooperative agreement:

**Option 1 – Acquire DSF Habitat.** The RCA would purchase 50 acres of DSF mitigation credits from the existing Colton Dunes Conservation Bank (“DSF Habitat”). RCA and the Applicant entered into the agreement for funding and acquisition dated September 10, 2018, that establishes the terms and conditions for Applicant to contribute toward the purchase price of the DSF mitigation credits. Payment by the Applicant to the RCA to acquire the DSF mitigation credits would represent the Project’s compliance and consistency with the MSHCP goals for DSF habitat conservation.

**Option 2 – Acquire 43 Acres of DSF Habitat that is Acceptable to the RCA and Wildlife Agencies.** Only if the agreement to purchase the Colton Dunes Conservation Bank DSF mitigation credits cannot be consummated, the Applicant may acquire 43 acres of DSF habitat within Riverside County or San Bernardino County subject to approval by the RCA and Wildlife Agencies and provided the property has long-term conservation value for the species and will be managed in perpetuity.

#### BIO-2: Conduct Burrowing Owl Preconstruction Survey

No more than 30 days prior to the commencement of initial ground disturbing activities for each phase of the development of the industrial business park, the Applicant shall implement focused pre-construction surveys for BUOW. Surveys shall be conducted prior to the initiation of ground disturbance (including, but not limited to: mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), and be conducted by a CDFW-approved biologist. In conformance with Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (2006) and California Burrowing Owl Consortium’s 1993 protocols (which are recommended by the CDFW), the surveys will consist of a minimum of three



site visits. A brief biological technical report will be prepared and submitted to the City and RCA, which describes the results of the preconstruction survey. If it is determined that BUOW have colonized the Project Site prior to the initiation of construction, the project proponent shall immediately inform RCA and the Wildlife Agencies and will be required to prepare a Burrowing Owl Protection and Relocation Plan for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance.

If BUOW is determined to be present in areas proposed for ground disturbance, the following avoidance measures will be implemented:

- Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Owls present onsite after February 1 will be assumed to be nesting unless evidence indicates otherwise. This nest protection buffer will be maintained until August 31, or based upon monitoring evidence, until the young owls are foraging independently, or the nest is no longer active.

Unless otherwise authorized by CDFW and/or the RCA, a 250-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting BUOW during the nesting season. This protected area will remain in effect until August 31 or based upon monitoring evidence, until the young owls are foraging independently. For BUOW present during the non-breeding season (generally September 1 to January 31), a 150-ft buffer zone will be maintained around the occupied burrow(s).

- If there is any possibility that owls will be injured or killed as a result of construction activities, the birds may be passively relocated during the non-breeding season in coordination with the City, RCA and CDFW. Relocation of owls will be performed by a qualified biologist using one-way doors, which should be installed in all burrows within the impact area and left in place for at least two nights. These one-way doors will then be removed and the burrows backfilled immediately prior to the initiation of grading. To avoid the potential for owls evicted from a burrow to occupy other burrows within the impact area, one-way doors will be placed in all potentially suitable burrows within the impact area when eviction occurs.
- Preparation of a Burrowing Owl Protection and Relocation Plan may be required if active and/or passive relocation is necessary. The relocation plan will outline the basic process and provides options for avoidance and mitigation. The relocation plan will be approved by the RCA and Wildlife Agencies prior to implementation.

BIO-3: Implement Construction and Operational Impact Avoidance and Minimization Measures for Least Bell's Vireo

Nesting LBV Impact Avoidance During Construction of Industrial Business Park and Open Space/Recreation Park Facilities

Least Bell's vireo (LBV) has been observed in the southern portion of the Project Site around Crestmore Lake and the Commercial Quarry (refer to Figure 8a). To avoid direct and indirect impacts to LBV prior to and during remedial activities followed by construction of the industrial business park and Open Space/Recreation Park facilities, the Applicant will be responsible for implementing the following:

- Construction activities shall be scheduled (to the extent feasible) to commence outside of the LBV nesting season (approximately mid-March to September, depending on when the birds arrive from and depart to wintering areas or whenever nesting birds are present as determined by a biological monitor with demonstrated LBV experience);
- Any construction activities that commence during the LBV nesting season shall require preconstruction surveys for nesting LBV. Such surveys shall be conducted by a qualified biologist that is experienced with accurately identifying LBV and possesses knowledge of the species' biology and life history within three days prior to construction. The survey area shall consist of the impact area and a 500-foot buffer around Crestmore Lake and the commercial quarry.
- If any active LBV nests are detected within the survey area, a nest protection buffer of 500 feet around the nest shall be delineated, flagged, and avoided until the nesting cycle is complete. The avoidance buffer may be modified, and/or other recommendations proposed as determined appropriate by a full-time biological monitor to minimize impacts. Supporting documentation shall be prepared and submitted to the RCA and Wildlife Agencies prior to construction to outline any proposed LBV monitoring activities. In addition, the following measures shall be taken to minimize potential indirect impacts to active LBV nests:
  - Prior to construction, a training program shall be developed and implemented by the Project biologist to inform all construction personnel workers about the federal and state listed LBV, the location of suitable habitat in relation to the work area, and the importance of complying with species avoidance and impact minimization measures pursuant to FESA and CESA.
  - Construction contractors shall stage equipment in areas that will create the greatest distance (minimum of 500 feet) between construction noise sources and LBV suitable habitat.
  - All construction work within 500 feet of LBV habitat shall occur during daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City. Construction contractors shall install properly operating and maintained mufflers on all construction equipment, fixed or mobile, to reduce construction equipment noise. Mufflers shall be installed consistent with manufacturers' standards. Construction contractors shall orient stationary construction equipment so that emitted noise is directed away from any occupied LBV habitat.
  - Any construction-related activities that could occur within 500 feet of an active LBV nest will require daily noise monitoring. A qualified biologist who possesses experience monitoring LBV nesting behavior will establish a baseline of hourly ambient noise levels by collecting measurements at several noise monitoring stations using an RCA-

approved sound monitoring device (e.g., Mastech MS6700 digital sound level meter or equivalent). Noise monitoring stations will be located 1) adjacent to construction areas within 500 feet of suitable LBV habitat and 2) along the edge of suitable LBV habitat area where access is feasible. The exact location and number of noise monitoring stations will be determined by the qualified biologist. Baseline noise measurements will be collected at the established monitoring stations prior to the nesting season and prior to construction (if feasible). On a daily basis during construction, the qualified biologist shall collect hourly noise measurements at the monitoring stations using the RCA-approved noise monitoring device. If the qualified biologist determines that nesting activities are being disturbed at any time during construction, the noise level that triggered the disturbance to nesting LBV will be recorded and identified as the "Disturbance Threshold" and the qualified biologist will issue a stop work order to the contractor immediately. All construction activities within the 500-foot nest protection buffer will cease until the noise levels can be reduced below the Disturbance Threshold that triggered the stop work order. In order to lower construction noise below the Disturbance Threshold, the qualified biologist shall direct the contractor to make operational changes, utilize technology to reduce construction noise such as mufflers, and/or install a barrier to alleviate noise levels during the breeding season. Installation of noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be completed prior to the LBV nesting season and would be done in coordination with the RCA, CDFW, and USFWS.

- Daily noise monitoring will continue following implementation of the corrective actions to ensure that the Disturbance Threshold for nesting LBV is not exceeded and that no further disturbance to nesting LBV occurs. The results of daily noise monitoring measurements will be tabulated and a summary of all monitoring activities and corrective actions will be recorded in daily monitoring reports. These reports will be compiled and submitted to the RCA and Wildlife Agencies on a monthly basis.
- If after all corrective actions are implemented the monitoring biologist determines that the normal expected breeding behavior of birds is still being affected, work shall again be ceased, and the RCA and Wildlife Agencies shall be contacted to discuss the appropriate course of action.

#### LBV Habitat Protection During Operation of the Open Space/Recreation Park

- To avoid direct and indirect impacts to LBV habitat during operation of the Open Space/Recreation Park, the applicant will be responsible for implementing the following avoidance and minimization measures as included in project plans to safeguard long-term conservation and sustainability of the species:
  - The Open Space/Recreation Park will be fenced and will restrict all access, except for areas that are required to undergo remediation, or construction pursuant to approved plans. Prior to public access into the Open Space/Recreation Park and the City's issuance of a Certificate of Occupancy or equivalent documentation for the completion of construction of the Open Space/Recreation Park portion of the Project, the applicant shall execute and record a deed restriction, conservation easement or other instrument ("Instrument") in a form acceptable to the Riverside Conservation Authority that provides for the permanent protection of the occupied LBV habitat as depicted on Figure 9

(Proposed Fencing and Protection Areas) in the GBRA dated October 22, 2018 (“Restricted Area”). The Instrument shall clearly indicate that the Restricted Area shall be preserved and no development within the Restricted Area is allowed, other than environmental remediation and routine property maintenance activities may occur under the guidance of a qualified biologist.

- A fencing plan that uses both geographic site features and fencing will be implemented to prevent access to the protected LBV habitat within the proposed “Restricted Area/LBV Protection Area”. A draft fence alignment and proposed feasible buffer are illustrated on Figure 9 of this GBRA. The location of both the Restricted Area, proposed fencing and any buffer areas are subject to review and approval by the resource agencies party to the MSHCP as well as the DTSC.

**BIO-4: Complete Focused Pre-Construction Surveys for Silvery Legless Lizard and Implement Impact Avoidance and Minimization Measures.**

Within 30 days prior to ground-disturbing activities associated with project construction initiated during any time of the year, the Applicant shall retain a qualified biologist to conduct focused silvery legless lizard surveys within areas of suitable habitat, to be determined by the biologist. The qualified biologist will be familiar with legless lizard ecology and survey methods and will have approval from CDFW to relocate this species. The scope of the survey shall be determined by the qualified biologist in consultation with CDFW and shall be sufficient to determine presence or absence in the areas of disturbance. If the focused survey results are negative, a letter report shall be submitted to the City, RCA, and CDFW, and no further action shall be required.

If the silvery legless lizard is found during the preconstruction surveys in the proposed work areas during any phase of the project, the following steps shall be taken:

- Silvery legless lizards shall be captured by hand by the qualified biologist and relocated to nearby suitable protected habitat at a pre-approved location outside of the Project Site. This may include areas in the proposed Open Space area or on public lands in the vicinity if approved by the landholding agency.
- Construction monitoring shall be required for all new ground-breaking activities located within silvery legless lizard habitat. Construction monitors shall capture and relocate lizards as specified above.
- A letter report shall be submitted to the City, RCA, and CDFW within 30 days of legless lizard relocation, or as directed by CDFW. The report will document trapping and relocation methods and results and identify any mortality that occurred during the relocation event. This report shall be submitted to the City, RCA, and CDFW no more than 14 days following the last day of each phase of project construction.

**BIO-5: Complete Focused Pre-Construction Surveys for American Badger Surveys and Implement Impact Avoidance and Minimization Measures.**

- a. No more than 30 days prior to the commencement of industrial business park construction activities, the Applicant shall retain a CDFW-approved biologist to conduct pre-construction surveys for American badger within suitable habitat on the Project Site in brittlebush scrub, eucalyptus grove,

and southern willow scrub where friable soils are present. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot protection buffer established. The extent of buffers shall be flagged in the field utilizing a method highly visible by construction crews. Buffers may be modified with the concurrence of CDFW and/or RCA. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction to monitor for adequate protection of all identified dens and to ensure that all flagging is kept in good working order.

- b. If avoidance of a non-maternity den (impacts to maternity dens is not allowed) is not feasible, badgers shall be relocated by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4 inches at a time) before or after the rearing season (15 February through 1 July). Any passive relocation of badgers shall occur only after consultation with the CDFW and the biological monitor.
- Prior to the final CDFW or RCA inspection or occupancy, whichever comes first, a written report documenting all badger related activities (e.g. den flagging, monitoring, badger removal, etc.) shall be provided to the City, RCA, and CDFW.

**BIO-6: Complete Focused Pre-Construction Surveys for Southern Grasshopper Mouse and Implement Impact Avoidance and Minimization Measures**

The Applicant shall retain a CDFW-approved biologist to conduct preconstruction surveys for southern grasshopper mouse prior to initiation of ground disturbing activities (i.e., vegetation removal, grubbing, and grading) during any time of the year. Surveys shall focus on all areas of suitable burrow habitat within non-native grassland and brittlebush scrub communities. If this species is observed within the Project Site during preconstruction surveys, it will be relocated, at the approval of the City, RCA, and CDFW, to an approved site with suitable habitat for this species. Surveys and relocation of southern grasshopper mouse may occur prior to construction; however, focused surveys must occur within 30 days prior to construction to ensure that no special-status wildlife is present within the Project Site during construction. Survey and relocation methods shall be approved by CDFW prior to commencement of grading.

**BIO-7: Conduct Pre-Construction Maternity Colony and Hibernaculum Surveys For Special Status Bat Species and Provide Alternate Roost Habitat**

- a. **Bat Surveys.** No more than 30 days prior to the removal of trees or other structures at any time of year, the Applicant shall retain a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle bats and to conduct pre-construction surveys for sensitive bat species within 50 feet of project activities prior to construction. Additionally, maternity colony surveys shall be conducted during the maternity season (March 1 to July 31). If no active roosts are found, then no further action is required. If the biologist detects the presence of active maternity roost or hibernacula (i.e., a non-maternity roost), then MM BIO-7b, 7c, and 7d will be implemented, as appropriate.

- b. **Survey for Alternative Maternity Roosting Habitat.** If active maternity roosts or hibernacula are found in a structure or tree scheduled for demolition/removal, the biologist shall survey (through the use of radio telemetry or other CDFW-approved methods) for nearby alternative maternity colony sites. If the biologist determines in consultation with the CDFW and/or RCA that there are alternative roost sites used by the maternity colony and young are not present, then bat eviction procedures as outlined in MM BIO-7d would apply. However, if there are no alternative roost sites used by the maternity colony nearby, MM BIO-7c (providing substitute maternity roost nearby) would be required. If active maternity roosts are absent, but a hibernaculum is present, then MM BIO-7c is not necessary, but MM BIO-7d is required.
- c. **Provide Substitute Maternity Roosting Habitat.** If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the Project Site no less than three months prior to the eviction of the colony. Eviction procedures are outlined in MM BIO-7d. Alternative roost sites will be constructed in accordance with the specific bat's requirements in coordination with CDFW. By making the roosting habitat available prior to eviction (MM BIO-7d), the colony will have a better chance of finding and using the roost. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The CDFW shall also be notified of any hibernacula or active nurseries within the construction zone.

If construction of alternative roost sites is required, the biologist shall provide a written report, documenting the required coordination with CDFW as well as the location of roost sites. This report will be provided to the City, RCA, and CDFW.

- d. **Eviction of Non-Breeding and Breeding Bats.** If non-breeding bat hibernacula are found in structures or trees scheduled to be removed, the individuals shall be safely evicted, under the direction of a qualified biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal).

If an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after July 31) using the exclusion techniques described above.



## BIO-8: Pre-Construction Surveys for Nesting and Breeding Songbirds and Raptors

- a. To avoid impacts to nesting birds associated with development of the industrial business park, construction activities and construction noise should occur outside the avian nesting season (prior to February 1 or after September 1). If construction and construction noise occur within the avian nesting season (during the period from February 1 to September 1), all suitable habitats within 100 feet of the Project Site shall be thoroughly surveyed for the presence of nests by a qualified biologist no more than five (5) days before commencement of any vegetation removal. If it is determined that the Project Site is occupied by nesting birds, Mitigation Measure BIO-8b shall apply.
  - b. If pre-construction nesting bird surveys result in the location of active nests, no grading, vegetation removal, or heavy equipment activity shall take place within 300 feet of non-raptor nests and 500 feet of raptor nests, or as determined by a qualified biologist. Protective measures (e.g., sampling) shall be required to ensure compliance with the MBTA and California Fish and Game Code requirements. The qualified biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts occur. A report of the findings, prepared by a qualified biologist, shall be submitted to the City and RCA prior to construction-related activities that have the potential to disturb any active nests during the nesting season.
- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS;*

## Impact BIO-9: CDFW-Regulated Habitat

CDFW-regulated lake (Feature G, 6.304 acres) and riparian habitat (Feature A through F and O, 4.669 acres; refer to Table 5 and Figures 6a-6e) are present within the industrial business park development and Open Space areas on the Project Site.

CDFW regulates not only the discharge of dredged or fill material into lakes and streambeds, but also all activities that alter these water bodies and their associated riparian vegetation habitats. The industrial business park development will permanently impact 0.332 acres of CDFW-regulated riparian habitat in a mining pit located in the southeast corner of the Project Site (refer to Feature K depicted on Figure 7e and in Figure 8a). No other CDFW-regulated lake, streambed, or riparian habitat will be impacted by the proposed project. Implementation of Mitigation Measure BIO-9, which requires the Applicant to obtain a Lake and Streambed Alteration Agreement from CDFW and consult with regulatory agencies, would reduce impacts to riparian habitat (Feature K) to less than significant.

## **Mitigation Measure**

### BIO-9: Obtain Lake and Streambed Alteration Agreement and Compensate for Impacts to Riparian Habitat

The project proponent shall obtain a Lake and Streambed Alteration Agreement (LSAA) from CDFW to authorize permanent impacts to 0.332 acres of riparian habitat prior to remediation of the mining pit and subsequent construction of the industrial business park. The project proponent will be responsible for complying with all permit conditions. Such conditions may include but are not limited to implementation of best management practices (i.e., erosion and sediment control measures) and seasonal work restrictions, as

appropriate. In addition, CDFW is expected to require compensatory mitigation for impacts to jurisdictional riparian habitat. The amount of required compensatory habitat acreage will be based on the functions and values of impacted features. Habitat compensation will be provided at an up to 3:1 ratio of created to filled or disturbed in-kind habitat (unless reduced by the regulatory agencies through the permit process upon a finding by the regulatory agencies that a different ratio is sufficient to mitigate impacts to jurisdictional riparian habitat), pending coordination with CDFW. Impacts to jurisdictional features shall not occur until LSAA is received from CDFW, or correspondence is received from CDFW indicating no permit is needed.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*

#### Impact BIO-10: Section 404 Waters of the U.S.

As discussed in Section 4.8, MIG conducted a jurisdictional delineation within and immediately adjacent to the Project Site. The results of the delineation are considered preliminary until submitted to, and verified by, the USACE. Impacts to waters of the U.S. through direct removal, filling, hydrological interruption, and/or other means would represent a significant impact. The implementation of Mitigation Measure BIO-10, requiring the Applicant to submit the jurisdictional delineation report to the USACE for verification and Clean Water Act jurisdiction and obtain permits, if required by the USACE and RWQCB, would reduce potential impacts to less than significant.

### **Mitigation Measure**

#### **BIO-10: Obtain USACE and RWQCB Permits for Impacts to Waters of the U.S. and Waters of the State**

Any alterations of, or discharges into, waters of the United States, including Section 404 wetlands must be in conformance with the Sections 404 and 401 of the CWA via certification and permitting prior to any grading or construction that may impact jurisdictional area(s), as applicable. Activities that usually involve a regulated discharge of dredged or fill materials include (but are not limited to) grading, placing of riprap for erosion control, pouring concrete, laying sod, preparing soil for planting (e.g., turning soil over, adding soil amendments), stockpiling excavated material, mechanized removal of vegetation, and driving of piles for certain types of structures. If avoidance of federally protected wetlands is not feasible, securing 404 and 401 permits under the Clean Water Act and compliance with the federal and state “no net loss of wetlands” policy will be required in accordance with USACE and RWQCB regulations.

Prior to initiation of ground disturbance activities within waters of the U.S. or Waters of the State, the applicant shall submit a jurisdictional delineation of waters of the U.S. to the USACE in order to request a formal verification of the limits of their jurisdiction and to identify potential impacts to waters of the U.S. If the USACE considers the Project Site to be outside of their regulatory jurisdiction, then no further action is required. If the USACE determines that jurisdictional waters of the U.S. will be impacted by the project, the appropriate CWA Section 404 permit shall be acquired by the Applicant for the construction of the proposed project. In addition, the Applicant will be required to submit to the Santa Ana RWQCB either (a) a Section 401 Water Quality Certification (if the USACE asserts regulatory jurisdiction), or (b) a Notice of Intent for their General Permit R6T-2003-0004 for minor impact projects (in the event that the USACE does not have jurisdiction). These permits will be

acquired, and all conditions will be agreed to prior to project construction. The Project Applicant will be responsible for complying with all conditions outlined in the applicable USACE and RWQCB permits.

The Applicant may be required to prepare a separate mitigation plan to be submitted with the agency permit applications, including an agreed-upon replacement ratio of wetlands with the USACE and RWQCB. Compensatory mitigation may include in-kind restoration at an up to 3:1 ratio of created to filled wetlands, pending coordination with the applicable resource agencies (unless it is determined by the regulatory agencies, through the permit process, that a different ratio is sufficient to mitigate impacts to jurisdictional waters of the U.S.). The amount of compensatory wetland acreage will be based on the functions and values of impacted features. As an alternative to wetland restoration, equivalent mitigation credits may be purchased at a mitigation bank or the Applicant may enter into an in-lieu fee agreement to offset impacts to jurisdictional features. Purchase of mitigation credits shall be subject to approval and verification by USACE and RWQCB. A qualified biologist shall prepare a mitigation plan that provides detailed information about the bank or in-lieu fee agreement, and how this approach will result in no net loss of wetlands. The plan shall be prepared pursuant to, and through consultation with, the USACE and RWQCB. As conditions of permit approval, impact minimization measures may also be required and could include implementation of best management practices (i.e., erosion and sediment control measures) and seasonal work restrictions, as appropriate.

Impacts to jurisdictional features shall not occur until the permits are received from the appropriate regulatory agencies, or correspondence is received from the agencies indicating that a permit is not required.

d) *Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of a native wildlife nursery site;*

No MSHCP wildlife habitat linkages or movement corridors exist within the Project Site, nor would Project implementation substantively and adversely affect any offsite designated wildlife habitat linkage or movement corridor. While the Project Site provides undeveloped habitats areas for wildlife, it is surrounded by a tall chain-link fence that limits regular wildlife movement in and out of the fenced property. Regional movement of common wildlife species through the Project Site is also limited due to surrounding urbanization, major roads and highways, and topographical barriers (limestone quarry pit and borrow areas) such that the remnant habitats on site have become a virtual island from established movement corridors or habitat linkages. In addition, the site provides limited habitat conducive to wildlife movement such as ridgelines or riparian corridors. Although limited movement of common species may infrequently occur between the Project Site and surrounding Open Space areas, such movement is very unlikely to result in eventual movement of wildlife populations to intact, preserved habitats; therefore, the site does not act as a true wildlife corridor, movement pathway, or linkage of note between larger habitat areas for terrestrial wildlife. As a result, construction and operation of the Project is not expected to substantially affect breeding productivity or population viability of any common species or cause a change in species diversity locally or regionally. Accordingly, the proposed Project would result in a less-than-significant impact to the movement of any native resident or migratory wildlife species.

However, the Project Site has the potential to support special status bat maternity roosts in abandoned buildings and trees onsite, and therefore may function as a native wildlife nursery site. Mitigation Measure BIO-7 requires the Applicant to conduct pre-construction maternity colony and hibernaculum surveys for special status bat species and provide alternate roost habitat if roosts are found during the survey. With implementation of this mitigation measure, this potential impact would be less than significant.

The Project Site supports vegetation that provide suitable nesting habitat for native resident and migratory bird species. Project construction activities including tree removal, other vegetation clearing, and noise and vibration have a potential to result in direct (i.e., death or physical harm) and indirect (i.e., nest abandonment) significant impacts to nesting birds. To reduce this potential impact to less than significant levels, Mitigation Measure BIO-8 requires the applicant to either 1) construct the project outside of the nesting season or 2) conduct preconstruction surveys and implement nest avoidance measures if construction occurs during the nesting season. The Project Site also supports foraging habitat for native resident and migratory birds including raptors; however, the permanent loss of potentially suitable foraging habitat onsite is not expected to significantly affect the long-term conservation of these species within the region. Additionally, the intent of MSHCP implementation is to conserve significant regional blocks of suitable nesting and foraging habitat for native resident and migratory bird species, providing for the persistence of core populations. Therefore, impacts to foraging habitat for native resident and migratory bird species would be less than significant.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;*

The Project was evaluated for consistency with all applicable local and regional policies, including the 2017 City of Jurupa Valley General Plan Conservation and Open Space Element.

The Project would not conflict with 2017 City of Jurupa Valley General Plan Conservation and Open Space Element Policies COS 1.1 through COS 1.6 pertaining to habitat conservation because the site does not support the habitats or special status species addressed in the policies, and/or it is not situated on the Santa Ana River. Through implementation of Mitigation Measures BIO-9, BIO-10, and BIO-13 pertaining to MSHCP compliance, regulatory permitting and compensatory mitigation for impacts to riparian areas and other aquatic features, the Project is consistent with Policy COS.1.7, which states “Conserve riparian areas, including river basin, creeks, streams, vernal springs, seeps and other natural water features.”

Removal of 1,604 trees as a result of project development has the potential to conflict with 2017 City of Jurupa Valley General Plan Policies COS 1.2 (Protection of Significant Trees) and COS 1.3 (Other Significant Vegetation). This would be a potentially significant impact if the trees planned for removal on the Project Site are determined to meet the City’s criteria for “Significant Trees.” This potential impact is addressed in more detail below.

#### Impact BIO-11: Tree Removal

A tree survey was completed by MIG biologists in June 2017 (Appendix C) and an analysis of tree removal impacts was conducted by MIG in August 2017 (Appendix K). The impact analysis considered whether trees planned for removal are native or non-native and evaluated the overall condition of trees to be removed. Project development would result in the loss of 31 native trees and 1,573 non-native trees planted around existing buildings and parking lots of the decommissioned cement plant. The tree impact analysis concluded

that over 60 percent of trees planned for removal are currently in overall poor condition (i.e., dead or dying potential hazard trees) and over 99 percent are non-native, ornamental plantings. Although most trees identified onsite are not native to the region and were planted for landscaping purposes, removal of an estimated 1,604 trees would constitute a potentially significant environmental impact under CEQA due to the ecosystem services that these trees currently provide. Eucalyptus groves in the northern portion of the Project Site (Figure 5) provide suitable habitat for nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code and potential roosting sites for special status bat species protected by CDFW; several inactive raptor and songbird nests were observed during the tree survey. Direct impacts to nesting birds and roosting bats as a result of tree removal would be less than significant with implementation of Mitigation Measures BIO-7 (Conduct Pre-Construction Maternity Colony and Hibernaculum Surveys for Special Status Bat Species and Provide Alternate Roost Habitat) and BIO-8 (Avoidance of Nesting and Breeding Raptors and Songbirds). However, the loss of potential habitat for these protected wildlife species and the removal of native and/or Significant Trees or Significant Vegetation pursuant to the 2017 City of Jurupa Valley General Plan Policies is considered a potentially significant impact. Implementation of Mitigation Measure BIO-11 (Tree Replacement Planting Program) would reduce potential indirect impacts resulting from tree removal to less than significant.

## **Mitigation Measure**

### **BIO-11: Tree Replacement Planting Program**

A tree replacement planting program shall be implemented to mitigate for the loss of 1,604 trees as a result of the business park development. A project-specific tree mitigation ratio (number of planted trees to be removed) was developed to offset this impact and is based upon whether trees planned for removal are native or non-native and their overall health and condition. A detailed methodology for determining tree mitigation requirements is included in the Tree Removal Impact Analysis and Mitigation Determination memorandum (Appendix K). To compensate for the loss of 31 native trees and 1,573 non-native trees, the Applicant will be required to plant a minimum of 61 native trees and 507 native or non-native trees. Trees will be selected that provide similar habitat functions and values to the trees planned for removal. Native replacement trees will be 1 to 5-gallon size, or as deemed appropriate by a qualified biologist. In addition to individual trees, several trees will be planted in groupings of 10 trees or more, subject to availability of space and where site conditions permit (i.e., topography and soils). These groupings will provide optimal structure and cover to support potential nesting birds and roosting bats. The identification of suitable replacement trees should be determined by a qualified biologist in coordination with an arborist, and/or landscape architect and will be subject to approval by the City's Planning Department. In accordance with MSHCP provisions, the replacement trees shall not include invasive, non-native species for the portions of the development that are adjacent to the Open Space area that contains sensitive habitats. Invasive plants that should be avoided are included in Section 6.1, Table 6-2 (Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area) of the MSHCP.

A Concept Landscape Plan for the proposed project is provided on Figure 5.1 of the Draft Agua Mansa Commerce Park Specific Plan (MIG Inc. 2017) that shows general planting areas. Replacement trees may be planted at entry points, common areas, adjacent to roadways, in between buildings, along the perimeters of parking lots, and within landscape screening/buffer areas. All replacement trees will be planted within the development area and buffer areas between the development area and the proposed Open Space area. Replacement tree stands will be mostly



concentrated within the development area north of the proposed Open Space and within buffer/screening areas along El Rivino Road.

Tree mitigation performance standards will be incorporated into the landscape plan to ensure the successful establishment and survivorship of replacement tree plantings. The landscape and planting plans will be developed in accordance with the City of Jurupa Valley's Ordinance Number 2015-17, Chapter 9.50 related to implementing the City's Water Efficient Landscape Design Requirements. The Applicant will be required to maintain the replacement trees on the Project Site for a period of no less than five (5) years from the date of planting and will replace any trees that die during that period; this exceeds the City's landscape maintenance requirement of one year, per Ordinance Number 2015-17.

f) *Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.*

All projects must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." A MSHCP Consistency Analysis (Appendix L) was conducted for the Project Site. Results and mitigation measures are summarized below.

Mitigation Measure 1a requires the payment of a Local Development Mitigation Fee for the conservation of covered species and Mitigation Measure 1b requires one of two options for the acquisition of DSF habitat. Mitigation Measure BIO-2 requires preconstruction BUOW surveys 30 days prior to the commencement of construction activities, since the Project Site was determined to be within a predetermined Survey Area for BUOW. Mitigation Measures BIO-3 and BIO-8 protect LBV and other covered bird species within and adjacent to the development area. The site does not support suitable habitat for Narrow Endemic plant species; therefore, no additional action is required to be consistent with the long-term goals of the MSHCP. No other additional survey needs or procedures apply to this Project Site since it is not located within predetermined Survey Areas for Criteria Area plant species, amphibian species, or mammal species.

Per RCA request for a vegetation community impact analysis to show conversion of vegetation communities and land cover types in the MSHCP Plan area, Table 7 quantifies these changes as a result of implementation of the proposed project, and Figure 8b shows the approximate area of permanent impacts.

**Table 7. Permanently Impacted Plant Communities and Land Cover Types**

<b>Plant Communities/Land Cover Type</b>	<b>Existing Area (acres)</b>	<b>Permanently Impacted Area (acres)</b>	<b>Remaining Non Impacted Area (acres)</b>
Developed	119.44	103.33	16.11
Disturbed	54.85	51.05	3.80
Brittlebush Scrub Alliance	56.91	17.35	39.56
Non-Native Grassland	25.25	17.67	7.58
Eucalyptus Grove	19.20	17.18	2.02



Rock Outcrop	7.79	0.26	7.53
Ornamental	8.14	4.13	4.01
Southern Willow Scrub	3.30	0.06	3.24
Cattail Alliance	1.53	0.41	1.12
Mulefat Stand	0.60	0.60	0.00
Open Water	6.30	0.00	6.30
<b>Total</b>	<b>302.12</b>	<b>212.04</b>	<b>91.27</b>

The Project Site is located within the Western Riverside MSHCP Jurupa Area Plan and contains three (3) Criteria Cells and one (1) Area Plan SU. Specifically, portions of the Project Site are located within Criteria Cells 21, 22, and 55 and SU3-Delhi Sands Area. Projects located within an MSHCP Criteria Cell are subject to a JPR analysis to determine whether all or part of the property is needed/suitable for inclusion in the MSHCP Conservation Area. Mitigation Measure BIO-12 (Prepare and Submit a JPR Application to the RCA) will be implemented to reduce impacts to areas within MSHCP Criteria Cells to less than significant levels.

#### Impact MSHCP BIO-12: Urban/Wildlands Interface

The Project Site does not occur within or adjacent to an MSHCP Linkage or Constrained Linkage. The Project Site does contain a small portion of Existing Core A and Proposed Non-Contiguous Habitat Blocks 1, 2, and 3 (refer to Appendix H, Exhibit 2). Project construction in proximity to the MSHCP Conservation Area has the potential to result in indirect effects to natural communities. Therefore, an Urban/Wildland Interface analysis pursuant to Section 6.1.4 of the MSHCP (Mitigation Measure BIO-13) is required for compliance with MSHCP requirements.

#### **Mitigation Measure**

##### **MM BIO-12: Prepare and Submit a JPR Application to the RCA**

The JPR application summarizes the biological surveys performed, unique biological features of the site, and how the Project Site parcels relate to the conservation criteria identified in the MSHCP. The JPR application also includes two mitigation options for DSF, only one of which needs to be selected for the completion of the JPR process. A joint discussion between the Applicant, RCA, and USFWS helped identify Options 1 and 2, both of which include the acquisition of DSF habitat. Collectively, these Options are known as MM BIO-1b. MM BIO-1b outlines detailed steps for compliance with the MSHCP. As mentioned in previously in MM BIO-1b, final DSF mitigation will be determined through the JPR process, by agreement among the Applicant, RCA, and USFWS, with the goal of providing the Applicant mitigation options that comply and are consistent with the MSHCP goals for DSF habitat conservation. The final mitigation options and the rights and obligations of the parties will be the subject of a cooperative agreement among the Applicant, the RCA, and the USFWS. Choosing between Option 1 and 2 described in MM BIO-1b will be the subject of the JPR process and cooperative agreement. The Project Developer will enter into a purchase agreement and provide a security deposit for the mitigation agreement up front. The Project Developer will then pay four additional installment payments for the next four consecutive years, completing all payments by year five.

## MM BIO-13: Implement all Urban/Wildlands Interface Guidelines

This section addresses the indirect effects associated with locating development in proximity to MSHCP Conservation Areas (Criteria Cell 55), including the Open Space area that currently supports occupied LBV habitat that will be preserved in perpetuity. Projects that are located immediately adjacent to a core area require project design features identified in the Urban/Wildlands Interface Guidelines (UWIG) presented in Section 6.1.4 of the MSHCP to minimize potentially significant impacts associated with the Development.. Project development will be consistent with all applicable MSHCP Urban/Wildlands Interface Guidelines and therefore will not result in significant indirect impacts or edge effects to an MSHCP Conservation Area. The following proposed UWIGs will be incorporated into the project design and implemented as Conditions of Approval for the project:

**Water Quality/Hydrology.** The project will comply with all applicable water quality regulations, including obtaining and complying with those conditions established in Waste Discharge Reports (WDRs) and NPDES permits. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared for the project as required by the State Water Resource Control Board. Temporary construction BMPs, as well as erosion control measures, would be put in place to reduce construction and post-construction siltation. The project will be designed to minimize off-site storm water runoff that has the potential indirectly affect LBV habitat within the adjacent Open Space area. The installation and proper maintenance of structural BMPs will ensure adequate long-term storage and treatment of water within the industrial business park development. All off-site drainage will be controlled by storm drain and flood control facilities and will not increase substantially beyond existing flow rates. Stormwater runoff will be captured by a combination of trench drains, storm drains, catch basins and drop inlets and pretreated prior to conveyance into existing storm drain systems and ground infiltration. Stormwater infiltration systems including detention basin basins and bioswales will be constructed to retain and treat stormwater onsite. The proposed Project would also be required to comply with the Low Impact Development (LID) standards.

**Toxics.** Storm water treatment systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm habitat for LBV in the preserved Open Space. Toxic sources within the Project Site would be limited to those commonly associated with residential, commercial, and mixed-use development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. To mitigate for the potential effects of these toxics, the project will incorporate structural BMPs, as required in association with compliance with WDRs and the NPDES permit system, in order to reduce the level of toxins introduced into the drainage system and the surrounding areas. Implementation of State and Federal Stormwater quality rules will ensure no significant impacts are anticipated.

**Lighting.** Night lighting associated with the proposed development that is adjacent to existing or proposed Conservation Areas would be directed away to reduce potential indirect impacts to wildlife species including LBV. No significant impacts are anticipated.

**Noise.** The project will be constructed to minimize the effects of noise on adjacent LBV habitat within the Open Space area pursuant to applicable rules, regulations and guidelines related to land use noise standards. Wildlife within the preserved Open Space area, including LBV, should not be subject to noise that would exceed residential noise standards, pursuant to MSHCP guidelines (Riverside County 2003). The Noise Impact Analysis prepared for the project (Lawson and Wolfe 2018) includes

a noise impact assessment to determine the noise exposure and the necessary noise mitigation measures for the proposed project.

According to the Noise Impact Analysis, background ambient noise levels adjacent to the Open Space area are dominated by transportation-related noise associated with the surrounding arterial transportation network and background industrial land use activities. This includes automobile and heavy truck activities on adjacent roadways near several noise level measurement locations. According to 24-hour existing noise level measurement results measured on Agua Mansa Road adjacent to the eastern boundary of occupied LBV habitat, the average hourly ambient noise levels were measured at 70.6 decibels (dB) during the daytime and 70.7 dB at nighttime.

Operational project-related noise sources are expected to include: roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playground, and trail activities). The Noise Impact Analysis describes noise level impacts associated with the expected typical operational activities within the industrial business park and recreation facilities in the Open Space Area. Based on the results of this analysis, operational noise levels associated with project development will be less than existing daytime and nighttime noise levels measured at all nearby sensitive receiver locations and are not expected to exceed 60.2 dB at any time. Therefore, operational noise levels are not expected to exceed ambient noise levels that LBV are currently exposed to within the Open Space area. In addition, there are existing geographic landforms between the proposed industrial business park development and Open Space recreation facilities that may attenuate anticipated post-project ambient noise levels identified in the Noise Impact Analysis.

**Invasive Species.** The landscape plans for the Project shall not include invasive, non-native species for the portions of the development areas adjacent to the Open Space area. Invasive plants that should be avoided are included in Section 6.1, Table 6-2 (Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area) of the MSHCP. The above measures would serve to minimize adverse project effects on conservation configurations and would minimize management challenges that can arise during development located adjacent to preserved LBV habitat areas. The project design and BMPs incorporated into the proposed project design will address and minimize edge effects associated with the Urban/Wildlands Interface.

**Fuels Management.** The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. The final project design will ensure that no fuel modification will extend into adjacent preserved Open Space lands and LBV habitat areas.

### 5.3 Cumulative Impacts to Biological Resources

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, may not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project. The key to making a determination of whether the proposed project may cause a cumulative impact, relates to whether its contribution to the related projects is cumulatively considerable. Examples of cumulative impacts include the loss of raptor foraging habitat, the loss of actual or potential

BUOW habitat, the loss of habitat for small mammals, impacts to jurisdictional waters, and impacts to wildlife movement.

Based on the existing and potential resources (and their expected roles) on the Project Site, in combination with the proposed avoidance and minimization measures for special status wildlife species, jurisdictional habitats, and MSHCP riparian/riverine resources, the Project does not have a cumulatively considerable contribution to a regional decline of these sensitive biological resources. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats. As stated in Section 5.1.1 of the MSHCP Final EIR/EIS, “implementation of the MSHCP and Covered Projects will not result in a cumulative adverse effect, either directly or through habitat modifications, on any of the Covered Species, including the 31 species that are currently listed as threatened or endangered and the one species that is currently proposed for listing. Implementation of the MSHCP will benefit the Covered Species by preserving their habitat in order to address their life cycle needs. Thus, based on the features of the Plan itself, impacts to Covered Species are mitigated below a level of significance.” As such, with the Project’s participation in the MSHCP, and with project-specific Mitigation Measures BIO-12 (Prepare and Submit a JPR Application to the RCA and wildlife agencies) and BIO-13 (Implement all Urban/Wildlands Interface Guidelines), cumulative impacts to biological resources as a result of Agua Mansa Commerce Park Specific Plan would be less than significant.

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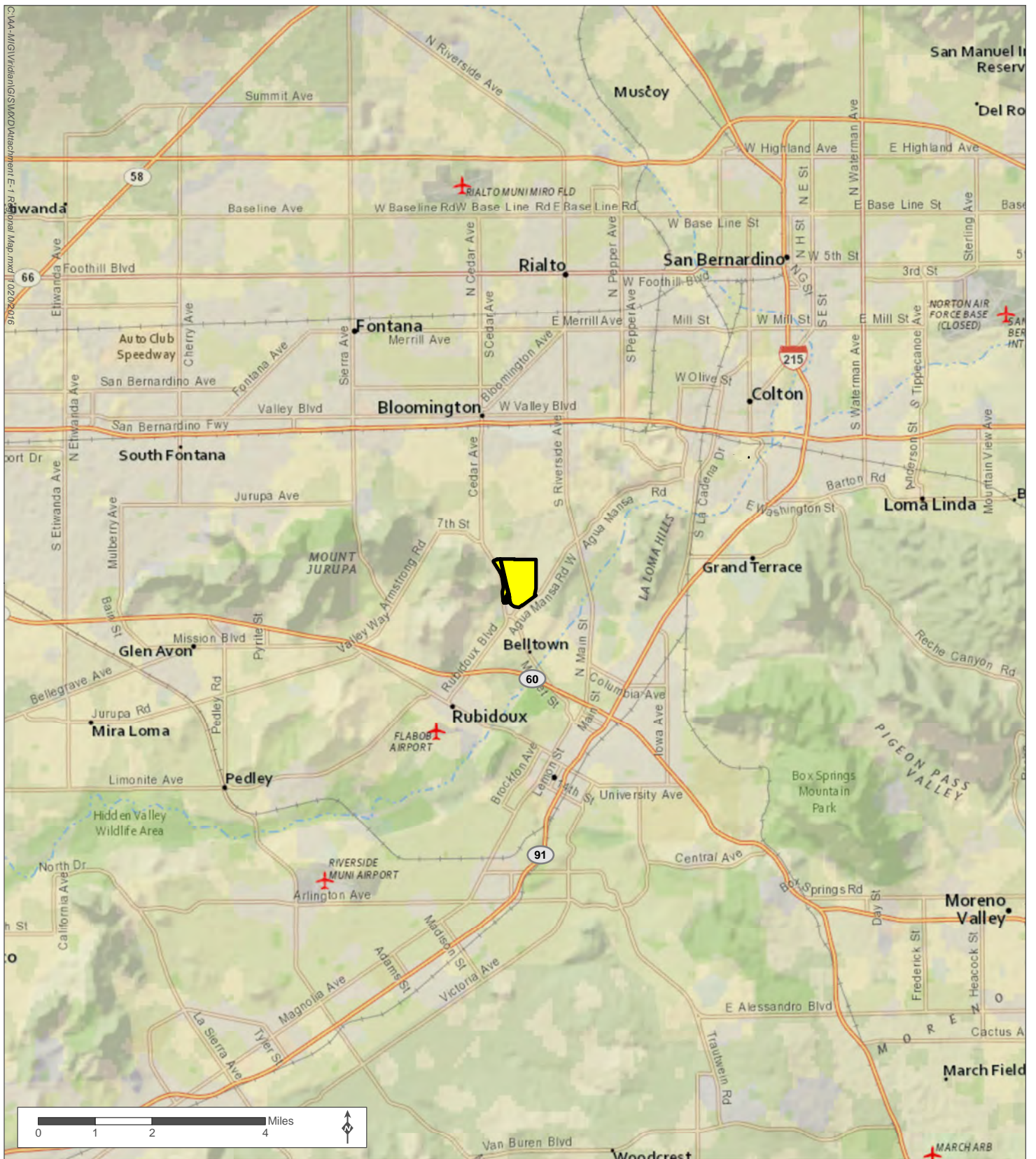
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## FIGURES



Source: MIG 2015, National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

 Project Site Boundary





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.




- |                                    |                                   |
|------------------------------------|-----------------------------------|
| Project Site Boundary (302.12 ac)* | Business Park with Retail Overlay |
| Assessor Parcel Numbers            | Industrial Park                   |
| MSHCP Criteria Cells               | Open Space                        |
|                                    | Railroad Right-of-Way             |

**Figure 2. MSHCP Conservation Areas**  
Agua Mansa Commerce Park, Jurupa Valley, CA



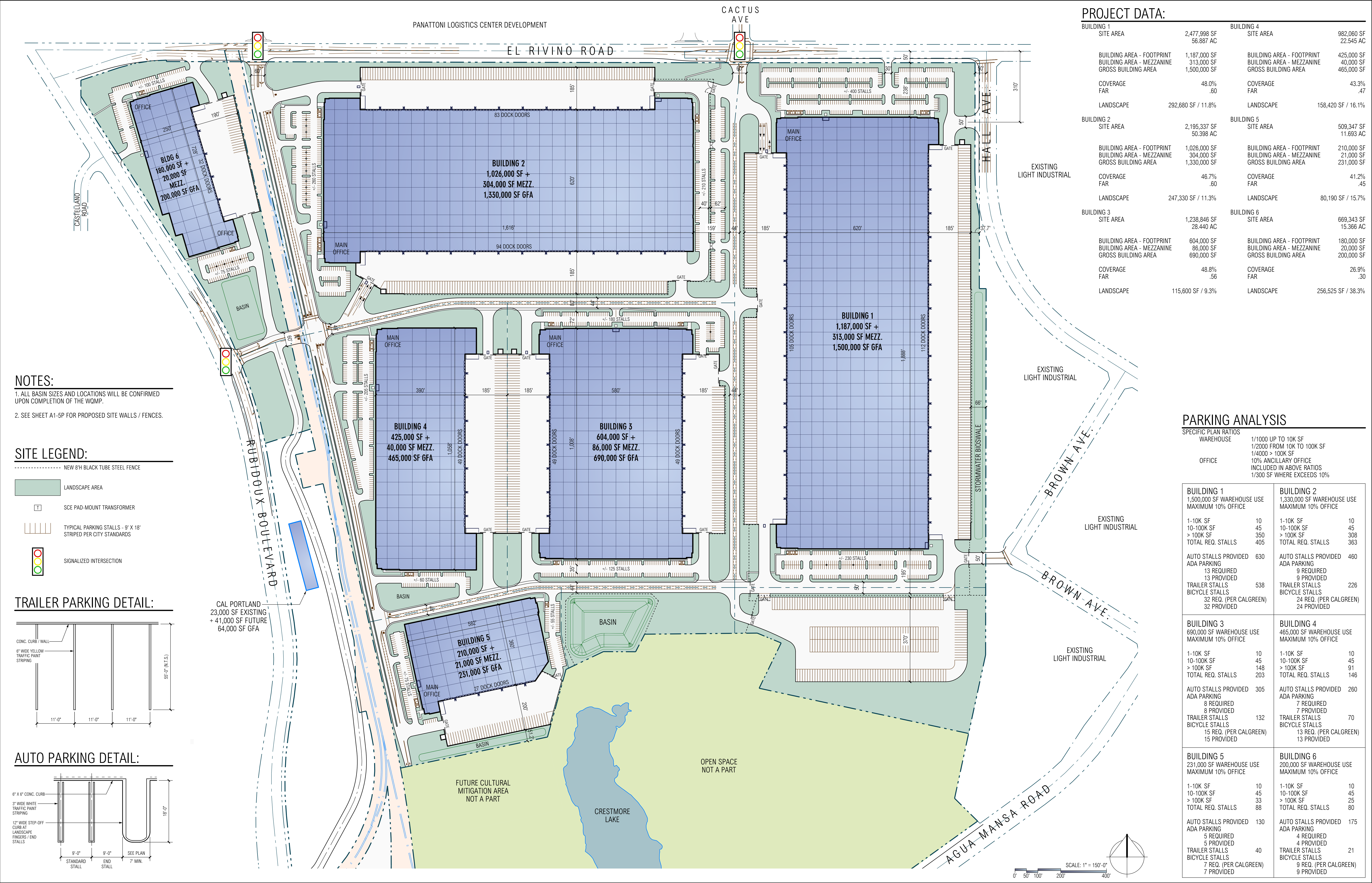


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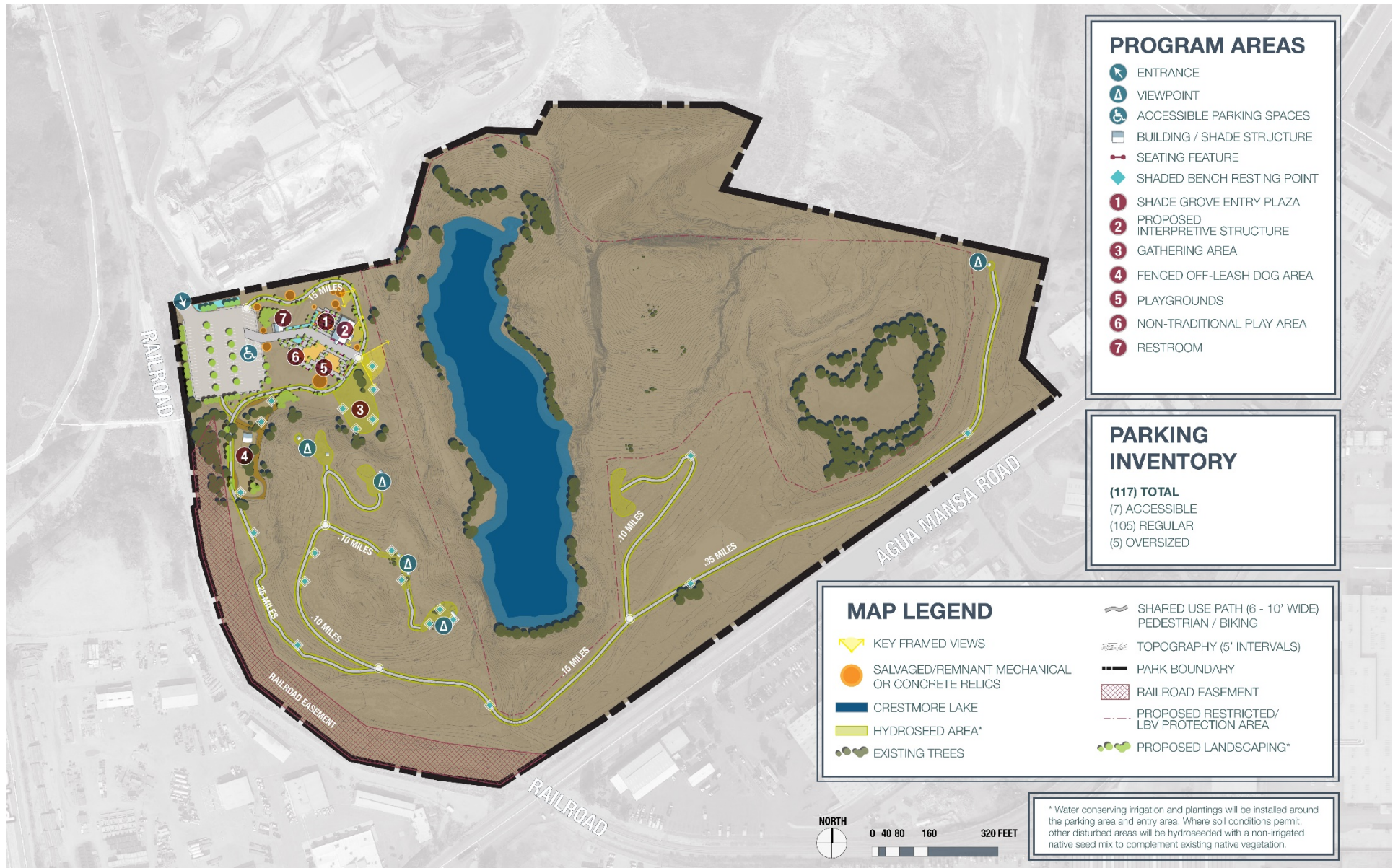
-  Project Site Boundary (302.12 ac)\*
-  Development Plan (Industrial and Open Space)
-  Topographic Contours

**Figure 3a.** Proposed Industrial Business Park and Open Space/Recreation Park Project Site Plan Overview









**Figure 3c. Proposed Open Space/Recreation Park Illustration**  
 Agua Mansa Commerce Park, Jurupa Valley, CA





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.












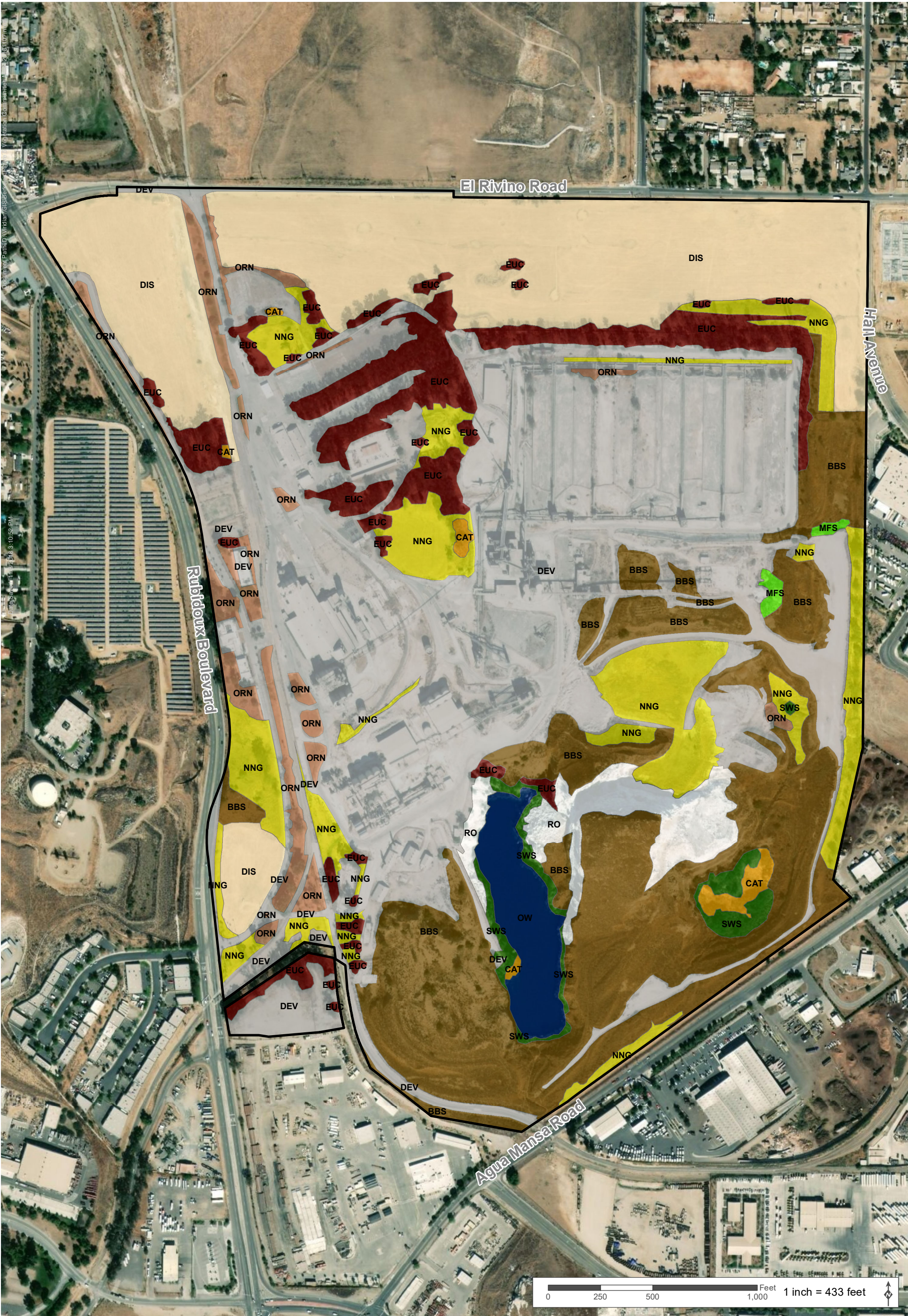
- |  |  |
|--|--|
|  Project Site Boundary (302.12 ac)*  |  Hanford coarse sandy loam, 8 to 15 percent slopes, eroded (HcD2): 4.72 acres |
|  Cieneba sandy loam, 15 to 50 percent slopes, eroded (ChF2): 4.81 acres    |  Pachappa fine sandy loam, 2 to 8 percent slopes, eroded (PaC2): 3.03 acres   |
|  Delhi fine sand, 2 to 15 percent slopes, wind-eroded (DaD2): 113.32 acres |  Quarries (QU): 85.58 acres   |
|  Delhi fine sand (Db): 74.95 acres   |  Ramona sandy loam, 0 to 2 percent slopes (RaA): 0.29 acres                   |
|  Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2): 12.42 acres  |  Ramona sandy loam, 2 to 5 percent slopes, eroded (RaB2): 1.15 acres          |
|  Hanford coarse sandy loam, 2 to 8 percent slopes (HcC): 1.88 acres        |  |

Figure 4. Soils Map

Agua Mansa Commerce Park, Jurupa Valley, CA





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

<b>Vegetation Communities</b>			<b>Project Site Boundary (302.12 ac)*</b>		
Developed (DEV): 119.45 ac	Non-Native Grassland (NNG): 24.67 ac	Open Water (OW): 6.30 ac			
Disturbed (DIS): 54.86 ac	Eucalyptus Grove (EUC): 19.20 ac	Southern Willow Scrub (SWS): 3.30 ac			
Brittlebush Scrub (BBS): 56.27 ac	Rock Outcrop (RO): 7.79 ac	Cattails (CAT): 1.53 ac			
	Ornamental (ORN): 8.15 ac	Mulefat Stand (MFS): 0.60 ac			

**Figure 5. Vegetation Communities Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA





PHOTOGRAPH 1 - The majority of the proposed business and industrial park development portion of the Project Site is characterized by eroding pavement, derelict industrial machinery, abandoned buildings, and other formerly developed areas.



PHOTOGRAPH 2 - The northern portions of the Project Site where the development is proposed are former agricultural fields that currently receive regular disturbance in the form of disking.

## Figure 6a Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*





PHOTOGRAPH 3 - Representative photograph of brittlebush scrub in disturbed upland habitats throughout the development area.



PHOTOGRAPH 4 - The development footprint is dominated by non-native grassland communities

## Figure 6b Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*





PHOTOGRAPH 5 - Eucalyptus groves contain a variety of non-native eucalyptus species that have been planted throughout the business/industrial park development portion of the Project Site. Dead trees are abundant throughout these communities.



PHOTOGRAPH 6 - The historic quarry operations onsite have resulted in many rock outcrops areas that range from lightly vegetated to unvegetated.

### **Figure 6c** Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*





PHOTOGRAPH 7 - Ornamental trees and shrubs have been planted along many of the roadways and existing buildings within the portion of the Project Site that is proposed for development of a business and industrial park.



PHOTOGRAPH 8 - Crestmore Lake, filling the former quarry, forms a relatively large body of open water both within the proposed Open Space portion of the Project Site.

**Figure 6d** Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*





PHOTOGRAPH 9 - Southern willow scrub is present primarily within depressions formed by the former quarry operations and around the fringe of Crestmore Lake in the proposed Open Space portion of the Project Site.



PHOTOGRAPH 10 - Cattails are found in the most mesic and low-lying areas of the Proposed Open Space portion of the Project Site.

## Figure 6e Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*





PHOTOGRAPH 11 - Mulefat scrub is present in limited areas associated with graded/disturbed borrow areas within the former cement quarry and proposed office park development within the northeastern portion of the Project Site.



PHOTOGRAPH 12 -California ground squirrels are fairly common and have produced a large number of suitable burrowing owl burrows onsite.

## **Figure 6f** Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*



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Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

**Figure 7a. Jurisdictional Delineation Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA



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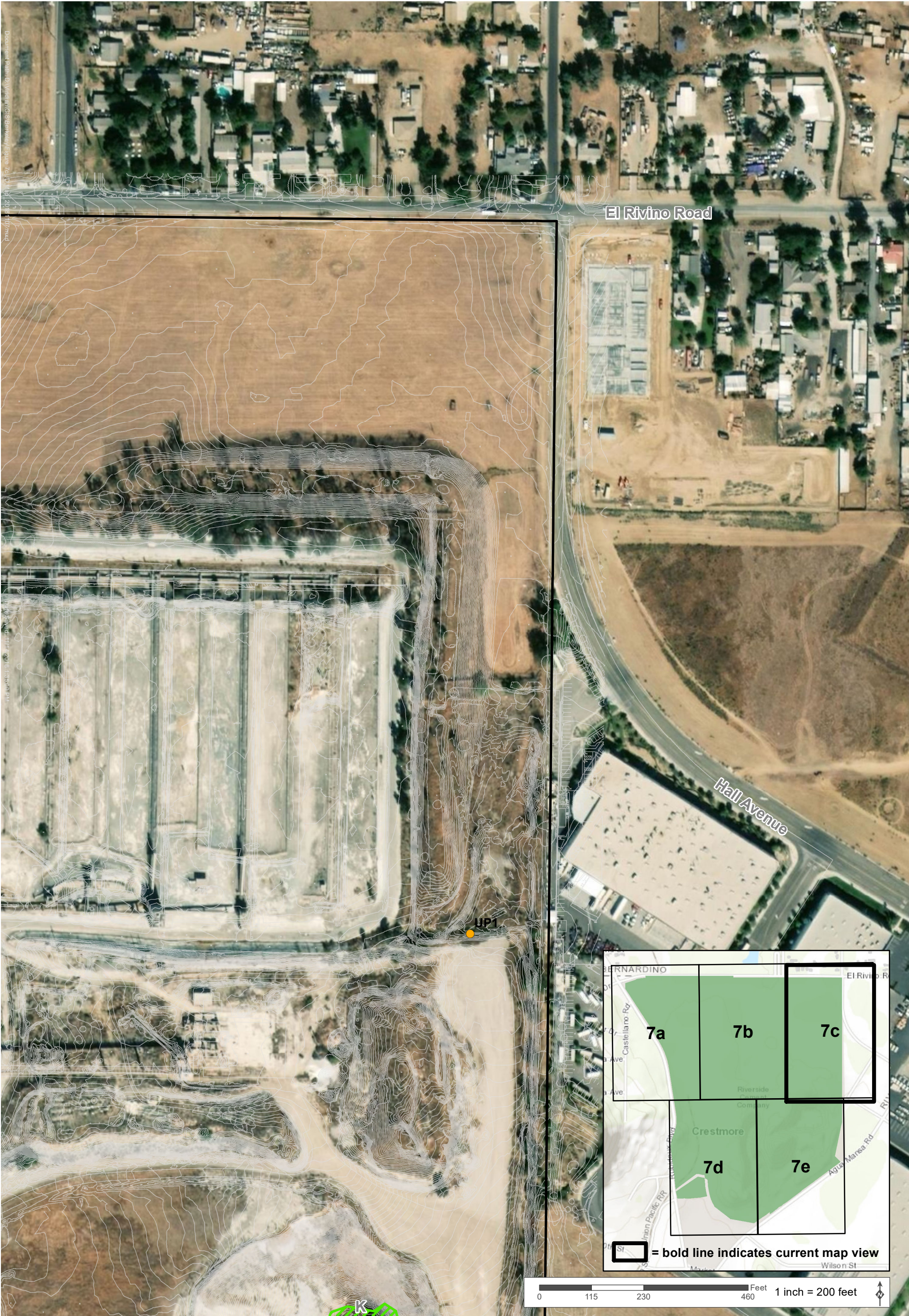


Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | <b>Isolated from Section 404 Jurisdiction (10.64 ac)</b>         |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | <b>Non-Jurisdictional Features (0.42 ac)</b>               | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

**Figure 7b. Jurisdictional Delineation Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

**Figure 7c. Jurisdictional Delineation Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA



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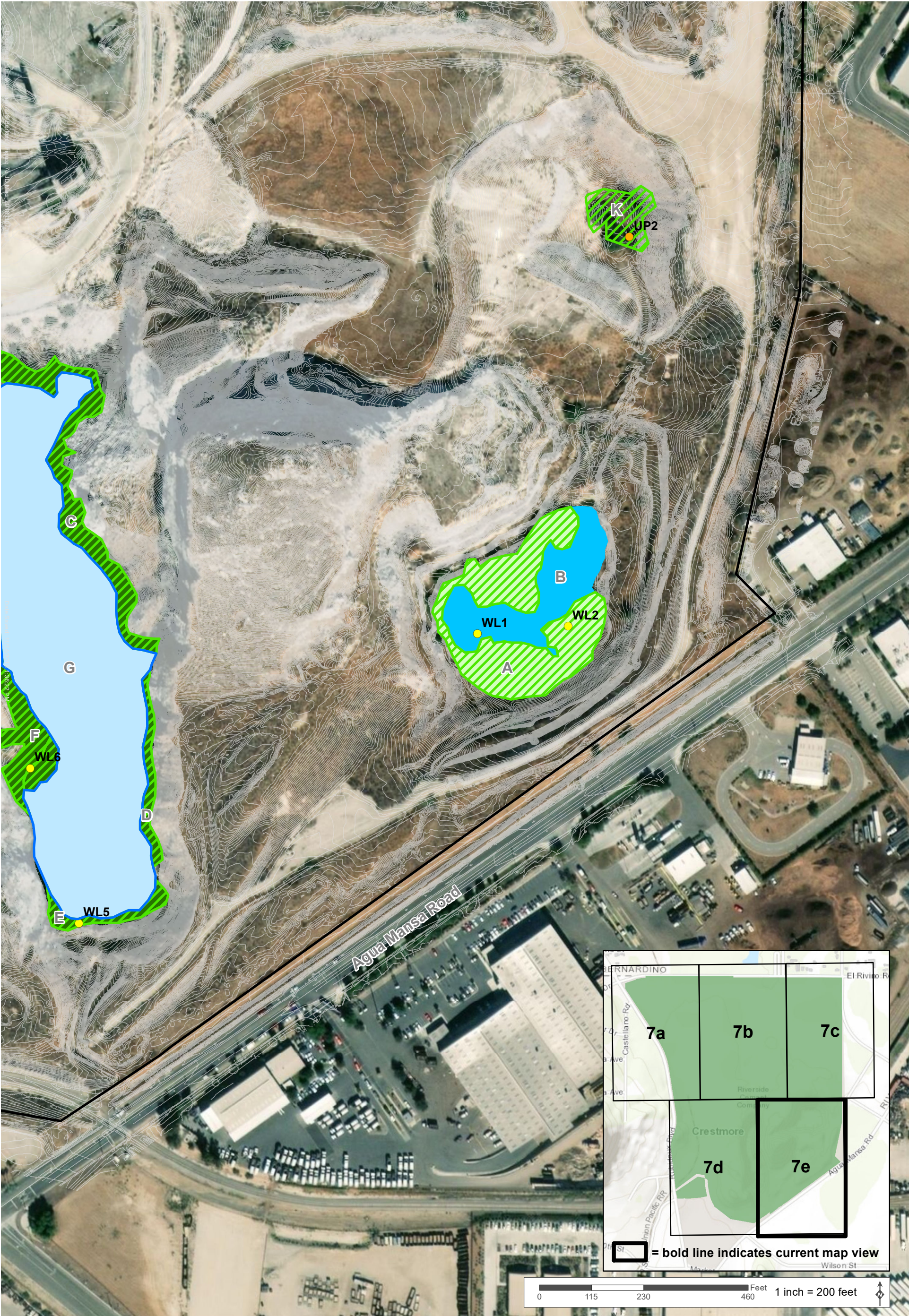


Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

**Figure 7d. Jurisdictional Delineation Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA



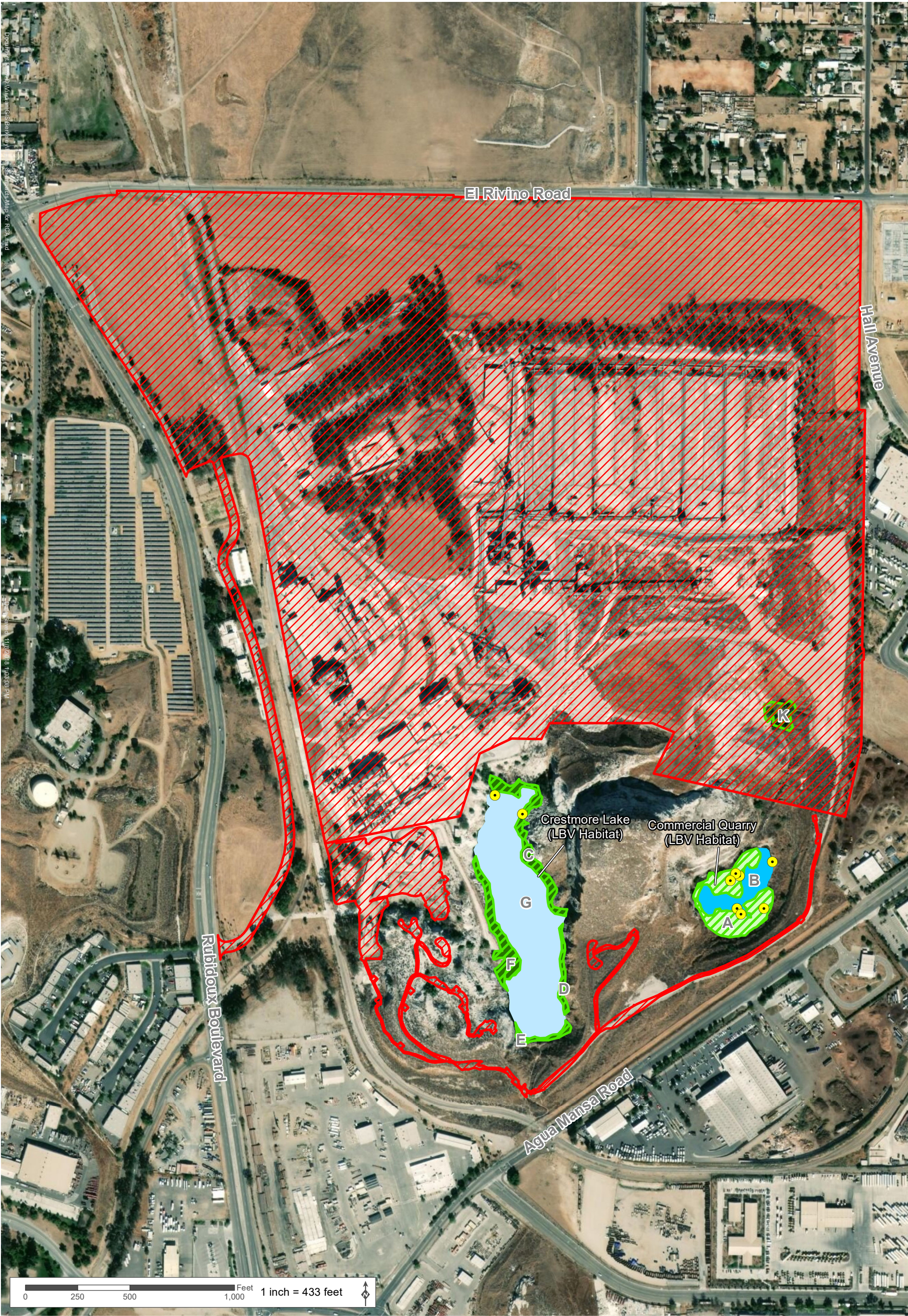


Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | <b>Isolated from Section 404 Jurisdiction (10.64 ac)</b>         |
| Ordinary High Water Mark (OHWM)    | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | Non-Jurisdictional Features (0.42 ac)                      | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    |  | Riparian Wetland (1.54 ac)                                       |

**Figure 7e. Jurisdictional Delineation Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA





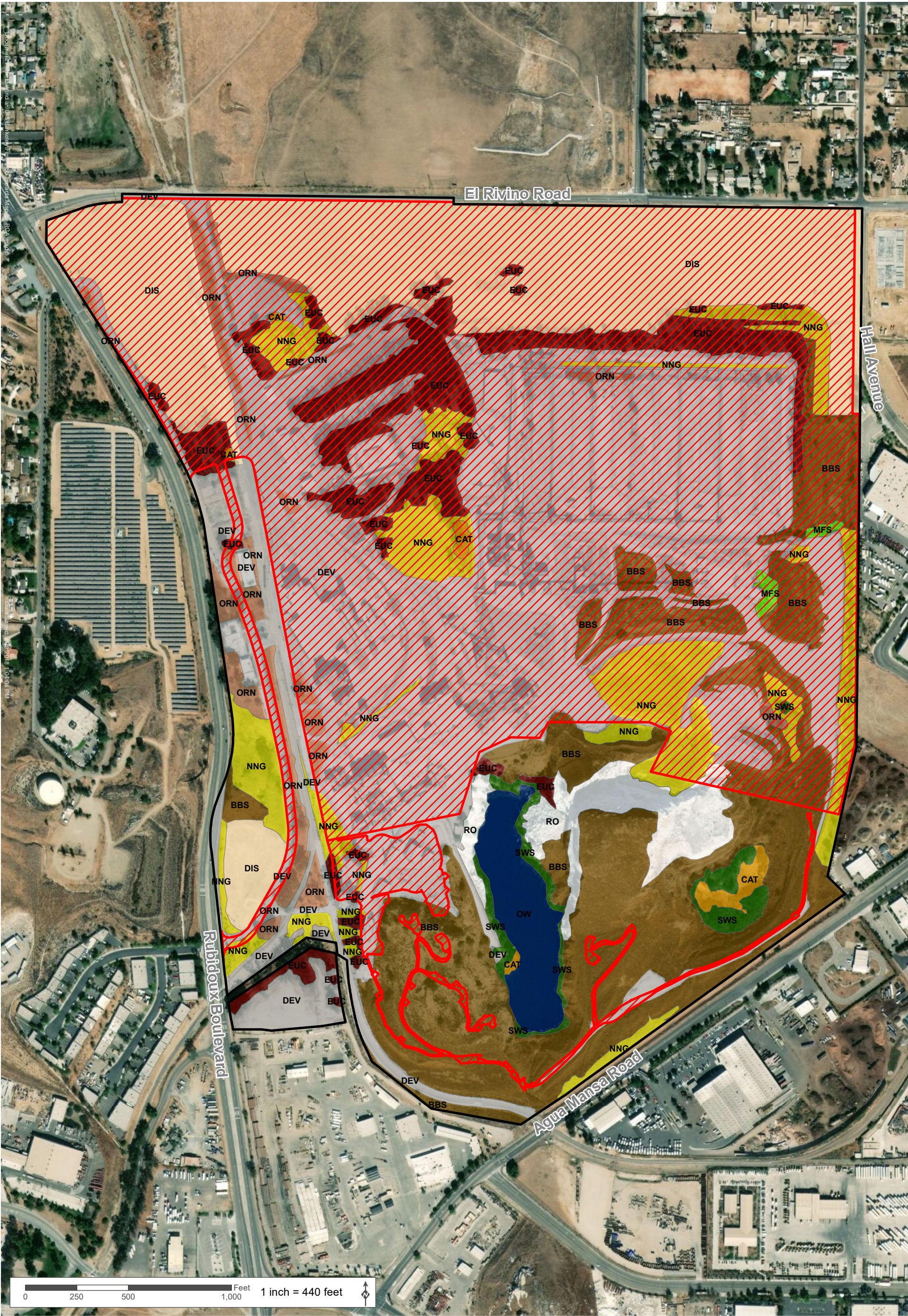
Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

Project Site Boundary* (302.12 ac)	Non-Impacted CDFW Jurisdiction (9.96 ac)	Non-Impacted Features Isolated from Section 404 Jurisdiction (10.64 ac)
Permanent Impact Areas	CDFW Riparian (3.66 ac)	Freshwater Emergent Wetland (1.01 ac)
Permanent Impacts to CDFW Riparian (0.33 ac)	CDFW Lake (Crestmore Lake) (6.30 ac)	Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac)
LBV Observations		Perennial Other Waters (Crestmore Lake) (6.30 ac)
		Riparian Wetland (1.54 ac)

**Figure 8a. Impacts to Sensitive Species and Habitats**

Agua Mansa Commerce Park, Jurupa Valley, CA





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

Project Site Boundary* (302.12 ac)	Non-Native Grassland (NNG): 17.67 ac	Southern Willow Scrub (SWS): 0.06 ac
Permanent Impact Areas	Eucalyptus Grove (EUC): 17.18 ac	Cattails (CAT): 0.41 ac
Developed (DEV): 103.33 ac	Rock Outcrop (RO): 0.26 ac	Mulefat Stand (MFS): 0.60 ac
Disturbed (DIS): 51.05 ac	Ornamental (ORN): 4.13 ac	
Brittlebush Scrub (BBS): 17.35 ac	Open Water (OW): 0.00 ac	

**Figure 8b. Permanent Impacts to Vegetation Communities and Land Cover**

Agua Mansa Commerce Park, Jurupa Valley, CA





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
 \* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- Project Site Boundary\*** (302.12 ac)
- Extent of the Restricted Area/LBV Protection Area (31.89 ac)**
- Topographic Lines
- Chain-link Fence
- Open Space/Recreation Park\*\*
- Geographic Barrier

\*\* The Open Space/Recreation Park boundary is based on the survey located boundary as depicted on Tentative Parcel Map No. 37528, revised October 4, 2018. The Project Site Boundary is mapped based on the APN map (revised May 2018) listed for this project. As such, the Project Site Boundary and the Open Space/Recreation Park boundary will not match up.

**Figure 9. Proposed Fencing and Protection Areas**  
 Agua Mansa Commerce Park, Jurupa Valley, CA



## APPENDICES



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**Appendix A**  
**Riverside County Integrated Project (RCIP) Conservation Summary Report**

## BIOLOGICAL REPORT SUMMARY SHEET

**Applicant Name:** Viridian Capital Partners, LLC - Agua Mansa Commerce Park

**Assessor's Parcel Numbers:** APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009

**Site Location:** Section: N/A Township: N/A Range: N/A

**Site Address:** Extends southeast of El Rivino Road and east of Rubidoux Boulevard

**Related Case Number(s):** \_\_\_\_\_ **PDB Number:** \_\_\_\_\_

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
<b>X-HA</b>	Arroyo Toad	Yes	<u>No</u>	N/A
<b>X-HA</b>	Blueline Stream(s)	<u>Yes</u>	No	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	<u>N/A</u>
<b>X-HA</b>	Coastal California Gnatcatcher	<u>Yes</u>	No	N/A
<b>X-HA</b>	Riversidean Sage Scrub	Yes	<u>No</u>	N/A
<b>X-HA</b>	Delhi Sands Flower-Loving Fly	<u>Yes</u>	No	N/A
	Desert Pupfish	Yes	No	<u>N/A</u>
	Desert Slender Salamander	Yes	No	<u>N/A</u>
	Desert Tortoise	Yes	No	<u>N/A</u>
	Flat-Tailed Horned Lizard	Yes	No	<u>N/A</u>
<b>X-HA</b>	Least Bell's Vireo	<u>Yes</u>	No	N/A
<b>X-HA</b>	Oak Woodlands	Yes	<u>No</u>	N/A
<b>X-HA</b>	Quino Checkerspot Butterfly	Yes	<u>No</u>	N/A
<b>X-HA</b>	Riverside/Vernal Pool Fairy Shrimp	Yes	<u>No</u>	N/A
<b>X-HA</b>	Santa Ana River Woollystar	Yes	<u>No</u>	N/A
<b>X-HA</b>	San Bernardino Kangaroo Rat	Yes	<u>No</u>	N/A
<b>X-HA</b>	Slender Horned Spineflower	Yes	<u>No</u>	N/A
<b>X-HA</b>	Stephens' Kangaroo Rat	<u>Yes</u>	No	N/A
<b>X-HA</b>	Seasonal Depression	Yes	<u>No</u>	N/A
<b>X-HA</b>	Wetlands	<u>Yes</u>	No	N/A

**HA - Habitat Assessment Determination**

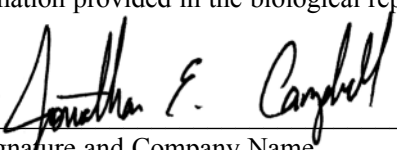


CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
X-HA	Burrowing Owl	Yes	No	N/A
X-HA	Southwestern Willow Flycatcher	Yes	No	N/A
X-HA	Western Yellow-billed Cuckoo	Yes	No	N/A
X-HA	San Diego Ambrosia	Yes	No	N/A
X-HA	Brand's phacelia	Yes	No	N/A
X-HA	San Miguel savory	Yes	No	N/A
		Yes	No	N/A
		Yes	No	N/A
		Yes	No	N/A
		Yes	No	N/A
		Yes	No	N/A
		Yes	No	N/A

### HA - Habitat Assessment Determination

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

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

  
Signature and Company Name

MIG October 25, 2016  
Report Date

10(a) Permit Number (if applicable)

Permit Expiration Date

#### County Use Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_  
PD-B# \_\_\_\_\_

# Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
175170030	Not A Part	Independent	3.36	Jurupa	Not a Part
175170035	21	Independent	16.67	Jurupa	SU3 - Delhi Sands Area
175170036	Not A Part	Independent	1.56	Jurupa	Not a Part
175170036	21	Independent	11.57	Jurupa	SU3 - Delhi Sands Area
175170040	21	Independent	9.57	Jurupa	SU3 - Delhi Sands Area
175170041	Not A Part	Independent	55.48	Jurupa	Not a Part
175170041	21	Independent	75.31	Jurupa	SU3 - Delhi Sands Area
175170043	Not A Part	Independent	3.55	Jurupa	Not a Part
175180001	Not A Part	Independent	7.67	Jurupa	Not a Part
175180001	55	Independent	27.87	Jurupa	SU3 - Delhi Sands Area
175200001	21	Independent	3.17	Jurupa	SU3 - Delhi Sands Area
175200001	22	Independent	6.39	Jurupa	SU3 - Delhi Sands Area
175200002	22	Independent	0.62	Jurupa	SU3 - Delhi Sands Area
175200003	22	Independent	3.68	Jurupa	SU3 - Delhi Sands Area
175200004	22	Independent	0.49	Jurupa	SU3 - Delhi Sands Area
175200005	22	Independent	1.88	Jurupa	SU3 - Delhi Sands Area
175200007	22	Independent	0.43	Jurupa	SU3 - Delhi Sands Area
175200008	21	Independent	11.07	Jurupa	SU3 - Delhi Sands Area
175200008	22	Independent	40.27	Jurupa	SU3 - Delhi Sands Area
175200009	Not A Part	Independent	0.12	Jurupa	Not a Part
175200009	21	Independent	3.49	Jurupa	SU3 - Delhi Sands Area
175200009	22	Independent	11.88	Jurupa	SU3 - Delhi Sands Area
175200009	55	Independent	0.57	Jurupa	SU3 - Delhi Sands Area

## HABITAT ASSESSMENTS

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

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
175170035	NO	YES	NO	NO	YES	NO
175170036	NO	YES	NO	NO	YES	NO
175170040	NO	YES	NO	NO	YES	NO
175170041	NO	YES	NO	NO	YES	NO
175180001	NO	YES	NO	NO	YES	NO



175200001	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200002	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200003	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200004	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200005	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200007	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO
175200008	NO	<b>YES</b>	NO	NO	<b>YES</b>	NO

## Burrowing Owl

Burrowing owl.

## Narrow Endemic Plant Species

7) San Diego ambrosia, Brand's Phacelia, San Miguel savory

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

## Background

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

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

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

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

[www.wrc-rca.org](http://www.wrc-rca.org)

## Introduction

As urbanization has increased within western Riverside County, state and federal regulations have required that public and private developers obtain "Take permits" from Wildlife Agencies for impacts to endangered, threatened, and rare species and their Habitats. This process, however, has resulted in costly delays in public and private Development projects and an assemblage of unconnected Habitat areas designated on a project-by-project basis. This piecemeal and uncoordinated effort to mitigate the effects of Development does not sustain wildlife mobility, genetic flow, or ecosystem health, which require large, interconnected natural areas.

A variety of capitalized terms are used in this report. Definitions for those terms are provided at the end of this report.

The MSHCP is a criteria-based plan, focused on preserving individual species through Habitat conservation. The MSHCP is one element of the Riverside County Integrated Project (RCIP), a comprehensive regional planning effort begun in 1999. The purpose of the RCIP is to integrate all aspects of land use, transportation, and conservation planning and implementation in order to develop a comprehensive vision for the future of the County. The overall goal of the MSHCP is rooted in the RCIP Vision Statement and supporting policy directives. The MSHCP will enhance maintenance of biological diversity and ecosystem processes while allowing future economic growth. Preserving a quality of life characterized by well-managed and well-planned growth integrated with an open-space system is a component of the RCIP vision. The MSHCP proposes to conserve approximately 500,000 acres and 146 different species. Approximately 347,000 acres are anticipated to be conserved on existing Public/Quasi-Public Lands, with additional contributions on approximately 153,000 acres from willing sellers. The overall goal of the MSHCP can be supported by the following:

**Biological Goal:** In the MSHCP Plan Area, conserve Covered Species and their Habitats.

**Economic Goal:** Improve the future economic development in the County by providing an efficient, streamlined regulatory process through which Development can proceed in an efficient way. The MSHCP and the General Plan will provide the County with a clearly articulated blueprint describing where future Development should and should not occur.

**Social Goal:** Provide for permanent open space, community edges, and recreational opportunities, which contribute to maintaining the community character of Western Riverside County.

This report has been generated to summarize the guidance in the MSHCP Plan that pertains to this property. Guidelines have been incorporated in the MSHCP Plan to allow applicants to evaluate the application of the MSHCP Criteria within specific locations in the MSHCP Plan Area. Guidance is provided through Area Plan Subunits, Cell Criteria, Cores and Linkages and identification of survey requirements. The guidance and Criteria incorporate flexibility at a variety of levels. The information within this report is composed of three parts: a summary table, Reserve Assembly guidance and survey requirements within the MSHCP Plan Area. The summary table provides specific information on this property to help determine whether it is located within the MSHCP Criteria Area or any survey areas. The Reserve Assembly guidance provides direction on assembly of the MSHCP Conservation Area if the property is within the Criteria Area. The survey requirements section describes the surveys that must be conducted on the property if Habitat is present for certain identified species within the Criteria Area or mapped survey areas.

### **Reserve Assembly Guidance within the Criteria Area**

The Reserve Assembly guidance only pertains to properties that are within the Criteria Area. Please check the summary table to determine whether this property is within the Criteria Area. If it is located inside of the Criteria Area, please read both this section and the section about survey requirements within the MSHCP Plan Area. If the property is located outside the Criteria Area, only read the survey requirements within the MSHCP Plan Area section.

The Area Plan Subunits, Cell Criteria and Cores and Linkages provide guidance on assembly of the MSHCP Conservation Area. The Area Plan Subunits section lists Planning Species and Biological Issues and Considerations that are important to Reserve Assembly within a specific Area Plan Subunit. The Cell Criteria identify applicable Cores or Linkages and describe the focus of desired conservation within a particular Cell or Cell Group. Cores and Linkages guidance includes dimensional data and biological considerations within each identified Core or Linkage.

The following is the Area Plan text and Cell Criteria that pertains specifically to this property. The Area Plan text includes the target acreage for conservation within the entire Area Plan, identification of Cores and Linkages within the entire Area Plan and Area Plan Subunit Planning Species and Biological Issues and Considerations. It is important to keep in mind that the Area Plan Subunits, Cell Criteria and Cores and Linkages are drafted to provide guidance for a geographic area that is much larger than an individual property. The guidance is intended to provide context for an individual property and, therefore, all of the guidance and Criteria do not apply to each individual property.

### **3.3.6 Jurupa Area Plan**



This section identifies target acreages, applicable Cores and Linkages, Area Plan Subunits and Criteria for the Jurupa Area Plan. For a summary of the methodology and map resources used to develop the target acreages and Criteria for the MSHCP Conservation Area, including this Area Plan, see Section 3.3.1.

### **Target Acreages**

The target conservation acreage range for the Jurupa Area Plan is 4,230 – 5,210 acres; it is composed of approximately 3,340 acres of existing Public/Quasi-Public Lands and 890 – 1,870 acres of Additional Reserve Lands.

### **Applicable Cores and Linkages**

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages and Noncontiguous Habitat Blocks (referred to here as "cores and linkages"). The Cores and Linkages listed below are within the Jurupa Area Plan. For descriptions of these Cores and Linkages and more information about the biologically meaningful elements of the MSHCP Conservation Area within the Jurupa Area Plan, see Section 3.2.3 and MSHCP Volume II, Section A.

### **Cores and Linkages within Jurupa Area Plan**

- Contains all of Proposed Noncontiguous Habitat Block 1
- Contains all of Proposed Noncontiguous Habitat Block 2
- Contains all of Proposed Noncontiguous Habitat Block 3
- Contains a small portion of Existing Core A

Descriptions of Planning Species, Biological Issues and Considerations and Criteria for each Area Plan Subunit within the Jurupa Area Plan are presented later in this section. These descriptions, combined with the descriptions of the Cores and Linkages referred to above, provide information about biological issues to be considered in conjunction with Reserve Assembly within the Jurupa Area Plan. As noted in Section 3.1, the Area Plan boundaries established as part of the Riverside County General Plan were selected to provide an organizational framework for the Area Plan Subunits and Criteria. While these boundaries are not biologically based, unlike the Cores and Linkages, they relate specifically to General Plan boundaries and the jurisdictional boundaries of incorporated Cities and were selected to facilitate implementation of the MSHCP in the context of existing institutional and planning boundaries.

### **• Area Plan Subunits**

The Jurupa Area Plan is divided into three Subunits. For each Subunit, target conservation acreages are established along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit. For more information regarding specific conservation objectives for the Planning Species, see Section 9.0. Subunit boundaries are depicted on the Cells and Cell Groupings map displays (Figures 3-12 and 3-13). Table 3-7 presents the Criteria for the Jurupa Area Plan.

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## **Cell Criteria**

A preliminary check indicates that this parcel is not subject to cell criteria under the draft MSHCP. Other requirements, including species surveys, may apply under the plan. It is recommended that you review the full text of the draft document for additional details. See [www.rcip.org](http://www.rcip.org) to read the document on-line or to find a location to view the hard copy document.

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**Cell: 21**

**Area Plan: Jurupa**

**Subunit: 3**

Surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2

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**Cell: 22****Area Plan: Jurupa****Subunit: 3**

Surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2

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**Cell: 55****Area Plan: Jurupa****Subunit: 3**

Surveys shall not be required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2

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**Surveys Within the MSHCP Plan Area**

Of the 146 species covered by the MSHCP, no surveys will be required by applicants for public and private projects for 106 of these Covered Species. Covered Species for which surveys may be required by applicants for public and private Development projects include 4 birds, 3 mammals, 3 amphibians, 3 crustaceans, 14 Narrow Endemic Plants, and 13 other sensitive plants within the Criteria Area. Of these 40 species, survey area maps are provided for 34 species, and surveys will be undertaken within suitable Habitat areas in locations identified on these maps in the MSHCP Plan. The remaining six species are associated with riparian/riverine areas and vernal pools and include least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and vernal pool fairy shrimp. Although there are no survey area maps for these six species, surveys for these species, if necessary, will be undertaken as described below. It is the goal of the MSHCP to provide for conservation of Covered Species within the approximately 500,000 acre MSHCP Conservation Area (comprised of approximately 347,000 acres of existing Public/Quasi-Public Lands and 153,000 acres of new conservation on private lands). Conservation that may be identified to be desirable as a result of survey findings is not intended to increase the overall 500,000 acres of conservation anticipated under the MSHCP. Please refer to Section 6.0 of the MSHCP Plan, Volume I for more specific information regarding species survey requirements.

As projects are proposed within the MSHCP Plan Area, an assessment of the potentially significant effects of those projects on riparian/riverine areas and vernal pools will be performed as currently required by the California Environmental Quality Act (CEQA) using available information augmented by project-specific mapping. If the mapping identifies suitable habitat for any of the six species associated with riparian/riverine areas and vernal pools listed above and the proposed project design does not incorporate avoidance of the identified habitat, focused surveys for these six species will be conducted, and avoidance and minimization measures will be implemented in accordance with the species-specific objectives for these species. For more specific information regarding survey requirements for species associated with riparian/riverine areas and vernal pools, please refer to Section 6.1.2 of the MSHCP Plan, Volume I.

Habitat conservation is based on the particular Habitat requirements of each species as well as the known distribution data for each species. The existing MSHCP database does not, however, provide the level of detail sufficient to determine the extent of the presence or distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Since conservation planning decisions for these plant species will have a substantial effect on their status, additional



information regarding the presence of these plant species must be gathered during the long-term implementation of the MSHCP to ensure that appropriate conservation of the Narrow Endemic Plants occurs. For more specific information regarding survey requirements for Narrow Endemic Plants, please refer to Section 6.1.3 of the MSHCP Plan, Volume I.

In addition to the Narrow Endemic Plant Species, additional surveys may be needed for certain species in conjunction with Plan implementation in order to achieve coverage for these species. The MSHCP must meet the Federal Endangered Species Act issuance criteria for Habitat Conservation Plans (HCP) which require, among other things, that the HCP disclose the impacts likely to result from the proposed Taking, and measures the applicant will undertake to avoid, minimize and mitigate such impacts. For these species in which coverage is sought under the MSHCP, existing available information is not sufficient to make findings necessary to satisfy these issuance criteria for Take authorization. Survey requirements are incorporated in the MSHCP to provide the level of information necessary to receive coverage for these species in the MSHCP.

Efforts have been made prior to approval of the MSHCP and will be made during the early baseline studies to be conducted as part of the MSHCP management and monitoring efforts to collect as much information as possible regarding the species requiring additional surveys. As data are collected and conclusions can be made regarding the presence of occupied Habitat within the MSHCP Conservation Area for these species, it is anticipated that survey requirements may be modified or waived. Please refer to Sections 6.1.3 and 6.3.2 of the MSHCP Plan, Volume I for more specific information regarding survey requirements.

## MSHCP DEFINITIONS

<b>Adaptive Management</b>	To use the results of new information gathered through the Monitoring Program of the Plan and from other sources to adjust management strategies and practices to assist in providing for the Conservation of Covered Species.
<b>Adaptive Management Program</b>	The MSHCP's program of Adaptive Management described in Section 5.0 of the MSHCP, Volume I.
<b>Additional Reserve Lands</b>	Conserved Habitat totaling approximately 153, 000 acres that are needed to meet the goals and objectives of the MSHCP and comprised of approximately 56, 000 acres of State and federal acquisition and mitigation for State Permittees, and approximately 97, 000 acres contributed by Local Permittees (Lands acquired since February 3, 2000 are included in the Local Permittees' Additional Reserve Lands contribution pursuant to correspondence discussed in Section 4.0 of the MSHCP, Volume I and on file with the County of Riverside)
<b>Agriculture</b>	For the species analyses, references to agriculture refer to the Vegetation Community, Agriculture, as depicted on the MSHCP Vegetation Map, Figure 2- 1 of the MSHCP, Volume I.
<b>Agricultural Operations</b>	The production of all plants (horticulture), fish farms, animals and related production activities, including the planting, cultivation and tillage of the soil, dairying, and apiculture; and the production, plowing, seeding, cultivation, growing, harvesting, pasturing and fallowing for the purpose of crop rotation of any agricultural commodity, including viticulture, apiculture, horticulture, and the breeding, feeding and raising of livestock, horses, fur-bearing animals, fish, or poultry, the operation, management, conservation, improvement or maintenance of a farm or ranch and its buildings, tools and equipment; the construction, operation and maintenance of ditches, canals, reservoirs, wells and/or waterways used for farming or ranching purposes and all uses conducted as a normal part of such Agricultural Operations; provided such actions are in compliance with all applicable laws and regulations. The definition of Agricultural Operations shall not include any activities on state and federal property or in the MSHCP Conservation Area.
<b>Allowable Uses</b>	Uses allowed within the MSHCP Conservation Area as defined in Section 7.0 of the MSHCP, Volume I.
<b>Annual Report</b>	The reports prepared pursuant to the requirements of Section 6.11 of the MSHCP, Volume I.
<b>Area Plan</b>	A community planning area defined in the County of Riverside General Plan. Sixteen County of Riverside Area Plans are located within the MSHCP Plan Area.

<b>Area Plan Subunit</b>	A portion of an Area Plan for which Biological Issues and Considerations and target acreages have been specified in Section 3.3 of the MSHCP, Volume I.
<b>Biological Issues and Considerations</b>	A list of biological factors to be used by the Plan Participants in assembly of the MSHCP Conservation Area. Biological Issues and Considerations are identified for each Area Plan Subunit in Section 3.3 of the MSHCP, Volume I.
<b>Biologically Equivalent or Superior Determination</b>	Documentation that a particular project alternative will be biologically equivalent or superior to a project consistent with the guidelines and thresholds established in the policies for the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools set forth in Section 6.1.2 of the MSHCP, policies for the Protection of Narrow Endemic Plant Species set forth in Section 6.1.3 of the MSHCP, Additional Survey Needs and Procedures policies set forth in Section 6.3.2 of the MSHCP, and the Criteria Refinement Process set forth in Section 6.5 of the MSHCP.
<b>Biological Monitoring Program</b>	The program detailing the requirements for monitoring of the MSHCP Conservation Area as set forth in Section 5.3 of the MSHCP, Volume I.
<b>Biological Monitoring Report</b>	Reports prepared pursuant to the requirements of Section 5.3.7 of the MSHCP, Volume I.
<b>Bioregion</b>	A generalized area with similar elevation, topography, soils and floristic characteristics within the MSHCP Plan Area. Seven Bioregions are identified in the MSHCP Plan Area and are depicted in Figure 2-6 of the MSHCP, Volume I.
<b>California Department of Fish and Game</b>	CDFG, a department of the California Resources Agency.
<b>California Department of Transportation</b>	Caltrans, a department of the California Business, Transportation and Housing Agency.
<b>Cell</b>	A unit within the Criteria Area generally 160 acres in size, approximating one quarter section.
<b>Cell Group</b>	An identified grouping of Cells within the Criteria Area.
<b>California Environmental Quality Act</b>	CEQA (California Public Resources Code, Section 21000 et seq.) and all guidelines promulgated thereunder, as amended. For the MSHCP, the County shall be the lead agency under CEQA as defined under State CEQA Guidelines section 15367.
<b>California Endangered Species Act</b>	CESA (California Fish and Game code, Section 2050 et seq.) and all rules, regulations and guidelines promulgated thereunder, as amended.
<b>Changed Circumstances</b>	Changes in circumstances affecting a Covered Species or the geographic area covered by the MSHCP that can reasonably be anticipated by the Parties and that can reasonably be planned for in the MSHCP. Changed Circumstances and the planned responses to those circumstances are more particularly described in Section 11.4 of the IA, and Section 6.8 of the MSHCP, Volume I. Changed Circumstances do not include Unforeseen Circumstances.
<b>Cities</b>	The cities of Banning, Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, and Temecula, collectively.
<b>Community and Environmental Transportation Acceptability Process</b>	CETAP, a process overseen by RCTC to identify Acceptability Process future transportation and communication corridors designed to relieve current traffic congestion and provide for the County's and the Cities' future transportation and communication needs.
<b>Conceptual Reserve Design</b>	A reserve concept developed for purposes of providing quantitative parameters for MSHCP species analyses, MSHCP Conservation Area description and target acreages within Area Plan Subunits. The Conceptual Reserve Design is intended to describe one way in which the Additional Reserve Lands could be assembled



consistent with MSHCP Criteria.

<b>Conservation</b>	To use, and the use of, methods and procedures within the MSHCP Conservation Area and within the Plan Area as set forth in the MSHCP Plan, that are necessary to bring any listed species to the point at which the measures provided pursuant to FESA and the California Fish and Game Code are no longer necessary. However, Permittees will have no duty to enhance, restore or revegetate MSHCP Conservation Area lands unless required by the MSHCP Plan or agreed to through implementation of the Plan.
<b>Conservation Strategy</b>	The overall approach to assure conservation of individual species within the MSHCP Plan Area; for each individual species, the Conservation Strategy is comprised of four elements: (1) a global conservation goal; (2) global conservation objectives; (3) species-specific conservation objectives that are measurable; and (4) management and monitoring activities.
<b>Conserved Habitat</b>	Land that is permanently protected and managed in its natural state for the benefit of the Covered Species under legal arrangements that prevent its conversion to other land uses, and the institutional arrangements that provide for its ongoing management.
<b>Constrained Linkage</b>	A constricted connection expected to provide for movement of identified Planning Species between Core Areas, where options for assembly of the connection are limited due to existing patterns of use.
<b>Cooperative Organizational Structure</b>	The local administrative structure for Implementation and management of the MSHCP, as set forth in Section 6.6 of the MSHCP, Volume I.
<b>Core Area</b>	A block of Habitat of appropriate size, configuration, and vegetation characteristics to generally support the life history requirements of one or more Covered Species.
<b>Corridor</b>	Refers to the alignment area or footprint for manmade linear projects such as transportation facilities, pipelines and utility lines. Corridor does not have a biological meaning in the MSHCP lexicon.
<b>County</b>	County of Riverside
<b>County Flood Control</b>	Riverside County Flood Control and Water Conservation District
<b>County Parks</b>	Riverside County Regional Parks and Open Space District
<b>County Waste</b>	Riverside County Waste Management District
<b>Covered Activities</b>	Certain activities carried out or conducted by Permittees, Participating Special Entities, Third Parties Granted Take Authorization and others within the MSHCP Plan Area, and described in Section 7 of the MSHCP, Volume I, that will receive Take Authorization under the Section 10(a) Permit and the NCCP Permit, provided these activities are otherwise lawful.
<b>Covered Species</b>	The current 146 species within the MSHCP Plan Area that will be conserved by the MSHCP when the MSHCP is implemented. These species are discussed in Section 2.1.4 of the MSHCP, Volume I, and listed in Exhibit C to the IA and Section 9.2 of the MSHCP, Volume I.
<b>Covered Species Adequately Conserved</b>	The initial 118 Covered Species and any of the remaining 28 Covered Species where the species objectives, set forth in Section 9.2 of the MSHCP, Volume I and Table 9-3, are met and which are provided Take Authorization through the NCCP Permit and for animals through the Section 10(a) Permit issued in conjunction with the IA. These species are discussed in Section 2.1.4 of the MSHCP, Volume I, and listed in Exhibit "D" to the IA and Section 9.2 of the MSHCP, Volume I.
<b>Criteria</b>	Descriptions provided for individual Cells or Cell Groups within the Criteria Area to guide assembly of the Additional Reserve Lands.
<b>Criteria Area</b>	The area comprised of Cells depicted on Figure 3-1 of the MSHCP, Volume I.

<b>Criteria Refinement Process</b>	The process through which changes to the Criteria may be made, where the refined Criteria result in the same or greater Conservation value and acreage to the MSHCP Conservation Area as determined through an equivalency analysis provided in support of the refinement.
<b>Critical Habitat</b>	Habitat for species listed under FESA that has been designated pursuant to Section 4 of FESA and identified in 50 C.F.R. §§ 17.95 and 17.96.
<b>Development</b>	The uses to which land shall be put, including construction of buildings, structures, infrastructure and all alterations of the land.
<b>Discretionary Project</b>	A proposed project requiring discretionary action or approval by a Permittee, as that term is used in CEQA and defined in State CEQA Guidelines section 15357, including issuance of a grading permit for County projects.
<b>Edge Effects</b>	Adverse direct and indirect effects to species, Habitats and Vegetation Communities along the natural urban/wildlands interface. May include predation by mesopredators (including native and non-native predators), invasion by exotic species, noise, lighting, urban runoff and other anthropogenic impacts (trampling of vegetation, trash and toxic materials dumping, etc.).
<b>Effective Date</b>	Date on which the IA takes effect, as set forth in Section 19.1 of the IA.
<b>Endangered Species</b>	Those species listed as endangered under FESA and CESA.
<b>Environmental Laws</b>	Includes state and federal laws governing or regulating the impact of development activities on land, water or biological resources as they relate to Covered Species, including but not limited to CESA, FESA, the NCCP Act, CEQA, the National Environmental Policy Act ("NEPA"), the federal Migratory Bird Treaty Act ("MBTA"), the Fish and Wildlife Coordination Act, the Fish and Wildlife Act of 1956, the Federal Water Pollution Control Act (33 U.S.C., Section 1251 et seq.), the Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq. and Sections 1801, 1802, 3511, 4700, 5050 and 5515) and includes any regulations promulgated pursuant to such laws.
<b>Executive Director</b>	Director of the Regional Conservation Authority
<b>Existing Agricultural Operations</b>	Those lands within the MSHCP Plan Area that are actively used for ongoing Agricultural Operations, as further defined in Section 11.3 of the IA and Section 6.2 of the MSHCP, Volume I.
<b>Existing Agricultural Operations Database</b>	The database created by the County to identify Existing Agricultural Operations, as further defined in Section 11.3 of the IA.
<b>Federal Endangered Species Act</b>	FESA (16 U.S.C., Section 1531 et seq.) And all rules and regulations promulgated thereunder, as amended.
<b>Feasible</b>	Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.
<b>Funding Coordination Committee</b>	A committee formed by the Regional Conservation Authority Board of Directors to provide input on local funding priorities and Additional Reserve Land acquisitions.
<b>Habitat</b>	The combination of environmental conditions of a specific place providing for the needs of a species or a population of such species.
<b>HabiTrak</b>	A GIS application to provide data on Habitat loss and Conservation which occurs under the Permits.
<b>Implementing Agreement</b>	The executed agreement that implements the terms and conditions of the MSHCP.
<b>Incidental Take</b>	Take of Covered Species Adequately Conserved incidental to and not the purpose of, an otherwise lawful



<b>(also see Take)</b>	activity, including, but not limited to, Take resulting from modification of Habitat as defined in FESA and its implementing regulations.
<b>Independent Science Advisors</b>	The qualified biologists, conservation experts and others that may be appointed by the Regional Conservation Authority Executive Director to provide scientific input to assist in the implementation of the MSHCP for the benefit of the Covered Species, as set forth in Section 6.6.7 of the MSHCP, Volume I.
<b>Linkage</b>	A connection between Core Areas with adequate size, configuration and vegetation characteristics to generally provide for "Live-In" Habitat and/or provide for genetic flow for identified Planning Species.
<b>Live-In Habitat</b>	Habitat that contains the necessary components to support key life history requirements of a species; e.g., year-round Habitat for permanent residents or breeding Habitat for migrant species.
<b>Local Development Mitigation Fee</b>	The fee imposed by applicable Local Permittees on new development pursuant to Government Code Section 66000 et seq.
<b>Local Permittees</b>	The Regional Conservation Authority, the County, County Flood Control, County Parks, County Waste, RCTC and the Cities.
<b>Locality(ies)</b>	An area with multiple occurrences of a species based on the MSHCP species occurrence data base or literature citations as noted in individual species accounts.
<b>Long-Term Stephens' Kangaroo Rat</b>	The Long-Term SKR HCP in Western Riverside County dated Habitat Conservation Plan. March 1996, more particularly described in Section 16.2 of the IA.
<b>Maintenance Activities</b>	Those Covered Activities that include the on going maintenance of public facilities as described in Section 7.0 of the MSHCP, Volume I.
<b>Major Amendments</b>	Those proposed amendments to the MSHCP and the IA as described in Section 20.5 of the IA and Section 6.10 of the MSHCP, Volume I.
<b>Management Unit</b>	Broad areas planned to be consolidated for overall unified management of the MSHCP Conservation Area. Five management units have been defined and are depicted in Figure 5-1 of the MSHCP, Volume I.
<b>Migratory Bird Treaty Act</b>	Federal MBTA (16 U.S.C., Section 702 et seq.) and all rules and regulations promulgated thereunder, as amended.
<b>Migratory Bird Treaty Special Purpose Permit</b>	Act A permit issued by the USFWS under 50 Code of Federal Regulations, section 21.27, authorizing Take under the MBTA of the Covered Species Adequately Conserved listed as endangered or threatened under FESA in connection with the Covered Activities.
<b>Ministerial Approvals</b>	Certain City approvals involving little or no judgement by the City prior to issuance but that could have adverse impacts to Covered Species and their habitat.
<b>Minor Amendments</b>	Minor changes to the MSHCP and the IA as defined in Section 20.4 of the IA and Section 6.10 of the MSHCP, Volume I.
<b>Mitigation Lands</b>	Subset of Additional Reserve Lands totaling approximately 103, 000 acres, comprised of approximately 97, 000 acres contributed by Local Permittees, and approximately 6, 000 acres contributed by State Permittees.
<b>Monitoring Program</b>	The monitoring programs and activities set forth in Section 5.3 of the MSHCP, Volume I.
<b>Monitoring Program Administrator</b>	The individual or entity responsible for administering the Monitoring Program, as described in Section 5.0 of the MSHCP, Volume I.
<b>MSHCP</b>	Approximately 500, 000 acres comprised of approximately 347, 000 acres of Public/Quasi-Public Lands and

<b>Conservation Area</b>	approximately 153, 000 acres of Additional Reserve Lands within Western Riverside County. The MSHCP Conservation Area provides for the conservation of the Covered Species.
<b>MSHCP Plan Area</b>	The boundaries of the MSHCP, consisting of an approximate 1, 966 square-mile area in Western Riverside County, as depicted in Figure 1-2 of the MSHCP Plan, Volume I, and Exhibit B of the IA.
<b>Multiple Species Habitat</b>	Western Riverside County Multiple Species Habitat Conservation
<b>Conservation Plan (MSHCP)</b>	Plan, a comprehensive habitat conservation planning program that addresses multiple species' needs, including Habitat, and the preservation of native vegetation in Western Riverside County, as depicted in Figure 3-1 of the MSHCP Plan, Volume I, and Exhibit A of the IA.
<b>NCCP Act</b>	California Natural Community Conservation Planning Act (California Fish and Game Code, Section 2800 et seq.) including all regulation promulgated thereunder, as amended.
<b>NCCP Permit</b>	The Permit issued in accordance with the IA by CDFG under the NCCP Act to permit the Take of identified species, including rare species, species listed under CESA as threatened or endangered, a species that is a candidate for listing, and unlisted species.
<b>National Environmental Policy Act</b>	NEPA (42 U.S.C., Section 4321-4335) and all rules, regulations promulgated thereunder, as amended. For the purposes of the MSHCP, USFWS is the lead agency under NEPA as defined in 40 Code of Federal Regulations section 1508.16.
<b>Narrow Endemic Plant Species</b>	Plant species that are highly restricted by their Habitat affinities, edaphic requirements or other ecological factors, and for which specific conservation measures have been identified in Section 6.1.3 of the MSHCP, Volume I.
<b>New Agricultural Lands</b>	The acreage converted to Agricultural Operations after the Effective Date of the IA, as described in Section 11.3 of the IA and Section 6.2 of the MSHCP, Volume I.
<b>New Agricultural Lands Cap</b>	A designated maximum number of acres of New Agricultural Land within the Criteria Area, as described in Section 11.3 of the IA and Section 6.2 of the MSHCP, Volume I.
<b>No Surprises Assurance</b>	Provided Permittees are implementing the terms and conditions of MSHCP, the IA, and the Permit(s), the USFWS can only require additional mitigation for Covered Species Adequately Conserved beyond that provided for in the MSHCP as a result of Unforeseen Circumstances in accordance with the "No Surprises" regulations at 50 Code of Federal Regulations sections 17.22(b)(5) and 17.32(b)(5) and as discussed in Section 6.8 of the MSHCP, Volume I.
<b>Non-contiguous Habitat Block</b>	A block of Habitat not connected to other Habitat areas via a Linkage or Constrained Linkage.
<b>Other Species</b>	Species that are not identified as Covered Species under the MSHCP.
<b>Participating Special Entity</b>	Any regional public facility provider, such as a utility company or a public district or agency, that operates and/or owns land within the MSHCP Plan Area and that applies for Take Authorization pursuant to Section 11.8 of the IA.
<b>Party and Parties</b>	The signatories to the IA, namely the Regional Conservation Authority, the County, County Flood Control, County Parks, County Waste, RCTC, the Cities, Caltrans, State Parks, USFWS and CDFG and any other city within the Plan Area that incorporates after the Effective Date and complies with Section 11.6 of the IA.
<b>Permit(s)</b>	Collectively, the Section 10(a) Permit and NCCP Permit issued by the Wildlife Agencies to Permittees for Take of Covered Species Adequately Conserved pursuant to FESA, CESA and the NCCP Act and in conformance with the MSHCP and the IA.
<b>Permittees</b>	The Regional Conservation Authority, the County, County Flood Control, County Parks, County Waste, RCTC, the Cities, Caltrans and State Parks.



<b>Plan Area</b>	See "MSHCP Plan Area."
<b>Plan Participants</b>	The Regional Conservation Authority, the County, County Flood Control, County Parks, County Waste, RCTC, the Cities, Caltrans and State Parks and others receiving Take Authorization under the Permits.
<b>Planning Agreement</b>	The document prepared pursuant to the NCCP Act to guide development of the MSHCP, that is contained in Appendix A of the MSHCP, Volume I.
<b>Planning Species</b>	Subsets of Covered Species that are identified to provide guidance for Reserve Assembly in Cores and Linkages and/or Area Plans.
<b>Public/Quasi-Public Lands</b>	Subset of MSHCP Conservation Area lands totaling approximately 347, 000 acres of lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the Conservation of Covered Species (including lands contained in existing reserves), as generally depicted in Figure 3-1 of the MSHCP, Volume I.
<b>Riverside County Transportation Commission</b>	RCTC, created pursuant to California Public Utilities Code section 130050.
<b>Regional Conservation Authority</b>	The Western Riverside County Regional Conservation Authority, a joint regional authority formed by the County and the Cities to provide primary policy direction for implementation of the MSHCP, as set forth in Section 6.6 of the MSHCP, Volume I, and Section 11.2 of the IA.
<b>Reserve Assembly</b>	Acquisition and Conservation of Additional Reserve Lands.
<b>Reserve Management Oversight</b>	The committee established by the Executive Director to provide Committee biological, technical and operational expertise for implementation of the MSHCP, including oversight of the MSHCP Conservation Area as described in Section 11.2 of the IA and Section 6.6 of the MSHCP, Volume I.
<b>Reserve Management Plan(s)</b>	The plan(s) setting forth management practices for identified portions of the MSHCP Conservation Area prepared and adopted as described in Section 5 of the MSHCP, Volume I.
<b>Reserve Managers</b>	The entities managing identified portions of the MSHCP Conservation Area for the benefit of the Covered Species as described in Section 6.6.5 of the MSHCP, Volume I.
<b>Rough Step</b>	A Reserve Assembly accounting process to monitor Conservation and loss of specified Habitats within the Criteria Area.
<b>Rough Step Analysis Unit</b>	A geographic unit within which Rough Step is tracked. Rough Step Analysis Units are depicted in Figure 6-6 of the MSHCP, Volume I.
<b>Rural Mountainous</b>	A County of Riverside General Plan land use designation currently permitting single-family residential uses with a minimum lot size of 10 acres with limited animal keeping and agricultural uses allowed; characterizes areas of at least 10 acres where a minimum of 70% of the area has slopes of 25% or greater
<b>Section 10(a) Permit</b>	The permit issued by the USFWS to Permittees, in conformance with the IA and pursuant to 16 U.S.C. section 1539(a), authorizing Take of Covered Species Adequately Conserved.
<b>State Assurances</b>	Except for provisions in Section 15.5 of the IA, provided Permittees are implementing the terms and conditions of the MSHCP, the IA, and the Permits, if there are Unforeseen Circumstances, CDFG shall not require additional land, water or financial compensation or additional restrictions on the use of land, water or other natural resources for the life of the NCCP Permit without the consent of the Permittees, unless CDFG determines that continued implementation of the IA, the MSHCP, and/or the Permits would jeopardize the continued existence of a Covered Species, or as required by law and would therefore lead to NCCP Permit

revocation or suspension.

<b>State Parks</b>	California Department of Parks and Recreation, a department of the California Resources Agency.
<b>State Permittees</b>	Caltrans and State Department of Parks and Recreation.
<b>Take</b>	The definition of such term in FESA with regard to species listed under FESA, and the definition of such term in the California Fish and Game Code with regard to species listed under CESA.
<b>Take Authorization</b>	The ability to Take species pursuant to the Section 10(a) Permit and/or the NCCP Permit.
<b>Third Party Granted Authorization</b>	Take Any Third Party that receives Third Party Take Authorization in compliance with Section 17 of the IA.
<b>Third Party Take Authorization</b>	Take Authorization received by a landowner, developer, farming interest or other public or private entity from the Permittees pursuant to Section 17 of the IA, thereby receiving Take Authorization for Covered Species Adequately Conserved pursuant to the Permits and in conformance with the MSHCP and IA.
<b>Threatened Species</b>	Those species listed as threatened under FESA and CESA.
<b>Unforeseen Circumstances</b>	Changes in circumstances affecting a Covered Species Adequately Conserved or geographic area covered by the MSHCP that could not reasonably have been anticipated by the Parties at the time of the MSHCP's negotiation and development, and that result in a substantial and adverse change in the status of the Covered Species Adequately Conserved. The term "Unforeseen Circumstances" as defined in the IA is intended to have the same meaning as it is used: 1) to define the limit of the Permittees' obligation on the "No Surprises" regulations set forth in 50 Code of Federal Regulations, sections 17.22 (b)(5) and 17.32 (b)(5); and 2) in California Fish and Game Code section 2805(k).
<b>Unlisted Species</b>	A species that is not listed as rare, endangered or threatened under FESA, CESA or other applicable state or federal law.
<b>United States Fish and Wildlife Service</b>	USFWS, an agency of the United States Department of the Interior.
<b>Urban/Wildlands Interface</b>	The area where structures and other human development occurs in proximity to the MSHCP Conservation Area.
<b>Vegetation Community(ies)</b>	A group of plants that tend to occur together in consistent, definable groups based on typical constituents as depicted on the MSHCP Vegetation Map, Figure 2-1 of the MSHCP, Volume I.
<b>Wildlife Agencies</b>	The USFWS and CDFG, collectively.

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**Appendix B**  
**Soils Analysis – Gradation Testing Results for Agua Mansa Commerce Park**

22 May 2017

Mr. Erik Zitek  
Viridian Partners  
1745 Shea Center Drive, Suite 190  
Highlands Ranch, Colorado 80129

**Re:      Gradation Test Results  
         Agua Mansa Commerce Park  
         Jurupa Valley, Riverside County, California  
         Langan Project No.: 700045407**

Dear Mr. Zitek:

As requested by Viridian Partners, Langan Engineering and Environmental Services, Inc. (Langan) performed gradation testing to evaluate silt and clay content of four (4) soil samples in support of a biologist's determination of the presence or absence of suitable Delhi Sand flower-loving fly (DSF) habitat within northern portion of Agua Mansa Commerce Park (Site) in Jurupa Valley, California.

## **Background**

Based on information provided by Mr. Thomas McGill of Michael Baker International (MBI), approximately 34.83 acres of the Aqua Mansa Commerce Park site were surveyed by United States Fish and Wildlife Service and Riverside County as suitable DSF habitat and identified as suitable DSF habitat in the Multi Species Habitat Conservation Plan (see Exhibit 2, prepared by MBI). DSF occur in Delhi sands, particularly clean dune formations composed of eolian sands. Based on United State Department of Agriculture's (USDA) soil description, Delhi Series soils are fine sands, or loamy sands with 5 percent or less very coarse sand; 35 percent or less coarse and very coarse sand, and 5 percent or less clay content. United States Geological Survey (USGS) classifies eolian sand as unconsolidated fine grained sand forming stabilized dunes with a particle size greater than 0.05 mm and a coarsest particle size of >50 microns (µm).

During geologic investigations within mapped suitable DSF habitat area at the Aqua Mansa Commerce Park, the near surface soils were identified as alluvial soils, and not eolian sands which would indicate that Delhi sands are not present at the Site. Langan was requested to perform gradation analyses on samples collected from the near surface soils within previously mapped suitable habitat at the Aqua Mansa site and compare the results to gradation analyses performed on samples collected from near surface soils at a documented sand fly habitat location (King is Coming site) located on the southwest corner of San Bernardino Avenue and Pepper Avenue in Riverside, California.

## **Sampling and Laboratory Testing**

Two (2) of the soil samples that were tested, were collected by Langan from material excavated within test pits designated as TP-2 and TP-5, during our April 2017 geotechnical investigation. See Figure 1 for approximate locations of the aforementioned test pits. See Figures 2 and 3 for corresponding test pit logs.



The remaining two (2) samples that were tested, were collected by Mr. McGill of MBI from the King is Coming site. Mr. McGill provided the samples and a site location and photographic information to Langan for gradation testing purposes. Refer to Appendix A for the related site location and photograph information.

The four (4) soil samples were sent to a laboratory for grain size analysis and hydrometer testing (ASTM D422). The results of the laboratory testing are discussed below and included as an attachment herein.

### Summary

The table below summarizes the results of the gradation analyses.

SAMPLE ID	COARSE SAND	SILT <sup>1</sup>	CLAY	USCS <sup>2</sup>
King is Coming #1	0%	1%	1%	SP
King is Coming #2	0%	1%	1%	SP
TP-2 Sample A	0%	10%	1%	SM
TP-5 Sample A	0%	12%	5%	SM

### Conclusion

Based on laboratory test results, the Agua Mansa Commerce Park samples were classified as silty sands (SM) consisting of fine sands with some silt and trace clay, while the King is Coming soils were classified as sands (SP) consisting of fine sands. Based on the gradations the soil samples do not appear to be derived from the same geologic depositional process.

### Closure

We trust that this letter provides you with the information required to advance your design and appreciate the opportunity to work with you on this project. If you have any questions regarding this letter report or require additional information, please feel free to contact us.

Sincerely,

**Langan Engineering and Environmental Services, Inc.**



Dan Eberhart, PG, CEG  
Associate  
CEG# 965



Diane M. Fiorelli, PE, GE  
Senior Associate/Vice President  
GE# 3042

### Enclosures:

- Exhibit 2. DSF Suitable Habitat
- Figure 1. Boring and Trench Location Plan
- Figure 2. Test Pit Log TP-2
- Figure 3. Test Pit Log TP-5
- Appendix A – King is Coming Site Location and Photographs
- Appendix B – Particle Size Distribution

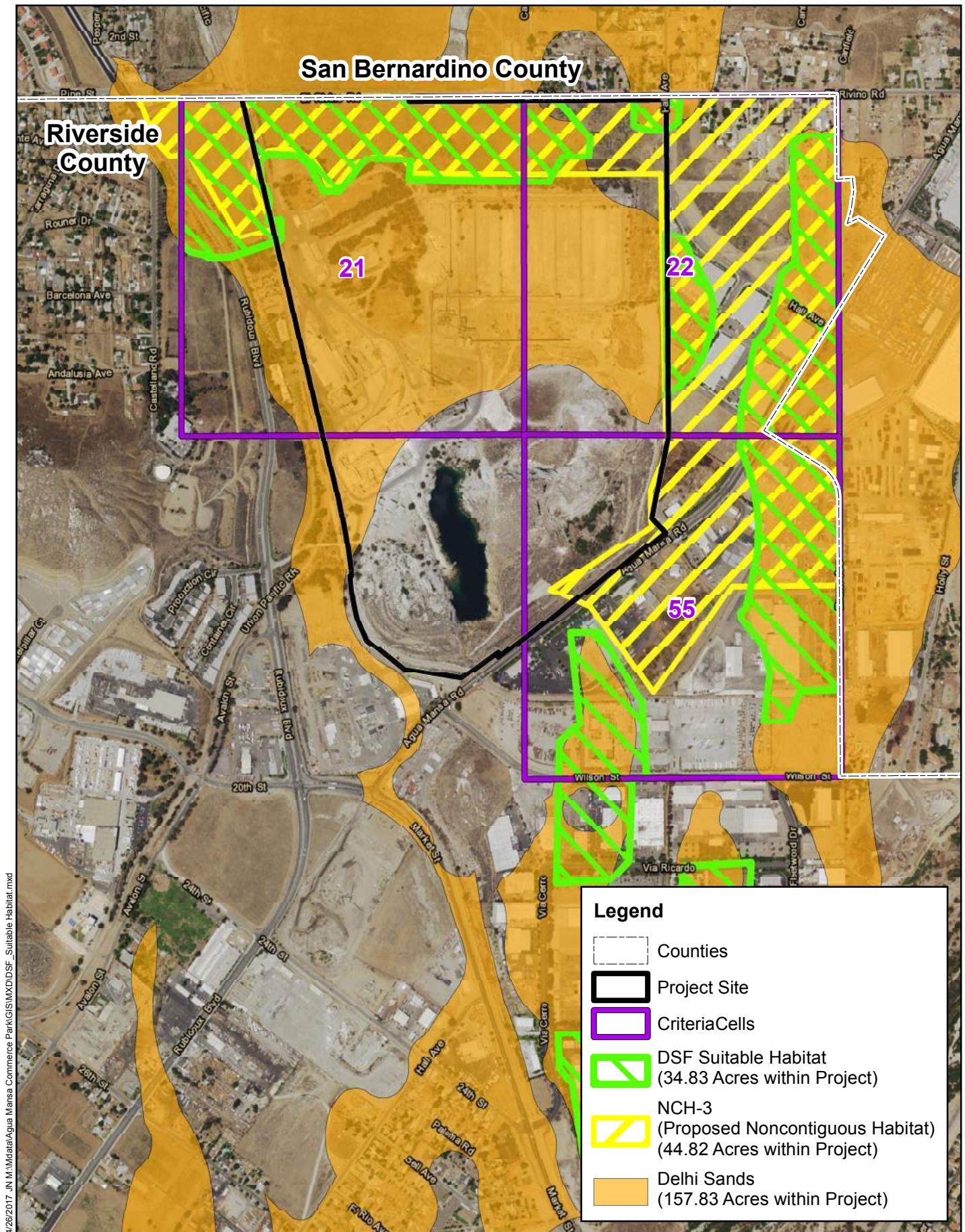
\\langan.com\data\ir\data4\700045407\office data\reports\geotechnical\king is coming and agua mansa gradation letter\700045407 gradation testing results letter.docx

<sup>1</sup> Per USDA, Silt particle size ranges from 0.05 to 0.002 mm; clay is less than 0.002 mm

<sup>2</sup> USCS – Unified Soil Classification System

## **EXHIBIT 2 AND FIGURES**



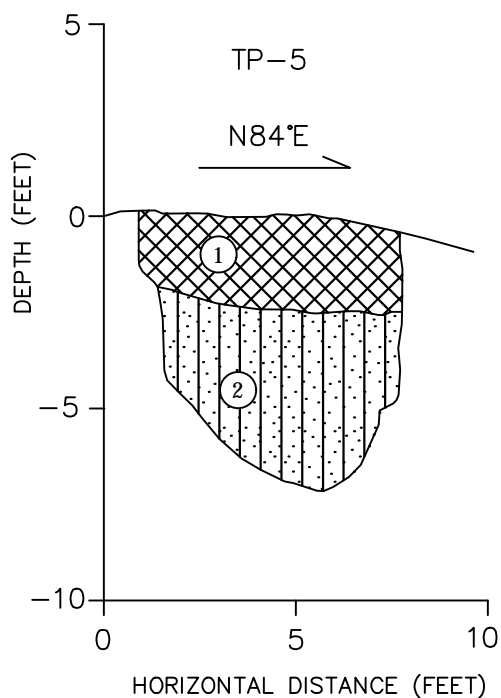












TEST PIT DESCRIPTION:

- ① 7.5YR 5/4, silty medium SAND, (SM), dry to slightly moist [FILL]
- ② 7.5YR 5/6, silty medium SAND, trace coarse sand (SM), moist [Alluvial Deposit]

NOTES:

- 1. REFER TO FIGURE 1 FOR APPROXIMATE LOCATION OF TEST PITS.
- 2. TEST PIT WAS EXCAVATED ON 10 APRIL 2017 AND BACKFILLED AFTER OBSERVATION AND LOGGING.

<b>LANGAN</b> <small>32 Executive Park, Suite 130, Irvine, CA 92614  T: 949.255.8640 F: 949.255.8641 www.langan.com</small> <small>NEW JERSEY NEW YORK CONNECTICUT PENNSYLVANIA  WASHINGTON DC VIRGINIA WEST VIRGINIA OHIO FLORIDA  TEXAS NORTH DAKOTA CALIFORNIA</small> <small>ABU DHABI ATHENS DOHA  DUBAI ISTANBUL LONDON PANAMA  Langan Engineering &amp; Environmental Services, Inc.</small>	<b>Project</b> <b>AGUA MANSA</b> <b>COMMERCE</b> <b>PARK</b> <b>JURUPA VALLEY</b> <b>RIVERSIDE COUNTY CALIFORNIA</b>	<b>Figure Title</b> <b>TEST PIT LOG</b> <b>TP-5</b>	<b>Project No.</b> 700045407	<b>Figure No.</b>  3
			<b>Date</b> MAY 2017	
			<b>Scale</b> 1" = 5'	
			<b>Logged By</b> JAB	
			<b>Drawn By</b> DJJ	



# **APPENDIX A**

5/2/2017 10:11:11 AM data1598511GISMXDKing Is Coming\Site Photo Location Map.mxd







Photo 1, King Is Coming site



Photo 2, Sample Site 1

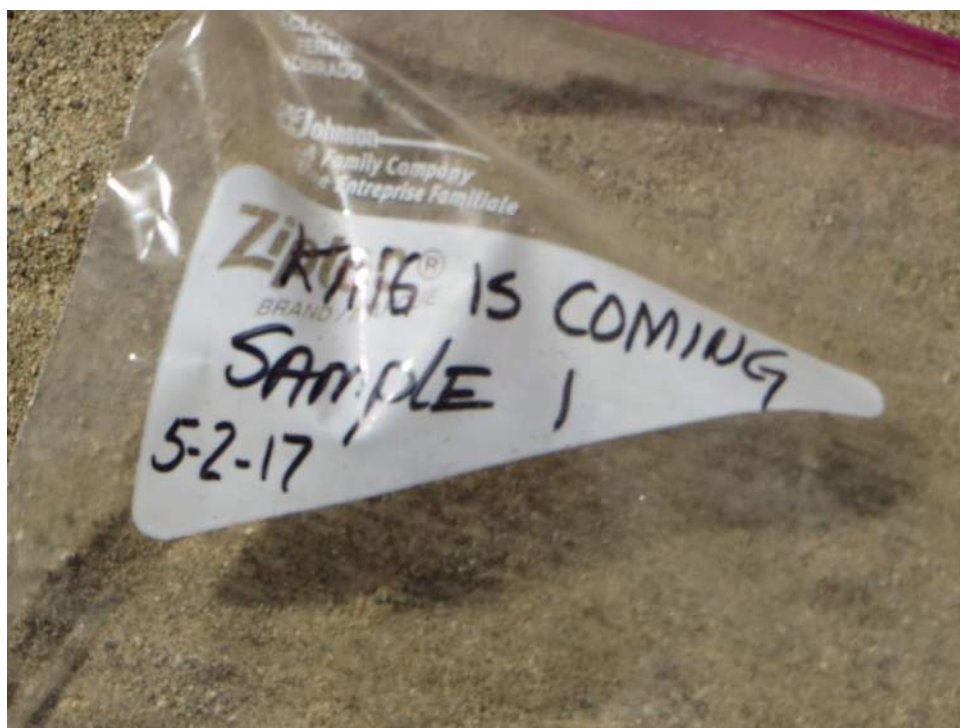


Photo 3, Sample Site 1



Photo 4, Sample Site 2





Photo 5, Ant hill at Sample Site 2

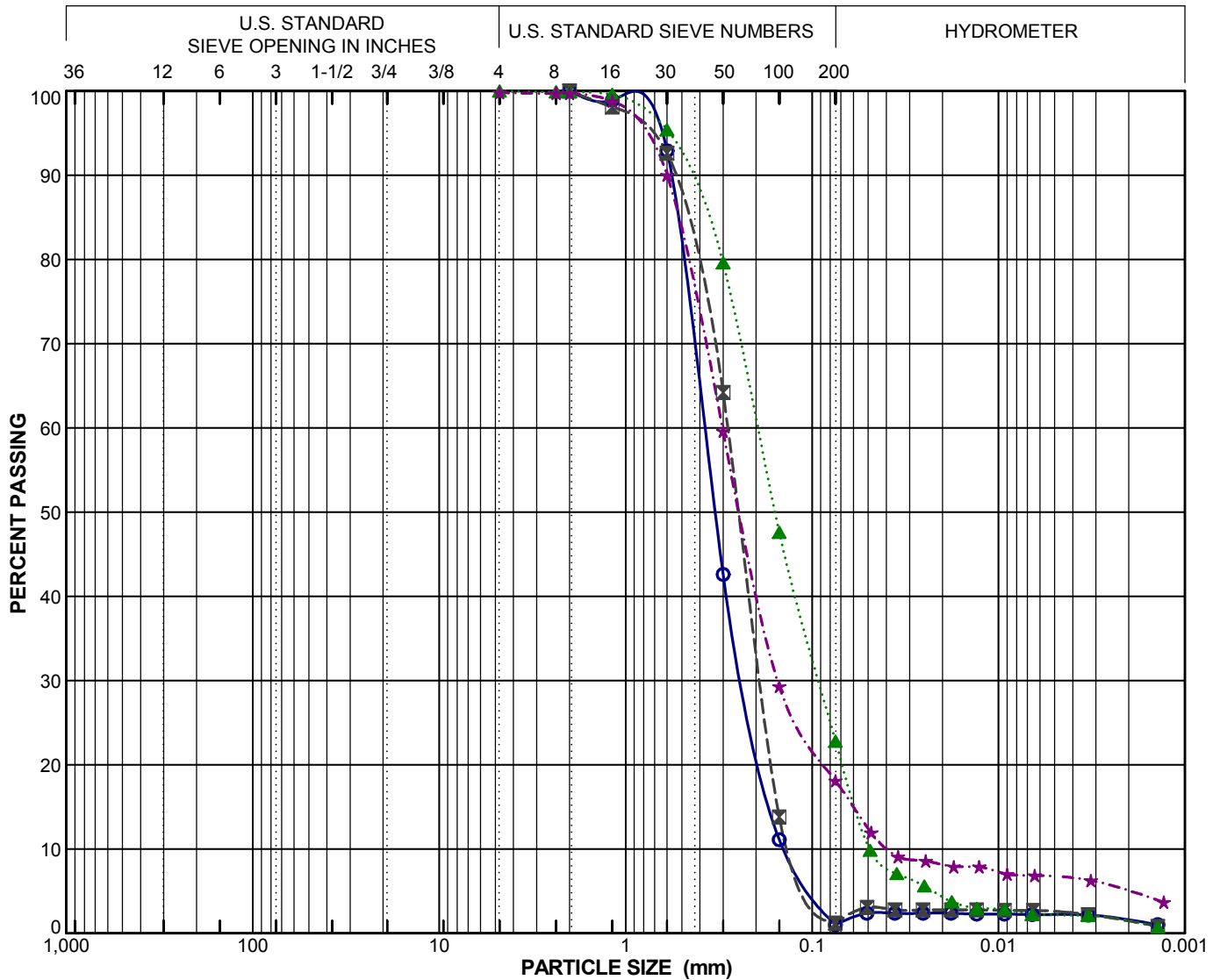


Photo 6, Sample Site 2

## **APPENDIX B**



BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	



**Appendix C**  
**Tree Survey Report for the Agua Mansa Commerce Park Project Site**



# Tree Survey

Agua Mansa Commerce Park  
Jurupa Valley, CA

**PREPARED FOR:**

Viridian Partners, LLC  
1805 Shea Center Drive, Suite 250  
Highlands Ranch, CO 80129

**PREPARED BY:**

MIG, Inc.  
1500 Iowa Avenue  
Riverside, CA

November 9, 2016

Project Number: 13502.04

## Table of Contents

Executive Summary.....	2
Introduction and Overview .....	3
Survey Methods.....	3
Results.....	3
Regulatory Setting .....	4
Conclusion.....	5

## Exhibits

Exhibit 1 Regional and Vicinity Map

Exhibit 2 Aerial Map

Exhibit 3 Tree Location Map



## Executive Summary

Viridian Partners requested that MIG prepare a Tree Survey for the 303.34-acre Agua Mansa Commerce Park site in the City of Jurupa Valley, located in Riverside County, California. See Exhibits 1 and 2. This report provides a survey of the trees located within the project footprint (tree species, diameter at breast height, tree condition, and height), and a discussion of the requirements of the applicable Riverside County Ordinances dealing with tree preservation. Trees were surveyed by MIG on September 12-16 and October 10-12, 2016. Tags were applied to trees measuring at least 6 inches in diameter at 4.5 feet above the ground. A total of 2,316 trees were identified and assessed on the property. See Exhibit 3 and Appendix B.

Most of the trees on the project site are ornamental, non-native trees that were planted for landscaping purposes. Despite this, and the fact that the majority are not protected by any local ordinances, trees on the project site still constitute a significant biological resource in an area that otherwise suffers from lack of tree coverage. They provide habitat for wildlife – several nests, belonging to raptor species as well as smaller birds, were spotted during the survey. In Riverside County, ecosystem services like dust and wind abatement are of importance, as well as the filtering of air pollutants. Similarly, the shade provided by many of the larger trees with fully developed canopies is a rarity, and they provide aesthetic value by screening the cement plant from public right-of-way.

Based on the current site development plans for Agua Mansa Commerce Park, approximately 1,604 trees would potentially be removed, which constitutes a potentially significant biological loss and impact for the area.

## Introduction and Overview

Viridian Partners requested that MIG prepare a Tree Survey for the 303.34-acre Agua Mansa Commerce Park site located within Riverside County, California. See Exhibits 1 and 2. The proposed project would create 4,500,000 square feet of business park, while setting aside 68 acres for a future city park. This report provides a survey of the trees located within the project footprint, including tree species, diameter at breast height, and tree condition. The purpose of the tree survey is to inform the project design and to serve as a baseline to assess potential impacts to on site trees due to project implementation.

## Survey Methods

Trees located throughout the 303-acre project footprint were surveyed on September 12-16 and October 10-12, 2016 by MIG senior biologists Laura Moran and Jon Campbell and biologists Ivy Ku and Hayden Agnew-Wieland. Trees located within the project footprint were surveyed in the following manner:

1. Assign an identification number to each tree (numbered aluminum tag nailed to tree)
2. Geo-reference every 25<sup>th</sup> tree's location within the project footprint.
3. Identify the tree species.
4. Measure the diameter at breast height (DBH) at 4.5 feet above grade level or measure the DBH for each trunk in a multi-trunk tree.
5. Measure the diameter below the lowest branch on a multi-trunk tree, if appropriate.
6. Estimate the height of the tree using a clinometer.
7. Evaluate the structure, health, and overall condition of the tree using the guidelines set forth in Appendix A (criteria used to classify tree conditions).

In several instances, certain trees could not be tagged due to lack of access, safety concerns, or the nature of the tree.<sup>1</sup> Trees that were inaccessible due to safety concerns were mostly located around the quarry pit/Crestmore Lake – these trees were identified as L## (L stands for lake). Other inaccessible trees were either located on the rock outcrop west of the quarried area or fenced off – these trees are identified as UT## (UT stands for untagged). Trees that could not be tagged are also labeled as UT##. Estimates for tree locations and specifications were made for these untagged trees.

## Results

A total of 2,317 trees were surveyed, most (78%) belonging to the genus *Eucalyptus*; in particular, *Eucalyptus camaldulensis* (red gum). Table 1 summarizes the most common species surveyed. The detailed results of the tree survey can be found in Exhibit 3 and Appendix B.

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<sup>1</sup> Lack of access caused by trees that were fenced off. Safety concerns were due to trees located in extremely steep slopes, with no path. Examples of problematic trees include certain palms which had an excess of dead fronds at the base, which prevented staff from properly securing a tag.



**Table 1. Common Tree Species Found on Project Site**

Common Name	# on Site	% on Site	Overall Structure and Health Rating for Species		
			Very Poor to Poor	Fair	Good to Very Good
Red gum	1579	67.8	67.6%	25.0%	7.3%
Red ironbark	141	6.1	61.7%	33.3%	5.0%
Mexican fan palm	108	4.6	2.8%	39.8%	57.4%
Goodding's willow	86	3.7	73.3%	24.4%	2.3%
Peruvian pepper	74	3.2	45.9%	41.9%	12.2%
Flooded gum	47	2.0	72.3%	23.4%	4.3%
California fan palm	43	1.8	4.7%	18.6%	76.7%

*Source: MIG, Inc. 2016*

Red gum and red ironbark eucalyptus can be found throughout the entire site, with the largest concentrations in dense stands planted to the east of the main office. Trees of all shapes and sizes were encountered, with the largest single-trunk measuring 70 inches DBH. Many of the trees on site are in overall poor condition, with over a third judged to be dead or dying, some of which could potentially be hazardous. However, many healthy, large red gums (up to 115 feet tall) are present that provide significant shelter from sun and wind, habitat for wildlife, and aesthetic benefits. Most flooded gums are located on the north side of a fence that separates the cement plant from the fallow field in the northern portion of the site. These trees tend to be in worse condition relative to the other eucalyptus species present.

The MIG biology team identified two species of fan palm, which are most likely to be found to the west of the railroad spur that bisects the site, either in the public right-of-way along Rubidoux or lining the roads within the site. Others frame the banks of Crestmore Lake. The California fan palms surveyed have a greater DBH than the Mexican species, but typically a shorter height. Both species are generally of good health and structure. Given their locations, there is potential for many of these palms to be preserved during site development.

Goodding's willow was found in the wetter areas on site. Nearly all the willows surveyed occur in the large quarried depression on the southeast edge of the property, with a small number occurring on the banks of the lake. Many are multi-trunked and most suffer from a severe lean, with few reaching above 40 feet in height.

Peruvian pepper trees are scattered throughout the site. Many are multi-trunk with a height of 25 to 30 feet. Other tree species with a notable presence on site include Bishop pine, Fremont cottonwood, Canary Island date palm, and green ash.

## Regulatory Setting

Jurupa Valley is a recently incorporated city and is still in the process of establishing its planning guidance documents. Since the City does not have any ordinances pertaining to the protection of trees, it currently defaults to county regulations. The following regulations apply to tree removal within Riverside County:

- **Riverside County Code of Ordinances, Section 12.08.050** requires a permit from the county transportation director to remove or severely trim any tree planted in the right-of-way of any county highway. Several trees lining Rubidoux Boulevard, Agua Mansa Road, and El Rivino Road may be protected by this ordinance.
- **Riverside County Code of Ordinances, Section 12.24 or Ordinance No. 559** requires a permit to “remove any living native tree on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside.” The elevation of the site is well below the 5,000 ft threshold; therefore, the ordinance does not apply.
- **The Riverside County Oak Tree Management Guidelines** address the treatment of oak woodlands and their preservation. MIG did not identify oak trees on the property; this regulation does not apply.

## Conclusion

Although most the trees identified on site are not protected by existing ordinances, removal of an estimated 1,604 trees would constitute a significant environmental impact under CEQA due to the ecosystem services that these trees currently provide.

Though non-native, the eucalyptus groves provide potentially suitable habitat for special-status species, including, but not limited to: coastal whiptail, Cooper's hawk, sharp-shinned hawk, loggerhead shrike, western mastiff bat, brush rabbit, and American badger.<sup>1</sup> The areas where Goodding's willow is dominant also provide habitat for the badger, rabbit, sharp-shinned hawk, least Bell's vireo, yellow warbler, Wilson's warbler, loggerhead shrike, yellow-breasted chat, southwestern willow flycatcher, Swainson's hawk, great blue heron, and tricolored blackbird. Many of the bird species listed above may use the trees for nesting and foraging and are protected under the Migratory Bird Treaty Act. Most of the cattail and southern willow scrub habitat on site are located within the footprint of the future city park and it is presently unclear if they will be impacted. If feasible, these habitats should be preserved to the greatest extent possible.

The trees on site also improve air quality by removing air pollutants like carbon monoxide, nitrogen dioxide, ozone, particulate matter less than 2.5 microns (PM<sub>2.5</sub>), PM<sub>10</sub>, and sulfur dioxide from their surroundings, in

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<sup>1</sup> Draft MSHCP Biological Resources Assessment and Consistency Analysis for the Agua Mansa Commerce Park Project Site. MIG, Inc. October 2016.



addition to sequestering carbon dioxide. Conservative estimates from the iTree tool<sup>2</sup> indicates that approximately 9,000 tons of CO<sub>2</sub> are being sequestered by the trees on site.

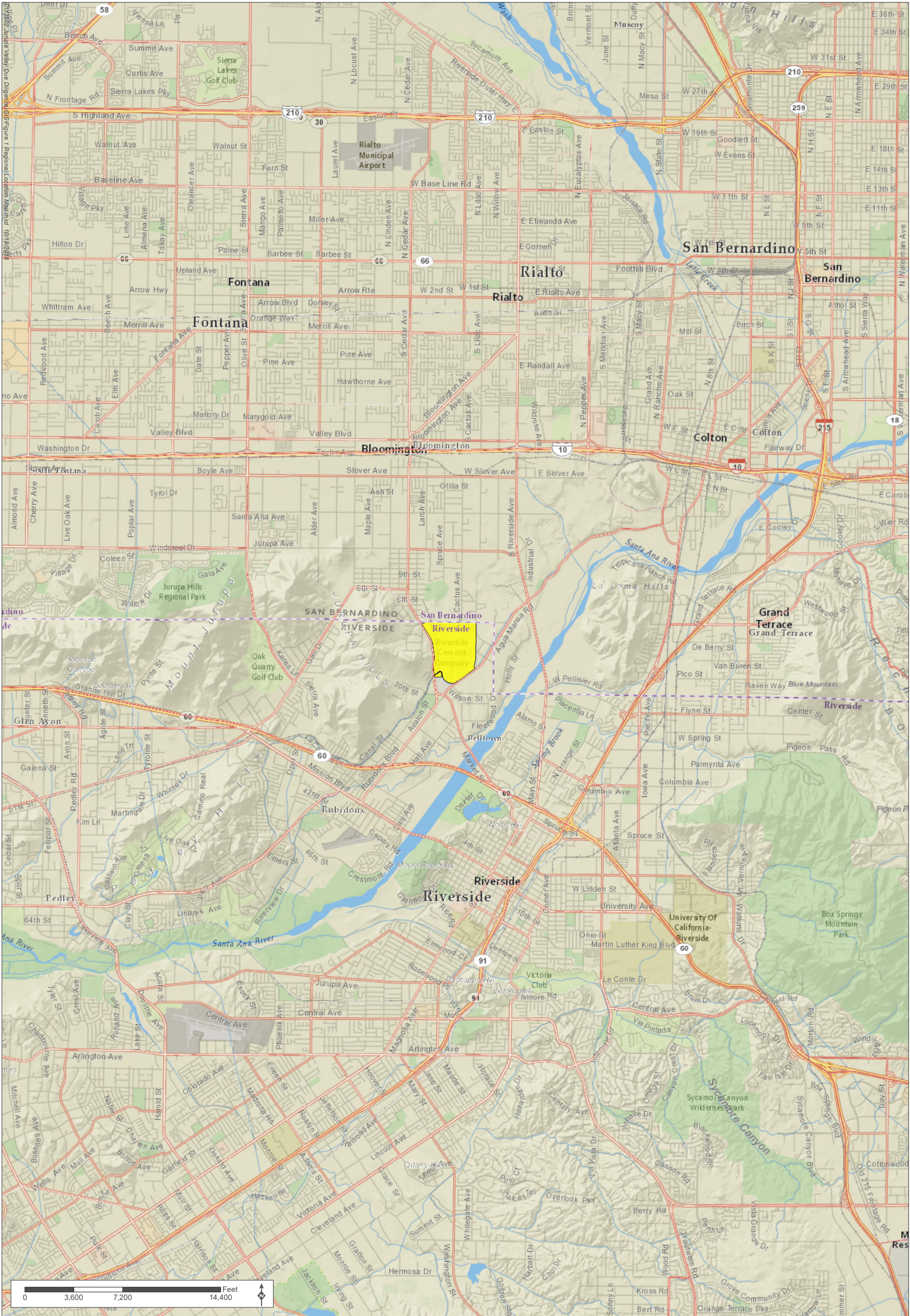
In conclusion, preservation of site trees where possible as well as identification of appropriate avoidance, minimization and mitigation measures to offset impacts of necessary tree removal due to project implementation will be required to minimize potentially significant impacts to trees, associated wildlife species, aesthetics, soil erosion and sediment control.

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<sup>2</sup> [www.itreetools.org/](http://www.itreetools.org/)

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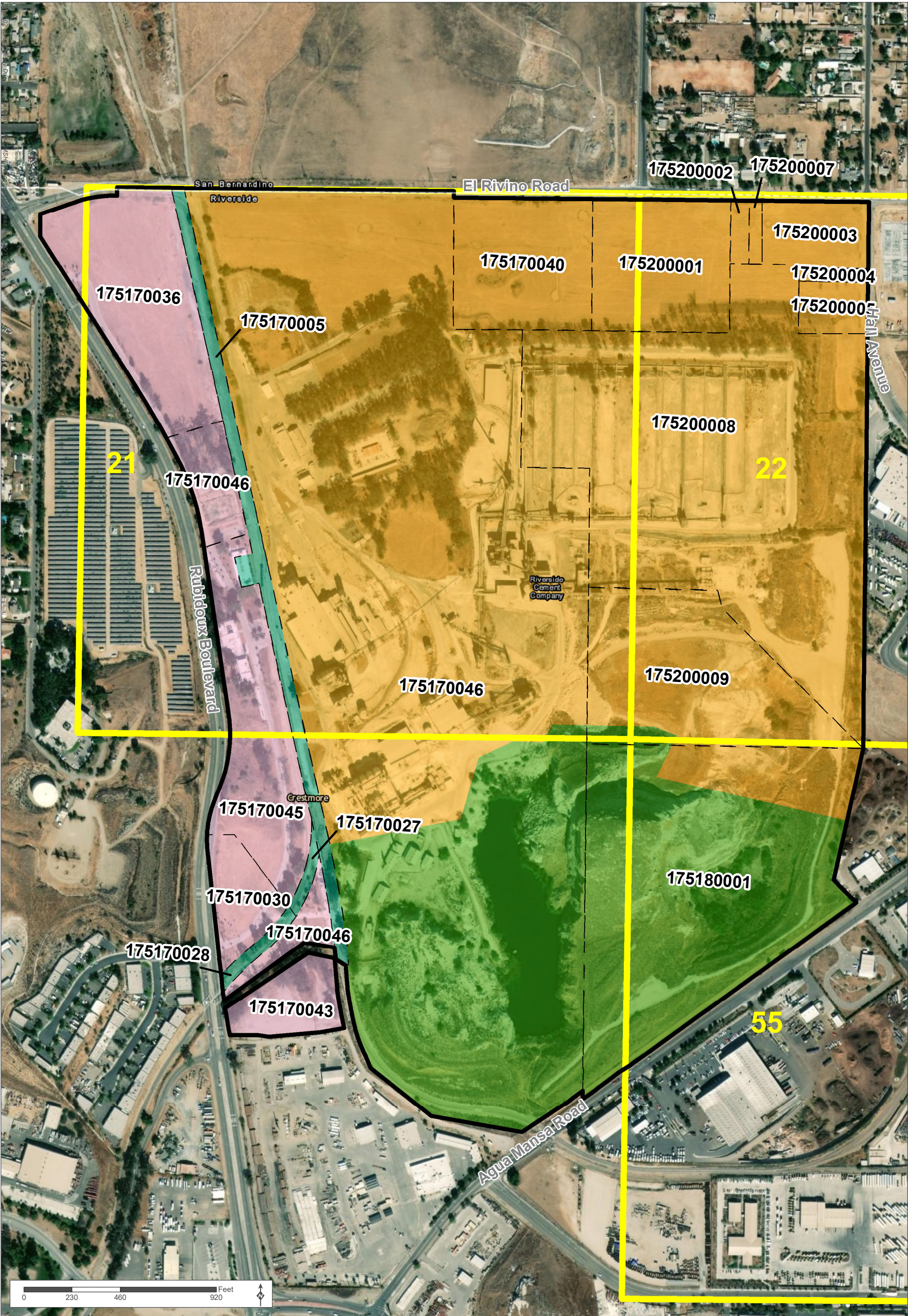


Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

 Project Site Boundary (303.34 ac)\*

\* Project Site Boundary lines were obtained from APN boundaries and do not reflect the boundaries shown in the Agua Mansa Commerce Park Specific Plan, which is based off of the Tentative Parcel Map. Biological resources and calculations herein are mapped to the extent of APN boundaries. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.slight discrepancies in acreage calculations may occur.



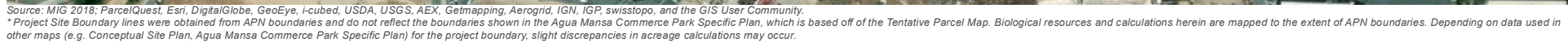



Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* Project Site Boundary lines were obtained from APN boundaries and do not reflect the boundaries shown in the Agua Mansa Commerce Park Specific Plan, which is based off of the Tentative Parcel Map. Biological resources and calculations herein are mapped to the extent of APN boundaries. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| Project Site Boundary (303.34 ac)* | Business Park with Retail Overlay |
| Assessor Parcel Numbers            | Industrial Park                   |
| MSHCP Criteria Cells               | Open Space                        |
|                                    | Railroad Right-of-Way             |

**Exhibit 2. MSHCP Conservation Areas and Aerial Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA





 Project Site Boundary (303.34 acres)\*  
 Tree Survey Area and Tree Sequences  
 Tree Survey Points



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## Appendix A: Criteria Used to Classify the Conditions of a Tree

### Structure

Category	Definition
Very Poor	Trunk has large pockets of decay, is bifurcated or has a severe lean. Limbs or branches are poorly attached or dead. Possible hazard.
Poor	Limbs or branches are poorly attached or developed. Canopy is not symmetrical. Trunk has a lean.
Fair	Trunk, limb, and branch development through flawed is typical of this species.
Good	Trunk is well developed with well-attached limbs and branches have some flaws but are hardly visible.
Very Good	In addition to attributes of a good rating, the tree exhibits a well-developed root flare and a balanced canopy.

### Health

Category	Definition
Very Poor	Tree displays severe dieback of branches, canopy is extremely sparse. Many exhibit extreme pathogen infestation or infection. Or tree is dead.
Poor	Tree displays some dieback of branches, canopy is sparse, little to no signs of new growth or vigor. Possible pathogen infestation or infection. Foliar canopy is sparse.
Fair	Tree is developing in a manner typical to others in the area. Canopy is full.
Good	New growth is vigorous as evidenced by stem elongation and color. Canopy is dense.
Very Good	In addition to attributes of a good rating, tree is displaying extremely vigorous growth and trunk displays a pattern of vigor cracks or lines.

### Overall

Category	Definition
Very Poor	Tree is in severe decline or dead.
Poor	Tree is in decline or lacks vigor.
Fair	Tree is typical of species in the area.
Good	Tree is vigorous with few visible flaws.
Very Good	Tree is extremely vigorous.

## Appendix B: Tree Survey Data



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1	Red gum	Eucalyptus camaldulensis	-	yes	20,7,10,27	45	good	good	good	82	
2	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	60	
3	Red gum	Eucalyptus camaldulensis	-	yes	7,13	24	fair	fair	fair	60	
4	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	60	
5	Red gum	Eucalyptus camaldulensis	-	yes	5,7	12	poor	very poor	very poor	20	
6	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	fair	fair	fair	20	
7	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	60	
8	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	60	
9	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	good	fair	55	
10	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	55	
11	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	30	
12	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	poor	fair	65	
13	Red gum	Eucalyptus camaldulensis	-	yes	6,7	17	poor	very poor	very poor	30	
14	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	good	good	65	
15	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	good	good	25	
16	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	40	
17	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	very poor	poor	35	
18	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	38	
19	Red gum	Eucalyptus camaldulensis	-	yes	16,6	32	poor	good	fair	45	
20	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	35	
21	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	35	
22	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	35	
23	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	35	
24	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	40	
25	Red gum	Eucalyptus camaldulensis	13	no	-	-	good	good	good	40	
26	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	fair	poor	24	
27	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	28	
28	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	55	
29	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	good	good	30	
30	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	45	
31	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	22	
32	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	25	
33	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	fair	65	
34	Red gum	Eucalyptus camaldulensis	-	yes	8,6	19	fair	poor	poor	33	
35	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	48	
36	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	80	
37	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	19	
38	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	38	
39	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	35	
40	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	poor	38	
41	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	fair	good	fair	36	
42	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	25	
43	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	good	good	30	
44	Flooded gum	Eucalyptus rudis	12	no	-	-	fair	good	fair	40	
45	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	poor	poor	35	
46	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	43	
47	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	poor	fair	40	
48	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	25	
49	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	good	good	48	
50	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	fair	35	
51	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	40	
52	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	35	
53	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	35	
54	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	poor	poor	35	
55	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	fair	50	
56	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	good	fair	25	
57	Flooded gum	Eucalyptus rudis	18	no	-	-	very good	good	good	65	
58	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	good	fair	good	33	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
59	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	good	poor	fair	28	
60	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	35	
61	Red gum	Eucalyptus camaldulensis	-	yes	14,9	34	fair	fair	fair	50	
62	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	43	
63	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	fair	poor	22	
64	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	fair	good	53	
65	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	good	fair	fair	40	
66	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	fair	fair	35	
67	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	35	
68	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	45	
69	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	poor	poor	30	
70	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	poor	50	
71	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	poor	poor	poor	45	
72	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	poor	30	
73	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	fair	fair	fair	50	
74	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	poor	poor	40	
75	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	40	
76	Flooded gum	Eucalyptus rudis	-	yes	8,11,9	29	very poor	good	fair	45	
77	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	very poor	very poor	30	
78	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	very poor	very poor	very poor	10	
79	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	poor	55	
80	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	25	
81	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	fair	fair	60	
82	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	poor	fair	30	
83	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	poor	poor	45	
84	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	40	
85	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	15	
86	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	good	good	good	35	
87	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	good	fair	25	
88	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	20	
89	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
90	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	45	
91	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	20	
92	Red gum	Eucalyptus camaldulensis	19	no	-	-	good	fair	fair	50	
93	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	fair	poor	35	
94	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	very poor	poor	45	
95	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	35	
96	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	40	
97	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	very poor	very poor	6	
98	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	35	
99	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	25	
100	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	poor	fair	45	
101	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	fair	poor	poor	30	
102	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	
103	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	35	
104	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	62	
105	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
106	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	30	
107	Red ironbark	Eucalyptus sideroxylon	19	no	-	-	poor	fair	fair	65	
108	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	fair	poor	poor	25	
109	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	very poor	poor	50	
110	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	very poor	very poor	45	
111	Flooded gum	Eucalyptus rudis	8	no	-	-	poor	fair	fair	40	
112	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	poor	poor	50	
113	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	poor	poor	35	
114	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	35	
115	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	50	
116	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	very poor	very poor	50	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
117	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	45	
118	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	45	
119	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	poor	poor	30	
120	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	40	
121	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
122	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	60	
123	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	fair	poor	35	
124	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
125	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	poor	poor	35	
126	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	good	fair	35	
127	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	35	
128	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	35	
129	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	40	
130	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	40	
131	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	25	
132	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	very poor	very poor	30	
133	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	30	
134	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	40	
135	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	63	
136	Flooded gum	Eucalyptus rudis	20	no	-	-	poor	good	fair	60	
137	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	poor	50	
138	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	40	
139	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	55	
140	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	30	
141	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	50	
142	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	40	
143	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	65	
144	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	very poor	50	
145	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	40	
146	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
147	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	very poor	very poor	50	
148	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	very poor	very poor	30	
149	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	fair	40	
150	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	35	
151	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	very poor	poor	40	
152	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	25	
153	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	40	
154	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	40	
155	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	50	
156	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	73	
157	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
158	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	50	
159	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	60	
160	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
161	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
162	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	60	
163	Red gum	Eucalyptus camaldulensis	41	no	-	-	very poor	good	fair	90	
164	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	55	
165	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	55	
166	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	35	
167	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
168	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	60	
169	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	poor	very poor	40	
170	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	poor	35	
171	Red gum	Eucalyptus camaldulensis	-	yes	19,10,11,7	37	very poor	poor	poor	65	
172	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	poor	poor	65	
173	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
174	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	40	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
175	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	poor	70	
176	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	40	
177	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	55	
178	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	fair	fair	fair	50	
179	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	fair	35	
180	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	poor	very poor	40	
181	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	35	
182	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
183	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	poor	very poor	12	
184	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	fair	fair	35	
185	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	50	
186	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	55	
187	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	40	
188	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	poor	36	
189	Red gum	Eucalyptus camaldulensis	-	yes	7,9	27	very poor	poor	poor	25	
190	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	30	
191	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	fair	50	
192	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
193	Flooded gum	Eucalyptus rudis	7	no	-	-	poor	poor	poor	40	near 2022
194	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	80	
195	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
196	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	60	
197	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	fair	70	
198	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	60	
199	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	55	
200	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	poor	poor	80	
201	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	35	
202	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	50	
203	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	45	
204	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	90	
205	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	55	
206	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	fair	poor	65	
207	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	50	
208	Red gum	Eucalyptus camaldulensis	-	yes	8,7	17	very poor	poor	poor	45	
209	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	25	
210	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	20	
211	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	
212	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	40	
213	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	good	fair	70	
214	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	25	
215	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	55	
216	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	45	
217	Red gum	Eucalyptus camaldulensis	-	yes	9,9	22	very poor	poor	poor	45	
218	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	55	
219	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	vp	vp	50	
220	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	55	
221	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	fair	fair	70	
222	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	70	
223	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	50	
224	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	60	
225	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	25	
226	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	very poor	very poor	40	
227	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	35	
228	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
229	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	60	
230	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	fair	poor	35	
231	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5,5	27	very poor	good	poor	30	
232	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	25	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
233	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	70	
234	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	30	
235	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	good	fair	65	
236	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	fair	55	
237	Red gum	Eucalyptus camaldulensis	26	no	-	-	good	fair	fair	85	
238	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	60	
239	Red gum	Eucalyptus camaldulensis	-	yes	14,9	26	poor	poor	poor	60	
240	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	70	
241	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	50	
242	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	35	
243	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
244	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	
245	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	40	
246	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	35	
247	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	30	
248	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	80	
249	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	40	
250	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	poor	60	
251	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	fair	70	
252	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	55	
253	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	fair	fair	55	
254	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
255	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	very poor	poor	50	
256	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
257	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	20	
258	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	poor	poor	65	
259	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	55	
260	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	85	
261	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
262	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	35	
263	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	fair	fair	75	
264	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	50	
265	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	50	
266	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	50	
267	Red gum	Eucalyptus camaldulensis	-	yes	26,10	29	poor	good	fair	60	
268	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	40	
269	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	65	
270	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	35	
271	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
272	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	fair	fair	105	
273	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	40	
274	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	40	
275	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	70	
276	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	60	
277	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	30	
278	Red gum	Eucalyptus camaldulensis	7	no	-	-	vp	poor	poor	35	
279	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	poor	80	
280	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	45	
281	Red gum	Eucalyptus camaldulensis	-	yes	7,6	14	very poor	very poor	very poor	45	
282	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	35	
283	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	poor	poor	30	
284	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	
285	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	65	
286	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	40	
287	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	55	
288	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
289	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	45	
290	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	60	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
291	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
292	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	good	fair	40	
293	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	40	
294	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	55	
295	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	
296	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	
297	Red ironbark	Eucalyptus sideroxylon	4	no	-	-	poor	fair	poor	30	
298	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	fair	90	
299	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	45	
300	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	poor	70	
301	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	50	
302	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	60	
303	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	65	
304	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	80	
305	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	fair	80	
306	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	fair	35	
307	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	fair	65	
308	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	55	
309	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
310	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	fair	90	
311	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	55	
312	Red gum	Eucalyptus camaldulensis	-	yes	10,9	29	very poor	poor	poor	45	
313	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	poor	45	
314	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	45	
315	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	70	
316	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	fair	poor	fair	35	
317	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
318	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	poor	poor	90	
319	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	45	
320	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	55	
321	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	75	
322	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	65	
323	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	poor	fair	55	
324	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	fair	poor	poor	45	
325	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	35	
326	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	70	
327	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	poor	50	
328	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	40	
329	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	50	
330	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	40	
331	Red ironbark	Eucalyptus sideroxylon	18	no	-	-	fair	fair	fair	75	
332	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	50	
333	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
334	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	65	
335	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	35	
336	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	60	
337	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	60	
338	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	50	
339	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	40	
340	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	40	
341	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	poor	40	
342	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	poor	50	
343	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	40	
344	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	poor	poor	35	
345	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	25	
346	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	fair	poor	30	
347	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	45	
348	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	40	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
349	Flooded gum	Eucalyptus rudis	12	no	-	-	fair	poor	fair	55	
350	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	50	
351	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	60	
352	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	60	
353	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	fair	fair	95	
354	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
355	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	65	
356	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	50	
357	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	55	
358	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	poor	very poor	45	
359	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	good	fair	80	
360	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	50	
361	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	fair	poor	40	
362	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	35	
363	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
364	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	55	
365	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	70	
366	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	good	fair	70	
367	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
368	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5	19	very poor	fair	poor	40	
369	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
370	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	good	fair	55	
371	Red gum	Eucalyptus camaldulensis	-	yes	19,14	43	poor	good	fair	75	
372	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	good	good	good	60	
373	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	good	good	good	60	
374	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	good	fair	40	
375	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	good	fair	40	
376	Red gum	Eucalyptus camaldulensis	-	yes	11,10	26	very poor	poor	poor	40	
377	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	45	
378	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	50	
379	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	55	
380	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	50	
381	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	good	good	75	
382	Peruvian pepper	Schinus molle	6	no	-	-	poor	fair	poor	20	
383	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	poor	fair	60	
384	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	good	fair	50	
385	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	45	
386	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	85	
387	Red gum	Eucalyptus camaldulensis	-	yes	12,7	21	very poor	poor	poor	55	
388	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	30	
389	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	115	
390	Red gum	Eucalyptus camaldulensis	34	no	-	-	very poor	very poor	very poor	75	
391	Red gum	Eucalyptus camaldulensis	5	no	-	-	fair	fair	fair	30	
392	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	fair	80	
393	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
394	Red gum	Eucalyptus camaldulensis	-	yes	15,6	23	poor	poor	poor	40	
395	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	40	
396	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	65	
397	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	40	
398	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	fair	fair	fair	65	
399	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	fair	fair	35	
400	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	50	
401	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	good	fair	70	
402	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	50	
403	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	90	
404	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	55	
405	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	45	
406	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	25	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
407	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	25	
408	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	good	fair	55	
409	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	good	fair	100	
410	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	30	
411	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
412	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	good	fair	75	
413	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	55	
414	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	fair	poor	40	
415	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	80	
416	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	20	
417	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	20	
418	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	75	
419	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
420	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	good	fair	85	
421	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	70	
422	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	poor	35	
423	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	45	
424	Red gum	Eucalyptus camaldulensis	26	no	-	-	good	good	good	95	
425	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	30	
426	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
427	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
428	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	60	
429	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	fair	good	75	
430	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
431	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
432	Red gum	Eucalyptus camaldulensis	23	no	-	-	good	good	good	85	
433	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	poor	fair	50	
434	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	poor	poor	45	
435	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	35	
436	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	fair	fair	70	
437	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	45	
438	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	55	
439	Red gum	Eucalyptus camaldulensis	35	no	-	-	very poor	very poor	very poor	65	
440	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	85	
441	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	50	
442	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	fair	poor	80	
443	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	
444	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	fair	75	
445	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	poor	40	
446	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	55	
447	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	30	
448	Red gum	Eucalyptus camaldulensis	-	yes	9,9	25	very poor	very poor	very poor	40	
449	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	35	
450	Red gum	Eucalyptus camaldulensis	-	yes	16,13	32	poor	poor	poor	70	
451	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	65	
452	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
453	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	poor	40	
454	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	25	
455	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	40	
456	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	40	
457	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	40	
458	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	30	
459	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	poor	45	
460	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	30	near 457
461	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
462	Red ironbark	Eucalyptus sideroxylon	4	no	-	-	poor	poor	poor	25	
463	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	35	
464	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	45	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
465	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	25	
466	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	poor	45	
467	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	45	
468	Red gum	Eucalyptus camaldulensis	-	yes	13,9	32	poor	poor	poor	70	
469	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	poor	60	
470	Red gum	Eucalyptus camaldulensis	-	yes	7,6	17	very poor	very poor	very poor	35	
471	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	65	
472	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	very poor	45	
473	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	55	
474	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	40	
475	Red gum	Eucalyptus camaldulensis	-	yes	10,7	21	very poor	very poor	very poor	50	
476	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	55	
477	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	15	
478	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	55	
479	Red gum	Eucalyptus camaldulensis	-	yes	16,10	36	poor	poor	poor	75	
480	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	50	
481	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	45	
482	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	fair	poor	50	
483	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	poor	poor	50	
484	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	poor	fair	75	
485	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	35	
486	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	45	
487	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	40	
488	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	30	
489	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5,5	12	very poor	very poor	very poor	35	
490	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	poor	fair	fair	65	
491	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	35	
492	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	50	
493	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	55	
494	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	50	
495	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	poor	75	
496	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	35	
497	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	50	
498	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	very poor	very poor	very poor	50	
499	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	40	
500	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	30	
501	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	30	
502	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
503	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	35	
504	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	95	
505	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	85	
506	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	45	
507	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
508	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	15	
509	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	50	
510	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	70	
511	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	poor	55	
512	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	75	
513	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	25	
514	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
515	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	poor	35	
516	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	50	
517	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	60	
518	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	75	
519	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	30	
520	Red gum	Eucalyptus camaldulensis	-	yes	13,6	18	very poor	fair	poor	45	
521	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	50	
522	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	fair	60	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
523	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	35	
524	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	40	
525	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	50	
526	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	65	
527	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	60	
528	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	30	
529	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	90	
530	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	40	
531	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	55	
532	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
533	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	40	
534	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	50	
535	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	80	
536	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	80	
537	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	35	
538	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	fair	fair	80	
539	Red gum	Eucalyptus camaldulensis	-	yes	5,3	11	very poor	very poor	very poor	30	
540	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
541	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	60	
542	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	50	
543	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	65	
544	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	30	
545	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	good	poor	20	
546	Red gum	Eucalyptus camaldulensis	-	yes	8,7,8	48	very poor	very poor	very poor	45	
547	Red ironbark	Eucalyptus sideroxylon	-	yes	7,7,8	55	very poor	poor	very poor	40	
548	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	very poor	very poor	very poor	45	
549	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	50	
550	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	65	
551	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	60	near 545
552	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	very poor	poor	35	
553	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	50	
554	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	50	
555	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	85	
556	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	poor	very poor	45	
557	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	55	
558	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	very poor	poor	75	
559	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	40	
560	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	poor	poor	100	
561	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	85	
562	Red gum	Eucalyptus camaldulensis	-	yes	14,4,5	18	very poor	fair	poor	25	
563	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	85	
564	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	25	
565	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	55	
566	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	poor	very poor	75	
567	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	fair	fair	85	
568	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	50	
569	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	30	
570	Red gum	Eucalyptus camaldulensis	-	yes	10,10	24	very poor	fair	poor	55	
571	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	30	
572	Red gum	Eucalyptus camaldulensis	-	yes	31,14,20,14,6,21,20	120	very poor	good	fair	55	
573	Red ironbark	Eucalyptus sideroxylon	-	yes	8,8,7	19	very poor	poor	fair	45	
574	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5	16	very poor	very poor	very poor	40	
575	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5,6,9,9,5	36	very poor	poor	poor	55	
576	Red gum	Eucalyptus camaldulensis	-	yes	13,8	22	poor	very poor	poor	40	
577	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	90	
578	Red gum	Eucalyptus camaldulensis	-	yes	14,16	26	poor	poor	poor	60	
579	Red gum	Eucalyptus camaldulensis	-	yes	8,13	18	poor	poor	poor	70	
580	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	good	good	100	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
581	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	75	
582	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	fair	poor	30	
583	Red gum	Eucalyptus camaldulensis	36	no	-	-	good	good	good	100	
584	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	good	fair	50	
585	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	80	
586	Red ironbark	Eucalyptus sideroxylon	24	no	-	-	poor	fair	fair	45	
587	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	40	
588	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	65	
589	Red gum	Eucalyptus camaldulensis	-	yes	8,7	10	poor	poor	poor	25	
590	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	65	
591	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	25	
592	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	poor	85	
593	Red gum	Eucalyptus camaldulensis	-	yes	8,10	15	poor	fair	poor	30	
594	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	60	
595	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	60	
596	Red gum	Eucalyptus camaldulensis	-	yes	7,10	37	very poor	poor	poor	30	
597	Red gum	Eucalyptus camaldulensis	-	yes	5,12	17	very poor	poor	poor	35	
598	Red gum	Eucalyptus camaldulensis	-	yes	12	23	poor	poor	poor	50	
599	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	50	
600	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	45	
601	Red gum	Eucalyptus camaldulensis	-	yes	12,5,5,5	32	very poor	fair	poor	25	
602	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	45	
603	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	75	
604	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	poor	fair	60	
605	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	poor	fair	70	
606	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
607	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	50	
608	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	75	
609	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	65	
610	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
611	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	70	
612	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	45	
613	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	15	
614	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	poor	35	
615	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	75	
616	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	60	
617	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	40	
618	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	55	
619	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	50	
620	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	50	
621	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	60	near 617
622	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	fair	45	
623	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	fair	45	
624	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	35	
625	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	55	
626	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	40	
627	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	60	
628	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	55	
629	Red gum	Eucalyptus camaldulensis	-	yes	8,6	10	very poor	poor	poor	20	
630	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
631	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	30	
632	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	good	good	85	
633	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	40	
634	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	80	
635	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	75	
636	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	55	
637	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	30	
638	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	60	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
639	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	55	
640	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	30	
641	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	poor	fair	85	
642	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	55	
643	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	45	
644	Red gum	Eucalyptus camaldulensis	-	yes	16,12	30	poor	fair	fair	60	
645	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	80	
646	Red gum	Eucalyptus camaldulensis	-	yes	6,8,9	9	very poor	poor	poor	45	
647	Red gum	Eucalyptus camaldulensis	-	yes	15,13	32	very poor	poor	poor	70	
648	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	poor	80	
649	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	good	good	75	
650	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	85	
651	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4	22	very poor	poor	poor	40	
652	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	15	
653	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	70	
654	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
655	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	70	
656	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	45	
657	Manna gum	Eucalyptus viminalis	17	no	-	-	good	good	good	55	
658	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	50	
659	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	good	good	100	
660	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	45	
661	Manna gum	Eucalyptus viminalis	-	yes	8,7	31	very poor	very poor	very poor	40	
662	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
663	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	60	
664	Red gum	Eucalyptus camaldulensis	-	yes	4,6	12	very poor	fair	poor	30	
665	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	70	
666	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	80	
667	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	35	
668	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	60	
669	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
670	Red gum	Eucalyptus camaldulensis	42	no	-	-	poor	good	good	90	
671	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	good	good	85	
672	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	75	
673	Red gum	Eucalyptus camaldulensis	-	yes	13,21	34	poor	good	good	65	
674	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	good	good	105	
675	Red gum	Eucalyptus camaldulensis	-	yes	5,4	26	very poor	good	poor	20	
676	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	70	
677	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	60	
678	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	good	fair	80	
679	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	poor	poor	80	
680	Red gum	Eucalyptus camaldulensis	-	yes	5,4,4,5,4	19	very poor	very poor	very poor	15	
681	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	poor	40	
682	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	60	
683	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	75	
684	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	95	
685	Red gum	Eucalyptus camaldulensis	31	no	-	-	good	fair	fair	95	
686	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	good	good	105	
687	Red gum	Eucalyptus camaldulensis	-	yes	15,12,5,12,4	40	very poor	fair	poor	55	
688	Red gum	Eucalyptus camaldulensis	-	yes	5,10,13	39	very poor	fair	poor	50	
689	Red gum	Eucalyptus camaldulensis	-	yes	9,6	23	very poor	very poor	very poor	35	
690	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	good	good	70	
691	Peruvian pepper	Schinus molle	44	no	-	-	fair	good	good	50	
692	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	good	fair	70	
693	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	50	
694	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	good	fair	55	
695	Red gum	Eucalyptus camaldulensis	-	yes	19,12	42	very poor	good	fair	55	
696	Red gum	Eucalyptus camaldulensis	-	yes	15,13,12	42	very poor	good	fair	65	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
697	Red gum	Eucalyptus camaldulensis	-	yes	4,4,6	21	very poor	very poor	very poor	25	
698	Red gum	Eucalyptus camaldulensis	-	yes	7,11,7	24	very poor	poor	poor	50	
699	Red gum	Eucalyptus camaldulensis	-	yes	6,6,6	37	very poor	poor	poor	40	
700	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	35	
701	Red gum	Eucalyptus camaldulensis	27	no	-	-	fair	poor	poor	75	
702	Manna gum	Eucalyptus viminalis	-	yes	21,7	28	very poor	poor	very poor	50	
703	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
704	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	45	
705	Manna gum	Eucalyptus viminalis	-	yes	16,8	20	poor	fair	poor	45	
706	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	60	
707	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	poor	55	
708	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	fair	90	
709	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	45	
710	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	40	
711	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
712	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	40	
713	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	50	
714	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
715	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	60	
716	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	70	
717	Manna gum	Eucalyptus viminalis	-	yes	13,18	36	poor	good	fair	45	
718	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	45	
719	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	35	
720	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	70	
721	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	poor	poor	40	
722	Red gum	Eucalyptus camaldulensis	31	no	-	-	very poor	poor	poor	70	
723	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	20	
724	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	55	
725	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	very poor	45	
726	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	80	
727	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	40	
728	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	very poor	very poor	65	
729	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	50	
730	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	50	
731	Red gum	Eucalyptus camaldulensis	-	yes	8,8,6	19	very poor	poor	poor	40	
732	Red gum	Eucalyptus camaldulensis	-	yes	8,6,4	18	very poor	poor	poor	30	
733	Red gum	Eucalyptus camaldulensis	-	yes	8,7,8,8,6	23	very poor	fair	poor	30	
734	Red gum	Eucalyptus camaldulensis	-	yes	8,8,7	22	very poor	poor	poor	45	
735	Red gum	Eucalyptus camaldulensis	-	yes	6,7	18	very poor	very poor	very poor	45	
736	Red gum	Eucalyptus camaldulensis	-	yes	6,4,8	17	very poor	poor	very poor	45	
737	Red gum	Eucalyptus camaldulensis	-	yes	8,7,4	15	very poor	fair	poor	40	
738	Red gum	Eucalyptus camaldulensis	-	yes	8,7,5,6,5	23	very poor	good	fair	35	
739	Red gum	Eucalyptus camaldulensis	-	yes	5,6,7	15	very poor	very poor	very poor	15	
740	Red gum	Eucalyptus camaldulensis	-	yes	8,6	16	very poor	fair	poor	25	
741	Red gum	Eucalyptus camaldulensis	-	yes	7,11,10,14,7,10,9,15,9,13,4	57	very poor	good	fair	25	
742	Red gum	Eucalyptus camaldulensis	-	yes	8,8,8	42	very poor	very poor	very poor	20	
743	Red gum	Eucalyptus camaldulensis	-	yes	8,9	18	very poor	very poor	very poor	25	
744	Red gum	Eucalyptus camaldulensis	-	yes	7,10,12,12	40	very poor	very poor	very poor	25	
745	Red gum	Eucalyptus camaldulensis	-	yes	7,8	30	very poor	good	fair	45	
746	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	35	
747	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	40	
748	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	45	
749	Red gum	Eucalyptus camaldulensis	-	yes	5,3	19	very poor	poor	poor	35	
750	Red gum	Eucalyptus camaldulensis	-	yes	10,9,3	30	poor	poor	poor	50	
751	Red gum	Eucalyptus camaldulensis	-	yes							
752	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	60	
753	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	poor	poor	50	
754	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	



Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
755	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	45	
756	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	35	
757	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
758	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	40	
759	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	35	
760	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	45	
761	Red gum	Eucalyptus camaldulensis	-	yes	7,7	16	very poor	poor	poor	45	
762	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	35	
763	Double Tag/760										this tag was placed on Tree 760
764	Red gum	Eucalyptus camaldulensis	-	yes	10,6	13	poor	fair	fair	60	
765	Red gum	Eucalyptus camaldulensis	-	yes	5,4	19	very poor	fair	poor	35	
766	Red gum	Eucalyptus camaldulensis	-	yes	9,5	25	poor	poor	poor	45	
767	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	60	
768	Red gum	Eucalyptus camaldulensis	-	yes	31,44	108	good	good	good	100	
769	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	poor	poor	20	
770	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	30	
771	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	50	
772	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	45	
773	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	35	
774	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	45	
775	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	40	
776	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	40	
777	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	30	
778	Red gum	Eucalyptus camaldulensis	-	yes	10,10	26	very poor	good	fair	50	
779	Lost Tag										blank on sheet... we couldn't find it
780	Peruvian pepper	Schinus molle	-	yes	10,7,4	25	poor	good	fair	25	
781	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	poor	poor	65	
782	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	good	good	80	
783	Red gum	Eucalyptus camaldulensis	-	yes	6,6,5	19	very poor	very poor	very poor	20	
784	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	20	
785	Red gum	Eucalyptus camaldulensis	-	yes	14,10	26	very poor	poor	poor	40	
786	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	50	
787	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	very poor	very poor	55	
788	Red gum	Eucalyptus camaldulensis	-	yes	9,10	19	very poor	poor	poor	30	
789	Red gum	Eucalyptus camaldulensis	-	yes	9,8	16	very poor	very poor	very poor	30	
790	Red gum	Eucalyptus camaldulensis	23	no	-	-	good	fair	good	65	near 786
791	Red gum	Eucalyptus camaldulensis	-	yes	13,16,15,16,20,15	120	poor	fair	fair	50	
792	Red gum	Eucalyptus camaldulensis	-	yes	12,9,7	48	poor	poor	poor	35	
793	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	fair	poor	55	
794	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	40	
795	Red gum	Eucalyptus camaldulensis	-	yes	12,8	21	poor	good	fair	55	
796	Red gum	Eucalyptus camaldulensis	-	yes	18,7,5	32	poor	good	fair	60	
797	Red gum	Eucalyptus camaldulensis	-	yes	5,13,7	24	very poor	very poor	very poor	35	
798	Red gum	Eucalyptus camaldulensis	-	yes	14,6	22	poor	good	fair	60	
799	Red gum	Eucalyptus camaldulensis	-	yes	22,10	30	poor	poor	poor	45	
800	Red gum	Eucalyptus camaldulensis	-	yes	15,10,12	54	very poor	good	fair	55	
801	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	45	
802	Red gum	Eucalyptus camaldulensis	-	yes	14,22	40	very poor	very poor	very poor	55	
803	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	30	
804	Red gum	Eucalyptus camaldulensis	-	yes	9,7	20	poor	poor	poor	45	
805	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	35	
806	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
807	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	65	
808	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	fair	poor	70	
809	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	35	
810	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
811	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	60	
812	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
813	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	70	
814	Red gum	Eucalyptus camaldulensis	58	no	-	-	poor	poor	poor	65	
815	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	fair	35	
816	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
817	Red gum	Eucalyptus camaldulensis	36	no	-	-	poor	fair	fair	80	
818	Red gum	Eucalyptus camaldulensis	-	yes	6,4,3	19	very poor	poor	poor	30	
819	Red gum	Eucalyptus camaldulensis	-	yes	16,5	34	poor	good	fair	60	
820	Red gum	Eucalyptus camaldulensis	-	yes	19,7	33	poor	good	good	75	
821	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
822	Red gum	Eucalyptus camaldulensis	-	yes	21,6	41	poor	fair	fair	70	
823	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	60	
824	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	50	
825	Red gum	Eucalyptus camaldulensis	-	yes	21,21,14	80	poor	fair	fair	55	
826	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	30	
827	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	50	
828	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	50	
829	Red gum	Eucalyptus camaldulensis	-	yes	16,5	32	poor	fair	fair	55	
830	Red gum	Eucalyptus camaldulensis	-	yes	5,19	24	fair	good	fair	65	
831	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
832	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	fair	50	
833	Red gum	Eucalyptus camaldulensis	-	yes	22,7	50	poor	fair	fair	65	
834	Red gum	Eucalyptus camaldulensis	-	yes	44,10,7	46	poor	fair	poor	45	
835	Red gum	Eucalyptus camaldulensis	-	yes	10,12,12	27	poor	good	fair	55	
836	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	60	
837	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	very poor	poor	35	
838	Red gum	Eucalyptus camaldulensis	-	yes	11,10,8,52	88	fair	good	good	100	
839	Red gum	Eucalyptus camaldulensis	-	yes	6,5,4	35	poor	good	fair	40	
840	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	45	
841	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	45	
842	Red gum	Eucalyptus camaldulensis	-	yes	8,5,3	50	poor	fair	fair	60	
843	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	55	
844	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	good	65	
845	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	fair	25	
846	Double Tag/843										this tag was placed on Tree 843
847	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	40	
848	Red gum	Eucalyptus camaldulensis	-	yes	5,6	8	poor	good	good	40	
849	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	35	
850	Red gum	Eucalyptus camaldulensis	-	yes	6,5	12	poor	good	fair	15	
851	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	good	good	65	
852	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	good	fair	40	
853	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	fair	fair	30	
854	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	55	
855	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
856	Red gum	Eucalyptus camaldulensis	-	yes	7,16,5,13	51	poor	poor	poor	65	
857	Red gum	Eucalyptus camaldulensis	-	yes	33,14,14	48	fair	good	good	90	
858	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	fair	25	
859	Red gum	Eucalyptus camaldulensis	-	yes	11,10	14	fair	fair	fair	30	
860	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	20	
861	Red gum	Eucalyptus camaldulensis	-	yes	25,26,5,34	88	good	very good	very good	85	
862	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	good	fair	40	
863	Red gum	Eucalyptus camaldulensis	-	yes	7,17	28	poor	poor	poor	60	
864	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	20	
865	Red gum	Eucalyptus camaldulensis	5	no	-	-	fair	poor	poor	25	
866	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	55	
867	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	45	
868	Red gum	Eucalyptus camaldulensis	35	no	-	-	very poor	very poor	very poor	55	
869	Red gum	Eucalyptus camaldulensis	-	yes	13,33,9,7	72	fair	fair	fair	75	
870	Red gum	Eucalyptus camaldulensis	59	no	-	-	very poor	very poor	very poor	65	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
871	Red gum	Eucalyptus camaldulensis	-	yes	23,20	70	very poor	very poor	very poor	70	
872	Red gum	Eucalyptus camaldulensis	-	yes	7,13	24	poor	good	fair	80	
873	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	fair	50	
874	Red gum	Eucalyptus camaldulensis	-	yes	7,6,7,20	45	very poor	very poor	very poor	70	
875	Red gum	Eucalyptus camaldulensis	-	yes	15,4,5	44	very poor	very poor	very poor	60	
876	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
877	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	40	
878	Red gum	Eucalyptus camaldulensis	-	yes	10,5	12	very poor	very poor	very poor	35	
879	Red gum	Eucalyptus camaldulensis	-	yes	5,11	21	very poor	very poor	very poor	55	
880	Red gum	Eucalyptus camaldulensis	-	yes	8,5,7	35	very poor	poor	poor	30	
881	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	50	
882	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	55	
883	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	60	
884	Red gum	Eucalyptus camaldulensis	-	yes	16,9,13	50	poor	good	fair	95	
885	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	fair	fair	55	
886	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	60	
887	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	70	
888	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
889	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	fair	60	
890	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	55	
891	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	fair	poor	25	
892	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	65	
893	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	poor	poor	45	
894	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	fair	fair	55	
895	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	45	
896	Red gum	Eucalyptus camaldulensis	-	yes	6,6	16	very poor	very poor	very poor	20	
897	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
898	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	45	
899	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	65	
900	Red gum	Eucalyptus camaldulensis	-	yes	10,6	12	very poor	very poor	very poor	30	
901	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	30	
902	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	poor	poor	40	
903	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	40	
904	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	65	
905	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	55	
906	Red gum	Eucalyptus camaldulensis	-	yes	15,6	23	poor	fair	poor	55	
907	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	70	
908	Red gum	Eucalyptus camaldulensis	-	yes	25,7,6,25	70	fair	good	g	95	
909	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	fair	50	
910	Red gum	Eucalyptus camaldulensis	-	yes	14,19,8	36	very poor	good	fair	50	
911	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	poor	75	
912	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	50	
913	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	65	
914	Red gum	Eucalyptus camaldulensis	-	yes	17,18,11,6	48	poor	poor	poor	60	
915	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	very poor	very poor	50	
916	Black elderberry	Sambucus nigra	5	no	-	-	very poor	very poor	very poor	15	
917	Red gum	Eucalyptus camaldulensis	-	yes	6,4	16	very poor	fair	poor	30	
918	Red gum	Eucalyptus camaldulensis	-	yes	9,5,3,3	21	very poor	poor	poor	30	
919	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	35	
920	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	40	
921	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	fair	poor	45	
922	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	fair	poor	40	
923	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	75	
924	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	fair	45	
925	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	good	fair	45	
926	Red gum	Eucalyptus camaldulensis	-	yes	17,13,8,9,4	60	poor	good	fair	55	
927	Red gum	Eucalyptus camaldulensis	-	yes	15,10,13,9,19	42	poor	good	fair	55	
928	Red gum	Eucalyptus camaldulensis	-	yes	10,3,6,7,4	40	very poor	good	fair	40	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
929	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	50	
930	White alder	Alnus rhombifolia	14	no	-	-	good	poor	poor	20	
931	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	poor	55	
932	Red gum	Eucalyptus camaldulensis	-	yes	9,5,6,20	36	very poor	poor	poor	40	
933	Fremont cottonwood	Populus fremontii	39	no	-	-	good	fair	good	45	
934	Red ironbark	Eucalyptus sideroxylon	23	no	-	-	fair	fair	fair	40	
935	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	very poor	very poor	very poor	55	
936	Red gum	Eucalyptus camaldulensis	-	yes	36,17	52	fair	good	good	80	
937	Red gum	Eucalyptus camaldulensis	-	yes	6,13	17	very poor	poor	poor	35	
938	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	40	
939	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	30	
940	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	35	
941	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	fair	fair	20	
942	Red ironbark	Eucalyptus sideroxylon	-	yes	10,19,13,9,13	32	poor	very poor	very poor	30	
943	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	30	
944	Red gum	Eucalyptus camaldulensis	-	yes	20,14	50	fair	very good	good	60	
945	Red gum	Eucalyptus camaldulensis	-	yes	19,13,22,23	48	very poor	very poor	very poor	50	
946	Bishop pine	Pinus muricata	-	yes	17,13	32	very poor	very poor	very poor	30	
947	Red gum	Eucalyptus camaldulensis	-	yes	7,8,9,11,6,10,12	48	poor	good	good	80	
948	Red gum	Eucalyptus camaldulensis	46	no	-	-	fair	good	good	95	
949	Red ironbark	Eucalyptus sideroxylon	18	no	-	-	very poor	very poor	very poor	30	
950	Bishop pine	Pinus muricata	23	no	-	-	fair	very good	good	20	
951	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	fair	poor	60	
952	Red ironbark	Eucalyptus sideroxylon	-	yes	24,16	33	poor	poor	poor	40	
953	Red gum	Eucalyptus camaldulensis	24	yes	21,32	60	very poor	very poor	very poor	75	
954	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	fair	45	
955	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	35	
956	Red gum	Eucalyptus camaldulensis	-	yes	16,9,14	33	very poor	poor	poor	50	near 951
957	Red gum	Eucalyptus camaldulensis	-	yes	34,19	44	poor	good	good	80	
958	Bishop pine	Pinus muricata	18	no	-	-	very poor	good	fair	25	near Tree 1990
959	Red gum	Eucalyptus camaldulensis	-	yes	8,32	35	poor	poor	poor	55	
960	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	25	
961	Red gum	Eucalyptus camaldulensis	-	yes	29,50	60	very poor	very poor	very poor	70	
962	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	30	
963	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	40	
964	Red gum	Eucalyptus camaldulensis	-	yes	6,5	23	poor	fair	fair	30	
965	Red gum	Eucalyptus camaldulensis	-	yes	5,4,3	18	poor	fair	fair	25	
966	Red gum	Eucalyptus camaldulensis	-	yes	6,11	22	poor	fair	fair	20	
967	Red gum	Eucalyptus camaldulensis	-	yes	23,22,12,13	52	poor	fair	fair	70	
968	Red gum	Eucalyptus camaldulensis	-	yes	18,27	45	very poor	very poor	very poor	75	
969	Red gum	Eucalyptus camaldulensis	-	yes	13,18,14	35	poor	very poor	poor	70	
970	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
971	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	very poor	poor	60	
972	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	45	
973	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	40	
974	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	very poor	poor	30	
975	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	40	
976	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	45	
977	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	30	
978	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	45	
979	Red gum	Eucalyptus camaldulensis	49	no	-	-	fair	good	good	90	
980	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	35	
981	Red gum	Eucalyptus camaldulensis	5	no	-	-	good	good	good	25	
982	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	25	
983	Red gum	Eucalyptus camaldulensis	-	yes	12,22	39	good	good	good	60	
984	Bishop pine	Pinus muricata	18	no	-	-	poor	good	fair	40	
985	Red gum	Eucalyptus camaldulensis	-	yes	8,9,12	40	poor	good	fair	40	
986	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	70	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
987	Bishop pine	Pinus muricata	17	no	-	-	poor	fair	fair	45	
988	Red gum	Eucalyptus camaldulensis	-	yes	5,11,20	33	very poor	very poor	very poor	40	
989	Red gum	Eucalyptus camaldulensis	-	yes	15,11	25	very poor	very poor	very poor	45	
990	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	50	
991	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	fair	poor	25	
992	Red gum	Eucalyptus camaldulensis	-	yes	16,18	27	poor	poor	poor	50	
993	Red ironbark	Eucalyptus sideroxylon	24	no	-	-	fair	fair	fair	50	
994	Red ironbark	Eucalyptus sideroxylon	30	no	-	-	fair	fair	fair	60	
995	Red gum	Eucalyptus camaldulensis	-	yes	11,13	22	poor	good	fair	50	
996	Red gum	Eucalyptus camaldulensis	-	yes	14,8,12,5	6	poor	good	fair	75	
997	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	50	
998	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	45	
999	Red gum	Eucalyptus camaldulensis	-	yes	18,24	39	fair	good	fair	70	
1000	Red gum	Eucalyptus camaldulensis	-	yes	11,13	21	fair	fair	fair	45	
1001	Lost Tag										lost tag
1002	Lost Tag										lost tag
1003	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	fair	50	
1004	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	60	
1005	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	fair	50	
1006	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	40	
1007	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	45	
1008	Red gum	Eucalyptus camaldulensis	-	yes	13,17	29	very poor	very poor	very poor	40	
1009	Red gum	Eucalyptus camaldulensis	-	yes	7,12	14	poor	poor	poor	35	
1010	Red-cap gum	Eucalyptus erythrocorys	12	no	-	-	poor	good	fair	25	
1011	Red-cap gum	Eucalyptus erythrocorys	-	yes	9,8	20	poor	good	fair	20	
1012	Red-cap gum	Eucalyptus erythrocorys	-	yes	14,7	29	poor	fair	fair	25	
1013	Red-cap gum	Eucalyptus erythrocorys	-	yes	5,6,9	19	poor	poor	poor	25	
1014	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	30	
1015	Red-cap gum	Eucalyptus erythrocorys	-	yes	4,10	20	poor	poor	poor	20	
1016	Red-cap gum	Eucalyptus erythrocorys	14	no	-	-	poor	good	fair	20	
1017	Red-cap gum	Eucalyptus erythrocorys	-	yes	7,8,9	22	poor	good	fair	20	
1018	Red-cap gum	Eucalyptus erythrocorys	-	yes	7,8	14	poor	fair	poor	20	
1019	Red-cap gum	Eucalyptus erythrocorys	8	no	-	-	poor	poor	poor	25	
1020	Red gum	Eucalyptus camaldulensis	36	no	-	-	fair	poor	poor	65	
1021	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	35	
1022	Red-cap gum	Eucalyptus erythrocorys	11	no	-	-	poor	fair	fair	20	
1023	Red-cap gum	Eucalyptus erythrocorys	-	yes	12,7	33	poor	fair	fair	20	
1024	Red gum	Eucalyptus camaldulensis	-	yes	18,21	45	very poor	very poor	very poor	45	
1025	Red gum	Eucalyptus camaldulensis	-	yes	8,3	48	poor	poor	poor	60	
1026	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	20	
1027	Flooded gum	Eucalyptus rudis	10	no	-	-	very poor	very poor	very poor	45	
1028	Red-cap gum	Eucalyptus erythrocorys	-	yes	11,14	16	poor	fair	fair	25	
1029	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	fair	55	
1030	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	poor	poor	75	
1031	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	very poor	very poor	55	
1032	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	45	
1033	Red-cap gum	Eucalyptus erythrocorys	10	no	-	-	poor	good	fair	25	
1034	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	50	
1035	Red-cap gum	Eucalyptus erythrocorys	12	no	-	-	poor	good	fair	25	
1036	Red-cap gum	Eucalyptus erythrocorys	-	yes	10,9	19	poor	fair	poor	20	
1037	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	poor	poor	poor	35	
1038	Red ironbark	Eucalyptus sideroxylon	41	no	-	-	poor	fair	fair	75	
1039	Red gum	Eucalyptus camaldulensis	-	yes	16,25,21	50	poor	very poor	poor	60	
1040	Red ironbark	Eucalyptus sideroxylon	-	yes	13,21	26	poor	poor	poor	45	
1041	Red ironbark	Eucalyptus sideroxylon	-	yes	6,17,12	30	poor	good	fair	30	
1042	Red gum	Eucalyptus camaldulensis	-	yes	28,18	38	very poor	very poor	very poor	60	
1043	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	60	
1044	Red-cap gum	Eucalyptus erythrocorys	7	no	-	-	poor	poor	poor	20	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1045	Red gum	Eucalyptus camaldulensis	51	no	-	-	fair	good	good	75	
1046	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	45	
1047	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	45	
1048	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
1049	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	45	
1050	Red gum	Eucalyptus camaldulensis	31	no	-	-	good	good	good	50	
1051	Red gum	Eucalyptus camaldulensis	-	yes	7,5,7	23	poor	poor	poor	30	
1052	Red gum	Eucalyptus camaldulensis	-	yes	14,9	24	poor	very good	good	35	
1053	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	45	
1054	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	40	
1055	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	35	
1056	Red gum	Eucalyptus camaldulensis	31	no	-	-	fair	fair	fair	80	west of Tree 1045, slightly out of order
1057	Red gum	Eucalyptus camaldulensis	-	yes	16,10,11	31	very poor	very poor	very poor	45	
1058	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	45	
1059	Red ironbark	Eucalyptus sideroxylon	46	no	-	-	very poor	very poor	very poor	70	
1060	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1061	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	25	
1062	Red gum	Eucalyptus camaldulensis	-	yes	15,24,29	60	very poor	very poor	very poor	65	
1063	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	fair	fair	65	
1064	Red gum	Eucalyptus camaldulensis	-	yes	16,18	60	poor	good	fair	65	
1065	Red ironbark	Eucalyptus sideroxylon	-	yes	17,25	33	very poor	very poor	very poor	50	
1066	Red ironbark	Eucalyptus sideroxylon	29	no	-	-	poor	poor	poor	60	
1067	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	20	
1068	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	80	
1069	Red gum	Eucalyptus camaldulensis	-	yes	18,18	32	very poor	very poor	very poor	40	
1070	Red gum	Eucalyptus camaldulensis	-	yes	10,11	19	very poor	very poor	very poor	45	
1071	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	45	
1072	Red gum	Eucalyptus camaldulensis	-	yes	5,9	11	poor	poor	poor	40	
1073	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	60	
1074	Red gum	Eucalyptus camaldulensis	-	yes	17,14	23	poor	fair	fair	45	
1075	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	very poor	very poor	very poor	45	
1076	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	fair	poor	35	
1077	Red gum	Eucalyptus camaldulensis	-	yes	8,22	23	poor	good	fair	50	
1078	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	40	
1079	Red gum	Eucalyptus camaldulensis	-	yes	7,8	16	poor	fair	poor	45	
1080	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	fair	35	
1081	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	45	
1082	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	40	
1083	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	fair	20	
1084	Green ash	Fraxinus pennsylvanica	-	yes	23,6	38	very poor	very poor	very poor	35	
1085	Green ash	Fraxinus pennsylvanica	33	no	-	-	very poor	very poor	very poor	55	
1086	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	70	
1087	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	70	
1088	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1089	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	45	
1090	Red gum	Eucalyptus camaldulensis	-	yes	16,28	52	fair	poor	fair	60	
1091	Green ash	Fraxinus pennsylvanica	18	no	-	-	very poor	very poor	very poor	45	
1092	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	fair	fair	90	
1093	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	40	
1094	Red gum	Eucalyptus camaldulensis	-	yes	24,14	36	very poor	very poor	very poor	55	
1095	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	45	
1096	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	35	
1097	Red gum	Eucalyptus camaldulensis	-	yes	20,8	29	poor	fair	poor	65	
1098	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	65	
1099	Red gum	Eucalyptus camaldulensis	-	yes	11,10	15	poor	poor	poor	40	
1100	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	good	fair	75	
1101	Red gum	Eucalyptus camaldulensis	-	yes	15,5	25	poor	good	fair	60	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1102	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	65	
1103	Red gum	Eucalyptus camaldulensis	-	yes	17,21	40	poor	good	fair	20	
1104	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	55	
1105	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	20	
1106	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
1107	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
1108	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	40	
1109	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	65	
1110	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
1111	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	fair	30	
1112	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	30	
1113	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	50	
1114	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	good	fair	65	
1115	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
1116	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	
1117	Red gum	Eucalyptus camaldulensis	-	yes	11,18	36	poor	good	fair	60	
1118	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	15	
1119	Red gum	Eucalyptus camaldulensis	-	yes	12,10	28	very poor	very poor	very poor	30	
1120	Red gum	Eucalyptus camaldulensis	-	yes	12,20	28	very poor	very poor	very poor	50	
1121	Red gum	Eucalyptus camaldulensis	-	yes	5,10	14	very poor	very poor	very poor	35	
1122	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	25	
1123	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	30	
1124	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	30	
1125	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	25	
1126	Peruvian pepper	Schinus molle	6	no	-	-	fair	poor	poor	20	
1127	Red gum	Eucalyptus camaldulensis	-	yes	16,7	25	very poor	very poor	very poor	40	
1128	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	good	good	30	
1129	Red gum	Eucalyptus camaldulensis	-	yes	6,13,6,5,6	43	very poor	poor	poor	20	
1130	Red gum	Eucalyptus camaldulensis	-	yes	8,7,5,8,6	36	very poor	very poor	very poor	25	
1131	Red gum	Eucalyptus camaldulensis	-	yes	5,11,7	40	very poor	very poor	very poor	35	
1132	Red gum	Eucalyptus camaldulensis	-	yes	6,7,11	30	very poor	very poor	very poor	25	
1133	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	33	
1134	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	25	
1135	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	35	
1136	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	25	
1137	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	75	
1138	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
1139	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	fair	fair	35	
1140	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	33	
1141	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	35	
1142	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	20	
1143	Peruvian pepper	Schinus molle	-	yes	9,7,6	30	poor	poor	poor	15	
1144	Red gum	Eucalyptus camaldulensis	-	yes	5,6,8,4	24	very poor	very poor	very poor	35	
1145	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	good	good	35	
1146	Red gum	Eucalyptus camaldulensis	-	yes	8,19	21	good	good	good	35	
1147	Red gum	Eucalyptus camaldulensis	-	yes	6,6,6	14	poor	fair	poor	30	
1148	Red gum	Eucalyptus camaldulensis	-	yes	6,8	9	very poor	very poor	very poor	25	
1149	Red gum	Eucalyptus camaldulensis	-	yes	8,7	19	poor	fair	fair	30	
1150	Red gum	Eucalyptus camaldulensis	-	yes	10,6	21	very poor	very poor	very poor	15	
1151	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	20	
1152	Red gum	Eucalyptus camaldulensis	-	yes	7,6,5	16	poor	poor	poor	25	
1153	Red gum	Eucalyptus camaldulensis	-	yes	16,10	21	fair	poor	fair	50	
1154	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	25	
1155	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	good	good	40	
1156	Red gum	Eucalyptus camaldulensis	-	yes	12,16	23	very poor	very poor	very poor	20	
1157	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	20	
1158	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	good	good	30	
1159	Red gum	Eucalyptus camaldulensis	-	yes	3,6,5	25	very poor	very poor	very poor	15	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1160	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1161	Red gum	Eucalyptus camaldulensis	-	yes	5,7	20	very poor	very poor	very poor	25	
1162	Red gum	Eucalyptus camaldulensis	-	yes	8,9,8,7	33	very poor	very poor	very poor	25	
1163	Red gum	Eucalyptus camaldulensis	-	yes	5,7,6,3,3	23	very poor	very poor	very poor	25	
1164	Red gum	Eucalyptus camaldulensis	-	yes	15,5,11	24	fair	good	good	50	
1165	Red gum	Eucalyptus camaldulensis	-	yes	8,5,11	20	very poor	very poor	very poor	35	
1166	Red gum	Eucalyptus camaldulensis	-	yes	7,6	22	very poor	very poor	very poor	25	
1167	Red gum	Eucalyptus camaldulensis	-	yes	5,7,14,4	36	very poor	very poor	very poor	25	
1168	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1169	Red gum	Eucalyptus camaldulensis	-	yes	15,6	19	fair	good	good	40	
1170	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	30	
1171	Red gum	Eucalyptus camaldulensis	-	yes	13,6	19	very poor	very poor	very poor	35	
1172	Red gum	Eucalyptus camaldulensis	-	yes	5,12	17	very poor	very poor	very poor	30	
1173	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	35	
1174	Red gum	Eucalyptus camaldulensis	-	yes	17,8,7,8	29	very poor	very poor	very poor	40	
1175	Red gum	Eucalyptus camaldulensis	-	yes	9,6	11	very poor	very poor	very poor	30	
1176	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	20	
1177	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	10	
1178	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	good	good	40	
1179	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	poor	poor	35	
1180	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
1181	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	good	good	30	
1182	Red gum	Eucalyptus camaldulensis	-	yes	12,4,3	22	good	good	good	50	
1183	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	25	
1184	Red gum	Eucalyptus camaldulensis	-	yes	7,7	16	very poor	very poor	very poor	20	
1185	Red gum	Eucalyptus camaldulensis	-	yes	8,12	16	very poor	very poor	very poor	35	
1186	Red gum	Eucalyptus camaldulensis	-	yes	5,10,10	20	very poor	very poor	very poor	40	
1187	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	35	
1188	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	35	
1189	Peruvian pepper	Schinus molle	-	yes	5,4	23	very poor	poor	poor	15	
1190	Red gum	Eucalyptus camaldulensis	-	yes	14,14	20	very poor	very poor	very poor	35	
1191	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	20	
1192	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	d	25	
1193	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	30	
1194	Red gum	Eucalyptus camaldulensis	12	no	-	-	good	very good	good	35	
1195	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	very good	good	30	
1196	Red gum	Eucalyptus camaldulensis	-	yes	8,7,4	23	good	good	good	40	
1197	Red gum	Eucalyptus camaldulensis	-	yes	13,5,5	18	good	very good	good	40	
1198	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	45	
1199	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	good	fair	80	
1200	Red gum	Eucalyptus camaldulensis	44	no	-	-	good	good	good	110	
1201	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	very good	good	55	
1202	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	45	
1203	Red gum	Eucalyptus camaldulensis	-	yes	6,4,5,21	38	very poor	poor	poor	50	
1204	Red gum	Eucalyptus camaldulensis	-	yes	17,26	39	fair	good	good	55	
1205	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	good	fair	55	
1206	Red gum	Eucalyptus camaldulensis	-	yes	16,9	22	poor	very good	good	60	
1207	Red gum	Eucalyptus camaldulensis	34	no	-	-	good	fair	fair	60	
1208	Red gum	Eucalyptus camaldulensis	29	no	-	-	very poor	very poor	very poor	50	
1209	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	good	good	35	
1210	Red gum	Eucalyptus camaldulensis	-	yes	15,20	42	fair	fair	fair	40	
1211	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	45	
1212	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	35	
1213	Red gum	Eucalyptus camaldulensis	-	yes	3,4,8,16,3	34	very poor	poor	very poor	45	
1214	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	25	
1215	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	25	
1216	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	55	
1217	Peruvian pepper	Schinus molle	9	no	-	-	poor	good	fair	25	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1218	Unk3		-	yes	9,5,7	14	very poor	very poor	very poor	15	
1219	Unk3		-	yes	6,6,5,3	27	very poor	very poor	very poor	20	
1220	Unk3		-	yes	6,6,4,3	24	very poor	very poor	very poor	15	
1221	Peruvian pepper	Schinus molle	21	no	-	-	fair	fair	fair	30	
1222	Peruvian pepper	Schinus molle	6	no	-	-	very poor	poor	poor	15	
1223	Lost Tag										lost tag
1224	Lost Tag										lost tag
1225	White alder	Alnus rhombifolia	-	yes	8,6,5,4,2	15	very poor	very poor	very poor	20	
1226	Unk3		-	yes	7,7,5,4,3	24	very poor	poor	poor	20	
1227	Unk3		-	yes	6,4,4	28	very poor	poor	poor	20	
1228	White alder	Alnus rhombifolia	10	no	-	-	very poor	very poor	very poor	25	
1229	Unk3		-	yes	8,7,5,5	28	very poor	poor	poor	25	
1230	Unk3		-	yes	10,8	26	poor	poor	poor	25	
1231	Unk3		-	yes	7,8,7,6,4	30	very poor	very poor	very poor	20	
1232	White alder	Alnus rhombifolia	10	no	-	-	very poor	poor	poor	25	
1233	White alder	Alnus rhombifolia	-	yes	8,8,8,6	40	very poor	poor	poor	20	
1234	Unk3		-	yes	8,6,5,5	23	poor	poor	poor	25	
1235	White alder	Alnus rhombifolia	7	no	-	-	fair	fair	fair	25	
1236	Tree of heaven	Ailanthus altissima	-	yes	5,10,4	24	fair	good	good	25	
1237	Unk3		-	yes	6,4,5	13	very poor	poor	poor	20	
1238	Unk3		-	yes	8,4,5,6	25	poor	poor	poor	25	
1239	Red gum	Eucalyptus camaldulensis	35	no	-	-	very good	good	good	65	
1240	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	40	
1241	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	good	fair	90	
1242	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	60	
1243	Red gum	Eucalyptus camaldulensis	-	yes	20,17	36	poor	poor	poor	35	
1244	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	poor	fair	60	
1245	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	35	
1246	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	good	fair	70	
1247	Red gum	Eucalyptus camaldulensis	-	yes	32,12	42	fair	good	good	60	
1248	Red gum	Eucalyptus camaldulensis	28	no	-	-	good	good	good	50	
1249	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	100	
1250	Red gum	Eucalyptus camaldulensis	29	no	-	-	good	fair	fair	70	
1251	Red gum	Eucalyptus camaldulensis	28	no	-	-	good	fair	good	50	
1252	Red gum	Eucalyptus camaldulensis	-	yes	24,35	48	good	very good	very good	75	
1253	Red gum	Eucalyptus camaldulensis	-	yes	24,40	46	fair	good	good	65	
1254	Red gum	Eucalyptus camaldulensis	-	yes	11,10,12,10,34	42	fair	good	fair	55	
1255	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1256	Red gum	Eucalyptus camaldulensis	37	no	-	-	good	fair	fair	60	
1257	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	50	
1258	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1259	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	15	
1260	Red gum	Eucalyptus camaldulensis	37	no	-	-	good	good	good	90	
1261	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	40	
1262	Red gum	Eucalyptus camaldulensis	-	yes	5,7	9	very poor	very poor	very poor	40	
1263	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	25	
1264	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	55	
1265	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	fair	fair	90	
1266	Red ironbark	Eucalyptus sideroxylon	19	no	-	-	poor	fair	poor	40	
1267	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	30	
1268	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	fair	poor	poor	85	
1269	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	50	
1270	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	poor	25	
1271	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	40	
1272	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	50	
1273	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
1274	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
1275	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	fair	poor	fair	35	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1276	Red gum	Eucalyptus camaldulensis	-	yes	6,7	15	very poor	very poor	very poor	40	
1277	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	poor	poor	poor	55	
1278	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1279	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	very poor	very poor	30	
1280	Red gum	Eucalyptus camaldulensis	-	yes	12,7	20	poor	very poor	very poor	50	
1281	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	45	
1282	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	50	
1283	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
1284	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	poor	poor	25	
1285	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	poor	poor	25	
1286	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	30	
1287	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	fair	fair	40	
1288	Red ironbark	Eucalyptus sideroxylon	26	no	-	-	fair	fair	fair	55	
1289	Red gum	Eucalyptus camaldulensis	-	yes	8,9	14	very poor	very poor	very poor	40	
1290	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	very poor	very poor	very poor	40	
1291	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	40	
1292	Red gum	Eucalyptus camaldulensis	-	yes	6,5,10	20	very poor	very poor	very poor	45	
1293	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
1294	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	very poor	very poor	30	
1295	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
1296	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
1297	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	55	
1298	Red gum	Eucalyptus camaldulensis	12	no	-	-	good	fair	fair	45	
1299	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	35	
1300	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	35	
1301	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	55	
1302	Red gum	Eucalyptus camaldulensis	22	no	-	-	good	poor	fair	75	
1303	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	35	
1304	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	35	
1305	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1306	Red ironbark	Eucalyptus sideroxylon	-	yes	9,9	18	fair	good	fair	40	
1307	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	60	
1308	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1309	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	25	
1310	Red gum	Eucalyptus camaldulensis	25	no	-	-	good	fair	good	70	
1311	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1312	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	75	
1313	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	fair	fair	50	
1314	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
1315	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	40	
1316	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	fair	good	fair	50	
1317	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	50	
1318	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	very poor	very poor	30	
1319	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	15	
1320	Flooded gum	Eucalyptus rudis	18	no	-	-	fair	fair	fair	35	
1321	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	30	
1322	Flooded gum	Eucalyptus rudis	-	yes	7,8,11	26	poor	fair	poor	30	
1323	Flooded gum	Eucalyptus rudis	-	yes	7,4,3,4	20	very poor	very poor	very poor	25	
1324	Flooded gum	Eucalyptus rudis	-	yes	7,3,3,8,6	30	poor	good	fair	25	
1325	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	35	
1326	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	45	
1327	Red gum	Eucalyptus camaldulensis	-	yes	50,15	62	very poor	very poor	very poor	45	
1328	Red gum	Eucalyptus camaldulensis	-	yes	10,9,9,8,34,7	70	very poor	very poor	very poor	35	
1329	Red gum	Eucalyptus camaldulensis	-	yes	7,9,9,7,5	26	very poor	fair	fair	30	
1330	Red gum	Eucalyptus camaldulensis	-	yes	20,11	35	fair	good	fair	45	
1331	Flooded gum	Eucalyptus rudis	-	yes	12,9	19	very poor	very poor	very poor	35	
1332	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
1333	Flooded gum	Eucalyptus rudis	-	yes	9,5	30	very poor	very poor	very poor	25	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1334	Flooded gum	Eucalyptus rudis	-	yes	4,4,4,8,6,3,4	25	very poor	good	fair	25	
1335	Flooded gum	Eucalyptus rudis	17	no	-	-	fair	good	good	40	
1336	Flooded gum	Eucalyptus rudis	14	no	-	-	poor	poor	poor	35	
1337	Flooded gum	Eucalyptus rudis	-	yes	19,18	23	poor	poor	poor	30	
1338	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	25	
1339	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	25	
1340	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	30	
1341	Flooded gum	Eucalyptus rudis	-	yes	18,8	24	fair	fair	fair	25	
1342	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	30	
1343	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	poor	fair	40	
1344	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	very poor	poor	45	
1345	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
1346	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	25	
1347	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	35	
1348	Red gum	Eucalyptus camaldulensis	20	no	-	-	good	fair	fair	50	
1349	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	35	
1350	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	30	
1351	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	poor	50	
1352	Red gum	Eucalyptus camaldulensis	-	yes	8,4,6,5,4,7	16	very poor	very poor	very poor	20	
1353	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	fair	45	
1354	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	very poor	very poor	50	
1355	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1356	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
1357	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1358	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	40	
1359	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
1360	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	50	
1361	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	25	
1362	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1363	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
1364	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	60	
1365	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	40	
1366	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	30	
1367	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
1368	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	30	
1369	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	fair	fair	65	
1370	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	25	
1371	Red gum	Eucalyptus camaldulensis	-	yes	5,9	27	very poor	very poor	very poor	45	
1372	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1373	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
1374	Red gum	Eucalyptus camaldulensis	-	yes	9,6,10	30	very poor	very poor	very poor	30	
1375	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	35	
1376	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	50	
1377	Flooded gum	Eucalyptus rudis	-	yes	5,7	22	very poor	very poor	very poor	30	
1378	Red ironbark	Eucalyptus sideroxylon	17	no	-	-	fair	poor	poor	60	
1379	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	45	
1380	Red gum	Eucalyptus camaldulensis	9	no	-	-	good	fair	fair	35	
1381	Red gum	Eucalyptus camaldulensis	-	yes	10,3,10	19	fair	poor	poor	45	
1382	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
1383	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	30	
1384	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1385	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	10	
1386	Red gum	Eucalyptus camaldulensis	-	yes	5,7,7	26	fair	fair	fair	35	
1387	Red gum	Eucalyptus camaldulensis	-	yes	13,8,6	30	very poor	poor	very poor	50	
1388	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
1389	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	45	
1390	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1391	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	45	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1392	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	55	
1393	Red gum	Eucalyptus camaldulensis	-	yes	11,5	25	very poor	very poor	very poor	50	
1394	Red gum	Eucalyptus camaldulensis	-	yes	9,11	24	very poor	very poor	very poor	45	
1395	Flooded gum	Eucalyptus rudis	-	yes	6,4	9	poor	fair	poor	30	
1396	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
1397	Red gum	Eucalyptus camaldulensis	-	yes	11,12	26	very poor	very poor	very poor	55	
1398	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	55	
1399	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	30	
1400	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1401	Red gum	Eucalyptus camaldulensis	-	yes	11,12	24	poor	fair	fair	45	
1402	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	45	
1403	Red gum	Eucalyptus camaldulensis	-	yes	6,7	18	very poor	very poor	very poor	30	
1404	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	20	
1405	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	20	
1406	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	very poor	very poor	30	
1407	Red gum	Eucalyptus camaldulensis	-	yes	-	-	very poor	very poor	very poor	25	
1408	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	45	
1409	Red gum	Eucalyptus camaldulensis	-	yes	4,5,4,5,3,8,12,9,7,5,5	35	very poor	poor	very poor	35	
1410	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	very poor	very poor	very poor	25	
1411	Red ironbark	Eucalyptus sideroxylon	-	yes	13,12	19	very poor	very poor	very poor	20	
1412	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	30	
1413	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1414	Red gum	Eucalyptus camaldulensis	-	yes	6,2,2,2,3	20	very poor	very poor	very poor	25	
1415	Red gum	Eucalyptus camaldulensis	-	yes	11,10	24	very poor	very poor	very poor	35	
1416	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	g	g	50	
1417	Flooded gum	Eucalyptus rudis	9	no	-	-	fair	fair	fair	30	
1418	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	40	
1419	Flooded gum	Eucalyptus rudis	-	yes	8,8	17	poor	poor	poor	25	
1420	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	25	
1421	Red gum	Eucalyptus camaldulensis	-	yes	9,9,10,15	48	very poor	very poor	very poor	40	
1422	Red gum	Eucalyptus camaldulensis	-	yes	5,5	35	very poor	very poor	very poor	35	
1423	Red ironbark	Eucalyptus sideroxylon	-	yes	9,7,9	25	very poor	very poor	very poor	25	
1424	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	30	
1425	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	35	
1426	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	45	
1427	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	60	
1428	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	35	
1429	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
1430	Red gum	Eucalyptus camaldulensis	-	yes	10,12	35	very poor	very poor	very poor	20	
1431	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	25	
1432	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	35	
1433	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	50	
1434	Red gum	Eucalyptus camaldulensis	-	yes	5,8	16	very poor	very poor	very poor	35	
1435	Red gum	Eucalyptus camaldulensis	8	no	-	-	good	poor	fair	30	
1436	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
1437	Red gum	Eucalyptus camaldulensis	-	yes	12,17	35	fair	poor	poor	55	
1438	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
1439	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	40	
1440	Red gum	Eucalyptus camaldulensis	35	no	-	-	good	poor	fair	70	
1441	Red gum	Eucalyptus camaldulensis	-	yes	5,19	25	very poor	very poor	very poor	55	
1442	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
1443	Red gum	Eucalyptus camaldulensis	21	no	-	-	good	fair	fair	60	
1444	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	35	
1445	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	good	good	60	
1446	Red gum	Eucalyptus camaldulensis	-	yes	9,3	15	fair	very poor	poor	40	
1447	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	45	
1448	Red gum	Eucalyptus camaldulensis	-	yes	16,7,19	40	poor	poor	poor	60	
1449	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1450	Red gum	Eucalyptus camaldulensis	-	yes	11,8	25	very poor	very poor	very poor	50	
1451	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	40	
1452	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	very poor	poor	55	
1453	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	40	
1454	Red gum	Eucalyptus camaldulensis	-	yes	8,8,8,4	31	very poor	poor	very poor	25	
1455	Red gum	Eucalyptus camaldulensis	-	yes	9,13	25	very poor	very poor	very poor	45	
1456	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	very poor	very poor	50	
1457	Red gum	Eucalyptus camaldulensis	-	yes	9,10,15	36	poor	poor	poor	50	
1458	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	45	
1459	Flooded gum	Eucalyptus rudis	13	no	-	-	poor	very poor	very poor	45	
1460	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	poor	poor	20	
1461	Lost Tag										lost tag
1462	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	35	
1463	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	25	
1464	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	55	
1465	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	25	
1466	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	55	
1467	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	50	
1468	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	15	
1469	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	40	
1470	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	40	
1471	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	30	
1472	Goodding's willow	Salix gooddingii	18	no	-	-	very poor	good	fair	30	
1473	Goodding's willow	Salix gooddingii	-	yes	13,20,16	60	very poor	good	fair	40	
1474	Goodding's willow	Salix gooddingii	-	yes	9,4,4,5	24	very poor	poor	very poor	25	
1475	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	25	
1476	Goodding's willow	Salix gooddingii	-	yes	9,8	12	very poor	very poor	very poor	25	
1477	Tamarisk	Tamarix ramosissima	-	yes	7,6,4	24	poor	fair	poor	25	
1478	Black elderberry	Sambucus nigra	-	yes	5,4,6,4,3,3	17	very poor	very poor	very poor	20	
1479	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	15	
1480	Goodding's willow	Salix gooddingii	-	yes	14,5	22	very poor	fair	poor	20	
1481	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	15	
1482	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	15	
1483	Goodding's willow	Salix gooddingii	13	no	-	-	very poor	very poor	very poor	20	near 1771
1484	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	fair	poor	25	near 1771
1485	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	10	
1486	Goodding's willow	Salix gooddingii	19	no	-	-	very poor	fair	poor	35	
1487	Goodding's willow	Salix gooddingii	-	yes	11,21	24	very poor	very poor	very poor	25	
1488	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	30	
1489	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	30	
1490	Goodding's willow	Salix gooddingii	8	no	-	-	poor	poor	poor	20	
1491	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	poor	very poor	15	
1492	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	10	
1493	Goodding's willow	Salix gooddingii	6	no	-	-	very poor	very poor	very poor	15	
1494	Goodding's willow	Salix gooddingii	-	yes	15,5	29	very poor	very poor	very poor	20	
1495	Goodding's willow	Salix gooddingii	-	yes	9,5	14	very poor	very poor	very poor	20	
1496	Goodding's willow	Salix gooddingii	-	yes	5,6,7,6,5,4,3,3,12,11,12	48	very poor	fair	poor	35	
1497	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	20	
1498	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	30	
1499	Lost Tag										lost tag
1500	Goodding's willow	Salix gooddingii	17	no	-	-	very poor	fair	fair	25	
1501	Red gum	Eucalyptus camaldulensis	38	no	-	-	very poor	very poor	very poor	15	
1502	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	15	
1503	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	35	
1504	Red gum	Eucalyptus camaldulensis	-	yes	21,13,17	60	fair	fair	fair	45	
1505	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	35	
1506	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	poor	poor	45	
1507	Red gum	Eucalyptus camaldulensis	29	no	-	-	fair	poor	poor	40	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1508	Red gum	Eucalyptus camaldulensis	42	no	-	-	very poor	very poor	very poor	40	
1509	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	30	
1510	Red gum	Eucalyptus camaldulensis	33	no	-	-	very poor	very poor	very poor	25	
1511	Red gum	Eucalyptus camaldulensis	34	no	-	-	very poor	very poor	very poor	45	
1512	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	25	
1513	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	poor	poor	40	
1514	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	15	
1515	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	very poor	very poor	15	
1516	Red gum	Eucalyptus camaldulensis	-	yes	10,9,8	16	fair	very good	good	35	
1517	Red gum	Eucalyptus camaldulensis	-	yes	11,15,8,16,7	25	very poor	good	fair	30	
1518	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	good	25	
1519	Red gum	Eucalyptus camaldulensis	-	yes	19,7,14	25	very poor	very poor	very poor	25	
1520	Red gum	Eucalyptus camaldulensis	24	no	-	-	very good	fair	good	40	
1521	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	fair	fair	40	
1522	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	30	
1523	Silverleaf mountain gum	Eucalyptus pulverulenta	23	no	-	-	very poor	very poor	very poor	35	
1524	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	fair	38	
1525	Silverleaf mountain gum	Eucalyptus pulverulenta	15	no	-	-	very poor	very poor	very poor	25	
1526	Peruvian pepper	Schinus molle	10	no	-	-	fair	good	good	20	
1527	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	26,22	48	poor	poor	poor	25	
1528	Peruvian pepper	Schinus molle	9	no	-	-	fair	good	good	15	
1529	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	10,18,13,8,16,17,11	40	poor	poor	poor	30	
1530	Silverleaf mountain gum	Eucalyptus pulverulenta	32	no	-	-	fair	poor	fair	30	
1531	Silverleaf mountain gum	Eucalyptus pulverulenta	34	no	-	-	poor	good	fair	40	
1532	Silverleaf mountain gum	Eucalyptus pulverulenta	30	no	-	-	poor	poor	poor	30	
1533	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	good	good	45	
1534	Silverleaf mountain gum	Eucalyptus pulverulenta	37	no	-	-	fair	fair	fair	30	
1535	Silverleaf mountain gum	Eucalyptus pulverulenta	22	no	-	-	very poor	very poor	very poor	25	
1536	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	22,9	30	fair	fair	fair	45	
1537	Red gum	Eucalyptus camaldulensis	-	yes	16,35	36	fair	good	good	55	
1538	Bishop pine	Pinus muricata	17	no	-	-	good	fair	fair	40	
1539	Bishop pine	Pinus muricata	19	no	-	-	good	fair	good	50	
1540	Red gum	Eucalyptus camaldulensis	13	no	-	-	good	fair	good	35	
1541	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	20,17,26	40	very poor	very poor	very poor	30	
1542	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	9,8,10	24	very poor	very poor	very poor	20	
1543	Red gum	Eucalyptus camaldulensis	-	yes	17,30	48	poor	poor	poor	45	
1544	Bishop pine	Pinus muricata	19	no	-	-	good	good	good	55	
1545	Silverleaf mountain gum	Eucalyptus pulverulenta	44	no	-	-	very poor	very poor	very poor	5	
1546	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	8,23,14	50	very poor	very poor	very poor	35	
1547	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	very poor	40	
1548	Red gum	Eucalyptus camaldulensis	-	yes	6,8	18	very poor	very poor	very poor	15	
1549	Red gum	Eucalyptus camaldulensis	-	yes	13,8,10,7,25,11,20	60	poor	fair	fair	60	
1550	Red gum	Eucalyptus camaldulensis	-	yes	23,9,10	48	poor	fair	fair	40	
1551	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	35	
1552	Southern California walnut	Juglans californica	-	yes	6,7,7,13	19	fair	poor	poor	30	
1553	Black elderberry	Sambucus nigra	-	yes	5,4,6,5,4	40	fair	good	fair	15	
1554	Southern California walnut	Juglans californica	6	no	-	-	poor	poor	poor	20	
1555	Black elderberry	Sambucus nigra	-	yes	5,4,6,5,4	48	poor	good	fair	20	
1556	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	poor	poor	70	
1557	Red gum	Eucalyptus camaldulensis	45	no	-	-	very good	fair	good	95	
1558	Red gum	Eucalyptus camaldulensis	-	yes	14,27	32	fair	fair	fair	55	
1559	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1560	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	45	
1561	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	65	
1562	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	40	
1563	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	55	
1564	Red gum	Eucalyptus camaldulensis	29	no	-	-	good	fair	fair	85	
1565	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	50	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1566	Red gum	Eucalyptus camaldulensis	36	no	-	-	poor	poor	poor	60	
1567	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	poor	poor	60	
1568	Unk1/2		18	no	-	-	very good	very good	very good	50	
1569	Unk2/1		13	no	-	-	good	poor	fair	35	
1570	Unk1/2		14	no	-	-	fair	fair	fair	40	
1571	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	50	
1572	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	poor	poor	55	
1573	Unk1/2		14	no	-	-	good	good	good	40	
1574	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	65	
1575	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	45	
1576	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	45	
1577	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	65	
1578	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	7	
1579	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	50	
1580	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	75	
1581	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
1582	Unk1/2		19	no	-	-	good	good	good	60	
1583	Unk1/2		20	no	-	-	poor	fair	fair	50	
1584	Red gum	Eucalyptus camaldulensis	36	no	-	-	very poor	very poor	very poor	65	
1585	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	50	
1586	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	45	
1587	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	55	
1588	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	35	
1589	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	35	
1590	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	60	
1591	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	fair	poor	50	
1592	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	35	
1593	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	50	
1594	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	50	
1595	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	55	
1596	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	65	
1597	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	35	
1598	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	65	
1599	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	65	
1600	Unk1/2		21	no	-	-	good	fair	fair	60	
1601	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	80	
1602	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	40	
1603	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	45	
1604	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	55	
1605	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	35	
1606	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	35	
1607	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	40	
1608	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	55	
1609	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	55	
1610	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	poor	45	
1611	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	30	
1612	Red gum	Eucalyptus camaldulensis	41	no	-	-	good	good	good	55	
1613	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	30	
1614	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	very poor	very poor	55	
1615	Red gum	Eucalyptus camaldulensis	33	no	-	-	good	good	good	60	
1616	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	50	
1617	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	good	fair	25	
1618	Red gum	Eucalyptus camaldulensis	-	yes	7,5,5,6,6	60	very poor	good	good	40	
1619	Red gum	Eucalyptus camaldulensis	-	yes	10,3,4	12	fair	good	good	30	
1620	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	good	fair	20	
1621	Red gum	Eucalyptus camaldulensis	-	yes	6,7	20	poor	good	fair	25	
1622	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	45	
1623	Olive	Olea eurpaea	-	yes	18,14,12,11	68	fair	good	fair	20	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1624	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	40	
1625	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	55	
1626	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	55	
1627	Olive	Olea europaea	-	yes	13,20	60	fair	good	good	25	
1628	Canary Island date palm	Phoenix canariensis	16	no	-	-	good	good	good	30	
1629	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	25	
1630	Canary Island date palm	Phoenix canariensis	16	no	-	-	fair	fair	fair	20	
1631	Canary Island date palm	Phoenix canariensis	26	no	-	-	poor	fair	fair	15	
1632	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	65	
1633	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	65	
1634	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	70	
1635	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	70	
1636	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	65	
1637	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	65	
1638	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	75	
1639	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	70	
1640	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	65	
1641	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	70	
1642	Mexican fan palm	Washingtonia robusta	12	no	-	-	fair	good	good	70	
1643	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	60	
1644	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	65	
1645	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	65	
1646	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	65	
1647	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	75	
1648	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	80	
1649	Canary Island date palm	Phoenix canariensis	12	no	-	-	fair	good	good	35	
1650	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	good	good	40	
1651	Canary Island date palm	Phoenix canariensis	13	no	-	-	good	good	good	40	
1652	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	fair	fair	30	
1653	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	fair	fair	40	
1654	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	75	
1655	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	80	
1656	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	80	
1657	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	80	
1658	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	80	
1659	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	80	
1660	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	65	
1661	Canary Island date palm	Phoenix canariensis	17	no	-	-	very good	very good	very good	45	
1662	Canary Island date palm	Phoenix canariensis	21	no	-	-	very good	very good	very good	45	
1663	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	20	
1664	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	75	
1665	Red gum	Eucalyptus camaldulensis	-	yes	7,3,6	22	poor	good	fair	25	
1666	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	25	
1667	California fan palm	Washingtonia filifera	22	no	-	-	good	good	good	25	
1668	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	25	
1669	Bishop pine	Pinus muricata	19	no	-	-	fair	fair	fair	25	
1670	Coast redwood	Sequoia sempervirens	27	no	-	-	fair	poor	poor	45	
1671	Mexican fan palm	Washingtonia robusta	15	no	-	-	poor	poor	poor	45	some kind of elm
1672	California fan palm	Washingtonia filifera	28	no	-	-	fair	fair	fair	45	
1673	Canary Island date palm	Phoenix canariensis	13	no	-	-	very poor	very poor	very poor	20	
1674	Mexican fan palm	Washingtonia robusta	7	no	-	-	fair	fair	fair	20	
1675	Loquat	Eriobotrya japonica	-	yes	7,4	11	fair	fair	fair	25	
1676	Olive	Olea europaea	-	yes	17,17	33	fair	good	fair	40	
1677	Bishop pine	Pinus muricata	24	no	-	-	poor	fair	poor	30	
1678	Pine	Pinus sp.	33	no	-	-	poor	fair	fair	50	
1679	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	poor	poor	80	
1680	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	50	
1681	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	45	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1682	Pine	Pinus sp.	22	no	-	-	good	fair	good	80	pinus "broom"
1683	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	80	
1684	Pine	Pinus sp.	20	no	-	-	good	fair	good	75	pinus "broom"
1685	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	75	
1686	Bishop pine	Pinus muricata	26	no	-	-	poor	fair	fair	40	
1687	Pine	Pinus sp.	30	no	-	-	very poor	fair	poor	25	pinus "whorled"
1688	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	poor	fair	70	
1689	Podocarpus	Podocarpus sp.	18	no	-	-	fair	good	good	45	
1690	Podocarpus	Podocarpus sp.	12	no	-	-	fair	good	good	40	
1691	Podocarpus	Podocarpus sp.	16	no	-	-	fair	fair	fair	50	
1692	Bishop pine	Pinus muricata	36	no	-	-	good	good	good	90	
1693	White alder	Alnus rhombifolia	17	no	-	-	fair	poor	poor	35	
1694	Olive	Olea eurpaea	16	no	-	-	poor	fair	fair	25	
1695	Canary Island date palm	Phoenix canariensis	23	no	-	-	good	good	good	40	
1696	Canary Island date palm	Phoenix canariensis	24	no	-	-	very good	very good	very good	35	
1697	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	60	
1698	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	60	
1699	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	55	
1700	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	55	
1701	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	good	good	75	
1702	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	75	
1703	California fan palm	Washingtonia filifera	31	no	-	-	good	good	good	80	
1704	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	75	
1705	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	70	
1706	California fan palm	Washingtonia filifera	23	no	-	-	good	fair	good	45	
1707	Mexican fan palm	Washingtonia robusta	6	no	-	-	good	good	good	25	
1708	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	fair	good	30	
1709	California fan palm	Washingtonia filifera	21	no	-	-	fair	fair	fair	30	
1710	Black poui	Jacaranda mimosifolia	-	yes	3,9,13,5,4,4,3,10	48	very poor	good	fair	35	
1711	Canary Island date palm	Phoenix canariensis	27	no	-	-	good	good	good	25	
1712	California fan palm	Washingtonia filifera	36	no	-	-	very poor	very poor	very poor	15	
1713	Bishop pine	Pinus muricata	13	no	-	-	very poor	fair	poor	25	
1714	Double Tag/1710										double-tagged, same tree as 1710
1715	Canary Island date palm	Phoenix canariensis	36	no	-	-	poor	poor	poor	20	
1716	Red gum	Eucalyptus camaldulensis	-	yes	5,5,3,2,2	15	very poor	good	fair	25	
1717	Red gum	Eucalyptus camaldulensis	-	yes	10,16,16	34	poor	fair	fair	40	
1718	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	30	
1719	Red gum	Eucalyptus camaldulensis	-	yes	9,11	27	poor	fair	poor	40	
1720	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	10	
1721	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	fair	fair	30	
1722	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	40	
1723	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	40	
1724	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	40	
1725	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	fair	35	
1726	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	good	35	
1727	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	fair	fair	45	
1728	California fan palm	Washingtonia filifera	24	no	-	-	good	fair	fair	25	
1729	Moreton Bay fig	Ficus macrophylla	48	no	-	-	good	very good	very good	60	
1730	Canary Island date palm	Phoenix canariensis	28	no	-	-	fair	good	good	25	
1731	California fan palm	Washingtonia filifera	-	yes	6,5,5,5	32	very poor	fair	poor	15	
1732	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	good	good	55	somewhere in the hole, near 1518?
1733	English ivy	Hedera helix	-	yes	6,5,4	9	very poor	good	fair	10	
1734	Bishop pine	Pinus muricata	25	no	-	-	poor	fair	poor	35	
1735	Pine	Pinus sp.	29	no	-	-	poor	poor	poor	80	pinus "broom"
1736	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	35	
1737	Pine	Pinus sp.	17	no	-	-	fair	poor	poor	70	pinus "broom"
1738	Red gum	Eucalyptus camaldulensis	-	yes	15,6	22	very poor	very poor	very poor	50	
1739	Red gum	Eucalyptus camaldulensis	-	yes	13,17,15,17,7	60	poor	fair	poor	85	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1740	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	65	
1741	Red gum	Eucalyptus camaldulensis	70	no	-	-	fair	fair	fair	70	
1742	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	25	
1743	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	very poor	65	
1744	Brazilian orchid tree	Bauhinia forficata	-	yes	9,7,6,5	21	poor	good	fair	25	
1745	Brazilian orchid tree	Bauhinia forficata	-	yes	15,10,14	24	very poor	very poor	very poor	20	
1746	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	25	
1747	Red gum	Eucalyptus camaldulensis	38	no	-	-	good	fair	good	70	
1748	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	15	
1749	Peruvian pepper	Schinus molle	6	no	-	-	very poor	poor	very poor	20	
1750	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	70	
1751	Red gum	Eucalyptus camaldulensis	-	yes	22,17	36	fair	fair	fair	70	
1752	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	30	
1753	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	45	
1754	Red gum	Eucalyptus camaldulensis	29	no	-	-	fair	fair	fair	60	
1755	Peruvian pepper	Schinus molle	-	yes	8,12	18	very poor	poor	poor	20	
1756	Peruvian pepper	Schinus molle	-	yes	7,5	9	poor	fair	poor	10	
1757	Peruvian pepper	Schinus molle	-	yes	5,5,3,4,3	18	poor	poor	poor	10	
1758	Peruvian pepper	Schinus molle	-	yes	5,5,4,4,3,2	24	poor	poor	poor	10	
1759	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	40	
1760	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	fair	fair	75	
1761	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	45	
1762	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1763	Peruvian pepper	Schinus molle	-	yes	5,6	7	poor	fair	fair	15	
1764	Peruvian pepper	Schinus molle	-	yes	12,6,11	22	poor	poor	poor	15	
1765	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	fair	fair	60	
1766	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	fair	25	
1767	Green ash	Fraxinus pennsylvanica	32	no	-	-	good	good	good	45	
1768	Green ash	Fraxinus pennsylvanica	20	no	-	-	good	fair	fair	35	
1769	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	40	
1770	Green ash	Fraxinus pennsylvanica	17	no	-	-	very poor	very poor	very poor	20	
1771	Mexican fan palm	Washingtonia robusta	19	no	-	-	fair	fair	fair	35	
1772	Green ash	Fraxinus pennsylvanica	35	no	-	-	good	good	good	40	
1773	Green ash	Fraxinus pennsylvanica	22	no	-	-	poor	fair	fair	45	
1774	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	35	
1775	Green ash	Fraxinus pennsylvanica	-	yes	16,10,9	55	poor	fair	poor	55	
1776	Peruvian pepper	Schinus molle	-	yes	7,5	13	poor	poor	poor	20	
1777	Green ash	Fraxinus pennsylvanica	18	no	-	-	fair	fair	fair	55	
1778	Green ash	Fraxinus pennsylvanica	-	yes	10,9,12	70	very poor	very poor	very poor	40	
1779	Peruvian pepper	Schinus molle	-	yes	6,6,4	18	poor	fair	poor	30	
1780	Green ash	Fraxinus pennsylvanica	-	yes	8,3	22	very poor	very poor	very poor	30	
1781	Green ash	Fraxinus pennsylvanica	-	yes	11,10	28	poor	poor	poor	30	
1782	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	55	
1783	Green ash	Fraxinus pennsylvanica	30	no	-	-	poor	poor	poor	40	
1784	Green ash	Fraxinus pennsylvanica	24	no	-	-	fair	fair	fair	35	
1785	Bishop pine	Pinus muricata	45	no	-	-	fair	good	good	80	
1786	Green ash	Fraxinus pennsylvanica	21	no	-	-	poor	poor	poor	20	
1787	Bishop pine	Pinus muricata	-	yes	25,31	58	poor	good	fair	80	
1788	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	fair	fair	25	
1789	Bishop pine	Pinus muricata	36	no	-	-	good	good	good	85	
1790	Green ash	Fraxinus pennsylvanica	20	no	-	-	fair	poor	fair	35	
1791	Bishop pine	Pinus muricata	32	no	-	-	poor	good	fair	65	
1792	Bishop pine	Pinus muricata	34	no	-	-	poor	good	fair	55	
1793	Canary Island date palm	Phoenix canariensis	20	no	-	-	good	fair	good	35	
1794	Canary Island date palm	Phoenix canariensis	26	no	-	-	very poor	very poor	very poor	15	
1795	Canary Island date palm	Phoenix canariensis	25	no	-	-	good	good	good	35	
1796	Red gum	Eucalyptus camaldulensis	-	yes	18,16	30	poor	fair	fair	65	
1797	Canary Island date palm	Phoenix canariensis	28	no	-	-	fair	good	fair	35	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1798	Canary Island date palm	Phoenix canariensis	25	no	-	-	good	fair	good	35	
1799	Canary Island date palm	Phoenix canariensis	25	no	-	-	very poor	very poor	very poor	25	
1800	Canary Island date palm	Phoenix canariensis	26	no	-	-	good	good	good	35	
1801	Mexican fan palm	Washingtonia robusta	13	no	-	-	poor	fair	fair	55	
1802	Canary Island date palm	Phoenix canariensis	27	no	-	-	good	good	good	25	
1803	Bishop pine	Pinus muricata	40	no	-	-	fair	good	good	80	
1804	Bishop pine	Pinus muricata	27	no	-	-	fair	good	good	75	next to 1671
1805	Bishop pine	Pinus muricata	40	no	-	-	poor	good	good	75	
1806	Crimson bottlebrush	Callistemon citrinus	10	no	-	-	fair	good	fair	25	
1807	Crimson bottlebrush	Callistemon citrinus	11	no	-	-	fair	fair	fair	30	
1808	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	good	fair	55	
1809	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	40	
1810	Mexican fan palm	Washingtonia robusta	12	no	-	-	fair	poor	fair	25	
1811	Mexican fan palm	Washingtonia robusta	12	no	-	-	poor	very poor	poor	20	
1812	Bishop pine	Pinus muricata	24	no	-	-	fair	good	good	25	
1813	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	25	
1814	Mexican fan palm	Washingtonia robusta	12	no	-	-	poor	fair	fair	25	
1815	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	20	
1816	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	35	
1817	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	30	
1818	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	poor	poor	25	
1819	California fan palm	Washingtonia filifera	25	no	-	-	fair	good	good	55	
1820	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	20	
1821	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	25	
1822	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	25	
1823	Mexican fan palm	Washingtonia robusta	11	no	-	-	fair	fair	fair	25	
1824	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	40	
1825	Mexican fan palm	Washingtonia robusta	10	no	-	-	fair	fair	fair	30	
1826	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	60	
1827	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	good	fair	40	
1828	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	30	
1829	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	65	
1830	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	good	fair	45	
1831	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	35	
1832	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	50	
1833	Mexican fan palm	Washingtonia robusta	17	no	-	-	poor	fair	fair	65	
1834	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	60	
1835	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	good	good	35	
1836	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	good	fair	50	
1837	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	good	fair	50	
1838	Red gum	Eucalyptus camaldulensis	-	yes	25,15	41	poor	good	fair	55	
1839	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	good	fair	60	
1840	Red gum	Eucalyptus camaldulensis	40	no	-	-	fair	good	good	105	
1841	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	good	fair	75	
1842	Red gum	Eucalyptus camaldulensis	-	yes	9,14,10,10,15,18	50	poor	good	fair	85	
1843	Red gum	Eucalyptus camaldulensis	-	yes	13,29	60	poor	good	fair	45	
1844	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	100	
1845	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	fair	poor	45	
1846	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	fair	fair	50	
1847	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	good	good	90	
1848	Red gum	Eucalyptus camaldulensis	37	no	-	-	fair	fair	fair	90	
1849	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	poor	poor	50	
1850	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	40	
1851	Red gum	Eucalyptus camaldulensis	-	yes	28,10,14	54	poor	good	fair	50	
1852	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	85	
1853	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	60	
1854	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	70	
1855	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	35	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1856	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	poor	40	
1857	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	50	
1858	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	40	
1859	Red gum	Eucalyptus camaldulensis	27	no	-	-	fair	poor	fair	85	
1860	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	30	
1861	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	40	
1862	Red gum	Eucalyptus camaldulensis	-	yes	18,21	34	poor	poor	poor	70	
1863	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	35	
1864	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	25	
1865	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	poor	very poor	45	
1866	Red gum	Eucalyptus camaldulensis	54	no	-	-	poor	fair	fair	105	
1867	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	80	
1868	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	80	
1869	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	fair	poor	75	
1870	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	poor	poor	55	
1871	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	35	
1872	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	25	
1873	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	15	
1874	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	40	
1875	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1876	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	fair	poor	85	
1877	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	80	
1878	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	fair	fair	85	
1879	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	poor	fair	110	
1880	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	50	
1881	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	70	
1882	Red gum	Eucalyptus camaldulensis	-	yes	7,13	19	very poor	very poor	very poor	15	
1883	Red gum	Eucalyptus camaldulensis	-	yes	11,14,6,7,8	54	very poor	poor	poor	40	
1884	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	45	
1885	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	15	
1886	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	45	
1887	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	45	
1888	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	60	
1889	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	45	
1890	Red gum	Eucalyptus camaldulensis	38	no	-	-	very poor	very poor	very poor	50	
1891	Canary Island date palm	Phoenix canariensis	19	no	-	-	good	good	good	25	
1892	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	45	
1893	Red gum	Eucalyptus camaldulensis	-	yes	20,36	60	poor	poor	poor	75	
1894	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	65	
1895	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	poor	poor	70	
1896	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	very poor	poor	90	
1897	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	50	
1898	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	40	
1899	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1900	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	55	
1901	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	25	
1902	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	poor	poor	75	
1903	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	50	
1904	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	poor	poor	75	
1905	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	60	
1906	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	60	
1907	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	45	
1908	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	50	
1909	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	poor	poor	80	
1910	Red gum	Eucalyptus camaldulensis	47	no	-	-	poor	poor	poor	90	
1911	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	45	
1912	Red gum	Eucalyptus camaldulensis	54	no	-	-	good	fair	fair	95	
1913	Red gum	Eucalyptus camaldulensis	-	yes	6,7,8,8,40	60	fair	good	fair	80	

## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1914	Red gum	Eucalyptus camaldulensis	-	yes	7,6,4,7,7,11,16,5,9	72	poor	good	fair	50	
1915	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	poor	poor	30	
1916	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	35	
1917	Red gum	Eucalyptus camaldulensis	-	yes	23,25	42	fair	good	fair	75	
1918	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	35	
1919	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	25	
1920	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	poor	fair	25	
1921	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	15	
1922	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	35	
1923	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	30	
1924	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	30	
1925	Red gum	Eucalyptus camaldulensis	-	yes	7,13,10	25	poor	poor	poor	40	
1926	Red gum	Eucalyptus camaldulensis	46	no	-	-	very good	very good	very good	90	
1927	Red gum	Eucalyptus camaldulensis	-	yes	19,23	42	poor	poor	poor	45	
1928	Red gum	Eucalyptus camaldulensis	-	yes	24,52	60	fair	good	good	70	
1929	Peruvian pepper	Schinus molle	42	no	-	-	fair	good	fair	35	
1930	Peruvian pepper	Schinus molle	44	no	-	-	fair	fair	fair	55	
1931	Peruvian pepper	Schinus molle	28	no	-	-	poor	poor	poor	30	
1932	Peruvian pepper	Schinus molle	40	no	-	-	poor	poor	poor	45	
1933	Peruvian pepper	Schinus molle	48	no	-	-	poor	poor	poor	35	
1934	Canary Island date palm	Phoenix canariensis	28	no	-	-	good	fair	fair	40	
1935	California fan palm	Washingtonia filifera	20	no	-	-	fair	fair	fair	20	
1936	Canary Island date palm	Phoenix canariensis	28	no	-	-	very poor	very poor	very poor	35	
1937	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	fair	fair	65	
1938	Peruvian pepper	Schinus molle	38	no	-	-	poor	poor	poor	35	
1939	Sanbox tree	Hura crepitans	13	no	-	-	fair	fair	fair	15	
1940	Sanbox tree	Hura crepitans	9	no	-	-	fair	fair	fair	15	
1941	Western sycamore	Platanus racemosa	-	yes	17,14	30	fair	good	good	20	
1942	Sanbox tree	Hura crepitans	30	no	-	-	good	good	good	30	
1943	California fan palm	Washingtonia filifera	26	no	-	-	good	good	good	35	
1944	Southern California walnut	Juglans californica	-	yes	7,13	16	good	good	good	20	
1945	Green ash	Fraxinus pennsylvanica	16	no	-	-	fair	fair	fair	20	
1946	Green ash	Fraxinus pennsylvanica	22	no	-	-	poor	good	fair	25	
1947	Sanbox tree	Hura crepitans	15	no	-	-	fair	poor	poor	20	
1948	Green ash	Fraxinus pennsylvanica	24	no	-	-	fair	good	good	30	
1949	Carob	Ceratonia siliqua	-	yes	20,12,13	38	fair	good	good	25	
1950	White alder	Alnus rhombifolia	-	yes	16,12	20	fair	poor	poor	20	
1951	White alder	Alnus rhombifolia	-	yes	15,11	17	fair	good	fair	30	
1952	Carob	Ceratonia siliqua	12	no	-	-	good	good	good	25	
1953	Carob	Ceratonia siliqua	-	yes	13,9	17	poor	fair	fair	20	
1954	Carob	Ceratonia siliqua	19	no	-	-	fair	fair	fair	25	
1955	Carob	Ceratonia siliqua	16	no	-	-	fair	good	fair	20	
1956	Red gum	Eucalyptus camaldulensis	29	no	-	-	very poor	very poor	very poor	85	
1957	Arizona Cypress	Cupressus arizonica	7	no	-	-	good	good	good	20	
1958	Arizona cypress	Cupressus arizonica	-	yes	9,5	13	poor	good	fair	25	
1959	Fremont cottonwood	Populus fremontii	7	no	-	-	good	good	good	25	
1960	Goodding's willow	Salix gooddingii	8	no	-	-	poor	poor	poor	25	
1961	Fremont cottonwood	Populus fremontii	7	no	-	-	fair	fair	fair	30	
1962	Fremont cottonwood	Populus fremontii	17	no	-	-	fair	good	good	30	
1963	Peruvian pepper	Schinus molle	-	yes	15,10	20	fair	good	fair	25	
1964	Fremont cottonwood	Populus fremontii	8	no	-	-	fair	fair	fair	20	
1965	Fremont cottonwood	Populus fremontii	9	no	-	-	fair	fair	fair	25	
1966	Goodding's willow	Salix gooddingii	6	no	-	-	poor	poor	poor	30	
1967	Fremont cottonwood	Populus fremontii	9	no	-	-	fair	fair	fair	25	
1968	Peruvian pepper	Schinus molle	15	no	-	-	good	good	good	30	
1969	Red gum	Eucalyptus camaldulensis	-	yes	12,14,13	26	fair	fair	fair	35	
1970	Peruvian pepper	Schinus molle	-	yes	8,8,7,5,5,4,3,3	48	fair	fair	fair	15	
1971	Peruvian pepper	Schinus molle	-	yes	13,9,8	36	fair	good	fair	30	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
1972	Peruvian pepper	Schinus molle	-	yes	18,10,10	48	poor	good	fair	35	
1973	Peruvian pepper	Schinus molle	24	no	-	-	fair	fair	fair	30	
1974	Peruvian pepper	Schinus molle	7	no	-	-	poor	fair	fair	15	
1975	Red gum	Eucalyptus camaldulensis	-	yes	8,5,4,4	36	poor	poor	poor	15	
1976	Red gum	Eucalyptus camaldulensis	-	yes	7,4,4	24	very poor	very poor	very poor	15	
1977	Red gum	Eucalyptus camaldulensis	-	yes	8,7,6	36	very poor	very poor	very poor	45	
1978	Peruvian pepper	Schinus molle	12	no	-	-	poor	poor	poor	25	
1979	Peruvian pepper	Schinus molle	-	yes	14,9	30	poor	poor	poor	35	
1980	Peruvian pepper	Schinus molle	17	no	-	-	fair	fair	fair	30	
1981	Peruvian pepper	Schinus molle	-	yes	18,11	25	poor	poor	poor	20	
1982	Arizona cypress	Cupressus arizonica	21	no	-	-	fair	good	fair	45	
1983	Arizona cypress	Cupressus arizonica	21	no	-	-	very poor	very poor	very poor	35	
1984	Arizona cypress	Cupressus arizonica	19	no	-	-	fair	good	fair	40	
1985	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	fair	fair	70	
1986	Red gum	Eucalyptus camaldulensis	48	no	-	-	fair	good	fair	70	
1987	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	good	good	65	
1988	Green ash	Fraxinus pennsylvanica	12	no	-	-	poor	poor	poor	25	
1989	Green ash	Fraxinus pennsylvanica	11	no	-	-	fair	poor	poor	30	
1990	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	poor	poor	35	
1991	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	fair	poor	35	
1992	Red gum	Eucalyptus camaldulensis	-	yes	14,10,6	45	fair	fair	fair	35	
1993	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	45	
1994	Red gum	Eucalyptus camaldulensis	58	no	-	-	good	good	good	75	
1995	Red gum	Eucalyptus camaldulensis	36	no	-	-	fair	good	good	35	
1996	Peruvian pepper	Schinus molle	32	no	-	-	good	good	good	60	
1997	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	fair	fair	30	
1998	Red gum	Eucalyptus camaldulensis	20	no	-	-	good	fair	fair	65	
1999	Red gum	Eucalyptus camaldulensis	-	yes	20,11	31	poor	poor	poor	45	
2000	Red gum	Eucalyptus camaldulensis	-	yes	6,4,5	12	fair	fair	fair	30	
2001	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	15	
2002	Goodding's willow	Salix gooddingii	20	no	-	-	very poor	good	fair	35	
2003	Goodding's willow	Salix gooddingii	-	yes	8,11	20	very poor	poor	very poor	20	
2004	Goodding's willow	Salix gooddingii	-	yes	7,11	12	poor	fair	poor	20	
2005	Goodding's willow	Salix gooddingii	11	no	-	-	poor	poor	poor	25	
2006	Black elderberry	Sambucus nigra	8	no	-	-	very poor	poor	poor	20	
2007	Black elderberry	Sambucus nigra	13	no	-	-	poor	poor	poor	20	
2008	Goodding's willow	Salix gooddingii	14	no	-	-	fair	good	fair	45	
2009	Goodding's willow	Salix gooddingii	-	yes	6,6,3	10	poor	good	fair	25	
2010	Goodding's willow	Salix gooddingii	-	yes	8,6	24	poor	good	fair	30	
2011	Goodding's willow	Salix gooddingii	-	yes	8,10,11	36	very poor	very poor	very poor	20	
2012	Goodding's willow	Salix gooddingii	-	yes	10,12	24	very poor	good	fair	20	
2013	Goodding's willow	Salix gooddingii	18	no	-	-	poor	very good	good	25	
2014	Goodding's willow	Salix gooddingii	11	no	-	-	fair	fair	fair	25	
2015	Goodding's willow	Salix gooddingii	-	yes	12,12	30	poor	fair	poor	30	
2016	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	25	
2017	Goodding's willow	Salix gooddingii	11	no	-	-	fair	poor	poor	25	
2018	Goodding's willow	Salix gooddingii	-	yes	10,12	30	poor	poor	poor	30	
2019	Goodding's willow	Salix gooddingii	-	yes	10,6	19	very poor	very poor	very poor	20	
2020	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	20	
2021	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	25	
2022	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	15	
2023	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	15	
2024	Goodding's willow	Salix gooddingii	6	no	-	-	very poor	very poor	very poor	10	
2025	Goodding's willow	Salix gooddingii	14	no	-	-	poor	fair	fair	25	
2026	Goodding's willow	Salix gooddingii	12	no	-	-	very poor	poor	poor	30	
2027	Goodding's willow	Salix gooddingii	-	yes	13,8	30	poor	poor	poor	30	
2028	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	fair	poor	30	
2029	Goodding's willow	Salix gooddingii	-	yes	26,13	40	fair	fair	fair	40	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
2030	Goodding's willow	Salix gooddingii	-	yes	9,4	30	very poor	fair	poor	30	
2031	Goodding's willow	Salix gooddingii	9	no	-	-	very poor	very poor	very poor	15	
2032	Fremont cottonwood	Populus fremontii	-	yes	15,14	23	good	good	good	25	
2033	Goodding's willow	Salix gooddingii	18	no	-	-	poor	good	fair	30	
2034	Goodding's willow	Salix gooddingii	15	no	-	-	very poor	fair	poor	30	
2035	Goodding's willow	Salix gooddingii	-	yes	23,24	70	very poor	fair	poor	30	
2036	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	20	
2037	Goodding's willow	Salix gooddingii	16	no	-	-	very poor	very poor	very poor	25	
2038	Goodding's willow	Salix gooddingii	-	yes	17,10	38	very poor	poor	very poor	40	
2039	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	40	
2040	Goodding's willow	Salix gooddingii	-	yes	13,10	20	very poor	fair	poor	20	
2041	Goodding's willow	Salix gooddingii	18	no	-	-	very poor	poor	poor	40	
2042	Goodding's willow	Salix gooddingii	21	no	-	-	poor	fair	fair	40	
2043	Goodding's willow	Salix gooddingii	15	no	-	-	very poor	poor	poor	15	
2044	Goodding's willow	Salix gooddingii	24	no	-	-	fair	very good	good	35	
2045	Goodding's willow	Salix gooddingii	13	no	-	-	very poor	poor	poor	25	
2046	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	20	
2047	Goodding's willow	Salix gooddingii	17	no	-	-	very poor	fair	poor	35	
2048	Goodding's willow	Salix gooddingii	-	yes	8,4,5,4	25	very poor	fair	poor	30	
2049	Tamarisk	Tamarix ramosissima	-	yes	6,4,4	22	poor	fair	fair	20	
2050	Goodding's willow	Salix gooddingii	-	yes	13,6	19	poor	good	fair	20	
2051	Tamarisk	Tamarix ramosissima	-	yes	8,4,6	14	fair	very poor	poor	20	
2052	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	poor	very poor	15	
2053	Arroyo willow	Salix lasiolepis	-	yes	6,3,4,5,4	50	very poor	fair	poor	15	
2054	Peruvian pepper	Schinus molle	-	yes	16,10,8	24	fair	good	fair	25	
2055	Fremont cottonwood	Populus fremontii	-	yes	24,26	36	fair	good	good	45	
2056	Fremont cottonwood	Populus fremontii	9	no	-	-	very poor	very poor	very poor	15	
2057	Fremont cottonwood	Populus fremontii	-	yes	7,5	8	very poor	very poor	very poor	15	
2058	Fremont cottonwood	Populus fremontii	10	no	-	-	very poor	very poor	very poor	25	
2059	Fremont cottonwood	Populus fremontii	17	no	-	-	very poor	very poor	very poor	15	
2060	Fremont cottonwood	Populus fremontii	-	yes	19,22	36	poor	poor	poor	50	
2061	Fremont cottonwood	Populus fremontii	21	no	-	-	poor	fair	fair	35	
2062	Fremont cottonwood	Populus fremontii	14	no	-	-	very poor	very poor	very poor	25	
2063	Peruvian pepper	Schinus molle	23	no	-	-	very poor	very poor	very poor	35	
2064	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	fair	fair	80	
2065	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	80	
2066	Red gum	Eucalyptus camaldulensis	-	yes	11,24,15	75	poor	good	fair	95	
2067	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	fair	fair	80	
2068	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	95	
2069	Peruvian pepper	Schinus molle	13	no	-	-	fair	good	good	20	
2070	Peruvian pepper	Schinus molle	9	no	-	-	poor	fair	fair	20	
2071	Bishop pine	Pinus muricata	29	no	-	-	fair	good	good	55	
2072	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	fair	good	20	
2073	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	fair	good	35	
2074	Red gum	Eucalyptus camaldulensis	-	yes	4,12,8,8,4,6	buried	good	fair	good	30	
2075	Red gum	Eucalyptus camaldulensis	-	yes	8,8,5,8	buried	poor	fair	fair	30	
2076	Red gum	Eucalyptus camaldulensis	8	no	-	-	good	fair	good	30	
2077	Red gum	Eucalyptus camaldulensis	-	yes	4,7	buried	fair	fair	fair	20	
2078	Red gum	Eucalyptus camaldulensis	-	yes	11,9,10,5	27	good	fair	good	45	
2079	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	20	
2080	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	25	
2081	Red gum	Eucalyptus camaldulensis	-	yes	9,5,9,7,6,9	buried	poor	fair	fair	30	
2082	Red gum	Eucalyptus camaldulensis	-	yes	8,10,4,4,8,8,12,12	buried	good	fair	good	25	
2083	Red gum	Eucalyptus camaldulensis	-	yes	8,5,9	buried	fair	fair	fair	15	
2084	Red gum	Eucalyptus camaldulensis	-	yes	6,3	buried	good	good	good	15	
2085	Peruvian pepper	Schinus molle	11	no	-	-	poor	fair	fair	25	
2086	Peruvian pepper	Schinus molle	-	yes	8,17	21	poor	poor	poor	25	
2087	Peruvian pepper	Schinus molle	-	yes	13,16	28	poor	poor	poor	35	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
2088	Peruvian pepper	Schinus molle	-	yes	9,13,12	28	fair	good	good	45	
2089	Fremont cottonwood	Populus fremontii	-	yes	4,4,4,6,10	12	poor	poor	poor	35	
2090	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	25	
2091	Unk2/1		11	no	-	-	very poor	very poor	very poor	25	same unknown as 1569
2092	Unk2/1		13	no	-	-	very poor	very poor	very poor	30	same unknown as 1569
2093	Unk2/1		18	no	-	-	fair	good	fair	30	same unknown as 1569
2094	Unk2/1		17	no	-	-	fair	fair	fair	35	same unknown as 1569
2095	Green ash	Fraxinus pennsylvanica	37	no	-	-	good	good	good	35	
2096	Green ash	Fraxinus pennsylvanica	33	no	-	-	fair	fair	fair	30	
2097	Green ash	Fraxinus pennsylvanica	31	no	-	-	fair	fair	fair	35	
2098	Unk2/1		19	no	-	-	good	good	good	40	same unknown as 1569
2099	Unk2/1		21	no	-	-	fair	good	fair	35	same unknown as 1569
2100	Lost Tag										lost tag
2101	Red gum	Eucalyptus camaldulensis	-	yes	9,6	10	poor	good	fair	25	
2102	Red gum	Eucalyptus camaldulensis	-	yes	7,4,6	11	fair	good	good	30	
2103	Red gum	Eucalyptus camaldulensis	-	yes	7,5,6,10	20	fair	good	fair	50	
2104	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	good	40	
2105	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	good	35	
2106	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	35	
2107	Red gum	Eucalyptus camaldulensis	-	yes	6,5	14	fair	good	fair	45	
2108	Red gum	Eucalyptus camaldulensis	-	yes	8,6	14	fair	good	fair	25	
2109	Red gum	Eucalyptus camaldulensis	-	yes	7,7,7	22	fair	good	fair	45	
2110	Red gum	Eucalyptus camaldulensis	-	yes	10,8,7,3,4,6	28	fair	good	fair	40	
2111	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	15	
2112	Red gum	Eucalyptus camaldulensis	-	yes	9,8,8,6	40	poor	good	fair	60	
2113	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	45	
2114	Red gum	Eucalyptus camaldulensis	-	yes	8,9,9,8,10,5,4,3	48	poor	good	fair	35	
2115	Red gum	Eucalyptus camaldulensis	-	yes	7,4,3,3	10	fair	very good	good	25	
2116	Red gum	Eucalyptus camaldulensis	-	yes	5,10,9,4,8,8	48	fair	fair	fair	45	
2117	Red gum	Eucalyptus camaldulensis	-	yes	6,8	15	fair	fair	fair	40	
2118	Red gum	Eucalyptus camaldulensis	-	yes	7,10,7,6,3,3	36	fair	good	fair	35	
2119	Red gum	Eucalyptus camaldulensis	-	yes	6,7,8,5,4,7,7,8,4	70	poor	good	fair	45	
2120	Red gum	Eucalyptus camaldulensis	-	yes	10,11,12,8,10,7,10	70	poor	good	fair	50	
2121	Red gum	Eucalyptus camaldulensis	-	yes	6,4	9	poor	poor	poor	35	
2122	Red gum	Eucalyptus camaldulensis	-	yes	7,9,8	30	poor	fair	fair	45	
2123	Red gum	Eucalyptus camaldulensis	-	yes	7,7	18	fair	good	fair	45	
2124	Red gum	Eucalyptus camaldulensis	-	yes	7,3,6	12	poor	fair	fair	45	
2125	Lost Tag										lost tag
2126	Unk2/1		19	no	-	-	fair	poor	fair	30	same unknown as 1569
2127	Mexican fan palm	Washingtonia robusta	15	no	-	-	poor	fair	fair	40	
2128	Olive	Olea eurpaea	20	no	-	-	poor	good	fair	25	
2129	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	45	
2130	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	50	
2131	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	45	
2132	Olive	Olea eurpaea	-	yes	15,18,12	50	poor	fair	fair	25	
2133	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	45	
2134	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	50	
2135	Olive	Olea eurpaea	-	yes	13,16	36	poor	fair	poor	25	
2136	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	55	
2137	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	50	
2138	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	40	
2139	Green ash	Fraxinus pennsylvanica	-	yes	11,11,21	30	fair	fair	fair	25	
2140	Olive	Olea eurpaea	-	yes	18,16	36	poor	good	fair	25	
2141	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	50	
2142	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	good	40	
2143	Olive	Olea eurpaea	19	no	-	-	fair	good	fair	25	
2144	Olive	Olea eurpaea	15	no	-	-	poor	fair	poor	15	
2145	Olive	Olea eurpaea	-	yes	18,22	48	poor	good	fair	25	

Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
2146	California fan palm	Washingtonia filifera	38	no	-	-	good	good	good	45	
2147	California fan palm	Washingtonia filifera	38	no	-	-	good	good	good	40	
2148	California fan palm	Washingtonia filifera	21	no	-	-	poor	fair	fair	20	
2149	California fan palm	Washingtonia filifera	25	no	-	-	poor	fair	fair	20	
2150	California fan palm	Washingtonia filifera	28	no	-	-	poor	good	fair	25	
2151	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	25	
2152	California fan palm	Washingtonia filifera	32	no	-	-	good	good	good	30	
2153	Joshua tree	Yucca brevifolia	-	yes	26,16	72	poor	fair	fair	20	
2154	Flooded gum	Eucalyptus rudis	-	yes	7,10	14	very poor	very poor	very poor	20	
2155	Flooded gum	Eucalyptus rudis	13	no	-	-	very poor	very poor	very poor	20	
2156	Flooded gum	Eucalyptus rudis	18	no	-	-	very poor	very poor	very poor	20	
2157	Flooded gum	Eucalyptus rudis	14	no	-	-	poor	poor	poor	20	
2158	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	15	
2159	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	20	
2160	Flooded gum	Eucalyptus rudis	-	yes	15,17,12	32	poor	fair	poor	20	
2161	Flooded gum	Eucalyptus rudis	18	yes	8,12,11	18	very poor	very poor	very poor	15	
2162	Flooded gum	Eucalyptus rudis	20	no	-	-	poor	poor	poor	15	
2163	Flooded gum	Eucalyptus rudis	-	yes	11,17	20	poor	poor	poor	15	
2164	Flooded gum	Eucalyptus rudis	17	no	-	-	poor	poor	poor	15	
2165	Flooded gum	Eucalyptus rudis	16	no	-	-	poor	poor	poor	15	
2166	Flooded gum	Eucalyptus rudis	26	no	-	-	fair	fair	fair	20	
L1	Goodding's willow	Salix gooddingii	-	yes	8,5,6	14	very poor	fair	fair	25	
L10	Fremont cottonwood	Populus fremontii	11	no	-	-	fair	fair	fair	35	
L11	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	30	
L12	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	45	
L13	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	25	
L14	Goodding's willow	Salix gooddingii	-	yes	8,8	12	poor	poor	poor	35	
L15	Fremont cottonwood	Populus fremontii	11	no	-	-	fair	fair	fair	30	near 2036
L16	Fremont cottonwood	Populus fremontii	8	no	-	-	fair	fair	fair	25	
L17	Goodding's willow	Salix gooddingii	16	no	-	-	fair	fair	fair	40	
L18	Peruvian pepper	Schinus molle	20	no	-	-	fair	fair	fair	40	
L19	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	30	
L2	Goodding's willow	Salix gooddingii	6	no	-	-	fair	fair	fair	25	in dense brush near 1225
L20	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	30	
L21	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	30	
L22	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	30	
L23	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	20	near 1708
L24	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	35	near 1708
L25	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	35	near 1708
L26	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	35	near 1708
L27	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	20	near 1708
L28	Goodding's willow	Salix gooddingii	10	no	-	-	fair	fair	fair	25	
L29	Peruvian pepper	Schinus molle	25	no	-	-	fair	fair	fair	30	
L3	Fremont cottonwood	Populus fremontii	6	no	-	-	fair	fair	fair	25	near 2033
L30	California fan palm	Washingtonia filifera	35	no	-	-	good	good	good	40	near 1709
L31	Fremont cottonwood	Populus fremontii	6	no	-	-	fair	fair	fair	25	
L32	Tamarisk	Tamarix ramosissima	25	no	-	-	poor	poor	poor	35	
L33	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	30	near 1709
L34	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	300	near 1709
L35	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	fair	fair	50	
L36	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	25	
L37	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	45	
L38	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	45	
L39	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	45	
L4	Fremont cottonwood	Populus fremontii	-	yes	8,8	16	poor	fair	fair	25	
L40	California fan palm	Washingtonia filifera	30	no	-	-	fair	good	good	50	
L41	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	25	
L42	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	25	



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Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
L43	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	25	
L44	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	20	
L45	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	60	
L46	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
L47	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
L48	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
L49	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
L5	Goodding's willow	Salix gooddingii	-	yes	12,10	16	poor	poor	poor	35	
L50	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	60	
L51	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L52	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L53	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L54	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L55	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L56	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L57	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L58	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L59	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L6	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	20	
L60	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L61	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L62	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L63	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L64	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L65	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	50	
L66	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	50	
L67	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	50	
L68	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	50	
L69	Peruvian pepper	Schinus molle	-	yes	7,5,4,5	28	poor	fair	fair	25	
L7	Red gum	Eucalyptus camaldulensis	-	yes	14,12	22	poor	poor	poor	30	
L70	Peruvian pepper	Schinus molle	14	no	-	-	poor	poor	poor	30	
L71	Peruvian pepper	Schinus molle	-	yes	10,14	25	fair	fair	fair	30	
L72	Peruvian pepper	Schinus molle	10	no	-	-	poor	poor	poor	20	
L73	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	50	
L74	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	55	
L75	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L76	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L77	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L78	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L79	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L8	Goodding's willow	Salix gooddingii	6	no	-	-	poor	fair	fair	15	
L80	Fremont cottonwood	Populus fremontii	20	no	-	-	fair	fair	fair	30	
L81	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	40	
L82	Peruvian pepper	Schinus molle	-	yes	8,8	20	poor	poor	poor	25	
L83	Peruvian pepper	Schinus molle	15	no	-	-	poor	poor	poor	30	
L84	Peruvian pepper	Schinus molle	-	yes	12,14,8	30	poor	fair	fair	30	
L85	Peruvian pepper	Schinus molle	-	yes	16,12,12	30	poor	fair	fair	30	
L86	Peruvian pepper	Schinus molle	-	yes	8,12	20	poor	poor	poor	20	
L87	Peruvian pepper	Schinus molle	-	yes	10,10,10	30	poor	fair	fair	35	
L88	Peruvian pepper	Schinus molle	10	no	-	-	fair	fair	fair	30	
L89	Peruvian pepper	Schinus molle	7	no	-	-	fair	fair	fair	15	
L9	Fremont cottonwood	Populus fremontii	7	no	-	-	fair	fair	fair	25	
L90	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5,3,4	30	poor	fair	fair	40	
L91	Red gum	Eucalyptus camaldulensis	-	yes	14,8	20	fair	fair	fair	50	
L92	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	40	
L93	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	40	
L94	Goodding's willow	Salix gooddingii	10	no	-	-	poor	poor	poor	20	
untagged	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	25	

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Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
untagged	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	20	
untagged	Canary Island date palm	Phoenix canariensis	10	no	-	-	fair	fair	fair	40	
untagged	Goodding's willow	Salix gooddingii	9	no	-	-	fair	good	fair	25	
untagged	Goodding's willow	Salix gooddingii	13	no	-	-	fair	fair	fair	45	
untagged	Goodding's willow	Salix gooddingii	20	no	-	-	poor	poor	poor	25	
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	fair	fair	35	
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	30	
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	35	
untagged	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	40	
untagged	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	55	
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	40	
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	55	
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	45	
untagged	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	fair	good	55	
untagged	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	65	
untagged	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	poor	45	
untagged	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	75	"bark looks similar to red gum but leaves are much broader"
untagged	Red gum	Eucalyptus camaldulensis	-	yes	13,9,12,10	52	very poor	good	fair	20	
untagged	Red gum	Eucalyptus camaldulensis	-	yes	11,12	37	very poor	very poor	very poor	35	
untagged	White alder	Alnus rhombifolia	10	no	-	-	very poor	poor	poor	25	
UT 1	Peruvian pepper	Schinus molle	-	yes	8,8,10	18	poor	poor	poor	25	
UT 10	Peruvian pepper	Schinus molle	-	yes	10,10	20	fair	fair	fair	25	
UT 11	Peruvian pepper	Schinus molle	20	no	-	-	fair	fair	fair	30	
UT 12	Peruvian pepper	Schinus molle	13	no	-	-	poor	poor	poor	25	
UT 13	Peruvian pepper	Schinus molle	-	yes	8,6	14	poor	poor	poor	25	
UT 14	Peruvian pepper	Schinus molle	14	no	-	-	poor	poor	poor	30	
UT 15	Peruvian pepper	Schinus molle	24	no	-	-	poor	fair	fair	35	
UT 16	Peruvian pepper	Schinus molle	32	no	-	-	fair	good	fair	35	
UT 17	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	poor	poor	45	
UT 18	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	poor	poor	55	
UT 19	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	50	
UT 2	Peruvian pepper	Schinus molle	14	no	-	-	fair	fair	fair	35	
UT 20	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	50	
UT 21	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	55	
UT 22	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	poor	poor	45	
UT 23	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	50	
UT 24	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	50	
UT 25	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	45	
UT 26	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	poor	poor	85	
UT 27	Red gum	Eucalyptus camaldulensis	-	yes	10,8,10,10,14,12,6	50	poor	fair	poor	65	
UT 28	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	40	
UT 29	Red gum	Eucalyptus camaldulensis	-	yes	7,5,4	22	poor	poor	poor	40	
UT 3	Southern California walnut	Juglans californica	8	no	-	-	good	good	good	35	
UT 30	Red gum	Eucalyptus camaldulensis	-	yes	7,4	14	poor	poor	poor	30	
UT 31	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	30	
UT 32	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	fair	poor	65	
UT 33	Red gum	Eucalyptus camaldulensis	-	yes	10,12,5,8,10	45	poor	poor	poor	60	
UT 34	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4	20	poor	poor	poor	55	
UT 35	Red gum	Eucalyptus camaldulensis	-	yes	10,14,4,4	32	poor	poor	poor	45	
UT 36	Red gum	Eucalyptus camaldulensis	-	yes	16,14,5	26	poor	poor	poor	60	
UT 37	Red gum	Eucalyptus camaldulensis	-	yes	6,6,5,5,3	24	poor	poor	poor	30	
UT 38	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4,4,7,10,8,8	60	poor	fair	poor	55	
UT 39	Red gum	Eucalyptus camaldulensis	-	yes	10,12,12,9	34	poor	fair	fair	65	
UT 4	Canary Island date palm	Phoenix canariensis	24	no	-	-	good	good	good	35	
UT 40	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	50	
UT 40	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	50	
UT 41	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	50	



## Appendix B: Tree Survey Data

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Height (feet)	Comments
UT 42	Peruvian pepper	Schinus molle	36	no	-	-	fair	good	good	35	
UT 43	California fan palm	Washingtonia filifera	24	no	-	-	good	good	good	45	
UT 44	Peruvian pepper	Schinus molle	-	yes	12,10	18	fair	good	good	25	
UT 45	Peruvian pepper	Schinus molle	-	yes	6,4,6,4	48	poor	fair	poor	20	
UT 46	Peruvian pepper	Schinus molle	14	no	-	-	poor	fair	poor	25	
UT 5	Peruvian pepper	Schinus molle	-	yes	10,10,10	25	fair	fair	fair	30	
UT 6	Red gum	Eucalyptus camaldulensis	-	yes	10,10,10,5,5,5	50	poor	good	fair	45	
UT 7	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	45	
UT 8	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	45	
UT 9	Red gum	Eucalyptus camaldulensis	-	yes	10,6	15	fair	fair	fair	45	*weird one - no description of where tree was, written at bottom of page after T2120 in Jon's handwriting, Ivy had written everything else on the page

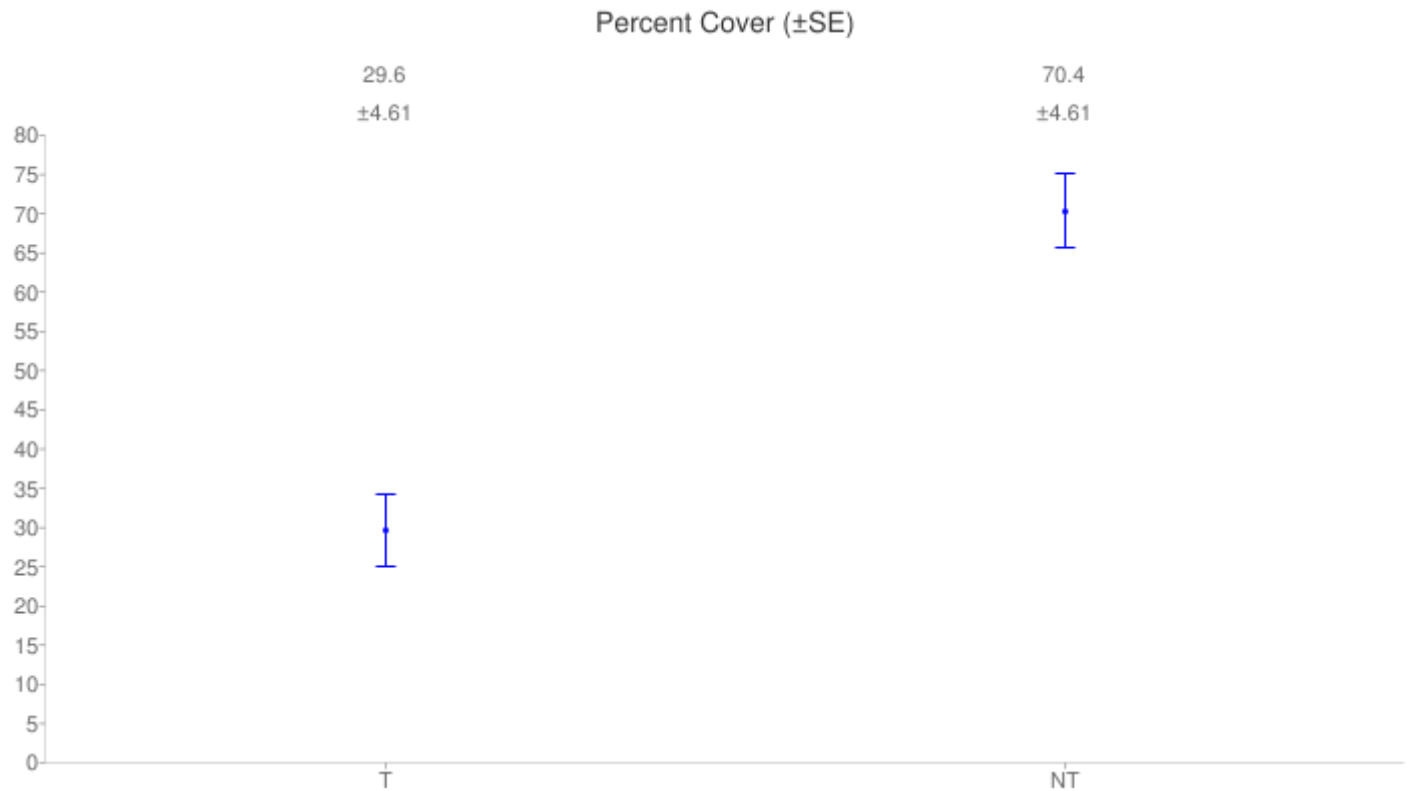
## Appendix C: iTree Canopy Cover Assessment and Tree Benefits Report



# i-Tree Canopy<sup>v6.1</sup>

## Cover Assessment and Tree Benefits Report

Estimated using random sampling statistics on 10/31/16



Cover Class	Description	Abbr.	Points	% Cover
Tree	Tree, non-shrub	T	29	29.6 $\pm$ 4.61
Non-Tree	All other surfaces	NT	69	70.4 $\pm$ 4.61

## Tree Benefit Estimates

Abbr.	Benefit Description	Value	±SE	Amount	±SE
CO	Carbon Monoxide removed annually	\$3.26	±0.51	76.81 lb	±11.97
NO2	Nitrogen Dioxide removed annually	\$5.61	±0.87	418.84 lb	±65.26
O3	Ozone removed annually	\$291.94	±45.49	2.09 T	±0.32
PM2.5	Particulate Matter less than 2.5 microns removed annually	\$603.49	±94.03	202.70 lb	±31.58
SO2	Sulfur Dioxide removed annually	\$0.98	±0.15	263.94 lb	±41.13
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	\$211.94	±33.02	1,397.27 lb	±217.72
CO2seq	Carbon Dioxide sequestered annually in trees	\$15,356.42	±2,392.78	424.69 T	±66.17
CO2stor	Carbon Dioxide stored in trees (Note: this benefit is not an annual rate)	\$387,183.10	±60,329.38	10,707.69 T	±1,668.43

*i-Tree Canopy Annual Tree Benefit Estimates based on these values in lbs/acre/yr and \$/T/yr: CO 0.902 @ \$85.08 | NO2 4.917 @ \$26.86 | O3 48.968 @ \$140.47 | PM2.5 2.379 @ \$5,975.67 | SO2 3.098 @ \$7.45 | PM10\* 16.403 @ \$304.43 | CO2seq 9,970.817 @ \$36.29 | CO2stor is a total biomass amount of 251,395.359 @ \$36.29*

*Note: Standard errors of removal amounts and benefits were calculated based on standard errors of sampled and classified points.*

### About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company).

### Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.

### A Cooperative Initiative Between:



[www.itreetools.org](http://www.itreetools.org)



## **Appendix D**

### **Special-Status Plant Species with Potential to Occur on the Project Site**

## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
San Diego ambrosia <i>Ambrosia pumila</i>	FE	-	COV	Open floodplain terraces or on in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse non-native grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas. Chaparral, coastal scrub, valley and foothill grassland. In valleys; persists where disturbance has been superficial. Garretson gravelly fine sandy loams when in association with floodplains, and on Las Posas loam in close proximity to silty, alkaline soils of the Willows series. 3-580 m. Blooms April – October.	<b>Not Expected.</b> This species was not observed during October 2016 or April 2017 surveys in grassland and shrub dominated habitats. Furthermore, suitable landforms and soils are not present onsite. Habitats within the Project site are disturbed from decades of cement processing and mining operations and/or occur on steep rocky hillsides and would not be suitable to support San Diego ambrosia.
marsh sandwort <i>Arenaria paludicola</i>	FE	SE, 1B.1	-	Marshes and swamps. Growing up through dense mats of <i>Typha</i> , <i>Juncus</i> , <i>Scirpus</i> , etc. in freshwater marsh. Sandy soil. 3-170 m. Blooms May – August.	<b>Not Expected.</b> Species not observed in artificially created wetland habitats on the Project site that were surveyed in July 2016 or April 2017. There are recent records of occurrence in the vicinity of the Project site (approximately 5 miles northeast).
western spleenwort <i>Asplenium vespertinum</i>	-	4.2	-	Chaparral, cismontane woodland, coastal scrub. Rocky sites. 180-1000 m. Blooms February – June.	<b>Not Expected.</b> Species not observed in patches of brittle brush scrub during April 2017 surveys that would provide limited habitat suitability. Patches of shrub dominated communities provide low habitat quality due to the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of this community for dust abatement. There are recent occurrences in the vicinity of the Project site (3 occurrences approximately 5 miles east).
Nevin's barberry <i>Berberis nevinii</i>	FE	SE, 1B.1	COV	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 290-1575 m. Blooms March – June.	<b>Not Expected.</b> This perennial shrub was not observed in brittle brush or riparian scrub areas during April 2017 surveys that would provide limited habitat suitability. There are recent records of occurrence in the vicinity of the Project site (approximately 8 miles east).



## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT	SE, 1B.1	COV	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1020 m. Blooms February - June.	<b>Not Expected.</b> Species not observed in patches of brittle brush scrub and ruderal grasslands during April 2017 surveys that would provide limited habitat suitability.
Plummer's mariposa-lily <i>Calochortus plummerae</i>	-	4.2	-	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m. Blooms May - July.	<b>Not Expected.</b> Species not observed in non-native annual grassland or within patches of brittle brush scrub during July 2016 or April 2017 surveys that would provide limited habitat suitability. In general, shrub dominated communities on the site provide low habitat quality due to the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of this community for dust abatement. There are recent occurrence records for this species in the vicinity of the Project site (approximately 4 miles west).
bristly sedge <i>Carex comosa</i>	-	2B.1	-	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. 5-1620 m. Blooms May - September.	<b>Not Expected.</b> Although there are recent records of occurrence in the vicinity of the Project site, (approximately 5 miles northeast), this species was not observed by MIG botanists in artificially created wetland habitats during July and October 2016 or April 2017 field surveys.
smooth tarplant <i>Centromadia pungens ssp. laevis</i>	-	1B.1	COV	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. Blooms April - September.	<b>Not Expected.</b> No suitable alkaline habitats present; furthermore, species was not observed by MIG botanists in wetland, grassland, or riparian habitats during July and October 2016 field surveys.
salt marsh bird's-beak <i>Chloropyron maritimum ssp. maritimum</i>	FE	SE, 1B.2	-	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m. Blooms May - October.	<b>Not Expected.</b> No suitable coastal salt marsh habitats present; furthermore, species was not observed by MIG botanists in wetland habitats during July and October 2016 field surveys.

## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
Peninsular spineflower <i>Chorizanthe leptotheca</i>	-	4.2	-	Chaparral, coastal scrub, lower montane coniferous forest. On granitic soils, in alluvial fans. 300-1900 m. Blooms May – August.	<b>Not Expected.</b> No lower montane coniferous forest or other potentially suitable habitats are present; furthermore, species was not observed by MIG botanists in wetland habitats during July and October 2016 or April 2017 field surveys.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	-	1B.1	-	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland; dry, sandy soils. 225-1220 m. Blooms April – June.	<b>Not Expected.</b> Species not observed during April 2017 surveys in non-native grassland or brittlebrush scrub communities that provide limited suitability for Parry's spineflower due to the terrain, substrate, and site disturbance. In general, shrub dominated communities on the site provide low habitat quality due to the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of this community for dust abatement. There are recent records of occurrence in the vicinity of the Project site (approximately 4 miles west).
San Miguel savory <i>Clinopodium chandleri</i>	-	1B.2	COV	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Rocky, gabbroic or metavolcanic substrate. 120-1075 m. Blooms March – May.	<b>Not Expected.</b> This species was not observed within non-native grassland, brittlebrush scrub, willow scrub, or mulefat scrub vegetation communities during the July 2016 or April 2017 surveys. There are no recent records of occurrence in the vicinity of the Project site (last occurrence was approximately 26 miles SSW, documented in 1993).
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	-	2B.2	-	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m. Blooms July – October.	<b>Not Expected.</b> Species was not observed by MIG botanists in perennial wetland habitats during July or October 2016 field surveys.
paniculate tarplant <i>Deinandra paniculata</i>	-	4.2	-	Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernal mesic sites. Sometimes in vernal pools or on mima mounds near them. 25-940 m. Blooms April – November.	<b>Not Expected.</b> Species was not observed by MIG botanists in non-native grassland, scrub, wetland habitats during July and October 2016 or April 2017 field surveys.



## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
slender-horned spineflower <i>Dodecahema leptoceras</i>	FE	SE, 1B.1	COV	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m. Blooms April – June.	<b>Not Expected.</b> Species not observed during April 2017 focused surveys. within brittle brush scrub vegetation communities. The site does not support mature alluvial scrub, sandy or gravelly soils or floodplain terrace landforms that are known to support this species.
Santa Ana River woollystar <i>Eriastrum densifolium ssp. sanctorum</i>	FE	SE, 1B.1	-	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-700 m. Blooms May – September.	<b>Not Expected.</b> There are no sandy soils or floodplain terraces on the Project site that would be suitable to support this species. Santa Ana River woollystar was not observed by MIG botanists in shrub-dominated habitats during July and October 2016 field surveys.
Alvin Meadow bedstraw <i>Galium californicum ssp. primum</i>	-	1B.2	-	Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1350-1700 m. Blooms May – July.	<b>Not Expected.</b> Suitable lower montane coniferous forest habitat is not present on the Project site. Species was not observed by MIG botanists during the July 2016 field survey.
Los Angeles sunflower <i>Helianthus nuttallii ssp. parishii</i>	-	1A	-	Marshes and swamps (coastal salt and freshwater). 10-1675 m. Blooms August – October.	<b>Not Expected.</b> Species was not observed by MIG botanists in artificially created perennial wetland habitats during July, or October 2016 field surveys. Lastly, this species is believed to be extinct (CDFW 2016).
mesa horkelia <i>Horkelia cuneata var. puberula</i>	-	1B.1	-	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. Blooms February – July.	<b>Not Expected.</b> Species was not observed by MIG botanists in shrub dominated habitats during July and October 2016 field surveys. In general, shrub dominated communities on the site provide low habitat quality due to the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of this community for dust abatement.

## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	-	4.3	-	Chaparral, coastal scrub. Dry soils, shrubland. 1-885 m. Blooms January – July.	<b>Not Expected.</b> Species was not observed by MIG botanists in perennial wetland habitats during July and October 2016 field surveys. Shrub dominated communities on the site provide low habitat quality and low overall species richness due to the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of this community for dust abatement.
Pringle's monardella <i>Monardella pringlei</i>	-	1A	-	Coastal scrub. Sandy Hills. 300-400m. Blooms May – June.	<b>Not Expected.</b> This species is believed to be extinct and the Project site does not support the vegetation community or substrate that this species has been historically documented to require. Furthermore, this species was not observed during mid-April 2017 surveys.
spreading navarretia <i>Navarretia fossalis</i>	FT	-	COV	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan & San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. 30-655 m. Blooms April – June.	<b>Not Expected.</b> No vernal pool or chenopod scrub habitat is present on the Project site. This species was not observed during April 2017 focused surveys. There are no recent records of occurrence in the vicinity of the Project site (nearest occurrence is approximately 20 miles southeast).
Brand's star phacelia <i>Phacelia stellaris</i>	-	1B.1	COV	Sandy washes and/or benches in alluvial flood plains. Coastal scrub, coastal dunes. Open areas. This species is generally dependent on periodic flooding and sediment transport. Population size may vary from year to year depending upon rainfall. 1-400 m. Blooms March – June.	<b>Not Expected.</b> This species was not observed during April 2017 focused surveys. The site does not support suitable plant communities or landforms that would support this species. There are recent records of occurrence in the vicinity of the Project site (one occurrence approximately 3 miles south).
Gambel's watercress <i>Rorippa gambellii</i> ( <i>Nasturtium gambellii</i> )	FE	ST, 1B.1	-	Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-330 m. Blooms April – October.	<b>Not Expected.</b> Species was not observed by MIG botanists in artificially created/excavated perennial wetland habitats during July and October 2016 field surveys.



## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

Species	Status <sup>1</sup>			Habitat Requirements <sup>2</sup>	Potential for Occurrence <sup>3</sup>
	Federal	State	MSCHP		
chaparral ragwort <i>Senecio aphanactis</i>	-	2B.2	-	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m. Blooms January – April.	<b>Not Expected.</b> The site does not support alkaline flats. Shrub dominated communities on the site provide are not suitable to support this species due to the rugged terrain and low habitat quality and low overall species richness. Undeveloped habitat areas have been significantly altered by the presence of excavated spoils, contaminated soils, and/or cement slurry that has sprayed throughout much of the site for dust abatement. There are no recent records of occurrence in the vicinity of the Project site (last occurrence occurred approximately 4 miles west in 1909)
salt spring checkerbloom <i>Sidalcea neomexicana</i>	-	2B.2	-	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 0-1530 m. Blooms March – June.	<b>Not Expected.</b> This species was not observed during the April 2017 focused surveys. The site does not support suitable habitat including alkaline habitats such as playas, springs, or meadows/marshes.
prairie wedge grass <i>Sphenopholis obtusata</i>	-	2.B2	-	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 300-2000 m. Blooms April – July.	<b>Not Expected.</b> No suitable habitat present and species was not observed by MIG botanists in artificially created perennial wetland habitats during July and October 2016 or April 2017 field surveys.
San Bernardino aster <i>Symphyotrichum defoliatum</i>	-	1B.2	-	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernal mesic grassland or near ditches, streams and springs; disturbed areas. 2-2040 m. Blooms July – November.	<b>Not Expected.</b> Species was not observed by MIG botanists in artificially created wetland, shrub-dominated, or non-native annual grassland habitats during July and October 2016 or April 2017 field surveys.

### <sup>1</sup>STATUS KEY:

#### Federal

FE: Federally-listed Endangered

FT: Federally-listed Threatened

FD: Federally-delisted

#### State

SE: State-listed Endangered

ST: State-listed Threatened

California Native Plant Society (CNPS)

Rank 1A – Presumed extinct in California;

Rank 1B – Rare, threatened, or endangered in California and elsewhere;

## Appendix D: Special-Status Plant Species with Potential to Occur on the Project Site

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Rank 2A – Plants presumed extirpated in California, but more common elsewhere;

Rank 2B – Rare, threatened, or endangered in California, but more common elsewhere;

Rank 3 – Plants for which more information is needed – A review list; and

Rank 4 – Plants of limited distribution – A watch list.

Additional threat ranks endangerment codes are assigned to each taxon or group as follows:

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

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

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

### MSHCP

COV: MSHCP Covered Species Adequately Conserved (MSHCP 2004)

### **<sup>2</sup>SOURCES:**

CDFW. 2017. California Natural Diversity Database (CNDDDB). Version 3.1.0. Sensitive Element Record Search for the Fontana and Surrounding USGS Quadrangles. California Department of Fish and Wildlife. Sacramento, California. Accessed April 2017.

CNPS 2017. Inventory of Rare and Endangered Plants (online edition). California Native Plant Society. Sacramento, CA. Available online at <http://www.rareplants.cnps.org/inventory>. Site accessed April 2017.

Riverside County Transportation and Land Management Agency. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Final MSHCP—Volumes 1 and 2. Approved June 17, 2003.

Riverside, County of. 2017. Riverside County Integrated Project (RCIP) Conservation Summary Report Generator. Available online at [http://www.rctlma.org/online/content/rcip\\_report\\_generator.aspx](http://www.rctlma.org/online/content/rcip_report_generator.aspx). Accessed March 2017

USFWS. 2017. Threatened and Endangered Species. Pacific Southwest Region. Carlsbad Office. Available online at <http://www.fws.gov/carlsbad/TEspecies.html>. Site accessed April 2017.

### **<sup>3</sup>POTENTIAL FOR OCCURRENCE RATIONALE:**

Each species was evaluated for its potential to occur on or in the immediate vicinity of the Project site per the following criteria:

Not Expected. There is no suitable habitat present on the Project site (i.e., habitats on the Project site are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation, hydrology, vegetation community, disturbance regime, etc.]). Additionally, there are no recent known records of occurrence in the vicinity of the Project site. The species has no potential of being found on the Project site.

Low Potential. Limited suitable habitat is present on the Project site (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat on the Project site is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the Project site. The species has a low probability of being found on the Project site.

Moderate Potential. Suitable habitat is present on the Project site (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat on the Project site is suitable or of marginal quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project site. The species has a moderate probability of being found on the Project site.

High Potential. Highly suitable habitat is present on the Project site (i.e., all habitat components meeting the species requirements are present and/or all of the habitat on the Project site is highly suitable or of high quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project site. This species has a high probability of being found on the Project site.

Present. Species was observed on the Project site (i.e., species was either observed during recent surveys or has a recorded observation in the CNDDDB on the Project site).



**Appendix E**  
**Special-Status Animal Species with Potential to Occur on the Project Site**

## Appendix E: Special-Status Animal Species with Potential to Occur on the Project Site

Species	Status			Habitat Requirements <sup>1</sup>	Potential for Occurrence <sup>2</sup>
	Federal	State	MSCHP		
INVERTEBRATES					
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	--	COV	Vernal pool fairy shrimp is restricted to seasonal vernal pools. The vernal pool fairy shrimp prefers cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived.	<b>Not Expected.</b> There are no vernal pools present on the Project Site that would be suitable to support this species. There are no recent records of occurrence in the vicinity (nearest occurrence is approximately 28.5 miles southeast).
Delhi Sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	FE	--	COV	Found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.	<b>Not Expected.</b> Although Delhi Sand soils were mapped on the project site (USDA, NRCS 2016), sandy soils were not observed on the Project Site during a focused habitat assessment for Delhi sands flower-loving fly. There are recent records of occurrence in the immediate vicinity of the Project Site.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE	--	COV	Riverside fairy shrimp is restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions. Riverside fairy shrimp prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time.	<b>Not Expected.</b> There are no vernal pools present on the Project Site that would be suitable to support this species. There are no recent records of occurrence in the vicinity (nearest occurrence is approximately 10.5 miles southeast).
FISHES					
Santa Ana sucker <i>Catostomus santaanae</i>	FT	--	COV	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	<b>Not Expected.</b> Suitable riverine habitat is not present on the Project Site. There are recent records of occurrence in the vicinity of the Project Site (approximately 0.5 miles southeast) in the Santa Ana River.
Arroyo chub <i>Gila orcuttii</i>	--	CSC	COV	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mohave and San Diego river basins. Inhabits slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	<b>Not Expected.</b> Suitable riverine habitat is not present on the Project Site. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.0 miles south) in the Santa Ana River.
REPTILES					
Silvery legless lizard <i>Anniella pulchra pulchra</i>	--	CSC	--	This legless lizard burrows in loose soil, especially in semi-stabilized sand dunes and in other areas with sandy soil, including habitats vegetated with oak or pine-oak woodland, or chaparral; it also occurs along wooded stream edges, and occasionally in desert-scrub.	<b>Moderate Potential.</b> Potentially suitable habitat is present in Brittlebush scrub or in the quarry pit and borrow areas on the Project Site. There are recent records of occurrence in the vicinity (nearest occurrence is approximately 3.8 miles south).
Orangethroat whiptail <i>Aspidoscelis hyperythra</i>	--	WL	COV	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food (i.e, termites).	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and rock outcrops. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.5 miles east).

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Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	--	CSC	COV	Found in deserts and semiarid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	<b>Present.</b> Suitable habitat is present on the Project Site within Brittlebush scrub, rock outcrop, and eucalyptus grove vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.7 miles northeast).
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	--	--	COV	Found in coastal and cismontane southern California. Inhabits granite or rocky outcrops in coastal scrub and chaparral habitats.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and rock outcrop communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.8 miles east).
Red-diamond rattlesnake <i>Crotalus ruber ruber</i>	--	CSC	COV	Inhabits chaparral, Mojavean Desert scrub, and Sonoran Desert scrub from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and rock outcrop communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.1 miles south).
Coastal rosy boa <i>Lichanura trivirgata roseofusca</i>	--	--	COV	The coastal rosy boa prefers rocky habitats within coastal sage scrub and chaparral habitats.	<b>Not Expected.</b> The Project Site does not contain coastal habitats where this species is known to occur. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 9.3 miles southeast).
Coast horned lizard <i>Phrynosoma blainvillii</i>	--	CSC	COV	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Requires open areas for sunning, bushes for cover, patches of loose soil for refuge, and abundant supply of insects.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub vegetation community. There are recent records of occurrence in the vicinity of the Project Site (approximately 2 miles east).
Western pond turtle <i>Emys marmorata</i>	--	--	COV	The western pond turtle inhabits slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and sewage treatment lagoons. Pools are the preferred habitat within streams.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within open water community. However, these aquatic habitats are artificially created and geographically isolated from streams, ponds and reservoirs in the region that could support this species. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 15 miles east).



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BIRDS					
Cooper's hawk <i>Accipiter cooperii</i>	--	CSC	COV	Mature forest, open woodlands, wood edges, river groves. Nests in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. Also found along trees along rivers through open country, and increasingly in suburbs and cities where some tall trees exist for nest sites. In winter may be in fairly open country, especially in west.	<b>Present.</b> Suitable habitat is present on the Project Site within eucalyptus grove vegetation community. This species was observed by MIG biologists during 2016 field surveys.
Sharp-shinned hawk <i>Accipiter striatus</i>	--	CSC	COV	Mixed or coniferous forests, open deciduous woodlands, thickets, edges. Usually nests in groves of coniferous trees in mixed woods, sometimes in dense deciduous trees or in pure coniferous forest with brush or clearings nearby.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within the eucalyptus grove and southern willow scrub vegetation communities. There are no recent records of occurrence in the vicinity of the Project Site.
Western Grebe <i>Aechmophorus occidentalis</i>	BCC	-	-	Found along entire coast in marine subtidal and estuarine waters (Oct – May). Uncommon to fairly common on large lakes near coast and inland at low elevations, and rare in Great Basin. Breed on large, marshy lakes. In summer, uncommon along coast, and rare at large inland lakes, except near breeding colonies. Require large, open waters for courtship, feeding, and flocking, and frequent extensive beds of tall, emergent vegetation such as tules or cattails for nesting.	<b>Low Potential.</b> Narrow bands of marginally suitable nesting habitat is present on the Project site within cattail vegetation surrounding Crestmore Lake. There are no records of occurrence in the vicinity of the Project Site.
Tricolored blackbird <i>Agelaius tricolor</i>	--	CSC	COV	Inhabits freshwater marsh, marsh and swamp, swamp, and wetland habitats. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within southern willow scrub and cattail vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.4 miles south).
Rufous-crowned Sparrow <i>Aimophila ruficeps</i>	BCC	WL	-	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass & forb patches.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub. There are several recent records of occurrence in the vicinity of the Project Site (approximately 2 miles east).
Great blue heron <i>Ardea herodias</i>	--	--	COV	The great blue heron breeds most commonly in isolated areas, such as wooded swamps or predator-free islands. Upland hardwood forest, forest-bordered lakes and ponds, and riparian woodlands are also used. Great blue herons forage in a variety of habitat types, including marshes, shores, swamps, tidal flats, lakes, rivers, lagoons, riparian forests, and coastal wetlands. Any slow-moving, shallow water will suffice for foraging.	<b>Present.</b> This species was observed by MIG biologists during Summer and Fall 2016 field surveys in the Crestmore Lake area. Suitable habitat onsite consists of open water, southern willow scrub, and cattail vegetation communities.

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Bell's sage sparrow <i>Artemisospiza belli belli</i>	--	WL	COV	Bell's sage sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.8 miles east).
Short-eared Owl <i>Asio flammeus</i>	BCC	CSC	-	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	<b>Low Potential.</b> There is marginally suitable habitat is present on the Project Site within disturbed and native grassland vegetation communities. Winter habitat is also present within cattail vegetation community and rock outcrops. There are no recent records of occurrence in the vicinity of the Project Site.
Burrowing owl <i>Athene cunicularia</i>	--	CSC	COV*	Inhabits open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel ( <i>Otospermophilus beecheyi</i> ).	<b>Moderate Potential.</b> Species not detected during protocol surveys conducted during 2016-2017. Suitable habitat is present on the Project Site within Brittlebush scrub, disturbed, developed, and rock outcrop vegetation communities, so there is potential that burrowing owl could colonize the site prior to project construction. There are recent records of occurrence in the vicinity of the Project Site (approximately 0.5 miles north).
Swainson's hawk <i>Buteo swainsoni</i>	--	ST	COV	Occurs in Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland habitats. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within southern willow scrub and disturbed vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 4.4 miles south).
Costa's Hummingbird <i>Calypte costae</i>	BCC	-	-	Desert riparian, desert, and arid scrub foothill habitats.	<b>Low Potential.</b> There is marginally suitable habitat is present on the Project Site within Brittlebush scrub and southern willow scrub. There are no recent records of occurrence in the vicinity of the Project Site.
Lawrence's Goldfinch <i>Carduelis lawrencei</i> <i>Spinus lawrencei</i>	BCC	-	-	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	<b>Low Potential.</b> Arid woodland, or eucalyptus groves, provide marginally suitable habitat – though there are no oak trees present. There is one recent record of occurrence in the vicinity of the Project Site (closest occurrence is 5 miles southwest).

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Vaux's swift <i>Chaetura vauxi</i>	BCC	CSC	--	Redwood, Douglas fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	<b>Present.</b> This species was detected in the riparian habitat in the proposed open space area during USFWS protocol level presence/absence surveys for least Bell's vireo and southwestern willow flycatcher between April 13 and July 15, 2017.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	--	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow ( <i>Salix</i> spp.) often mixed with cottonwoods ( <i>Populus</i> sp.), with lower story of blackberry ( <i>Rubus</i> spp.), nettles ( <i>Urtica</i> spp.), or wild grape ( <i>Vitis girdiana</i> ).	<b>Not Expected.</b> Suitable habitat is not present on the Project Site. There are recent records of occurrence in the vicinity of the Project Site (approximately 0.5 miles east) in the Santa Ana River riparian corridor.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE	SE	COV*	Inhabits riparian and wetland thickets, generally of willow ( <i>Salix</i> spp.), tamarisk ( <i>Tamarix</i> spp.), or both, sometimes boxelder ( <i>Acer negundo</i> ) or Russian olive ( <i>Elaeagnus angustifolia</i> ).	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within southern willow scrub. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 11.5 miles east).
Merlin <i>Falco columbarius</i>	--	WL	COV	The merlin has a sparse and widespread distribution throughout the MSHCP Plan Area within almost every habitat that occurs within the Plan Area. It occurs within the Plan Area as a transient in the spring and fall and may occasionally winter within the area. It does not require specific conditions or locations for nesting because it does not nest in the region.	<b>Low Potential (Foraging).</b> Marginally suitable foraging habitat is present on the Project Site. No breeding habitat is present on the Project Site. There are recent records of occurrence in the vicinity of the Project Site (approximately 5.5 miles northeast).
Peregrine falcon <i>Falco peregrinus</i>	BCC	FP	-	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	<b>Low Potential.</b> Marginally suitable habitat present on rock outcrops and lake. There are no recent records of occurrence in the vicinity of the Project Site (closest occurrence is 28 miles northwest).
bald eagle <i>Haliaeetus leucocephalus</i>	BCC	SE, FP	-	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter. Lower montane coniferous forest, old growth trees.	<b>Low Potential.</b> Marginally suitable habitat exists along lake margins – large, old growth eucalyptus available for nesting. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 13 miles south).



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Yellow-breasted chat <i>Icteria virens</i>	--	--	COV	Yellow-breasted chats in southern California and within the Plan Area are primarily found in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds.	<b>Present.</b> Suitable habitat is present on the Project Site within southern willow scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 4.4 miles southwest). This species was detected in the riparian habitat in the proposed open space area during USFWS protocol level presence/absence surveys for least Bell's vireo and southwestern willow flycatcher between April 13 and July 15, 2017.
Least Bittern <i>Ixobrychus exilis</i>	BCC	CSC	-	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.	<b>Low Potential.</b> Marginally suitable habitat exists along lake margins where there are patches of cattails and southwestern willow scrub. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 13 miles south).
Loggerhead shrike <i>Lanius ludovicianus</i>	--	CSC	COV	Open sparse vegetation for foraging and trees and shrubs for nesting. It is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within eucalyptus grove, Brittlebush scrub, southern willow scrub, and disturbed vegetation community. There are recent records of occurrence in the vicinity of the Project Site (approximately 8.5 miles south).
Lewis's Woodpecker <i>Melanerpes lewis</i>	BCC	-	-	Breeds in open forest and woodland with an open canopy and brushy understory. Requires dead trees for nest cavities.	<b>Low Potential.</b> Marginally suitable nesting habitat is present on the Project Site within the eucalyptus grove, where there are dead trees for nesting. This species would only be near the project site during winter months. There are no recent records of occurrence in the vicinity of the Project Site.
Lincoln's sparrow <i>Melospiza lincolnii</i>	--	--	COV	Lincoln's sparrow is known to prefer dense, low underbrush often in disturbed edges with grasses and weeds mixed with shrubs. The species occurs in a variety of habitats including willow-sedge swamp, scrub-meadow and flat land aspen.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within southern willow scrub.
Osprey <i>Pandion haliaetus</i>	--	CSC	COV	Ospreys gravitate toward shallow fishing grounds, frequenting deep water only where fish school near the surface. Osprey habitat includes almost any expanse of shallow, fish-filled water, including rivers, lakes, reservoirs, lagoons, swamps, and marshes. Nest usually within 0.25 mile of fish-producing water, but may nest up to 1.5 miles from water.	<b>Present.</b> Suitable habitat is present on the Project Site within the open water community. This species was observed by MIG biologists during 2016 field surveys.

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Fox Sparrow <i>Passerella iliaca</i>	BCC	-	-	Breeds commonly in mountains of California, in dense montane chaparral and brushy understory of other wooded, montane habitats. Although absent from desert ranges, breeds in Great Basin ranges south through White Mountains. Less common in winter east of Cascade Range and Sierra Nevada than elsewhere in state. Mostly leaves mountains in winter; common then in dense brush habitats, including understories of open forests, throughout foothills and lowlands, except in southern deserts. Prefers montane chaparral for breeding, dominated by manzanita, ceanothus, chinquapin, and riparian thickets of low willow, aspen, alder, wild rose. Suitable habitat provided both by extensive brushfields and by thickets scattered in forest stands.	<b>Not expected.</b> Suitable habitat is not present on the Project Site. There are no recent records of occurrence in the vicinity of the Project Site.
Double-crested cormorant <i>Phalacrocorax auritus</i>	--	CSC	COV	Double-crested cormorants are most frequently seen in freshwater. They breed on the coast as well as on large inland lakes. They form colonies of stick nests built high in trees on islands or in patches of flooded timber.	<b>Present.</b> Suitable habitat is present on the Project Site within the open water community. This species was observed by MIG biologists during 2016 field surveys.
Nuttall's Woodpecker <i>Picoides nuttallii</i>	BCC	-	-	A common, permanent resident of low-elevation riparian deciduous and oak habitats. Occurs in the Central Valley, Transverse and Peninsular Ranges, in the Coast Ranges north to Sonoma Co. and rarely to Humboldt Co., and in lower portions of the Cascade Range and Sierra Nevada. Occurs as a vagrant in the Owens Valley.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within the southern willow scrub. There are no recent records of occurrence in the vicinity of the Project Site.
Green-tailed Towhee <i>Pipilo chlorurus</i>	BCC	-	-	A common summer resident and breeder in montane regions throughout most of California, occurring primarily in montane chaparral, sagebrush, low sagebrush, and bitterbrush habitats. Where such habitats form understory, sparse coniferous forests also are occupied. Rare to uncommon in brushy habitats of southern California lowlands in migration. Optimal breeding habitat is relatively arid, moderately open chaparral with low canopy about 0.6 to 1.3 m (2-4 ft) high; favors stands of mixed species.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within the Brittlebush scrub. There are no recent records of occurrence in the vicinity of the Project Site.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT	CSC	COV	Obligate, permanent resident of coastal sage scrub below 2,500 feet in Southern California. Inhabits low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	<b>Low Potential.</b> There are recent records of occurrence in the vicinity of the Project Site (approximately 0.7 miles northwest), however the site does not support coastal sage scrub where this species is known to inhabit. Brittlebush scrub vegetation onsite has low potential to support this species.

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Yellow warbler <i>Setophaga petechia</i>	--	CSC	COV	Shrubby thickets and woods, particularly along watercourses and in wetlands. Common trees include willows, alders, and cottonwoods.	<b>Present.</b> Suitable habitat is present on the Project Site within southern willow scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 4.5 miles southwest). This species was detected in the riparian habitat in the proposed open space area during USFWS protocol level presence/absence surveys for least Bell's vireo and southwestern willow flycatcher between April 13 and July 15, 2017.
Black-chinned sparrow <i>Spizella atrogularis</i>	BCC	-	-	Prefers sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, & similar brushy habitats. Often on arid, south-facing slopes with Ceanothus, manzanita, sagebrush, & chamise.	<b>Low Potential.</b> Marginally suitable habitat is present on the Project Site within the Brittlebush scrub. There are no recent records of occurrence in the vicinity of the Project Site.
Brewer's sparrow <i>Spizelli (Spizella?) breweri</i>	BCC	-	-	East of Cascade-Sierra Nevada crest, mountains & high valleys of Mojave Desert & mountains at south end of San Joaquin Valley. For nesting they prefer high sagebrush plains, slopes & valley with Great Basin sagebrush & antelope brush.	<b>Not expected.</b> Suitable montane habitat is not present on the Project Site. There are no recent records of occurrence in the vicinity of the Project Site.
Le Conte's Thrasher <i>Toxostoma lecontei</i>	BCC	CSC	-	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	<b>Not expected.</b> There is no suitable habitat present. There are no recent records of occurrence in the vicinity of the Project Site (nearest occurrence is approximately 35 miles east).
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	COV*	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways (usually <i>Salix</i> spp., <i>Baccharis</i> spp., and <i>Prosopis</i> spp.).	<b>Present.</b> This species was observed by MIG biologists during protocol-level surveys conducted in April and May 2017. Suitable nesting habitat is present on the Project Site within southern willow scrub and mulefat vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 0.5 miles east).
Wilson's warbler <i>Wilsonia pusilla</i>	--	--	COV	The Wilson's warbler has a sparse and widespread distribution within almost every Habitat that occurs within the MSHCP Plan Area. Breeding Habitats for the Wilson's warbler include montane meadows and low, dense willow thickets as well as other shrubs and scrub, often on steep slopes (Garrett and Dunn 1981. During migration, they occur in woodlands and forests with shrub understories as well as chaparral habitats, and it also may occur in well-grown woodlands, city parks, and gardens.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within southern willow scrub and mulefat scrub vegetation communities.



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MAMMALS					
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	--	CSC	COV	Inhabits coastal scrub, chaparral, grasslands, and sagebrush habitats. Found in sandy, herbaceous areas, usually in association with rocks or coarse gravel.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and non-native grassland vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.3 miles northwest).
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	FE	CSC	COV	Inhabits alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	<b>Low Potential.</b> The site does not contain alluvial scrub or alluvial fans and floodplains that this species typically inhabits. Brittlebush scrub vegetation onsite is not expected to provide suitable habitat for this species. There are recent records of occurrence in the vicinity of the Project Site (approximately 0.2 miles east).
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE	ST	COV	Inhabits primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat ( <i>Eriogonum sp.</i> ), chamise ( <i>Adenostoma fasciculatum</i> ), brome grass ( <i>Bromus sp.</i> ) and filaree ( <i>Erodium sp.</i> ). Will burrow into firm soil.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and non-native grassland vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 5.6 miles east).
Western mastiff bat <i>Eumops perotis californicus</i>	--	CSC	--	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, valley and foothill grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within eucalyptus grove, Brittlebush scrub, developed, rock outcrop, and non-native grassland vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.7 miles northeast).
Western yellow bat <i>Lasiurus xanthinus</i>	--	CSC	--	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	<b>Moderate Potential.</b> Suitable foraging habitat is present on the Project Site within southern willow scrub and open water and there are several trees onsite that may provide suitable roosting habitat. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.8 miles east).
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	--	CSC	COV	Found in intermediate canopy stages of shrub habitats and open shrub/herbaceous and tree/herbaceous edges. Inhabits coastal sage scrub habitats in Southern California.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.3 miles northwest).

## Appendix E: Special-Status Animal Species with Potential to Occur on the Project Site.

Species	Status			Habitat Requirements <sup>1</sup>	Potential for Occurrence <sup>2</sup>
	Federal	State	MSCHP		
Bobcat <i>Lynx rufus</i>	--	--	COV	The bobcat requires large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and rock outcrop vegetation communities.
Long-tailed weasel <i>Mustela frenata</i>	--	--	COV	In Western Riverside County, the MSHCP database includes two records in chaparral, four in crop lands, two in non-native grassland, three in Brittlebush scrub, one in coniferous forest, and one in alkali playa. Eleven records are in areas mapped as residential/urban/exotic, with the most recent record from 1993. Records for this species in areas mapped as residential/urban/ exotic is not surprising because weasels often are found in rural areas near agriculture.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub, disturbed, and ornamental vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.8 miles east).
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	--	CSC	--	Inhabits a variety of arid areas in Southern California, including pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian. Prefers rocky areas with high cliffs.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within rock outcrop and Brittlebush scrub communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 2.5 miles northeast).
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	--	CSC	--	Inhabits desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub. There are recent records of occurrence in the vicinity of the Project Site (approximately 4.5 miles east).
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	--	CSC	COV	Inhabits lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Found in open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub and non-native grassland vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.7 miles northeast).
Mountain lion <i>Puma concolor</i>	--	--	COV	Mountain lions use rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral, as well as riparian areas that provide protective habitat connections for movement between fragmented core habitat.	<b>Low Potential.</b> Suitable habitat is present on the Project Site within southern willow scrub and rock outcrop communities; however, the site is surrounded by busy roads and industrial development.
Brush rabbit <i>Sylvilagus bachmani</i>	--	--	COV	The brush rabbit occurs throughout the Plan Area in suitable habitat, including chaparral, coastal sage scrub (Diegan coastal sage scrub, Brittlebush scrub, and alluvial fan sage scrub), riparian and woodland habitats, coniferous forest, and agricultural areas (grove/orchard, and field crops) (MSHCP 2004).	<b>Moderate Potential.</b> Suitable habitat is present on the Project Site within Brittlebush scrub, eucalyptus grove, and southern willow scrub vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 1.7 miles northeast).

## Appendix E: Special-Status Animal Species with Potential to Occur on the Project Site.

Species	Status			Habitat Requirements <sup>1</sup>	Potential for Occurrence <sup>2</sup>
	Federal	State	MSCHP		
American badger <i>Taxidea taxus</i>	--	CSC	--	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	<b>Moderate Potential.</b> Although no dens were observed during the field surveys, suitable habitat is present on the Project Site within Brittlebush scrub, eucalyptus grove, and southern willow scrub vegetation communities. There are recent records of occurrence in the vicinity of the Project Site (approximately 5 miles east).

### STATUS KEY:

#### Federal

FE: Federally-listed Endangered

FT: Federally-listed Threatened

FD: Federally-delisted

BCC: USFWS Bird of Conservation Concern

#### State

SE: State-listed Endangered

ST: State-listed Threatened

CSC: California Species of Special Concern

WL: State Watch List

#### MSHCP

COV: MSHCP Covered Species Adequately Conserved (MSHCP 2004)

COV\*: MSHCP Covers Species with Additional Survey Needs and Procedures

### SOURCES:

1 CNDDB (October 2016), BIOS 5 Data Viewer, and NatureServe.org Explorer were used to identify preferred habitat for each species.

2 CNDDB (October 2016) GIS data (polygon) was used to determine the distance of each species to the Project Site

*The following species were listed in the USFWS special status species query but were not included in this table because the project site is not in the correct region/biome for this species to occur: oak titmouse, cactus wren, mountain plover, olive sided flycatcher, pinyon jay, long billed curlew, flammulated owl, william's sapsucker, California spotted owl, lesser yellowleg.*



**Appendix F**  
**Burrowing Owl Survey Report for the Agua Mansa Commerce Park Project Site**

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## Burrowing Owl Focused Survey Report

Agua Mansa Commerce Park Project Site  
Jurupa Valley, Riverside County, California



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*Revised November 2018*





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## 1.0 INTRODUCTION

This report presents the results of focused burrowing owl (*Athene cunicularia*) surveys at the 302.12-acre<sup>1</sup> Agua Mansa Commerce Park Project Site (Project Site) in Jurupa Valley, Riverside County, California. The Project Site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) area. The MSHCP is a regional multi-jurisdictional habitat conservation program that addresses multiple species' habitat needs in western Riverside County. According to MSHCP, surveys for the burrowing owl are to be conducted as part of the environmental review process. The MSHCP Additional Surveys Needs and Procedures identify a specific burrowing owl Survey Area within the MSHCP Plan Area. The Project Site occurs within this predetermined Survey Area. Suitable habitat was identified on the Project Site during an initial site reconnaissance conducted in July 2016. Subsequently, focused burrowing owl surveys were conducted during the breeding season in order to comply with MSHCP requirements. The purpose of this report is to document the results of the burrowing owl habitat assessment and focused burrow and burrowing owl surveys.

### 1.1 Project Site Location

The 302.12-acre Project Site is located south of El Rivino Road, east of Rubidoux Boulevard, north of Agua Mansa Road and west of Hall Avenue in the City of Jurupa Valley, Riverside County, California, APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009 (Exhibit 1, Regional Map and Exhibit 2, Project Site Map). The Project Site occurs within the US Geological Survey (USGS) 7.5' series Fontana Quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986). The Project Site contains variable topography. The northern extent of the Project Site contains much of the machinery and buildings used to operate the cement plant and is relatively flat, with elevations ranging between approximately 900-960 feet above mean sea level (AMSL). The southern extent of the Project Site contains a large hill and the former quarry, which is now filled with water, forming Crestmore Lake. The topography in this area is fairly rugged with elevations ranging between approximately 820 and 1,160 feet.

Land uses bordering the Project Site include light industrial, residential, and vacant properties to the west. Land uses to the east and south are primarily manufacturing, while land uses to the north are vacant and residential. The Santa Ana River floodplain flows from northeast to southwest approximately 3,500 feet southeast of the Project Site. Along with Crestmore Lake, water features on the Project Site include the West Riverside Canal, flowing intermittently along Agua Mansa Road and the southeast boundary of the site, and a few scattered wetland areas in depression areas, notably a large pit at the southeastern extent of the Project Site.

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<sup>1</sup> The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur due to rounding differences

## 1.2 Project Description

The Agua Mansa Commerce Park Specific Plan (Project) is a proposed industrial business park with retail overlay and open space development located on the former Riverside Cement facility. The Site has previously been utilized for mining and cement production, until operations ceased in 2014. The brownfield site is being decommissioned and prepared for environmental remediation and successful redevelopment under the requirements of the Specific Plan. The Specific Plan will allow for the development of approximately 4,500,000 square feet of total building area and a 70.96-acre Open Space/Recreation Park. The Specific Plan area (heretofore referred to as “Project Site”) encompasses approximately 302 acres of land in the City of Jurupa Valley. The Project will consist of three primary land uses, discussed in more detail below: 1) an Industrial Park, 2) a Business Park (with possible retail component) and 3) Open Space with Recreation Park.

### Industrial Park

The Industrial Park area will be 189.7 acres in size and is planned for approximately 4,216,000 square feet (3,452,000 square feet of building footprint and up to 764,000 square feet of mezzanine area) of industrial park uses, such as manufacturing, research and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution, and cross-dock facilities.

### Business Park

The Business Park with Retail Overlay district is 42.2 acres that will support 200,000 square feet of business park uses along with an existing 23,000 square-foot research and development building (CalPortland area). The Business Park with Retail Overlay district includes an option to build up to 25,000 square feet of retail and/or food service uses along with 170,000 of business park square footage in lieu of the 200,000 square feet of business park uses. The Specific Plan allows for an additional 41,000 square feet of business park use(s) in the CalPortland area – either through expansion of the existing building or new construction. A Union Pacific Railroad right-of-way and a portion of the North Riverside and Jurupa Canal bisect the Specific Plan and accounts for 8.4 acres within the Specific Plan boundary.

### Open Space/Recreation

There is a proposed approximately 70.96-acre Open Space area in the southern portion of the Specific Plan area. Portions of the Open Space area may be developed as a recreation area, contingent upon successful remediation of the Site. Recreational and cultural facilities that are planned within the Open Space area would include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children’s play areas, and cultural interpretive facilities to highlight the history of the Site and cement industry. Any proposed trail or activity would be separated from the Open Space area by fencing, signage, and/or other means of buffering, while still allowing visitors to experience the view of the unique landscape the Site has to offer. Preserved habitat areas lay approximately 80-feet below grade and will be inaccessible to visitors and undisturbed.



## 2.0 METHODS AND RESULTS

The survey was conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (2006). Survey protocol consists of three steps: Step I – Habitat Assessment; Step II – Locating Burrows and Burrowing Owls; and Step III – Reporting Requirements. Each step conducted during this survey is briefly outlined below.

Surveys were conducted during weather that is conducive to observing burrowing owls outside of their burrows and detecting burrowing owl sign. All surveys were conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Surveys were not conducted within five days of measurable precipitation.

### 2.1 Step I – Habitat Assessment

Step 1 of the burrowing owl focused survey consists of walking the Project Site to determine if suitable habitat is present. This initial habitat assessment was conducted on July 7 and 21, 2016 by MIG Senior Biologist Jonathan Campbell, PhD (Table 1. Summary of Focused Survey Weather Conditions during the Nesting Season). Upon arrival at the Project Site and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically across each habitat type while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat include, but are not limited to: native and non-native grassland, grassland interspersed with shrubland along ecotonal areas, shrublands with low density shrub cover, concrete rubble, and earthen berms. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*) or badgers (*Taxidea taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock or wood debris piles, or openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or near man-made structures. A majority of the habitat mapped onsite represents potential suitable habitat for burrowing owl.

According to the MSHCP (2006) guidelines, if suitable habitat is present the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the Project Site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In this case, only areas to the north were accessible.

The largest area and center of the Project Site is characterized as “developed” but exists in various states of disrepair and offers habitat value to plants and wildlife. Brittle bush scrub covers the most ground of any vegetation community (Exhibit 3, Biological Resources Map). Other prominent vegetation communities include disturbed, non-native grassland and eucalyptus grove. Natural community names and hierarchical structure follows List of Alliances and Associations (CDFW September 2010) which have been refined and augmented where appropriate to better characterize the habitat types observed onsite when not addressed by the classification system. Scientific nomenclature and common names used for plants in this report follows Hickman (1993). Vertebrate taxonomy follows Stebbins (2003) for amphibians and reptiles, the

American Ornithologists' Union (1998 and supplemental) for birds, and Jones et al. (1992) for mammals. The onsite plant communities are as follows:

**Developed (119.45 acres)**

The center of the Project Site is a former cement plant and thus is dominated by paved areas, abandoned buildings, and derelict industrial machinery. Vegetation in these areas consists primarily of non-native, disturbance-adapted plant species such as wild lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), oleander (*Nerium oleander*), Russian thistle (*Salsola tragus*), white sweet clover (*Melilotus albus*), castor bean (*Ricinus communis*), tamarisk (*Tamarix ramosissima*), summer mustard (*Hirschfeldia incana*), tree of heaven (*Ailanthus altissima*), Washington fan palm (*Washingtonia robusta*), and fountain grass (*Pennisetum setaceum*).

**Disturbed (54.86 acres)**

The northern portion of the Project Site has received continuous disturbance from disking in recent years and remains largely unvegetated. Vegetation that does grow in these areas consists primarily of weedy, non-native, disturbance-adapted, and ruderal plant species such as red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), London rocket (*Sisymbrium irio*), Russian thistle, and tree tobacco (*Nicotiana glauca*).

**Brittlebush Scrub Alliance (56.27 acres)**

Southern portions of the Project Site have received the least amount of recent disturbance relative to other areas and are characterized by the dominance of brittlebush (*Encelia farinosa*). Other common native species found here include small numbers of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), coastal prickly pear (*Opuntia littoralis*), and cholla (*Cylindropuntia* sp.). Some non-native species are also common in these communities and include London rocket, Russian thistle, summer mustard, and tocalote (*Centaurea melitensis*).

**Non-Native Grassland (24.67 acres)**

Non-native grasslands are found scattered throughout the Project Site. These areas receive occasional disturbance and are characterized primarily by non-native species such as red brome, ripgut brome, wild oat, Russian thistle, jimsonweed (*Datura stramonium*), Peruvian peppertree (*Schinus molle*), fountain grass, and Bermuda grass (*Cynodon dactylon*). Native species are occasional in these communities and include common sunflower (*Helianthus annuus*) and common fiddleneck (*Amsinckia intermedia*).

**Eucalyptus Grove (19.20 acres)**

Eucalyptus groves have been planted throughout the northern portions of the Project Site. Based on the tree surveys conducted on September 12-16 and October 10-12, 2016, red gum (*Eucalyptus camaldulensis*) and red ironbark (*Eucalyptus sideroxylon*) are the most commonly observed here, although blue gum (*Eucalyptus globulus*) and silver dollar gum (*Eucalyptus polyanthemos*) are occasional. The understory of these groves is dominated by non-native species such as London rocket, Russian thistle, lamb's quarters (*Chenopodium album*), red brome, ripgut brome, and wild oat.

**Rock Outcrop (7.79 acres)**

Rock outcrops are found around the former cement plant and the large central hill on the Project Site. These areas are generally devoid of vegetation. Some rock outcrop areas are composed of, or overlain by, decades of quarry dust that have developed into an impermeable concrete crust that does not provide suitable burrowing owl habitat.

**Ornamental (8.15 acres)**

Ornamental communities are found primarily along the western portion of the Project Site, planted near buildings and roadways. Ornamental plant species observed here include Washington fan palm, pine tree (*Pinus* sp.), oleander (*Nerium oleander*), silk tree (*Albizia julibrissin*), agapanthus (*Agapanthus africanus*), and English ivy (*Hedera helix*).

**Open Water (6.30 acres)**

Crestmore Lake is located in the south-central portion of the Project Site. This open water body is ringed by cattails and the southern willow scrub vegetation community, as described below.

**Southern Willow Scrub (3.30 acres)**

Several relatively mesic areas located onsite are characterized by native, riparian tree species. Black willow (*Salix gooddingii*) and yellow willow (*Salix lasiandra*) tends to dominate in these areas, although other common tree species include red willow (*Salix laevigata*), and Fremont cottonwood (*Populus fremontii*). Other common, native species in this community include mulefat (*Baccharis salicifolia*), willow baccharis (*Baccharis salicina*), branching phacelia (*Phacelia ramosissima*), willow herb (*Epilobium ciliatum*), California everlasting (*Pseudognaphalium californicum*), California fan palm (*Washingtonia filifera*), and common sunflower. Non-native species are occasional in these communities and include species such as tree tobacco, summer mustard, castor bean, tocalote, horehound (*Marrubium vulgare*), Washington fan palm, London rocket, fountain grass, red gum, bull thistle (*Cirsium vulgare*), and tamarisk.

**Cattails (1.53 acres)**

Southern cattail (*Typha domingensis*) forms monocultures in the wettest onsite areas, including the fringe of Crestmore Lake, near water control structures, and in the large depression at the southern extent of the Project Site.

**Mulefat Stand (0.60 acres)**

Similar to the cattail vegetation community, mulefat forms monocultures in relatively mesic, riparian areas of the Project Site.

Results from the Step I - Habitat Assessment indicate that much of the developed, disturbed, brittlebush scrub, rock outcrop, non-native grassland, and ornamental vegetation communities (described above) represent potentially suitable habitat for the burrowing owl. All onsite areas that provide suitable burrowing owl habitat were surveyed, including man-made features such as debris piles. Accordingly, due to the presence of suitable habitat onsite, Step II – Locating Burrows and Burrowing Owls is required. In addition, due to the presence of suitable habitat onsite, a pre-construction survey within 30 days of any project-related or construction-related activities is therefore required.

**2.2 Step II – Locating Burrows and Burrowing Owls****Part A – Focused Burrow Survey**

Due to the presence of suitable burrowing owl habitat, focused burrow surveys, including documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl, were conducted as part of the protocol on March 30 (BUOW Survey Area 1), March 31 (BUOW Survey Area 2), April 13 (BUOW Survey Area 3), and April 25 (BUOW Survey Area 4), 2017 (Table 1. Summary of Focused Survey Weather Conditions during the Nesting Season) (Exhibit 4, Burrowing Owl Survey Area Map).



The systematic surveys for burrows, including burrowing owl signs, were conducted by walking across all suitable habitat mapped at the Project Site. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart, and owing to the terrain, occasionally much smaller. Transect routes were also adjusted to account for fence lines, cement factory structures, equipment storage sites, rock ledges, vegetation density, and ground surface visibility.

All burrow surveys began within two hours prior to sunset and ended prior to one hour after sunset. Suitable burrows were found throughout 15.3 acres the Project Site, including in developed areas (Exhibit 4, Burrowing Owl Survey Area Map and Exhibit 5, Current Project Site Photographs). Accordingly, due to the presence of suitable burrowing owl burrows onsite, Step II, Part B – *Focused Burrowing Owl Surveys* are required.

General wildlife species documented onsite or within the vicinity of the Project Site include but are not limited to: western fence lizard (*Sceloporus occidentalis*), American coot (*Fulica americana*), killdeer (*Charadrius vociferus*), double-crested cormorant (*Phalacrocorax auritus*) (WL), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*) (WL), Cooper's hawk (*Accipiter cooperii*) (WL), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), Canadian goose (*Branta Canadensis*), white-throated swift (*Aeronautes saxatalis*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), rufous hummingbird (*Selasphorus rufus*), Nuttall's woodpecker (*Picoides nuttallii*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), western scrub-jay (*Aphelocoma californica*), bushtit (*Psaltiriparus minimus*), European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), California towhee (*Pipilo crissalis*), blue-gray gnatcatcher (*Polioptila caerulea*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Spinus tristis*), house finch (*Carpodacus mexicanus*), California ground squirrel, Botta pocket gopher (*Thomomys bottae*), desert cottontail (*Sylvilagus audubonii*), raccoon (*Procyon lotor*), domestic dog (*Canis lupus familiaris*), and coyote (*Canis latrans*).

### **Part B – Focused Burrowing Owl Surveys**

If any burrows are found during the Part A – Focused Burrow Survey, Part B – Focused Burrowing Owl Surveys are required to determine presence or absence of the species. The Part B effort consists of at least four focused surveys to search for signs of occupation at the burrows, or observations of burrowing owls. These surveys are concentrated on the areas where suitable burrows have been found during Part A. They are to be conducted within the breeding season between March 1 and August 31. A review of local documentation (CNDDDB 2017) suggests that no burrowing owls have been historically identified within the extent of the Project Site boundary.

Step II, Part A – Focused Burrow Surveys determined that a total of 15.3 acres of the Project Site contained suitable BUOW burrows. In addition to the breeding season surveys completed for each Survey Area on March 30, March 31, April 13, April 25, three additional breeding season surveys were conducted within the 15.6 acres of suitable burrow habitat area on April 28, May 12, and May 18, 2017 by MIG Associate Ecologist Hayden Agnew-Wieland. All surveys were conducted during times and conditions conducive to observing burrowing owl (Table 1. Summary of Focused Survey Weather Conditions during

the Breeding Season). A thorough investigation of the potentially suitable burrows concluded that no evidence of burrowing owl activity was present in any of the onsite burrow complexes.

**Table 1. Summary of Focused Survey Weather Conditions during the Breeding Season**

Date	Time Start/End	Temperature (°F)	Wind Speed (mph)	Conditions
3/30/2017	5:00PM - 8:00PM	65	10	Clear
3/31/2017	6:30AM - 9:30AM	60	5	Clear
4/13/2017	5:20PM - 8:20PM	70	10	Clear
4/25/2017	5:30PM - 8:30PM	72	10	Hazy
4/28/2017	5:30PM - 8:30PM	82	12	Clear
5/12/2017	5:30PM - 8:30PM	75	15	Clear
5/18/2017	5:45PM - 8:45PM	79	17	Clear

## 2.3 Step III – Reporting Requirements

This report represents the third step of the burrowing owl focused survey, the preparation of a report that provides the results of each step of the survey protocol. After completion of appropriate surveys, a final report shall be submitted to the Riverside County Environmental Programs Division and the RCA Monitoring Program Administrator, which discusses the survey methodology, transect width, duration, conditions, and results of the survey. Appropriate maps showing burrow locations shall be included.

## 2.4 Preconstruction Surveys

All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment), whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).

### 3.0 CONCLUSIONS AND RECOMMENDATIONS

Both suitable burrowing owl habitat and suitable burrowing owl burrows were identified within the Project Site during the Step I – Habitat Assessment performed on July 7 and 21, 2016, and the Step II, Part A – Focused Burrow Survey performed on March 30 (BUOW Survey Area 1), March 31 (BUOW Survey Area 2), April 13 (BUOW Survey Area 3), and April 25 (BUOW Survey Area 4), 2017 (Exhibit 4, Burrowing Owl Survey Area Map). Three additional Step II, Part B – Focused Burrowing Owl Surveys were therefore performed during the breeding season on April 28, May 12, and May 18, 2017 within the Project Site. No evidence of burrowing owl activity was observed during any of the surveys.

A pre-construction burrowing owl survey will need to be completed within 30 days prior to any project-related or construction-related disturbances to onsite areas.

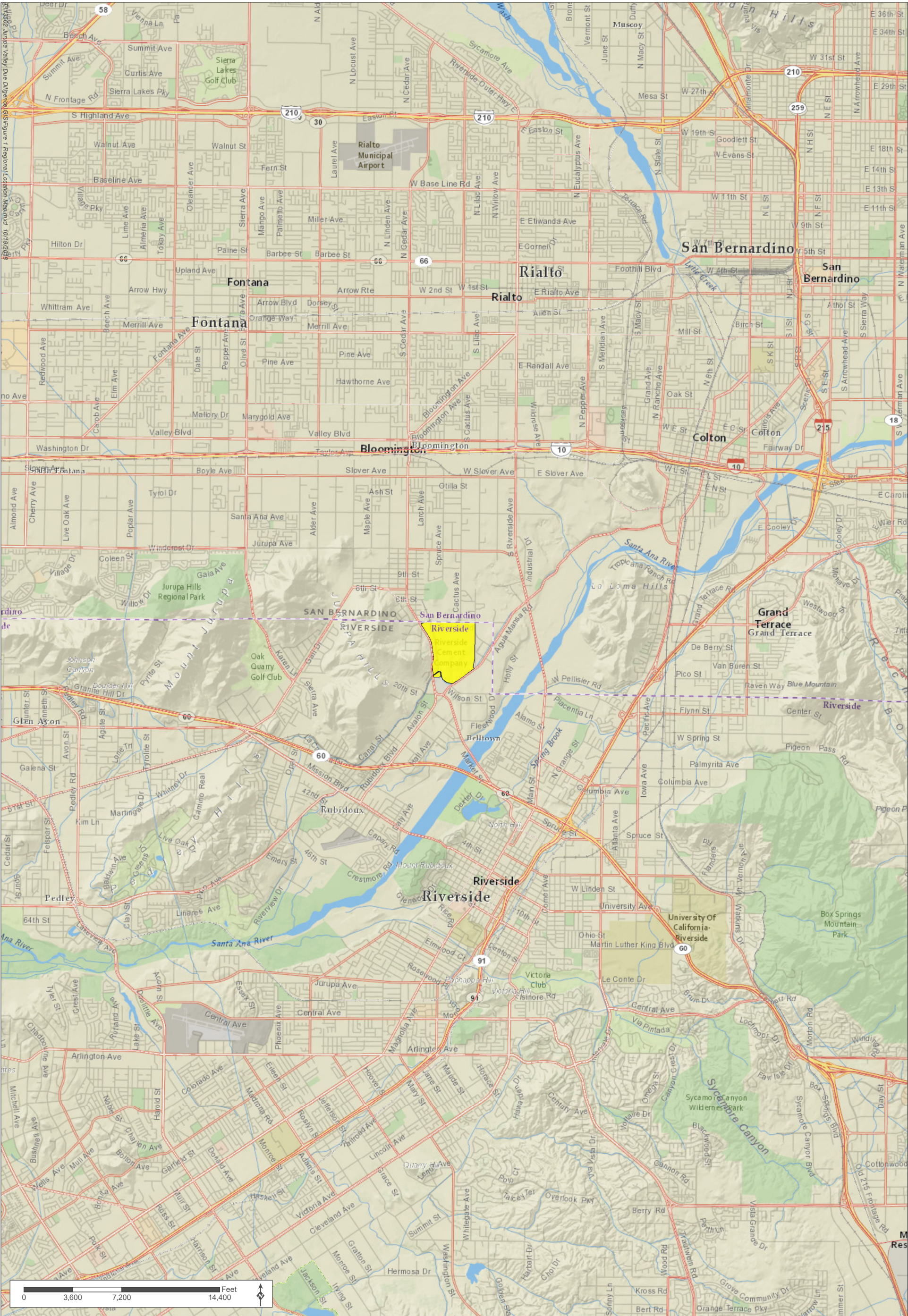


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## Exhibit 1: Regional Map





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

 Project Site Boundary (303.34 ac)\*

\* Project Site Boundary lines were obtained from APN boundaries and do not reflect the boundaries shown in the Agua Mansa Commerce Park Specific Plan, which is based off of the Tentative Parcel Map. Biological resources and calculations herein are mapped to the extent of APN boundaries. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.slight discrepancies in acreage calculations may occur.



## Exhibit 2: Project Site Map





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| Project Site Boundary (302.12 ac)* | Business Park with Retail Overlay |
| Assessor Parcel Numbers            | Industrial Park                   |
| MSHCP Criteria Cells               | Open Space                        |
|                                    | Railroad Right-of-Way             |

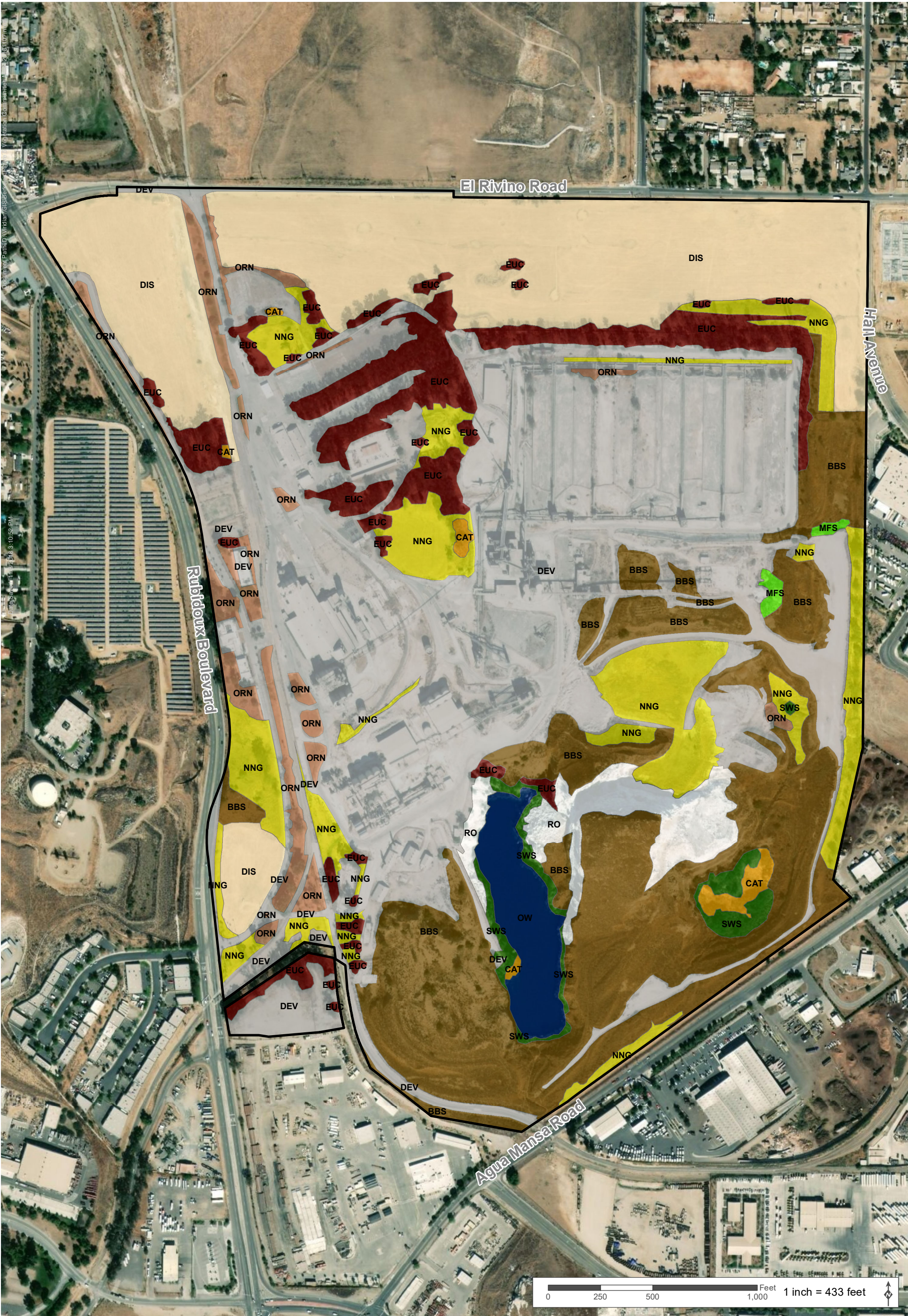
**Exhibit 2. MSHCP Conservation Areas**

Agua Mansa Commerce Park, Jurupa Valley, CA



## Exhibit 3: Vegetation Community Map





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

**Vegetation Communities**

Developed (DEV): 119.45 ac  
Disturbed (DIS): 54.86 ac  
Brittlebush Scrub (BBS): 56.27 ac

Non-Native Grassland (NNG): 24.67 ac  
Eucalyptus Grove (EUC): 19.20 ac  
Rock Outcrop (RO): 7.79 ac  
Ornamental (ORN): 8.15 ac

Open Water (OW): 6.30 ac  
Southern Willow Scrub (SWS): 3.30 ac  
Cattails (CAT): 1.53 ac  
Mulefat Stand (MFS): 0.60 ac

Project Site Boundary (302.12 ac)\*

**Exhibit 3. Vegetation Communities Map**

Agua Mansa Commerce Park, Jurupa Valley, CA



## Exhibit 4: Burrowing Owl Survey Area Map





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* Project Site Boundary lines were obtained from APN boundaries and do not reflect the boundaries shown in the Agua Mansa Commerce Park Specific Plan, which is based off of the Tentative Parcel Map. Biological resources and calculations herein are mapped to the extent of APN boundaries. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

- Project Site Boundary (303.34 ac)
- BUOW Survey Area (495.2 ac)
- Suitable BUOW Burrows (15.3 ac)
- BUOW Suitable Habitat Survey Areas (307.3 ac)
- Survey Area 1 (75.8 ac)
- Survey Area 2 (83.6 ac)
- Survey Area 3 (72.3 ac)
- Survey Area 4 (76.0 ac)

**Exhibit 4 Burrowing Owl Survey Area Map**

Agua Mansa Commerce Park, Jurupa Valley, CA



## **Exhibit 5: Current Project Site Photographs**



PHOTOGRAPH 1 - Suitable burrows located in the disturbed vegetation community in the northwestern portion of the Study Area.



PHOTOGRAPH 2 - Suitable burrows are observed within formerly developed portions of the Study Area.

## **Exhibit 5** Current Project Site Photographs

*Agua Mansa Commerce Park, Jurupa Valley, CA*

**Appendix G**  
**Least Bell's Vireo and Southwestern Willow Flycatcher Survey Results for the**  
**Agua Mansa Commerce Park Project Site**



**RESULTS OF A FOCUSED FIELD SURVEY  
FOR THE LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER  
AT THE VIRIDIAN-AGUA MANSA PROJECT SITE,  
CITY OF JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA  
FINAL REPORT**

Prepared for:

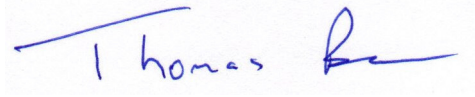
Laura Moran  
MIG, Inc.  
800 Hearst Avenue  
Berkeley, California 94710

Prepared by:

**Thomas Ryan**  
Ryan Ecological Consulting  
526 West Colorado Blvd.  
Monrovia, CA 91016

August 9, 2017

I certify that the information in this survey report, and attached exhibits, fully and accurately represent my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFW. If you have any questions or require additional information, please call me at (949) 923-8224.

A handwritten signature in blue ink that reads "Thomas Ryan". The signature is written in a cursive style with a long horizontal line extending from the end.

Sincerely,

Thomas Ryan  
Biologist  
Ryan Ecological Consulting  
526 West Colorado Blvd.  
Monrovia, CA 91016  
(949) 923-8224  
tryanbio@gmail.com

## **1. EXECUTIVE SUMMARY**

This report presents results of habitat evaluation and protocol presence/absence surveys for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) (flycatcher), Least Bell's Vireo (*Vireo bellii pusillus*) (vireo) at the 297 acre Viridian-Agua Mansa Project Site, City of Jurupa Valley, Riverside County, California. The habitat evaluation found that there was suitable habitat for the vireo and flycatcher. Subsequent surveys for the flycatcher and vireo followed current U. S. Fish and Wildlife Service (USFWS) standards, acknowledged by the USFWS. No flycatchers were detected. One vireo territory was detected at a depression east of the quarry and fledged young were heard calling from the territory, indicating successful nesting. A second singing male vireo was detected at Crestmore Lake, but was only detected during two surveys and likely abandoned the site prior to nesting.

## **2. INTRODUCTION**

This report presents results of habitat evaluation and protocol presence/absence surveys for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) (flycatcher), Least Bell's Vireo (*Vireo bellii pusillus*) (vireo) within an approximately 19 acre study area within a 297 project site acre Viridian-Agua Mansa Project Site, City of Jurupa Valley, Riverside County, California (study area) (Figures 1-3).

### **2.1 DESCRIPTION OF THE STUDY AREA**

The Viridian-Agua Mansa Project Site was formerly a cement quarry. As such the majority of the 297 acres support either developed or disturbed habitats (170 acres), another 63 acres support other non-native or otherwise unsuitable habitats including non-native grasslands, eucalyptus groves, rock outcroppings, and ornamental plantings. There are 57 acres of native brittlebush scrub on the project site. Habitats that are potentially suitable for these riparian bird species include Southern Willow Scrub (3.3 acres), Mulefat Scrub (0.6 acre) and cattail marsh (1.5 acre), some of which surrounds the 6.3 acres of open water at Crestmore Lake. These habitats are principally found along the southern portion of the project site along Crestmore Lake, two depressions southeast of the remaining quarried hill, and borrow area of the quarried hill (Figure 2). There are two depressions east/southeast of the quarry that support Southern Willow Scrub and Cattail Marsh (Figure 2, Photographs 2 and 3). These areas are 550 feet from each other. The smaller area supports both willow and cottonwood trees. The larger southern depression supports a combination of mulefat, willow and cottonwood trees and appears to become seasonally flooded.

The two areas of mulefat scrub north of the quarry support habitat that is potentially suitable for the Least Bell's vireo. Combined these only make up 0.6 acres and occur in two highly disturbed patches that are approximately 0.3-0.35 acres each. Both are narrow, but there are non-native trees and shrubs within and adjacent to them (Photograph 1). The mulefat is dense in the easternmost of the two patches.



Crestmore Lake is a depression created by the excavation of the quarry, but supports narrow bands of Southern Willow Scrub and Cattail Marsh around its perimeter (Figure 2, Photographs 4-7). Although relatively small and narrow, these areas support mulefat, willow and cottonwoods

The site is bordered by a mixture of disturbed fields, light industrial and rural residential housing (Figure 2). The site is located 0.6 miles (1.0 km) north of the Santa Ana River; and 1.3 miles north of the Santa Ana River Regional Park.

## **2.2 PURPOSE**

This report presents results of protocol presence/absence surveys for the flycatcher and vireo at the study area (Figure 1).

## **2.3 AVIAN SPECIES**

### **2.3.1 Southwestern Willow Flycatcher**

The flycatcher is listed as federally and California endangered and is protected under the MBTA. The flycatcher is a small greenish flycatcher that is difficult to identify in the field, except when making its characteristic “witz-beeeur” call. Subtle field marks include the lack of an eye-ring, broad bill that is orange underneath and a white throat. This bird occurs in riparian woodland habitat characterized by a dense growth of willows (*Salix* sp.), mule-fat (*Baccharis salicifolia*), arrowweed (*Pluchea* sp.), buttonbush (*Cephalanthus* sp.) and tamarisk (*Tamarix* sp.). These areas frequently include other trees such as cottonwood (*Populus fremontii*), and California sycamore (*Platanus racemosa*) in habitats with surface water or saturated soils present in or adjacent to nesting thickets. Actions that could adversely affect this species include the loss and degradation of breeding habitat, nest parasitism by the Brown-headed Cowbird (*Molothrus ater*), flood control measures, livestock grazing, and removal of understory vegetation for trails.

Within California, the known breeding locations are restricted primarily to Sierra Nevada/Cascade region south to northern Kern County, including Alpine, Inyo, and Mono Counties, in Southern California near Buellton in Santa Barbara County, at the Prado Basin riparian forest in Riverside County, Forest Falls in San Bernardino County, and several locations in San Diego County. The flycatcher is a regular migrant along the Santa Ana River, there are recent observations within one mile of the project site (ebird 2016). Approximately 0.6 miles southeast of the project site, the adjacent Santa Ana River is listed as Critical Habitat for the southwestern willow flycatcher (USFWS 1997) (Figure 1). During migration they are known to use both riparian habitats and park-like settings as stopovers and foraging locations. The southwestern willow flycatcher is known to breed at the Prado Basin (14 miles southwest) and along creeks in the nearby San Bernardino Mountains (25 miles west northwest). There are no recent records of the flycatcher breeding along the Santa Ana River between these locations.

### **2.3.2 Least Bell's Vireo**

The vireo is listed as federally and California endangered and is protected under the MBTA. They are small birds (4.75 inches long) restricted to willow-dominated riparian woodlands. Coloring is dull grey-olive above, whitish below, with yellow sides. They have short, sturdy bills slightly hooked at the tip, a distinguishing characteristic of all vireos; their song is a series of fast, harsh, scolding notes. Preferring mature riparian habitat with a dense understory of young willows, mulefat, and a variety of other shrubby species, this vireo was once widespread throughout the Central Valley and other low elevation river valleys of California. In recent years, their population has begun to recover and they are being detected more frequently. However, vireo's are currently restricted to scattered areas of riparian habitat in southern California.

The least Bell's vireo (vireo) is known to occur in large numbers and nest in the nearby Santa Ana River, approximately 0.6 miles (1.0 km) southeast of suitable habitat within the project site. During surveys conducted during the 2016 nesting season as many as 21 individuals were reported between the Riverside Avenue and Market Street Bridges (ebird 2017). Vireos are a common nesting species in suitable habitat from approximately the Waterman Street Bridge to the Prado Dam along this reach of the Santa Ana River (ebird 2017).

## **2.4 SURVEYS**

Surveys were conducted by Mr. Thomas Ryan who holds Recovery Permit TE-097516-6 issued under Section 10(a)(1)(A) of the Endangered Species Act for the vireo and flycatcher and State Scientific Collecting Permit SC-003409, and California Department of Fish and Wildlife (CDFW) Memorandum of Understandings (MOU) for flycatcher and vireo. Notification of the intent to survey for vireo and flycatcher was sent on April 5, 2017.

## **2.5 LOCATION**

The project is located at the former Crestmore Cement Plant east of Rubidoux Blvd, north of Agua Mansa Road, and south of El Rivino Road in City of Jurupa Valley, Riverside County, California (Figure 1, Project Location). The project site is located in the Fontana, California USGS 7.5-minute quadrangle map (USGS 1995). It is at 34° 1'27.86" North Latitude, and 117°23'5.78" West Longitude. Surveys were conducted within suitable habitat in a 500 foot radius of suitable habitat (Figures 1 and 2).

## **2.6 METHODS**

Surveys followed current U. S. Fish and Wildlife Service (USFWS) standards for each species (see below). Surveys were conducted between April 13 and July 15, 2017 (Table 1). The biologists walked the study area and searched it using 10x binoculars. Surveys were conducted under clear to cloudy conditions, with temperatures ranging from 56-76 degrees Fahrenheit, and winds ranging from 1 - 8 mph (Table 1). As per USFWS direction, surveys for the flycatcher and vireo were not conducted concurrently. Surveyors attempted to survey within flycatcher habitat first, surveying for vireos once efforts for flycatchers

were complete. Vireos detected during the flycatcher portion of the survey were mapped as they were detected. Surveys were conducted on foot and were not conducted during extreme or inclement weather conditions (Table 1). Observers identified the target species using vocalizations, flight patterns, and plumage characteristics assisted by binoculars (10x43). Observations were mapped using an aerial image and GPS from an iPhone 6 with Trimble Outdoors Navigator (version 5.6.16). Waypoints were then imported using DNRGPS (Version 6.1.0.6) to download a .gpx file and converted to Microsoft Excel for upload into Google Earth. Observations were plotted on a map. Territories were estimated by the observer looking for clusters of points on an aerial photo. Individual sightings from each survey were assigned to the closest territory. As juveniles were detected visually or by exhibiting begging calls or behaviors within these territories, the territories were considered to have “successfully fledged young.”

### **2.6.1 Southwestern Willow Flycatcher**

Surveys for flycatcher were conducted according to accepted protocols (Sogge et al. 1997, USFWS 2000, Sogge et al 2010), instructions provided in Mr. Ryan’s USFWS permit. During the pedestrian survey, Mr. Ryan stopped for one minute, played a series of flycatcher calls, listened for responding flycatchers for three to five minutes, then walked approximately 50 meters and repeated the process. Call playback was conducted using an iPhone 6 with an amplified speaker set to 80-90 dba one meter from the speaker. One survey was conducted between May 15 and 31 (Window I); two surveys were conducted during survey between June 1 and 24 (Window II)), and two surveys were conducted between June 25 and July 17 (Window III). Surveys were at least one week apart. Survey dates, times and conditions are described in Table 1.

### **2.6.2 Least Bell’s Vireo**

Surveys for the vireo were conducted according to accepted protocols (USFWS, 2001), and instructions provided in Mr. Ryan’s USFWS permit. These were passive surveys to detect the presence of vireo, and did not include nest searches or nest monitoring. Eight focused surveys were conducted at least 10 days apart between sunrise and 1100 between April 14 and July 16 (Table 1). The biologists walked through each site listening for songs, scolds, begging and making visual observations of the vireo when possible. He used binoculars to aid in visual identification. Survey dates, times and conditions are described in Table 1. No least Bell’s calls were used. There were no deviations from the accepted survey protocol (USFWS 2001) or permit conditions.



**Table 1: Summary of Survey Conditions for vireo and flycatcher.**

<b>Survey</b>	<b>Date</b>	<b>Biologist</b>	<b>Time (PDT)</b>	<b>Temp (°F)</b>	<b>Wind (mph)</b>	<b>Conditions</b>
vireo 1	4/13/17	Thomas Ryan	0850-1020	69-71	1-8	Partly Cloudy 50%
vireo 2	4/26/17	Thomas Ryan	0900-1030	67-70	1-3	Partly Cloudy 30%
vireo 3	5/8/17	Thomas Ryan	0900-1035	56-62	1-3	Partly Cloudy 30%
vireo 4 flycatcher I-1	5/24/17	Thomas Ryan	0815-0945	65-70	3-6	Partly Cloudy 30%
vireo 5 flycatcher II-1	6/9/17	Thomas Ryan	0820-0930	62-67	0-1	Cloudy 100-30%
vireo 6 flycatcher II-2	6/22/17	Thomas Ryan	0850-1000	73-76	4-8	Clear
vireo 7 flycatcher III-1	7/5/17	Thomas Ryan	0815-0940	72-76	1-3	Clear
vireo 8 flycatcher III-2	7/15/17	Thomas Ryan	0817-0925	72-76	3-5	Clear

### **3. RESULTS & DISCUSSION**

#### **3.1.1 Southwestern Willow Flycatcher**

Biologists did not detect flycatchers during protocol level surveys in 2017. While they are known to occasionally occur at the study area and immediate vicinity during migration, they are not known to nest here. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFW.

#### **3.1.2 Least Bell's Vireo**

Biologists detected vireos singing at two sites within the study area (Figure 3). Evidence of nesting was detected at the large depression east of the quarry, where the territory is marked on Figure 3. Biologists observed a male singing here regularly and the sounds of a juvenile during the July 5 and 15 surveys, indicating that nesting was successful at the large depression (Figure 3). At Crestmore Lake, a male was heard singing during the May 8 and 24 surveys, but not detected again. This attempt most likely failed and the vireo relocated. In conclusion, vireos are present and breeding within the study area. The results of focused

surveys for listed species are typically considered valid for one year by the USFWS and CDFW.

#### 4. REFERENCES

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eBird. 2017. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: <a href="http://www.ebird.org">http://www.ebird.org</a> . (Accessed: July 19, 2017).
Kus, Barbara, Hopp, S.L., Johnson, R.R and Brown, B.T. 2010. Bell's vireo ( <i>Vireo bellii</i> ), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online:  <a href="http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/035doi:10.2173/bna.35">http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/035doi:10.2173/bna.35</a> .
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**Figure 1. Topographic Vicinity Map of the Survey area. The Project Site is outlined in red. Nearby Critical Habitat for the Southwestern Willow Flycatcher is in purple.**

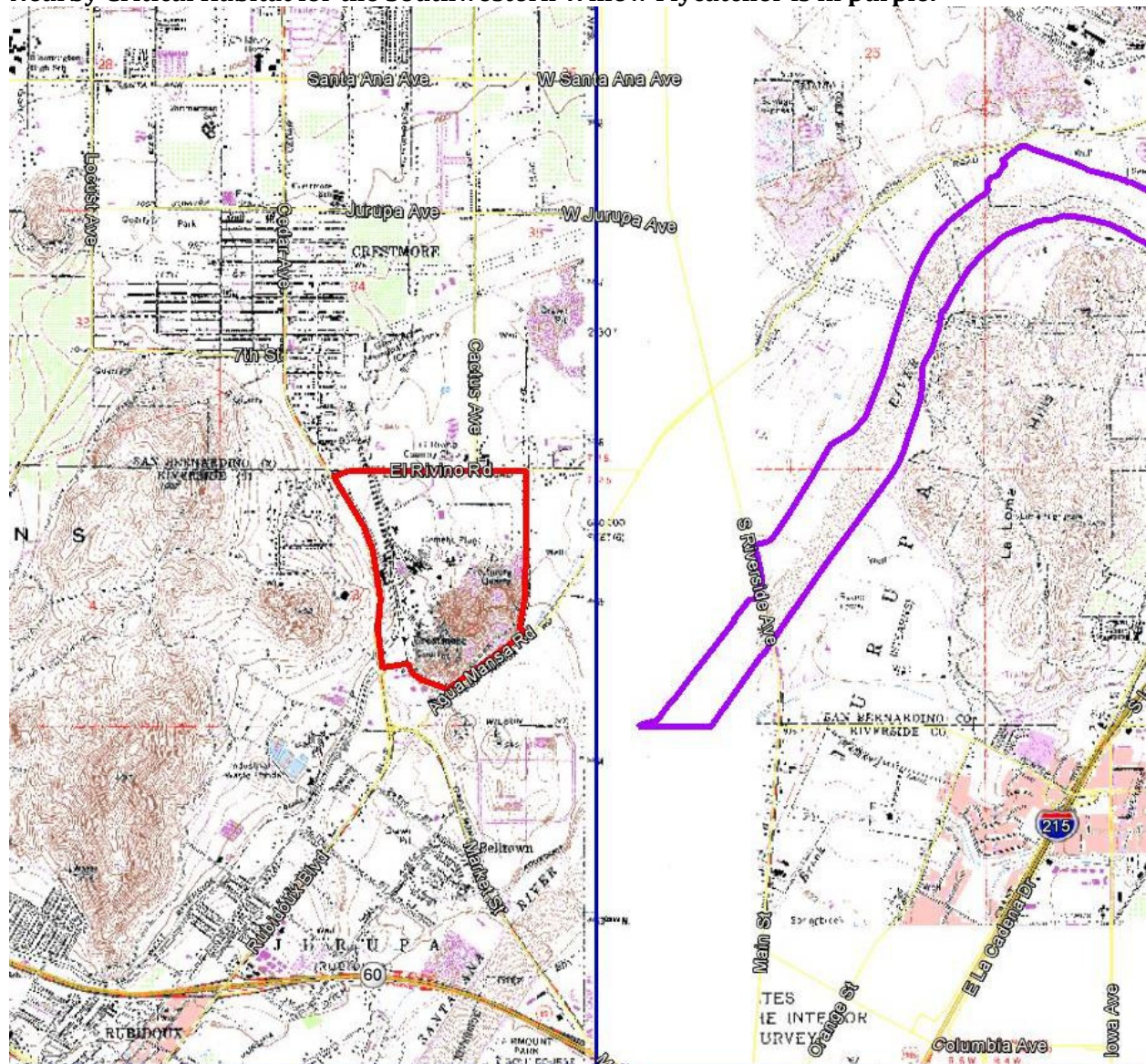




Figure 2. Vegetation Map of the project site.



Vegetation Community	
Developed (DEV): 115.89 ac	Rock Outcrop (RO): 7.80 ac
Disturbed (DIS): 53.70 ac	Ornamental (ORN): 7.33 ac
Brittlebush Scrub (BBS): 56.92 ac	Open Water (OW): 6.30 ac
Non-Native Grassland (NNG): 24.42 ac	Southern Willow Scrub (SWS): 3.29 ac
Eucalyptus Grove (EUC): 18.92 ac	Cattails (CAT): 1.52 ac
	Mulefat Stand (MFS): 0.60 ac

Figure 4 Vegetation Communities Map  
Agua Mansa Commerce Park, Jurupa Valley, CA

**Figure 3: Least Bell's Vireo detections at the Study Area (yellow polygons) in 2017. Observations recorded on May 8 – yellow dot; May 24 - green dot; June 9 - orange dot; June 22 – purple dot; July 5 – light green dot; and July 15 – light blue dot. The proposed territory is outlined in light blue.**





## **APPENDIX A: PHOTOGRAPHS**

Photograph 1. Mulefat Scrub habitat along drainage north of the quarry.



Photograph 2. Southern Willow Scrub in the smaller depression southeast of the quarry.





Photograph 3. Southern Willow Scrub in the larger depression southeast of the quarry.



Photograph 4. Southern Willow Scrub in the larger depression southeast of the quarry.





Photograph 5. Southern Willow Scrub along the east shore of Crestmore Lake.



Photograph 6. Southern Willow Scrub and Cattail Marsh along the west shore of Crestmore Lake.





Photograph 7. Southern Willow Scrub and Cattail Marsh along the west and north shore of Crestmore Lake.



## APPENDIX B: WILDLIFE DETECTED DURING SURVEYS.

Common Name	Scientific Name	Present
<b>Birds</b>		
Gadwall	<i>Anas strepera</i>	X
Mallard	<i>Anas platyrhynchos</i>	X
Ruddy Duck	<i>Oxyura jamaicensis</i>	X
California Quail	<i>Callipepla californica</i>	X
Pied-billed Grebe	<i>Podilymbus podiceps</i>	X
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	X
Great Blue Heron	<i>Ardea herodias</i>	X
Snowy Egret	<i>Egretta thula</i>	X
Green Heron	<i>Butorides virescens</i>	X
Turkey Vulture	<i>Cathartes aura</i>	X
Cooper's Hawk	<i>Accipiter cooperii</i>	X
Red-tailed Hawk	<i>Buteo jamaicensis</i>	X
Common Gallinule	<i>Gallinula galeata</i>	X
American Coot	<i>Fulica americana</i>	X
Rock Pigeon	<i>Columba livia</i>	X
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	X
Mourning Dove	<i>Zenaida macroura</i>	X
Vaux's Swift	<i>Chaetura vauxi</i>	X
White-throated Swift	<i>Aeronautes saxatalis</i>	X
Anna's Hummingbird	<i>Calypte anna</i>	X
Allen's Hummingbird	<i>Selasphorus sasin</i>	X
Nuttall's Woodpecker	<i>Picoides nuttallii</i>	X
Northern Flicker	<i>Colaptes auratus</i>	X
American Kestrel	<i>Falco sparverius</i>	X
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	X
Black Phoebe	<i>Sayornis nigricans</i>	X
Say's Phoebe	<i>Sayornis saya</i>	X
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	X
Cassin's Kingbird	<i>Tyrannus vociferans</i>	X
Bell's Vireo	<i>Vireo bellii</i>	X
American Crow	<i>Corvus brachyrhynchos</i>	X
Common Raven	<i>Corvus corax</i>	X
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	X
Tree Swallow	<i>Tachycineta bicolor</i>	X
Barn Swallow	<i>Hirundo rustica</i>	X
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	X

<b>Common Name</b>	<b>Scientific Name</b>	<b>Present</b>
Bushtit	<i>Psaltirparus minimus</i>	X
Rock Wren	<i>Salpinctes obsoletus</i>	X
Canyon Wren	<i>Catherpes mexicanus</i>	X
House Wren	<i>Troglodytes aedon</i>	X
Bewick's Wren	<i>Thryomanes bewickii</i>	X
Wrentit	<i>Chamaea fasciata</i>	X
Western Bluebird	<i>Sialia mexicana</i>	X
Swainson's Thrush	<i>Catharus ustulatus</i>	X
California Thrasher	<i>Toxostoma redivivum</i>	X
Northern Mockingbird	<i>Mimus polyglottos</i>	X
European Starling	<i>Sturnus vulgaris</i>	X
Phainopepla	<i>Phainopepla nitens</i>	X
Orange-crowned Warbler	<i>Oreothlypis celata</i>	X
Common Yellowthroat	<i>Geothlypis trichas</i>	X
Yellow Warbler	<i>Setophaga petechia</i>	X
Yellow-breasted Chat	<i>Icteria virens</i>	X
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	X
Song Sparrow	<i>Melospiza melodia</i>	X
California Towhee	<i>Melospiza crissalis</i>	X
Spotted Towhee	<i>Pipilo maculatus</i>	X
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	X
Blue Grosbeak	<i>Passerina caerulea</i>	X
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	X
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	X
Great-tailed Grackle	<i>Quiscalus mexicanus</i>	X
Brown-headed Cowbird	<i>Molothrus ater</i>	X
Hooded Oriole	<i>Icterus cucullatus</i>	X
House Finch	<i>Haemorhous mexicanus</i>	X
Lesser Goldfinch	<i>Spinus psaltria</i>	X
American Goldfinch	<i>Spinus tristis</i>	X
<b>Reptiles &amp; Amphibians</b>		
Bullfrog	<i>Rana catesbeiana</i>	X
Red-eared Slider	<i>Pseudemys scripta</i>	X
Western Fence Lizard	<i>Sceleprous occidentalis occidentalis</i>	X
California Whiptail	<i>Cnemidophorus tigris mundus</i>	X
Pacific Gopher Snake	<i>Pitouphis melanoleucus catenifer</i>	X
<b>Mammals</b>		
Coyote	<i>Canis latrans</i>	X
Raccoon	<i>Procyon lotor</i>	X
Striped Skunk	<i>Mephitis mephitis</i>	X



<b>Common Name</b>	<b>Scientific Name</b>	<b>Present</b>
House Cat	<i>Felis domesticus</i>	X
California Ground Squirrel	<i>Otospermophilus beecheyi</i>	X
Botta Pocket Gopher	<i>Thomomys bottae</i>	X
Desert Cottontail	<i>Sylvilagus audubonii</i>	X

**Appendix H**  
**Delhi Sands Flower-Loving Fly (DSF) Habitat Suitability Assessment for the**  
**Agua Mansa Commerce Center**

Date: February 21, 2018

To: Erik Zitek

Crestmore Redevelopment, LLC

Re: Delhi Sands Flower-Loving Fly (DSF) Habitat Suitability Assessment for the Agua Mansa Commerce Center

Michael Baker International prepared this Delhi Sands Flower-Loving Fly (DSF) Habitat Suitability Assessment for the Agua Mansa Project located in the City of Jurupa Valley, Riverside County, California. Dr. Thomas J. McGill assessed the condition of potential Delhi Sand soils habitat in April 2017. This assessment was conducted to assess the quality of DSF habitat within the boundaries of the Agua Mansa Commerce Center project site (Project Site).

The Project Site is an approximately 276.5-acre site located east of Rubidoux Boulevard, south of El Rivino Road, west of Hall Avenue and north of Agua Mansa Road (see Exhibit 1, Agua Mansa Commerce Park). The Project Site is the location of the former Riverside Cement Plant and has been used for the mining and cement production continuously since 1906.

## **BACKGROUND**

It has been generally acknowledged that DSF occur in Delhi sands, particularly clean dune formations composed of eolian or wind deposited sands. Conversely, soils and sands deposited by fluvial processes from the surrounding alluvial fans do not support DSF. These alluvial soils are composed of course sands, cobble and gravel (Tujunga soils) or course sands, silts and clays (Cieneba soils). The separation of soil types has been lost in most areas due to the mixing and cross contamination from years of agricultural activities, development, and other man-made disturbances.

Depending on the extent of mixing and contamination, some areas formally mapped in 1970 as Delhi Sands no longer have potential to support DSF populations. In 2003, Dr. Tom McGill met with five of the leading experts on DSF (Ken Osborne, Greg Ballmer, Rudy Matoni, Karin Cleary-Rose, and Alison Anderson) to develop methodology for conducting suitability assessments to rate the relative abundance of clean Delhi Sands on sites designated as Delhi Sands. Based on this meeting, Dr. McGill authored the following DSF suitable assessment methodology to rate the suitability of the habitat to support DSF (Michael Brandman Associates, 2003). Soils high in gravel and alluvial materials, or high in fine materials such as silts and clays, were rated low, while soils that appear to be high in eolian deposited sands were rated high. This qualitative assessment of



DSF habitat was further refined by considering the relative degree of soil compaction. Alluvial soils have a tendency to solidify to a hard surface pavement, while eolian soils are easier to penetrate and provide good substrate for DSF. This methodology for evaluating the suitability of DSF habitat has been in use for fifteen years.

Although it has been common to attribute the presence of four common plant species California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), deer weed (*Acmispon glaber*), and telegraph weed (*Heterotheca grandiflora*) as indicators of habitat suitability, for the assessment, vegetation composition was not given much weight in making this habitat evaluation. These dominant plant species, and plant species composition of habitats, may not be directly relevant to larval development (due to likely predatory or parasitic habit of DSF larvae) (Osborne, et al. 2003). The known immature life histories of the nine asiloid fly families, including that to which the DSF is classified, are primarily predatory and/or parasitic on other invertebrate species (mainly insects) and the presence or absence of plant species appears not to be relevant to the life history of these flies.

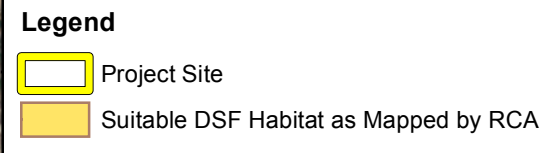
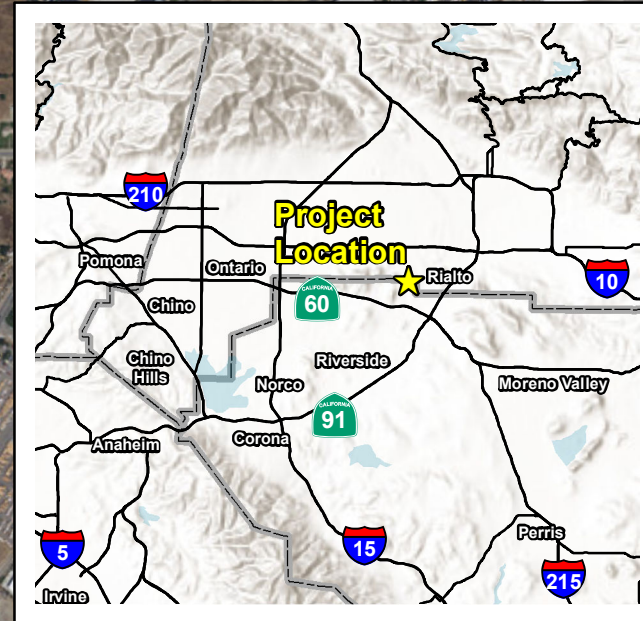
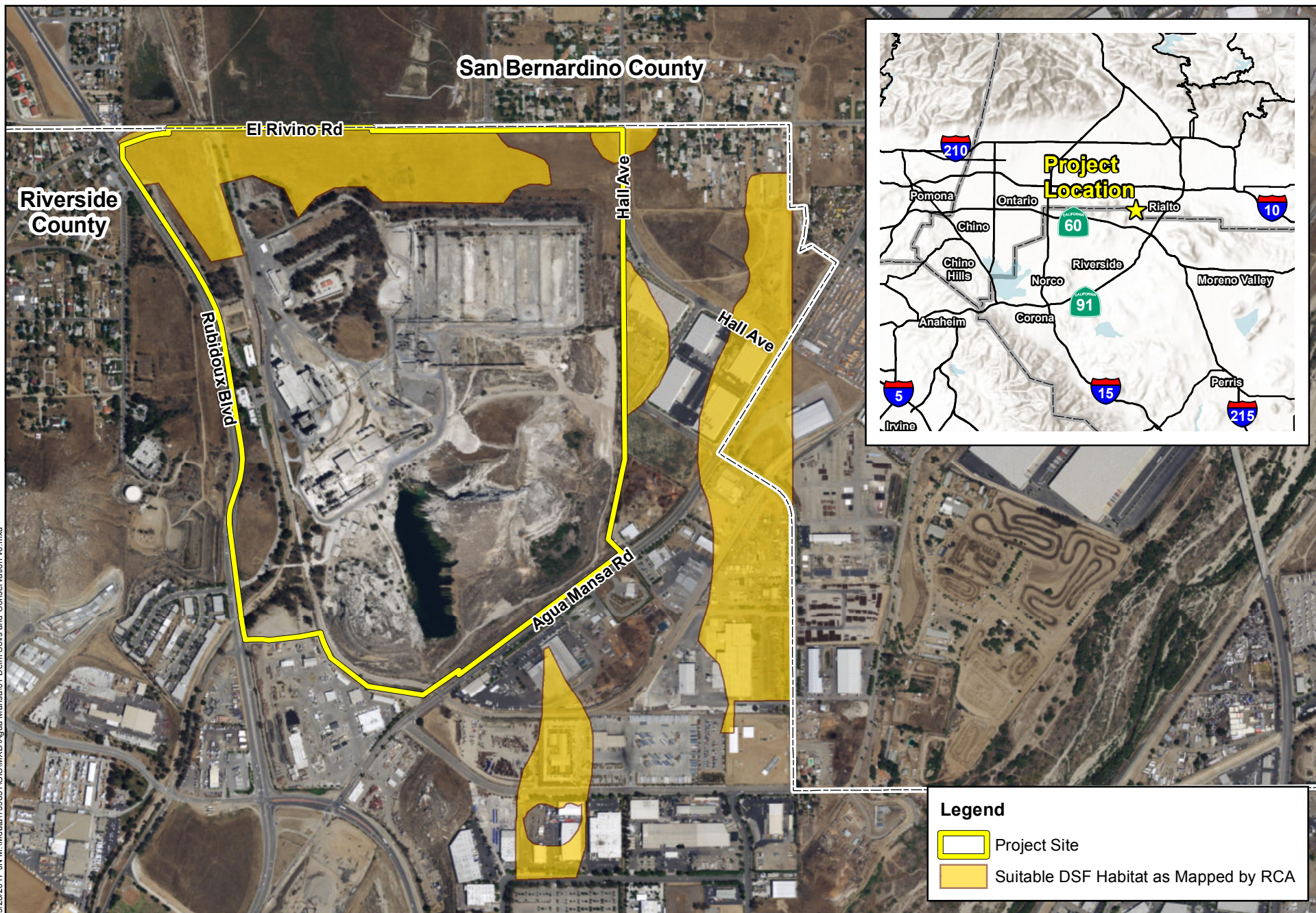
## **DELHI SANDS FLOWER-LOVING FLY SUITABILITY ASSESSMENT**

The habitat suitability assessment consisted of a visual and tactile inspection of all areas on the Project Site that contain Delhi Sand soils. Areas identified as containing Delhi Sand soils were evaluated for their quality or purity and for their potential to support DSF. Areas were assigned one or more ratings ranging between 1 and 5, with 5 being the best quality and most suitable habitat:

1. Soils dominated by heavy deposits of alluvial material including coarse sands and gravels with little or no Delhi sands and evidence of soil compaction. *Unsuitable Quality*
2. Delhi Sand soils are present but the soil characteristics include a predominance of alluvial materials (Tujunga Soils and Hilmar loamy sand). *Very Low Quality*
3. Although not clean, sufficient Delhi Sand soils are present to prevent soil compaction. Some sandy soils exposed on the surface due to fossorial animal activity. *Low Quality*
4. Abundant clean Delhi Sand soils with little or no alluvial material (Tujunga soils or Hilmar loamy sand) present. Moderate abundance of exposed sands on the soil surface. Low vegetative cover. Evidence of moderate degree of fossorial animal activity by vertebrates and invertebrates. *Moderate Quality*
5. Sand dune habitat with clean Delhi Sand soils. High abundance of exposed sands on the soil surface. Low vegetative cover. Evidence (soil surface often gives under foot) of high degree of fossorial animal activity by vertebrates and invertebrates. *High Quality*



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## RESULTS

The Project Site has been identified as occurring in an area mapped as Delhi sand soils by the U.S. Department of Agriculture (USDA) Soil Conservation Service (1980).<sup>1</sup> However, it is evident that the underlying soils have been disturbed by routine disking of the site for weed abatement, have been replaced with non-eolian fill soils, or that the soils were incorrectly mapped as eolian soils. Weed abatement activities introduced disked vegetation and organic material into the top soil, contaminating the underlying soils with silts. This routine disking of weeds would have contaminated any clean surface Delhi Sand soils with organic matter or silt, reducing the suitability of the Delhi Sands for DSF. Based on the apparent presence of sands on the Project Site, which were assumed to be contaminated Delhi Sands in advance of a soil gradation analysis, the site was initially rated as low (3) to very low (2) quality. Although there appears to be sufficient fine sands present in an area, the presence of surface sands has been obscured by the contamination, by weed abatement and/or agricultural activities which introduced organic matter into the upper layer of soils. In addition, fill soils have been introduced to the area over many years. Current NRCS Soils Survey Geographic Data Viewer (SSURGO version 6.1) maps the site soils as Urban Land indicating fill and other activities associated with the development of the cement plant over many years.

To verify the results of the suitability assessment and to determine if Delhi Sands soils occur beneath the surface layer of contaminated soils, a soil gradation test was conducted by Langan Engineering and Environmental Services, Inc (Langan) on April 13, 2017. Two liter-sized zip lock bags were used to gather clean grab soil samples from the Project Site trenches and two soil samples were collected from documented DSF-occupied habitat at the “King-is-Coming” site in Colton, CA<sup>2</sup>. The four samples were sent to a laboratory for grain size analysis and hydrometer testing (ASTM D422). The results of the testing are summarized below in Table 1.

**Table 1: Results of Gradation Analysis**

SAMPLE ID	COARSE SAND	SILT <sup>3</sup>	CLAY	USCS <sup>4</sup>
King is Coming #1	0%	1%	1%	SP

<sup>1</sup> USDA Soil Conservation Service. 1980. *San Bernardino County Southwestern Part, California*. Prepared in cooperation with University of California Agricultural Experiment Station.

<sup>2</sup> United States Fish and Wildlife Service. 2008. *Delhi Sands Flower-loving Fly (Rhaphiomidas terminatus) 5-Year Review: Summary and Evaluation*.

<sup>3</sup> Per USDA, Silt particle size ranges from 0.05 to 0.002 mm; clay is less than 0.002 mm

<sup>4</sup> USCS – Unified Soil Classification System

SAMPLE ID	COARSE SAND	SILT <sup>3</sup>	CLAY	USCS <sup>4</sup>
King is Coming #2	0%	1%	1%	SP
TP-2 Sample A	0%	10%	1%	SM
TP-5 Sample A	0%	12%	5%	SM

DSF occur in Delhi sands, particularly clean dune formations composed of eolian sands. Based on the USDA's soil description, Delhi Series soils are fine sands, or loamy sands with 5 percent or less very coarse sand; 35 percent or less coarse and very coarse sand, and 5 percent or less clay content. United States Geological Survey (USGS) classifies eolian sand as unconsolidated fine-grained sand forming stabilized dunes with a particle size greater than 0.05 mm and a coarsest particle size of >50 microns (µm). The samples from the Agua Mansa Commerce Park were classified as silty sands (SM) consisting of fine sands with some silt and trace clay which is indicative of alluvial deposition. The King-is-Coming site soils were classified as sands (SP) consisting of fine sands indicative of eolian deposition (Langan, Soil Gradation Tests, May 22, 2017). Based on the results of the gradation tests, the soils are not derived from the same geologic depositional process. The soils at the Project Site are derived from alluvium while the fine sands of the King-is-Coming site are comprised of eolian sands. In addition, the King-is-Coming site supports vegetation common to Delhi Sands soils (refer to Figures 1 and 2 in the Langan Report).

The lack of Delhi Sands on the Site, as determination by soil gradation testing, changes the initial determination of suitability of the site to support DSF, which assumed presence of Delhi Sands. Without the presence of Delhi Sands, the Project Site is considered unsuitable DSF habitat, a habitat rating of 1, and therefore DSF can be presumed absent from the Project Site. Development of the site would, thus, not impact DSF or impede their recovery as defined by the DSF Recovery Plan (USFWS 1997)

## **MSHCP COMPLIANCE**

DSF is a covered species under the Western Riverside County MSHCP. The project is a covered activity under the Plan and should demonstrate compliance with the County's MSHCP. DSF is found in low numbers and narrowly distributed within the Plan Area. Distribution is based on the availability of open habitats within fine, sandy Delhi Sands soils. USFWS identified three core population areas known to currently support DSF or to have at one-time supported DSF in the Plan Area. One core area is the "Agua Mansa Industrial Center" which is found in Criteria Cells 21, 22 and 55 along the eastern boundary of Subunit 3 of the Jurupa Area Plan. The northern portion of the project site is located within an area designated by USGS as Delhi Sands that have been further

delineated as Criteria Cells 21 and 22 (Non-Contiguous Habitat Block 3 (NCH-3)) by the Western Riverside County MSHCP (see Exhibit 2, *Jurupa Area Plan*). However, as discussed above, a soil gradation analysis by Langan (May 2017) concluded that Delhi Sands are not present within those portions of NCH-3 that occur within the project site. Given these results, DSF would not be expected to occur on the Project Site.

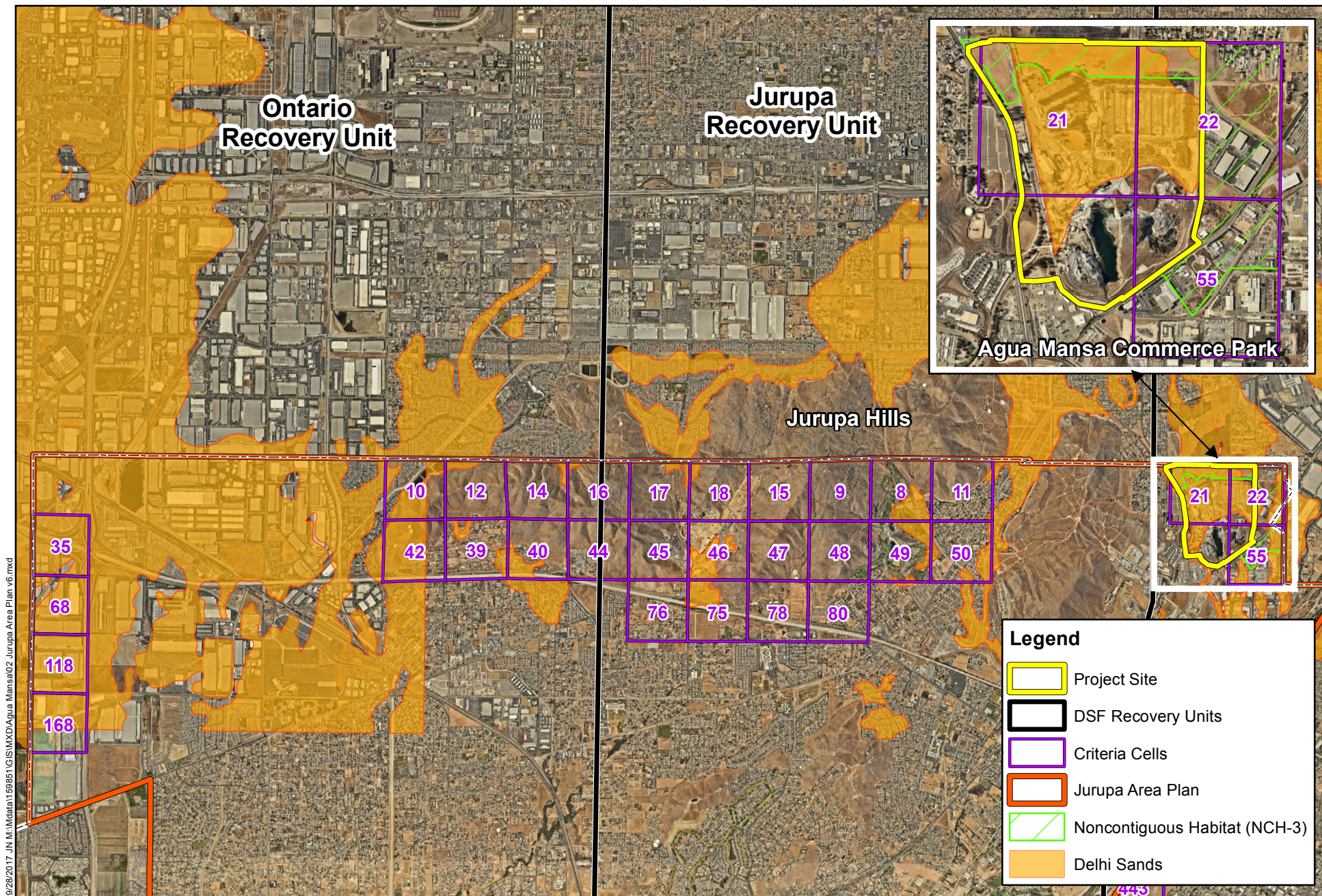
Areas to be conserved under the Western Riverside County MSHCP Plan Area are to include suitable dispersal habitat and/or movement habitat and interconnecting linkages within Core Areas or that are contiguous to areas that have already been conserved within and outside the Plan Area, including locations outside the Criteria Area or within San Bernardino County. Conservation values are to be measured (assessed) by such factors as occupation by DSF and opportunities for connectivity to other areas conserved for the species. There are an estimated 94.6 acres of suitable DSF habitat in Criteria Cells 21, 22 and 55 as mapped by RCA. Fifty (50) acres of the areas mapped as potential DSF habitat need to be preserved to meet the Plan's biological goals and objectives for DSF. However, the Plan does allow for the preservation of Delhi Sands considered to be suitable for DSF to be purchased elsewhere in the Jurupa Area Plan, or within San Bernardino County.

Given that the existing open area along the northern boundary that has been designated as NCH-3 does not and likely never has supported Delhi Sands, the undeveloped ruderal grassland habitat along the Site's northern boundary does not meet the Plan's proposed biological goals and objectives for the conservation of DSF in the Agua Mansa Industrial Center Area.



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The question that needs to be considered is “with the lack of Delhi Sands along the northern boundary of the Project Site, can the area function as movement habitat, allowing DSF to disperse through the area during the breeding season?”. In order to evaluate the site’s conservation value for DSF, aeriels from 1948 to the present were reviewed to assess the historic and current roles of the project site in providing Delhi Sands and/or open habitat for DSF, providing movement opportunities. In the years between 1948 and 1974, there were no impacts to the 94.6 acres mapped as suitable DSF habitat. All available habitat remained open and available for DSF (see Exhibits 3, Historic Aerial 1948, and Exhibit 4, Historic Aerial 1974). A review of an aerial from 2008, shows that the amount of mapped available habitat had decreased to 64.4 acres of suitable DSF habitat or 68% of the originally identified 94.6 acres (see Exhibit 5, Historic Aerial 2008). In 2017, the amount of available open Delhi soils dropped to 10.0 acres of mapped suitable DSF habitat or 11% of the originally identified 94.6 acres (see Exhibit 6, 2017 Aerial with Approved Development). The identified loss of areas mapped as Delhi Sands and open habitat in 2017 includes the 39.5 acres of mapped suitable DSF habitat identified within the project site that have subsequently been determined not to be Delhi Sands. Table 2 below provides a summary of this increasing loss of available Delhi Sands and open habitat in NCH-3 between 1948 and 2107. The loss of a minimum of 84.6 acres of suitable DSF habitat out of the original 94.6 acres of identified suitable DSF habitat as occurring in NCH-3 suggests that NCH-3 does not meet the identified goal of providing long-term conservation value for DSF within the Agua Mansa Industrial Center Area.

**Table 2: Availability of Delhi Soils in NCH-3 between 1948 and 2017**

	<b>Acres of Suitable DSF Habitat in Noncontiguous Habitat (NCH-3)</b>	<b>Acres of Open Space /Developed</b>	
<b>1948</b>	94.6	94.6	0.0
<b>1974</b>	94.6	94.6	0.0
<b>2008</b>	94.6	64.4	30.2
<b>2017</b>	94.6	10.0	84.6

Further, connectivity of the NCH-3 acres to Delhi Sands to the north in San Bernardino County is no longer viable. The area to the north, while providing open Delhi Sands in 1948, was converted to a golf course in the 1960s and remained in operation until 2015 when the City of Rialto approved converting the golf course to industrial buildings, precluding the availability of the area for DSF habitat. Exhibit 7, *Surrounding and Approved Development*, shows the project site in context to surrounding development, both existing and approved projects, as well as the proposed conservation for NCH-3. Based on the Soil Gradation Tests, the previously identified Delhi Sands

illustrated as suitable DSF habitat and part of NCH-3, is not Delhi Sands. The above review of historic aerials of NCH-3 noted that most of the areas delineated by USFWS as supporting Delhi Sands and assumed to be suitable for DSF as part of NCH-3, have either been developed or approved for development and would not be available for DSF.

## **CONCLUSION**

The initial qualitative suitability assessment of the undeveloped areas within the northern portion of the Project Site rated the DSF habitat found on site as low to very low quality and assumed presence of Delhi Sands as mapped by RCA. The subsequent soil gradation analysis determined that this area did not support Delhi Sands. The Gradation Test Results report concluded that the soils present on the Project were comprised of fill overlying alluvial sands, and found no evidence of the eolian soils needed to support DSF. Given the lack of Delhi Sands within the Project Site, the habitat quality rating was changed to unsuitable DSF habitat and the species can be presumed absent from the project site.

Delhi Sands Fly (“DSF”) is a covered species under the Western Riverside County MSHCP (the “MSHCP”). Agua Mansa Commerce Center (the “Project”) is located within an area deemed by the USGS to contain Delhi Sands soils, delineated by the Western Riverside County MSHCP as Criteria Cells 21, 22 and 55 (Non-Contiguous Habitat-3 (the “NCH-3”)), and identified for DSF habitat preservation. The MSHCP identifies an objective to preserve 50 acres of suitable DSF habitat, within the 183-acre NCH-3.

The MSHCP plan allows for mitigation of DSF habitat to occur in “rough step” with development within the NCH-3 area, with mitigation of the 50 acres of to be allocated proportionately to all new developments within the NCH-3 in order to be in compliance with the MSHCP biological goals and objectives for the species. The RCA, Riverside County (prior to the City’s incorporation) and the City of Jurupa Valley not been successful in acquiring DSF habitat mitigation compensation within the plan area through approval of development projects occurring on mapped DSF habitat to date. An estimated 41 acres of the 50 acres are required to keep in “rough step” with the MSCHP plan, and the Project Site seems to be the “last man standing” to satisfy the full mitigation of the habitat. Given the results of the above analysis, as well as the overall lack of available undeveloped suitable habitat within NCH-3 and surrounding areas, it appears the goal of acquiring 50 acres of Delhi Soils may not be achievable within this MSHCP boundary.

The project developer, RCA, and USFWS met to discuss the findings of this report at the JPR Project Introduction meeting on September 21, 2017. RCA and USFWS agree with the findings of the DSF assessments.

Even though there is no DSF habitat at or within close proximity to the Project Site, the Project is required to comply with the MSHCP. The Project Developer, RCA, and USFWS have been working collaboratively to develop DSF mitigation to offset NCH-3 mitigation requirements that would reflect: a) compliance by the Project with the MSHCP and b) consistency of the mitigation with the goals for DSF habitat conservation under the MSHCP.

Mitigation for DSF may include, but is not limited to:

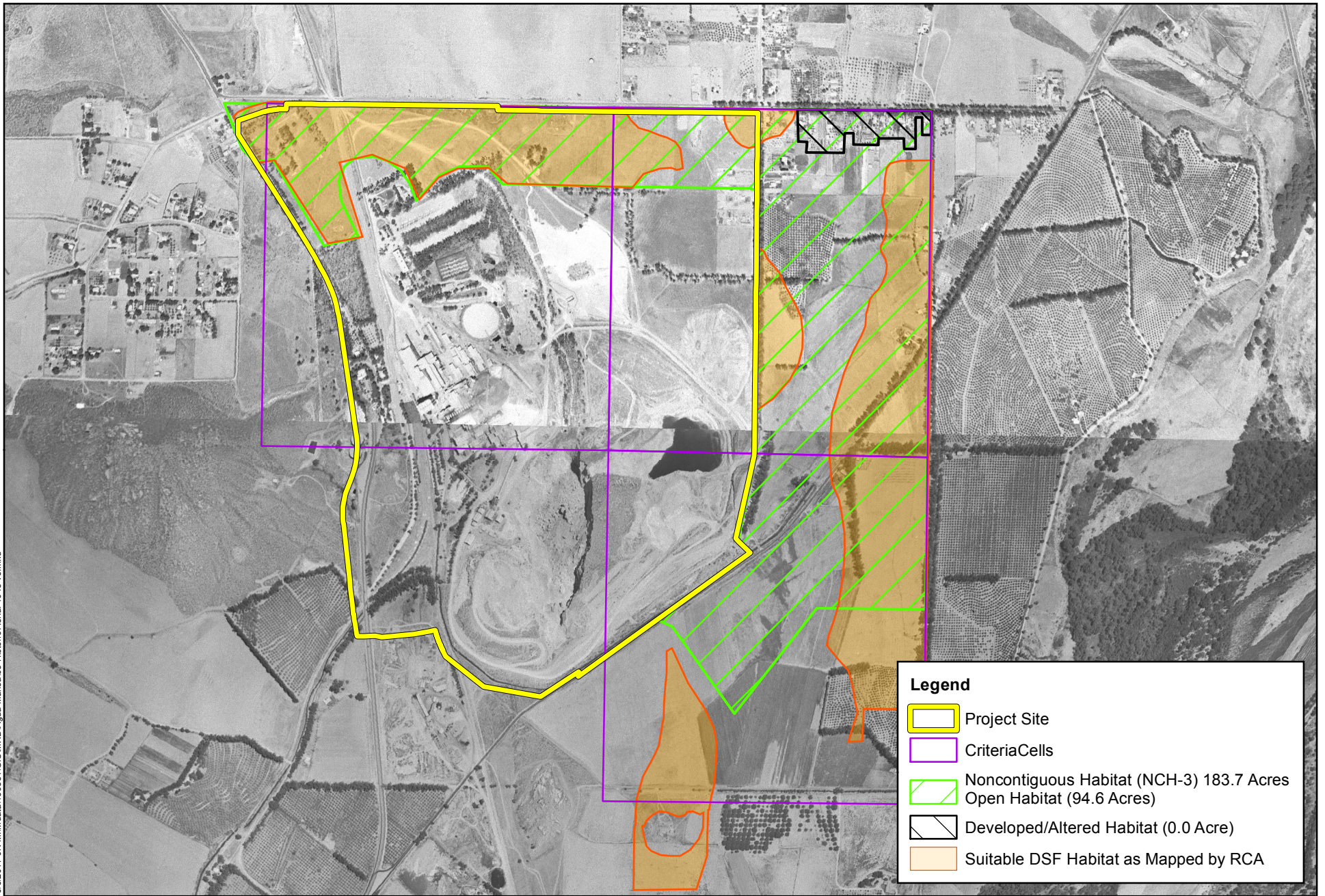
- a) the funding or purchase of suitable DSF habitat,
- b) purchasing conservation credits from an existing DSF mitigation bank, or
- c) funding of habitat restoration.

The USFWS has identified feasible mitigation offset sites which are currently under consideration. The final DSF mitigation will be determined through the HANS/JPR process involving the RCA and USFWS.



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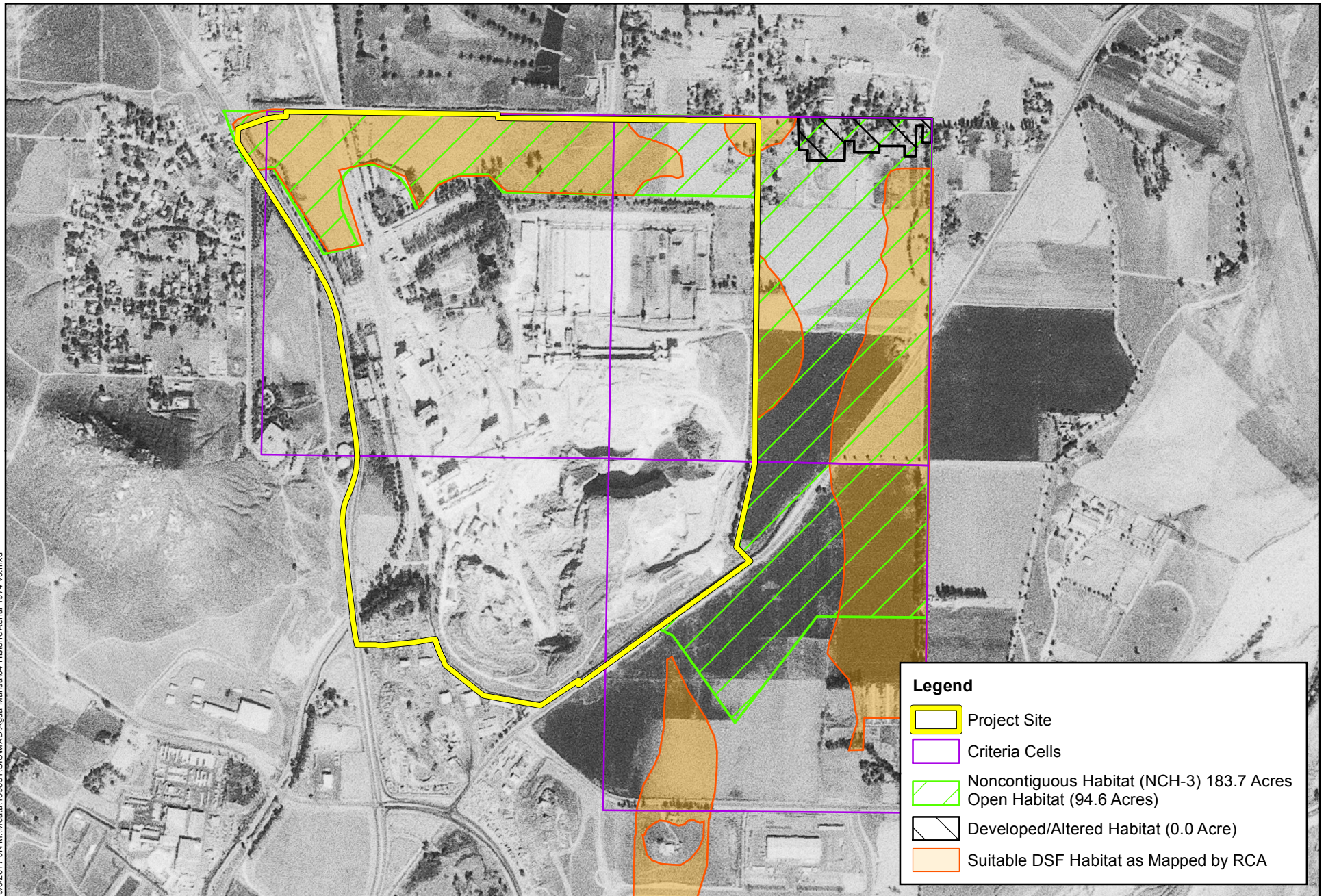
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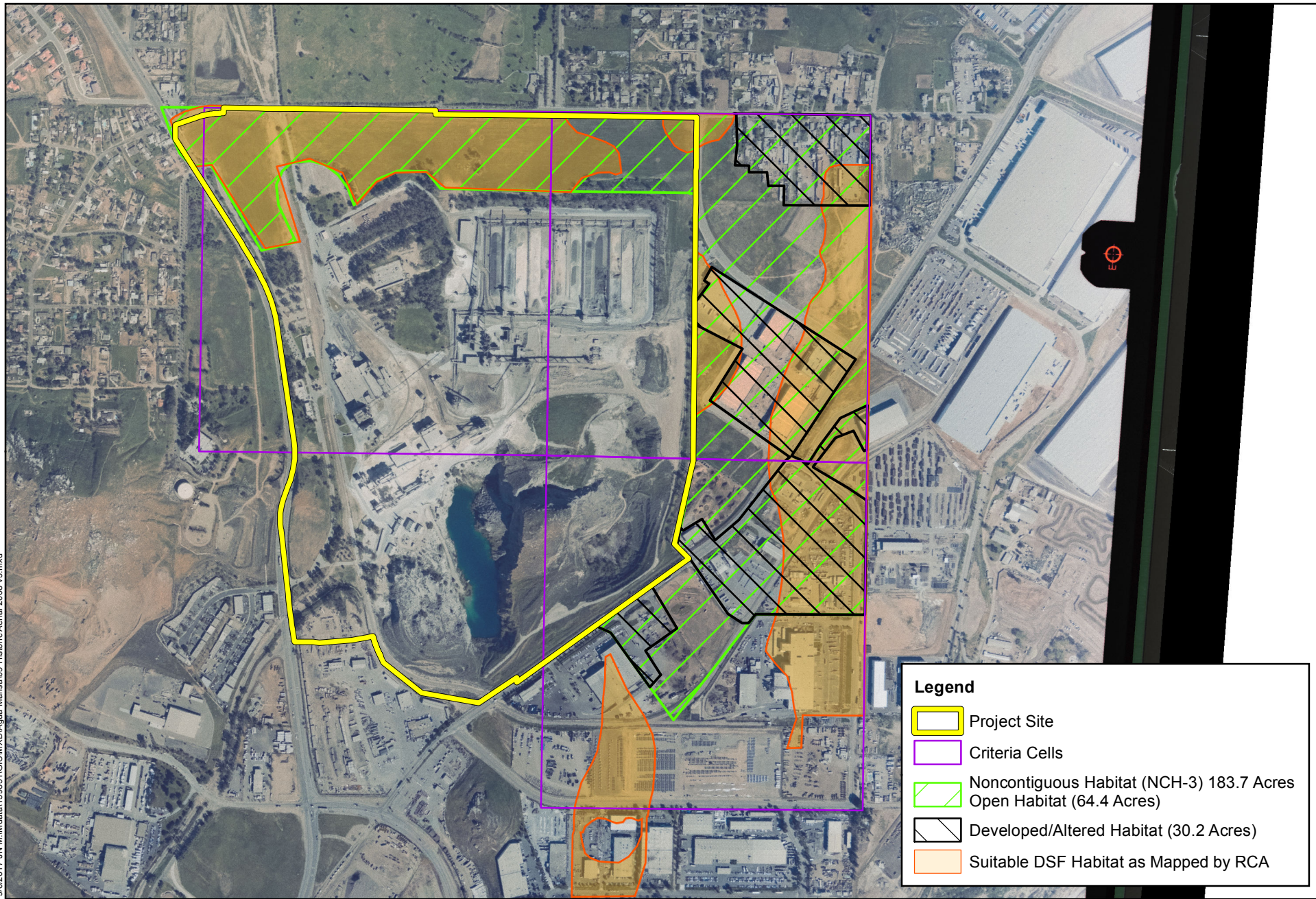
- Project Site
- Criteria Cells
- Noncontiguous Habitat (NCH-3) 183.7 Acres
- Open Habitat (94.6 Acres)
- Developed/Altered Habitat (0.0 Acre)
- Suitable DSF Habitat as Mapped by RCA









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**Legend**

-  Project Site
-  Criteria Cells
-  Noncontiguous Habitat (NCH-3) 183.7 Acres
-  Open Habitat (64.4 Acres)
-  Developed/Altered Habitat (30.2 Acres)
-  Suitable DSF Habitat as Mapped by RCA

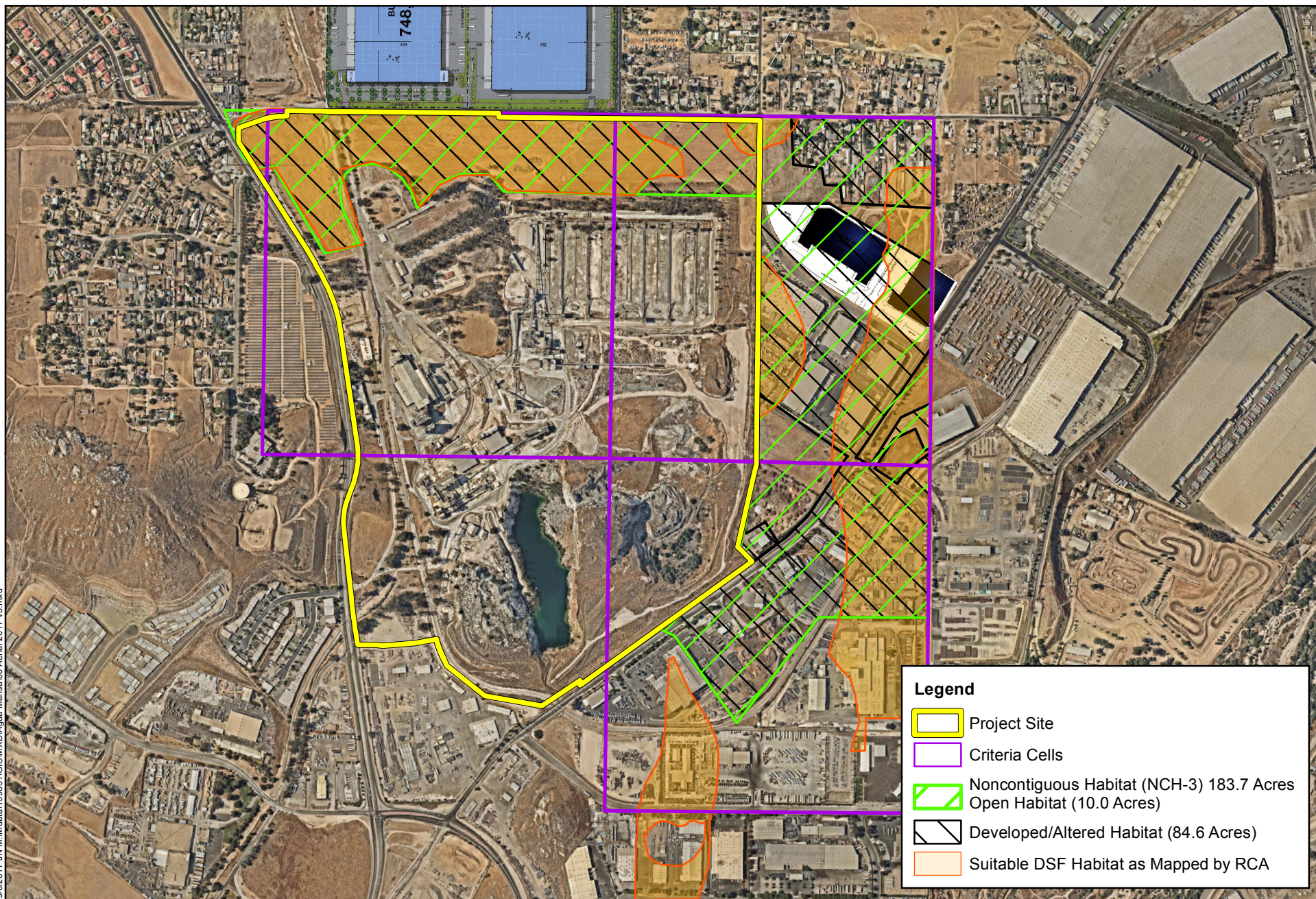




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**Legend**

- Project Site
- Criteria Cells
- Noncontiguous Habitat (NCH-3) 183.7 Acres
- Open Habitat (10.0 Acres)
- Developed/Altered Habitat (84.6 Acres)
- Suitable DSF Habitat as Mapped by RCA

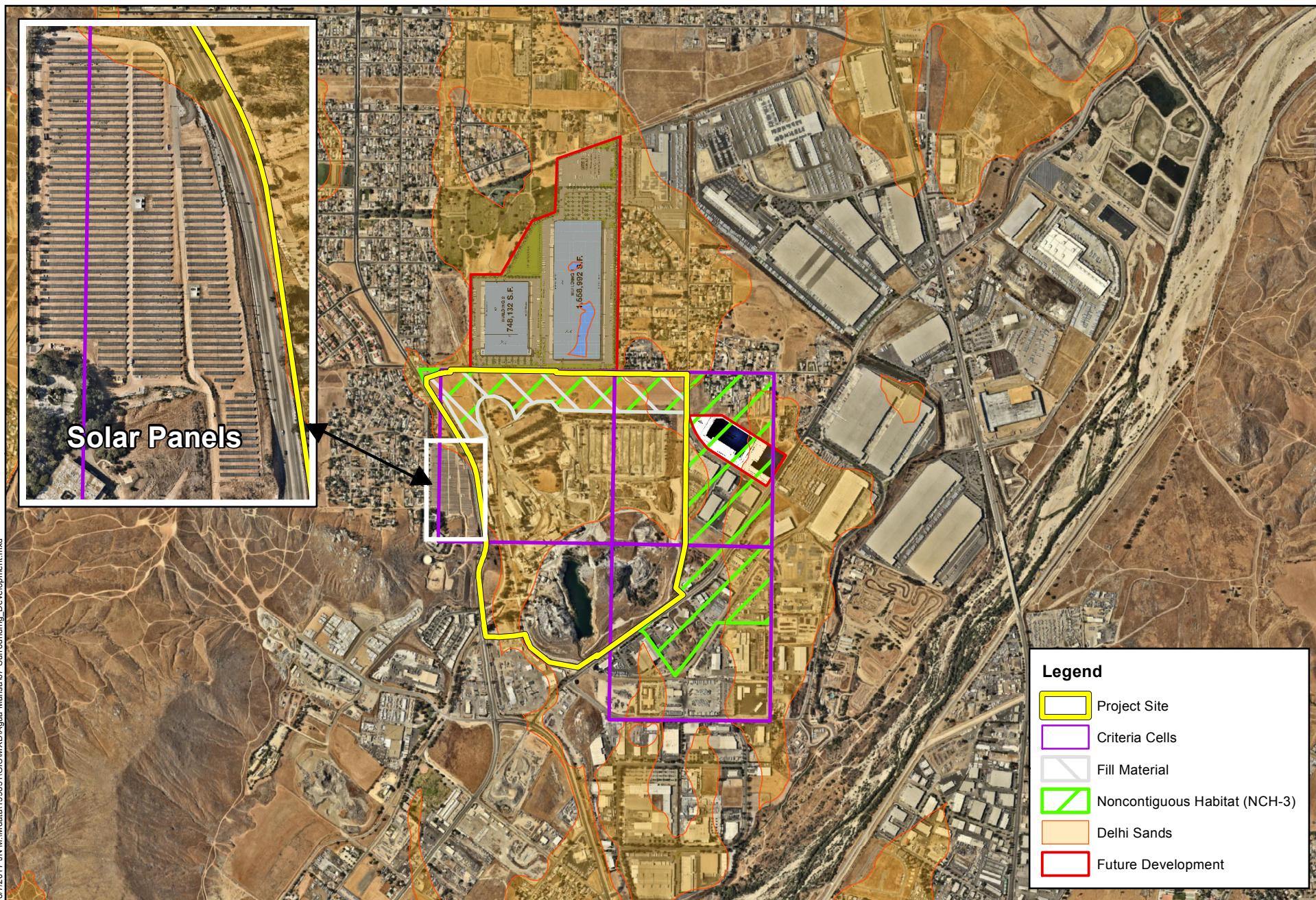




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**Appendix I**  
**Jurisdictional Delineation Report for the Agua Mansa Commerce Park Project Site**

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## Agua Mansa Commerce Park Project Jurisdictional Delineation Report



### **Prepared for:**

Crestmore Redevelopment, LLC an Indirect  
Subsidiary of VCP Management, LLC (Viridian Partners)  
1805 Shea Center Drive, Suite 250  
Highlands Ranch, CO 80129

### **Prepared by:**

MIG, Inc.  
1500 Iowa Avenue, Suite 110  
Riverside, California 92507  
Contact: Amy Parravano (415) 250-8900

**November 2017**

*Revised November 2018*



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## List of Abbreviated Terms

CCR	California Code of Regulations
CFR	Code of Federal Regulations
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
EPA	Environmental Protection Agency
°F	degrees Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
GPS	Global Positioning System
HUC	Hydrologic Unit Code
LSAA	Lake and Streambed Alteration Agreement
MIG, Inc.	Moore Iacofano Goltsman, Incorporated
NCDC	National Climatic Data Center
NRCS	Natural Resource Conservation Service
OBL	Obligate
OHWM	Ordinary High Water Mark
PJD	Preliminary Jurisdictional Determination
Porter-Cologne Act	Porter-Cologne Water Quality Act
RWQCB	Regional Water Quality Control Board
SWANCC	Solid Waste Agency of Northern Cook County
TNW	Traditional Navigable Water
UPL	Upland
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service



# 1 Introduction

MIG, Inc. (MIG) was retained by Crestmore Redevelopment, LLC an Indirect Subsidiary of VCP Management, LLC (Viridian Partners), to conduct a wetland delineation of potential waters of the United States (U.S.), including wetlands, for the Agua Mansa Commerce Park Study Area (Study Area) located in the City of Jurupa Valley, Riverside County, California (Figures 1 and 2). The purpose of this study is to determine the location and extent of wetland and/or water features within the Study Area that are potentially regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Findings in this report are considered preliminary until the USACE has completed its formal review and verification process. This report also provides maps and acreages of Waters of the State that fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW).

This jurisdictional delineation report has been prepared in compliance with the USACE's Minimum Standards for Acceptance for Preliminary Delineations (USACE 2001) and Final Map and Drawing Standards for the South Pacific Division Regulatory Program (USACE 2012).

## 1.1 Study Area Location and Setting

The 302.12-acre<sup>1</sup> Study Area (APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009) is currently owned by the Riverside Cement Company and is located in the City of Jurupa Valley within Riverside County, California (Figure 1). The site is located in the Fontana U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Study Area is bordered to the north by El Rivino Blvd., to the west by Rubidoux Blvd., to the east by light industrial uses, and to the south by Agua Mansa Rd. The site is a decommissioned cement plant (Riverside Cement Plant) and currently has offices and dismantled equipment on-site.

## 1.2 Applicant Information

Crestmore Redevelopment, LLC an Indirect  
Subsidiary of VCP Management, LLC (Viridian Partners)  
1805 Shea Center Drive, Suite 250  
Highlands Ranch, CO 80129  
Contact: Erik Zitek

## 1.3 Study Area Directions

Regional access to the site is provided by Interstate 10 (I-10) and State Route (SR) 60, located approximately 2.5 miles to the north and 1.4 miles to the south, respectively. The site may be accessed via Cedar Avenue from I-10 and Rubidoux Boulevard from SR-60.

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<sup>1</sup> The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

## 1.4 Project Summary

The Agua Mansa Commerce Park Specific Plan (Project) is a proposed industrial business park with retail overlay and open space development located on the former Riverside Cement facility. The Site has previously been utilized for mining and cement production, until operations ceased in 2014. The brownfield site is being decommissioned and prepared for environmental remediation and successful redevelopment under the requirements of the Specific Plan. The Specific Plan will allow for the development of approximately 4,500,000 square feet of total building area and a 70.9-acre Open Space/Recreation Park. The Specific Plan area (heretofore referred to as “Project Site”) encompasses approximately 303 acres of land in the City of Jurupa Valley. The Project will consist of three primary land uses, discussed in more detail below: 1) an Industrial Park, 2) a Business Park (with possible retail component) and 3) Open Space with Recreation Park.

### Industrial Park

The Industrial Park area will be 189.7 acres in size and is planned for approximately 4,216,000 square feet (3,452,000 square feet of building footprint and up to 764,000 square feet of mezzanine area) of industrial park uses, such as manufacturing, research and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution, and cross-dock facilities.

### Business Park

The Business Park with Retail Overlay district is 42.2 acres that will support 200,000 square feet of business park uses along with an existing 23,000 square-foot research and development building (CalPortland area). The Business Park with Retail Overlay district includes an option to build up to 25,000 square feet of retail and/or food service uses along with 170,000 of business park square footage in lieu of the 200,000 square feet of business park uses. The Specific Plan allows for an additional 41,000 square feet of business park use(s) in the CalPortland area – either through expansion of the existing building or new construction. A Union Pacific Railroad right-of-way and a portion of the North Riverside and Jurupa Canal bisect the Specific Plan and accounts for 8.4 acres within the Specific Plan boundary.

### Open Space/Recreation Park

There is a proposed approximately 70.96-acre Open Space area in the southern portion of the Specific Plan area. Portions of the Open Space area may be developed as a recreation area, contingent upon successful remediation of the Site. Recreational and cultural facilities that are planned within the Open Space area would include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children’s play areas, and cultural interpretive facilities to highlight the history of the Site and cement industry. Any proposed trail or activity would be separated from the Open Space area by fencing, signage, and/or other means of buffering, while still allowing visitors to experience the view of the unique landscape the Site has to offer. Preserved habitat areas lay approximately 80-feet below grade and will be inaccessible to visitors and undisturbed.

## 2 Regulatory Setting

The Study Area contains wetland and other aquatic features, environments and habitats. These waters and wetland features are regulated under federal and state laws. Each of the laws is administered independently and in coordination by the following federal and state agencies: USACE, U.S. Fish and Wildlife Service (USFWS), the United States Environmental Protection Agency (EPA), California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB).

### 2.1 Waters of the U.S.

#### 2.1.1 Section 404 of the Clean Water Act

The objective of the CWA is to maintain and restore the chemical, physical, and biological integrity of the Waters of the U.S. (33 CFR Part 328 Section 328.4). "Waters of the U.S." is the encompassing term for areas that qualify for federal regulation under Section 404 of the CWA. Section 404 of the CWA gives the EPA and the USACE regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters of the U.S.." Section 502(7) of the CWA defines navigable waters as "waters of the U.S., including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) defines the term "waters of the U.S." as it applies to the jurisdictional limits of the authority of the USACE under the CWA. A summary of this definition of "waters of the U.S." in 33 CFR 328.3 includes (1) waters used for commerce and subject to tides; (2) interstate waters and wetlands; (3) "other waters" such as intrastate lakes, rivers, streams, and wetlands; (4) impoundments of waters; (5) tributaries of waters; (6) territorial seas; and (7) wetlands adjacent to waters. Therefore, for purposes of determining USACE jurisdiction under the CWA, "navigable waters" as defined in the CWA are the same as "waters of the U.S." defined in the Code of Federal Regulations above. Waters of the U.S include non-isolated "wetlands" and "other waters of the U.S."

#### Section 404 Wetlands

The term "wetlands" (a subset of waters of the U.S.) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." The USACE developed field methods for identifying the location and extent of jurisdictional wetlands (a subset of waters of the U.S.) using the USACE Wetland Delineation Manual (Environmental Laboratory 1987): Arid West Regional Supplement [AWRS]) (USACE 2008). This supplement was intended to address specific wetland issues within the arid west and supersedes much of the 1987 Wetland Delineation Manual in arid regions.

#### Section 404 Other Waters

In the absence of wetlands, other waters of the U.S. refer to unvegetated waterways and other water bodies with a defined bed and bank, such as drainages, creeks, rivers, and lakes. This approximately translates to the bank to bank portion of water bodies, up to the ordinary high water mark (OHWM). The limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM) which is defined at 33 CFR 328.3(e) as:

"...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."



The OHWM in the Arid West Region is consistent with the physical and biological signature<sup>2</sup> established and maintained at the boundaries of the active channel.<sup>3</sup> Delineation of the active channel signature, and thus the OHWM, is based largely on identification of three primary physical or biological indicators—topographic break in slope, change in sediment characteristics, and change in vegetation characteristics. A break in slope refers to a localized and distinct change in the lateral topographic gradient (i.e., perpendicular to the principal direction of flow) within a stream system. Changes in sediment characteristics include any transition in the physical, chemical, or biological qualities of the sediments within and adjacent to a stream channel. For the purposes of OHWM identification, changes in vegetation characteristics include any lateral transition (i.e., perpendicular to the principal direction of flow) in the abundance, growth stage, or plant cover and composition within and adjacent to a stream channel. Supporting features including drift/wrack (i.e., debris deposits), signs of erosion/scour, bank undercutting, root exposure, point bars (meanders), silt deposits, and shelving (“benches” and breaks in slope along the active channel), were also used to help determine the location of the OHWM.

## **2.1.2 Isolated Areas Excluded from Section 404 Jurisdiction**

In addition to areas that may be exempt from Section 404 jurisdiction, some isolated wetlands and waters may also be considered outside of USACE jurisdiction as a result of the Supreme Court’s decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* (531 U.S. 159 [2001]). The key factor in this decision was language in the CWA that relates to navigable waters. Isolated wetlands and waters are those areas that do not have a connection to, and are not adjacent to a navigable “waters of the U.S.,” and do not otherwise exhibit an interstate commerce connection. Under Section 404 of the CWA, federal protection extends to those wetlands located on or adjacent to navigable waters of the U.S. or their tributary systems. Wetlands that do not meet this requirement, such as isolated wetlands with no link to interstate commerce, are not regulated as waters of the U.S. and are therefore not protected under the CWA. In general, the USACE considers isolated wetlands to be those of any size that are not adjacent to or do not have a sufficient hydrologic connection to navigable waters.

## **2.1.3 Rapanos v. United States and Carabell v. United States**

After the SWANCC decision, there was confusion about which wetlands were covered under the CWA. Therefore, on June 5, 2007, the USACE and the EPA issued joint guidance on implementing a June 19, 2006 U.S. Supreme Court opinions resulting from *Rapanos v. United States* and *Carabell v. United States* (*Rapanos*) cases (USACE 2007). The agencies received 66,047 public comments on the *Rapanos* Guidance (65,765 form letters, 282 non-form letters), from States, environmental and conservation organizations, regulated entities, industry associations, and the general public. EPA and the USACE jointly reviewed the comments and released a revised version of the guidance on December 2, 2008 (USACE 2008). The revised guidance states that the agencies will assert jurisdiction over:

- Non-navigable tributaries that are not relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months);

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<sup>2</sup> A combination of physical and biological features that act to form a distinct mark on the landscape.

<sup>3</sup> The hydrogeomorphic unit of a stream system within which the local hydrologic regime and geo-morphic processes are effective in maintaining a linear topographic depression or conduit on the land surface, typically characterized by the presence of a bed and banks.

- Wetlands adjacent to non-navigable tributaries that are not relatively permanent; and
- Wetlands adjacent to but that do not directly abut a relatively permanent non navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters (TNW).
- Significant nexus includes consideration of hydrologic and ecologic factors.

#### **2.1.4 Rivers and Harbors Act**

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and non-wetland bodies of water that meet specific criteria. Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 US Code [u.s.c.] 403), USACE regulatory jurisdiction, regulates almost all work in, over and under waters listed as “navigable waters of the U.S.” The USACE regulates activity that results in the alteration of a navigable water of the United States, including the excavation or filling of any such water.

#### **2.1.5 Executive Order 11990 for Protection of Wetlands**

Executive Order 11990 for the Protection of Wetlands (May 24, 1977) establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On federally funded projects, impacts on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific “Wetlands Only Practicable Alternative Finding” in the final environmental document. An additional requirement is to provide early public involvement in projects affecting wetlands.

### **2.2 Waters of the State**

#### **2.2.1 Section 401 of the Clean Water Act**

The RWQCB regulates activities in “Waters of the State”, including wetlands, through Section 401 of the CWA. While the USACE administers permitting programs that authorize impacts to waters of the U.S., any USACE permit authorized for a project would be invalid unless the RWQCB has issued a project-specific water quality certification or waiver of water quality. A water quality certification requires a finding by the RWQCB that the activities permitted by the USACE will not violate water quality standards individually or cumulatively over the term of the issued USACE permit.

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

The Porter-Cologne Water Quality Act (Porter-Cologne Act) (California Water Code Section 13260) requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the “Waters of the State” to file a report of discharge” with the RWQCB through an application for waste discharge. “Waters of the State” are defined by the Porter-Cologne Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The RWQCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA.

### **2.2.3 California Fish and Game Code Section 1600-1603**

Under Section 1602 of California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) has authority over any proposed activity that may substantially modify a river, stream, or lake. The CDFW requires notification for any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. The CDFW typically considers a river, stream, or lake to include its riparian vegetation, but it may also extend to its floodplain. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life”. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFW 1994). Riparian is defined as “on, or pertaining to, the banks of a stream”; therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFW 1994).

If the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be prepared, which includes reasonable conditions necessary to protect those resources. The applicant may then proceed with the activity in accordance with the final LSAA. Section 1602 does not extend to isolated wetlands and waters, such as small ponds not located on drainages.



## 3 Methods

The study methods utilized in the preparation of this report included a background information review and multiple site visits to collect pertinent wetland field data. Prior to conducting the initial field visit a 200-scale color aerial photograph of the Study Area and USGS topographic maps were assessed to determine the locations of potential federal and state jurisdictional habitats. Suspected jurisdictional areas were then field-checked and or sampled where access was feasible for the presence of wetland vegetation, soils, and hydrology. The presence of potentially jurisdictional features on the site was evaluated using the USACE methodologies described below.

### 3.1 Background Information Review

Prior to conducting field studies, available reference materials were reviewed including but not limited to:

- Online Soil Survey of Western Riverside County, California (USDA NRCS 2016). <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- National Climatic Data Center (NCDC) WETS Table and U.S. Palmer Drought Indices. <http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/palmer.html>. Site accessed September 2016. (NCDC 2016)
- National Oceanic and Atmospheric Administration (NOAA), California Nevada River Forecast Center (CNRFC). (NOAA, CNRFC 2017). <http://www.cnrfc.noaa.gov>
- National Wetland Inventory (NWI) Map Data (USFWS 2016) for the Fontana 7.5 Minute USGS quadrangle that characterize wetland and waters of the U.S. according to the Classification of Wetlands and Deepwater Habitats of the United States developed by USFWS (Cowardin et al. 1979).

### 3.2 Jurisdictional Delineation

MIG certified wetland delineators Laura Moran and Amy Parravano conducted a jurisdictional delineation on July 21, October 11, and October 12, 2016 and April 17-18, 2017. The delineation survey area included the entire 302.12-acre Study Area (Figures 1 and 2), and representative upland and wetland sample points were taken throughout the site. The wetland delineation was completed according to the USACE's 1987 Wetland Delineation Manual (Environmental Laboratory 1987) in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement) (USACE 2008a). Vegetation, hydrology, and soils data were collected at several locations to determine if any CWA Section 404 wetlands and other waters were present (Appendix A). The methods of assessing each of these parameters is discussed in the subsections that follow.

#### 3.2.1 Hydrophytic Vegetation

Hydrophytic vegetation is generally defined as plant species that are adapted to grow in wet, oxygen-poor soils. Hydrophytic vegetation is determined to be present when the plant community is dominated by species that can tolerate prolonged inundations or soil saturation during the growing season. The National Wetland Plant List (Lichvar et al. 2016) provides a wetland indicator status for all hydrophytic plant species in the U.S. The wetland indicator status is a predictor of the likelihood of the plant to occur in wetlands, and is defined as follows:

- Obligate Plant (OBL): a plant that almost always occurs in wetlands
- Facultative Wetland Plant (FACW): a plant that usually occurs in wetlands, but may occur in non-wetlands
- Facultative Plant (FAC): a plant that occurs in wetlands and non-wetlands
- Facultative Upland Plant (FACU): a plant that usually occurs in non-wetlands, but may occur in wetlands
- Upland Plant (UPL): a plant that almost never occurs in wetlands

The Arid West Supplement (USACE 2010) requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the “50/20 rule” (Indicator 1) described in the manual. For each sampling point, the biologists visually estimated absolute percent cover of plant species within an approximately 10-foot radius and the wetland indicator status (i.e., OBL, FACW, FAC, FACU, and UPL) of the species was recorded. For species not on the 2016 National Wetland Plant List for the Arid West Region, the indicator status was assumed to be UPL (USACE 2010). To apply the “50/20 rule”, dominant species are evaluated within each herb, shrub, and tree stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total. If greater than 50 percent of the dominant species can be classified by an OBL, FACW, or FAC wetland indicator status, ignoring + and - qualifiers, hydrophytic vegetation is present. If the community passes Indicator 1 then the community is hydrophytic. If the community fails Indicator 1 and both hydric soils and wetland hydrology are not present, then hydrophytic vegetation is not present, unless the site is a problematic wetland situation. However, if the plant community fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator must apply Indicator 2.

Indicator 2 is known as the Prevalence Index. The prevalence index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. All species are then organized into groups according to their wetland indicator status and the Prevalence Index is calculated using the following formula:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal or less than 3, hydrophytic vegetation is present. However, if the community fails Indicator 2, the delineator must proceed to Indicator 3.

Indicator 3 is known as Morphological Adaptations. Some hydrophytes in the Arid West Region develop easily recognized physical characteristics (or morphological adaptations) when they occur in wetland areas. Some of these adaptations may include, but are not necessarily limited to, adventitious roots and shallow root systems developed on or near the soil surface. If more than 50 percent of the individuals of a FACU species exhibit morphological adaptations for life in wetlands that species is considered to be a hydrophyte and its wetland indicator status should be reassigned to FAC. If such observations are made, the delineator

must recalculate Indicator 1 and 2 using a FAC indicator status for this species. The vegetation is hydrophytic if either test is satisfied.

### **3.2.2 Hydric Soils**

The National Technical Committee for Hydric Soils (NTCHS) defines hydric soils as “a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (U.S. Department of Agriculture [USDA], Soil Conservation Service [SCS] 1994). Nearly all hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation for more than a few days, including redoximorphic features such as orange oxidized mottles or light-colored (high value, low chroma) reduced matrix or mottle colors. The AWRS (USACE 2008b) contains a list of 23 hydric soil indicators that are known to occur in the Arid West region. Soils samples were collected and described according to the methodology provided in the AWRS. Soil chroma and values were determined by utilizing a standard Munsell soil color chart (Munsell 2000). Hydric soils were determined to be present if any of the soils samples met one or more of the 23 hydric soil indicators described in the AWRS (USACE 2008a). Characteristic field indicators of hydric soils include the presence of a histic epipedon, the presence of sulfidic material, the presence of an aquic or peraquic moisture regime, reducing soil conditions, soil color (including gleyed soils or soils with a low matrix chroma, with or without bright mottles), iron or manganese concretions, and soils listed as hydric by the U.S. Department of Agriculture (USDA) on the National Hydric Soils List (NRCS 2016).

### **3.2.3 Wetland Hydrology**

Wetland hydrology is indicated by an area that is inundated or saturated for a period long enough to create anaerobic vegetation and soil conditions during the growing season. (USACE 2008a, Section 4). Primary field indicators of wetland hydrology include surface water, soil saturation, sediment deposits, drift deposits, surface soil cracks, oxidized rhizospheres along living roots. Secondary indicators include drainage patterns. Wetland hydrology was determined to be present if one or more primary indicators or two or more secondary indicators were observed. According to the AWRS (USACE 2008a), wetland hydrology is satisfied if the sampled area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season.

During the wetland delineation, the hydrological setting of the Study Area was evaluated to identify the jurisdictional boundaries of wetlands and waters of the U.S. and their connection to off-site navigable waters. In addition, the overall landforms and climatic/hydrological conditions were assessed.

## **3.3 Jurisdictional Other Waters Delineation**

For non-wetland, “other water” features, the extent of USACE jurisdiction is defined by the OWHM. Delineation of other waters was based on observing indicators for the OWHM (33 CFR 328.3), following established USACE criteria and considering hydrological connectivity or isolation. The OWHM was determined through an examination of both recent and past physical evidence of surface flows. Common physical characteristics that indicate the presence of an OWHM include, but are not limited to, a clear natural line impressed on the bank; evidence of scour; recent bank erosion; destruction of native terrestrial vegetation; sediment deposition; and the presence of litter and debris. The bank-to-bank extent (i.e., bankfull width) of drainages and ponds or lakes that contain water during a normal rainfall year generally serves as a reliable approximation of the lateral limit of USACE jurisdiction.



The limit of the OHWM was recorded in the field based on observations of changes in vegetation and break in bank slope. The upper limit of flow fluctuations by a sharp break in the bank slope, with a corresponding change in vegetation and/or scour; this level was typically mapped as the OHWM. In a few areas where this line was less clear in cases where the drainage split and braided around raised mounds with mature shrubs, the OHWM was mapped at the upslope edge of clear sediment and drift deposits. A submeter GPS unit was used to map the OHWM in the field where access was feasible. These GPS readings, photographs, and notes were then used to identify the OHWM on high resolution, geo-rectified aerial photography.

### **3.4 Mapping CDFW Jurisdictional Lakes and Streambeds**

CDFW streambeds include unvegetated waterways and other water bodies with a defined bed and bank, such as streams, lakes, drainages and rivers. Evaluation of CDFW jurisdiction followed guidance in the California Fish and Game Code and standard field practices by CDFW personnel. CDFW jurisdiction was delineated by measuring outer width boundaries of state jurisdiction (lakes or streambeds), consisting of the greater of either the “top of bank” (TOB) measurement or the extent of associated riparian vegetation. Delineation of CDFW lakes and streambeds was based on indicators of an ephemeral, intermittent or perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. In the Study Area, the TOB was identified as a distinct break in the bank slope and corresponding change in vegetation from riparian woodland/scrub to ruderal vegetation or unvegetated rock walls. A sub meter GPS unit was used to map the top of bank in the field where access was feasible. Remaining areas were digitized onto an aerial photograph. These data were then displayed on high resolution, geo-rectified aerial photography using ArcGIS software.

## 4 Environmental Setting

The Study Area is currently occupied by the former Riverside Cement Plant. Land uses bordering the Study Area include light industrial, residential, and open space to the west. Land uses to the east and south are primarily manufacturing, while land uses to the north are open space and residential. The following subsections characterize the topography and soils, major vegetation communities, and hydrologic influences.

### 4.1 Topography and Soils

The northern extent of the Study Area is relatively flat and contains machinery and buildings used to operate the cement plant, with elevations ranging between approximately 900-960 feet above mean sea level (AMSL). The southern extent of the Study Area contains a large hill and the former quarry, which is now filled with water, forming Crestmore Lake. The topography in this area is rugged and variable, with elevations ranging between approximately 820 and 1,160 feet. In addition to Crestmore Lake, the southeastern portion of the Study Area features two closed basins created by limestone mining activities. The Study Area is located in the Santa Ana Watershed with headwaters located in the San Gabriel Mountains, the San Bernardino Mountains, San Jacinto Mountains, and the Santa Ana Mountains.

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has identified ten soil map units within the Study Area. The following soil descriptions are from the Online Soil Survey of Western Riverside Area (USDA NRCS 2016) and are depicted on Figure 3 and Appendix F. The National List of Hydric Soils was reviewed to determine if the soils within the Study Area are hydric (USDA NRCS 2016).

**Cieneba sandy loam, 15 to 50 percent slopes, eroded (ChF2).** This map unit occurs in the southwestern corner of the Study Area. The Cieneba series consists of somewhat excessively drained, strongly sloping to steep soils. This soil type formed in residuum weathered from igneous rock on uplands. These soils are rapidly permeable. Their available water capacity is about 1 to 3 inches. Roots can penetrate to a depth of 12 to 20 inches. Typical vegetation is chaparral, chamise, and annual grasses and forbs. In a representative profile, the surface layer is brown, slightly acid sandy loam about 8 inches thick. The underlying material is pale-brown, neutral sandy loam about 6 inches thick that overlies reddish-yellow, weathered granitic rock. This soil map unit is not classified as a hydric soil (USDA NRCS 2016).

**Delhi fine sand, 2 to 15 percent slopes, wind-eroded (DaD2) and Delhi fine sand (Db).** These soils are located in the northern half of the Study Area. The Delhi series consist of excessively drained soils on dunes and alluvial fans, with slopes ranging from 0 to 15 percent. The vegetation is chiefly annual grass, alfilaria, and flat-top buckwheat. In a typical profile, the surface layer is light brownish-gray fine sand about 10 inches thick. The underlying material is light brownish-gray and light olive-brown, stratified fine sand, loamy fine sand, and fine sandy loam. Permeability of this soil is rapid. The available water holding capacity is 4.5 to 6.5 inches. Runoff is very slow. The hazard of water erosion is slight, but wind erosion is a high

hazard. The root zone is more than 60 inches deep. Delhi fine sand (Db) is classified as hydric, fulfilling hydric criteria<sup>4</sup> 2 and 3.

**Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2).** These soils are located in the northeastern corner and southern corner of the Study Area. This gently to moderately sloping soil occurs on alluvial fans and terraces. This well-drained soils developed in alluvium consisting mainly of granitic materials. The vegetation is chiefly annual grasses, forbs, sumac, and chamise but includes some scattered oak trees. In a typical profile, the surface layer is brown sandy loam about 26 inches thick. The subsoil is brown sandy loam and pale-brown loam and extends to a depth of about 60 inches. Permeability of the soil is moderate. Runoff is slow to medium, and the hazard of erosion is light to moderate. The available water holding capacity of 7.5 to 10.0 inches. The root zone is more than 60 inches deep. This is not classified as a hydric soil (USDA NRCS 2016).

**Hanford coarse sandy loam, 8 to 15 percent slopes, eroded (HcD2) and Hanford coarse sandy loam, 2 to 8 percent slopes (HcC).** These map units occur in the southwestern corner of the Study Area along Rubidoux Blvd. The Hanford series consists of well-drained, nearly level to strongly sloping soils that formed in recent granitic alluvium on valley floors and alluvial fans. Runoff is medium, and the hazard of erosion is medium to high if the soil is left without plant cover. This soil unit has been used for citrus, grapes, and dry farmed small grains. In a representative profile, the surface layer is light brownish-gray coarse sandy loam down to 10 inches and palebrown and very pale brown sandy loam to a depth of 60 inches or more. This material is slightly acid or neutral throughout. These soil map units are not classified as a hydric soil (USDA NRCS 2016).

**Pachappa fine sandy loam, 2 to 8 percent slopes, eroded (PaC2).** These soils are located in the northeastern corner of the Study Area, between the eastern boundary and the Greenfield sandy loam soils. This gently to moderately sloping soil occurs on alluvial fans. These soils developed in predominantly granitic alluvium. Vegetation is chiefly annual grasses, forbs, and chamise. In a typical profile, the surface layer is brown fine sandy loam and very fine sandy loam about 29 inches thick. The substratum is very pale brown very fine sandy loam. Permeability of this soil is moderate. Runoff is medium, and the hazard of erosion is moderate. The available water holding capacity is 7.5 to 10.0 inches. The root zone is greater than 60 inches deep. This is not classified as a hydric soil (USDA NRCS 2016).

**Quarries (QU).** Approximately 1/3 of the Study Area including Crestmore Lake is classified as Quarry by USDA, located in the southern portion. Since this area is located adjacent to the Delhi, Greenfield, and

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<sup>4</sup> According to the USDA NRCS, the criteria for hydric soils are as follows:

<sup>2</sup>. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:

- a) Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
- b) Show evidence that the soil meets the definition of a hydric soil;

3. Map unit components that are frequently ponded for long duration or very long duration during the growing season that:

- a) Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
- b) Show evidence that the soil meets the definition of a hydric soil



Ramona soil series, a combination of these soils is expected to be found in this area. This area has undergone extensive disturbance due to mining activities and thus might include other soil materials. This is not classified as a hydric soil (USDA NRCS 2016).

**Ramona sandy loam, 0 to 2 percent slopes (RaA) and Ramona sandy loam, 2 to 5 percent slopes, eroded (RaB2).** These series are located in the southeastern corner of the Study Area. The Ramona series consist of well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting mainly of granitic materials. The vegetation consists chiefly of annual grasses, forbs, chamise, salvia, and flat-top buckwheat. In a typical profile, the surface layer is brown sandy loam and fine sandy loam about 23 inches thick. The subsoil extends to a depth of about 68 inches. This layer is brown loam and reddish-brown and yellowish-red sandy clay loam. The substratum is strong-brown fine sandy loam. 2 to 5 percent permeability is moderately slow, and available water holding capacity is 8.5 to 9.5 inches. Runoff is medium, and the hazard of erosion is moderate. The root zone is more than 60 inches deep. 0 to 2 percent slopes: Runoff is slow on this soil and the hazard of erosion is slight. The Ramona sandy loam, 0 to 2 percent slopes (RaA) soil map unit is classified as hydric when it occurs in depressions with a criterion rating of 3 (USDA NRCS 2016).

During the site investigation visits, soil pits dug by MIG wetland delineators at each sample site confirmed that much of the Study Area soils were consistent with the soil description provided by the NRCS. The field data from all sampling pits are provided on USACE data forms in Appendix A.

## 4.2 Climate and Precipitation

The length of the growing season in the Study Area was obtained from the NCDC WETS table (NCDC 2016) for the closest National Weather Service cooperative station with weather data pertaining to the Study Area, which is the Riverside Citrus Experiment (CA7473) station. Climate data from this weather station indicate that the growing season (based on air temperature thresholds of greater than 32 degrees Fahrenheit [°F] at a frequency of 5 years in 10) is approximately 365 days. The climate within the Study Area is characterized as Mediterranean, bordering on a semi-arid climate with dry, hot summers and mild, wet winters.

Table 1 provides a summary of precipitation data observed at the nearest National Weather Service weather station to the Study Area: Riverside Gas Co. (RVRC1) (NOAA, CNRFC 2017). During the July and October 2016 surveys, Water Year to-date precipitation was 57 and 54 percent of normal, respectively. Water Year to-date precipitation was 139 percent of normal at the time the April 2017 surveys were conducted.

**Table 1. RVRC1 Precipitation Data For 2016-2017 Survey Dates (NOAA, CNRFC 2017)**

Survey Dates	Observed Water Year-to-Date Precipitation	Average Water Year-to-Date Precipitation	Water Year-to-date Percent of Normal Precipitation
July 21, 2016	5.24	9.12	57
October 10-11, 2016	5.24	9.71	54
April 17-18, 2017	12.60	9.04	139

### 4.3 Hydrology

The Study Area is located in the Santa Ana Watershed (USGS Hydrologic Unit 18070206) with headwaters located in the San Gabriel Mountains, the San Bernardino Mountains, San Jacinto Mountains, and the Santa Ana Mountains. The segment of the Santa Ana River that runs close to the Study Area (approximately 1 mile southeast) is fed by streams and tributaries located in the San Gabriel and San Bernardino Mountains. The Santa Ana River is regulated as a Traditional Navigable Water (TNW) by the USACE.

Primary sources of hydrology that support wetland and water features onsite are groundwater in the closed quarry pits and artificial discharge from failing water infrastructure, or “nuisance flows” within the cement plant processing facilities. Wetland areas in the quarry pits and cement processing facility are hydrologically isolated.

### 4.4 Vegetation Communities and Land Cover Types

Vegetation communities were mapped in the field onto a color aerial photograph (Figure 3) and classified according to *A Manual of California Vegetation* (MCV), Second Edition (Sawyer et al 2009) or *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), as appropriate. The Study Area supports 11 vegetation communities and/or land cover types, described below in more detail and are shown on Figure 4. A majority of the site consists of upland plant communities or developed areas associated with the cement processing facilities, offices, and parking lots. Nomenclature used for dominant plant species discussed below follows *The Jepson Manual: Vascular Plants of California*, Second Edition (Baldwin et al 2012). Nomenclature changes made after the publication date of this manual follow the Jepson eFlora (2016) website.

#### 4.4.1 Wetland/Water Communities and Land Cover Types

**Open Water (6.30 acres).** Crestmore Lake is located in the south-central portion of the Study Area in area that was quarried to a depth that intersects the ground water table and is surrounded on all sides by steep rock wall. This open water body is ringed by cattails and the southern willow scrub vegetation community, as described below.

**Cattail Alliance (1.53 acres).** Narrowleaf cattail (*Typha domingensis*) and broadleaf cattail (*Typha latifolia*) form monocultures in portions of the Study Area that are subjected to prolonged periods of saturation and/or inundation due to interception with the groundwater table and ongoing nuisance flows. Cattail alliance occurs around the fringe of Crestmore Lake, near leaking water control structures, and in a quarry pit in the southeastern portion of the Study Area (Figure 4).

**Southern Willow Scrub (3.30 acres).** Southern willow scrub (Figure 4) occurs as dense, multilayered stands supported by groundwater within the quarry pit surrounding Crestmore Lake to the south, and within two large borrow areas in the southeast corner of the site. Black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and yellow willow (*Salix lasiandra*) tends to co-dominate these areas, although other common riparian species include red willow (*Salix laevigata*), Fremont cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), mulefat (*Baccharis salicifolia*), willow baccharis (*Baccharis salicina*). Non-native species are occasional in riparian shrub and tree dominated areas, and include tree tobacco (*Nicotiana glauca*), summer mustard (*Hirschfeldia incana*), castor bean (*Ricinus communis*), tocalote (*Centaurea melitensis*), horehound (*Marrubium vulgare*), Washington fan palm (*Washingtonia robusta*),

London rocket (*Sisymbrium irio*), fountain grass (*Pennisetum setaceum*), bull thistle (*Cirsium vulgare*), and tamarisk (*Tamarix ramosissima*).

#### 4.4.2 Upland/Developed Communities and Land Cover Types

**Developed (119.45 acres).** The center of the Study Area is a former cement plant and thus is dominated by paved areas, abandoned buildings and derelict industrial machinery (Figure 4). Vegetation in these areas consists primarily of non-native, disturbance-adapted plant species such as wild lettuce (*Lactuca serriola*), tree tobacco, Washington fan palm, oleander (*Nerium oleander*), Russian thistle (*Salsola tragus*), white sweet clover (*Mellilotus albus*), castor bean, tamarisk, summer mustard, tree of heaven (*Ailanthus altissima*), and fountain grass. Native form species, such as horseweed (*Erigeron canadensis*), are occasional as well.

**Rock Outcrop (7.79 acres).** Rock outcrops are found around the former cement plant and the large central hill on the Study Area. These areas are generally devoid of vegetation.

**Disturbed (54.86 acres).** The northern portion of the Study Area has received continuous disturbance from disking in recent years and remains largely unvegetated. Vegetation that does grow in these areas consists primarily of weedy, non-native, disturbance-adapted, and ruderal plant species such as red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), London rocket, Russian thistle, and tree tobacco.

**Brittle Bush Scrub (56.27 acres).** Southern portions of the Study Area that have received the least amount of disturbance relative to other areas and are dominated by the brittle bush (*Encelia farinosa*). Other common native species associated with this community include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), coastal prickly pear (*Opuntia littoralis*), and cholla (*Cylindropuntia* sp.). Some non-native species are also common in these communities and include London rocket, Russian thistle, summer mustard, and tocalote.

**Non-Native Grassland (24.67 acres).** Patches of non-native grassland are scattered throughout the Study Area. These areas receive occasional disturbance and are characterized primarily by non-native species such as red brome, ripgut brome, wild oats, Russian thistle, jimsonweed (*Datura stramonium*), Peruvian peppertree (*Schinus molle*), fountain grass, and Bermuda grass (*Cynodon dactylon*). Native species are occasional in these communities and include common sunflower (*Helianthus annuus*) and common fiddleneck (*Amsinckia intermedia*).

**Eucalyptus Grove (19.20 acres).** Eucalyptus groves have been planted throughout the northern portions of the Study Area. Red gum (*Eucalyptus camaldulensis*) and red ironbark (*Eucalyptus sideroxylon*) are the most commonly observed here, although blue gum (*Eucalyptus globulus*) and silver dollar gum (*Eucalyptus polyanthemos*) are occasional. The understory of these groves are dominated by non-native species such as London rocket, Russian thistle, lamb's quarters (*Chenopodium album*), red brome, ripgut brome, and wild oats.

**Ornamental (8.15 acres).** Ornamental communities are found primarily along the western portion of the Study Area, planted near buildings and roadways. Ornamental plant species observed include Washington fan palm, pine trees (*Pinus* sp.), oleander (*Nerium oleander*), silk tree (*Albizia julibrissin*), agapanthus (*Agapanthus africanus*), and English ivy (*Hedera helix*).



**Mulefat Stands (0.60 acres).** Mulefat stands occur as monotypic, isolated patches within the cement plant processing area. This phreatophytic vegetation type occurs in disturbed areas (borrow areas and among cement rubble) that are not ponded or saturated within the upper 12 inches of soil, so do not meet USACE wetland criteria.

## 5 Results

The 302.12-acre Study Area was evaluated for the presence of waters of the U.S. subject to USACE jurisdiction, as well as Waters of the State which are regulated by RWQCB and CDFW. Wetlands and other water features were delineated and mapped based on federal and state delineation guidance, methodology, and regulatory framework and code, as described in Section 2 (Regulatory Setting). All other waters and wetlands (including final acreages and types) delineated within the Study Area are considered to be geographically isolated from USACE, pending a formal jurisdictional determination performed by USACE.

Field data were recorded on standard USACE AWRS datasheets provided in Appendix A. Per USACE mapping guidelines, the delineation maps in Appendix B depict the extent of potential federal and state jurisdictional features within Study Area at a scale of 1 inch = 200 feet. A summary table of wetland and water features is provided in Appendix C. A list of plant species observed during the delineation and their associated wetland indicator status is provided in Appendix D. Representative photographs taken during site surveys to document existing conditions at each sample point location are provided in Appendix E. Soils mapped by the USDA NRCS within the Study Area is provided in Appendix F.

Crestmore Lake and the two unnamed quarry pits in the southern portion of the Study Area were not classified as wetland features by the USFWS National Wetland Inventory (NWI) map (USFWS 2016; Appendix G),

The Federal Emergency Management Agency (FEMA) produces maps which depict flood zones which are generally associated with rivers, oceans and other water bodies. Like the NWI maps, the FEMA flood zone maps are based predominantly on topography and regional modeling. Based upon a review of the FEMA flood zone map (Map Number 06065C0045G), the majority of the Study Area is located in an Area of Minimal Flood Hazard (Zone X), while the pond area is classified as an Area of Special Flood Hazard (Zone A), with no base flood elevations determined (Appendix H; FEMA 2008).

The results of this delineation are based on conditions observed at the time of the field surveys conducted on July 21, October 11, and October 12, 2016. Descriptions of features found in the Study Area that are potentially isolated from Section 404 jurisdiction are provided below.

### 5.1 Isolated from CWA Section 404 Jurisdiction and/or Non-Jurisdictional

All wetland and other water features mapped in the Study Area are hydrologically isolated by steep and rugged terrain in the former quarry operations area in the southern portion of the site, and by existing development (buildings, parking lots, paved roads, railroad tracks, and landscaped hillsides) in the northern and central portions of the Study Area. None of the wetlands or other water features meet the definition of Traditional Navigable Waters (TNWs), Relatively Permanent Waters (RPWs) that are tributary to a TNW, or wetlands abutting a TNW or RPW; therefore, they would not be considered jurisdictional pursuant to Section 404 of the CWA. However, these features may be considered Waters of the State and therefore regulated by the RWQCB pursuant to the Porter-Cologne Act

The Study Area supports 10.641 acres of isolated wetlands and other waters potentially regulated by RWQCB within the Open Space area and 0.417 non-jurisdictional, artificially created and sustained wetlands features within the existing cement processing facility (Appendix B1 and B2). These features are described in detail below.

## Isolated Wetlands

All wetlands and other water features were artificially created, either by excavation to the water table depth through quarry operations or by nuisance flows created by failed water infrastructure associated with cement plant facilities. A total of 8 sample points were taken at various locations within the Study Area to determine the location and extent of areas that meet USACE wetlands and waters criteria (i.e., contained hydric soils, hydrology, and hydrophytic vegetation). Six out of 8 data points met wetlands criteria: WL-1 through WL-6 (Appendix A). Approximately 4.337 acres were mapped as isolated wetlands. Areas classified as this wetland type include vegetated fringes around Crestmore Lake, a low lying wet area within a smaller quarry borrow area to the east, and three small wetland patches within the processing facility that are created and wholly sustained by nuisance flows and are underlain by pavement and other imported fill materials. The dominance test ( $>50\%$  FAC, FACW, OBL) and prevalence index ( $\leq 3.0h$ ) hydrophytic vegetation indicators were met at most the wetland sample points. A jurisdictional delineation map showing the location of wetland sample points and the distribution and extent of isolated and non-jurisdictional wetland features is provided in Appendix B.

**Riparian Wetland (1.536 acres).** Feature A (Appendix B5) is a riparian wetland that occupies the remaining portion of the quarry pit surrounding Feature A (refer to WL2 in Appendix A). Although situated 1-2 feet above Feature A, the area is still at a low enough elevation to be supported by groundwater fluctuations on a seasonal basis (saturation in the upper 12 inches for at least 2 weeks during the growing season). Arroyo willow, black willow, and yellow willow are co-dominants within this feature. Sampled soils were similar to Feature A. Wetland hydrology was evidenced by the presence of sediment deposits (B2) on October 11, 2016. Primary hydrology indicators including a high water table (A2) and saturation (A3) were observed on July 21, 2016.

**Freshwater Emergent Wetland (1.005 acre).** Feature B (Appendix B5) is a freshwater emergent wetland at the base of a limestone quarry pit dominated by a nearly monotypic stand of Southern cattail (*Typha domingensis*; OBL). This wetland is characterized by sample point WL1 in Appendix A. The pit is an artificial impoundment that has been excavated to a depth that intersects the groundwater table. Hydrologic conditions are characterized by semipermanent to permanent saturation to inundation in the upper 12 inches of soil, supporting a predominance of obligate hydrophytes. The wetland is bordered to the west by a vertical rock wall. Soils at the sampled location (WL1; Appendix A) consist of light brownish gray (10YR6/2) to light gray (2.5Y 7/2) depositional quarry process spoils with brownish yellow (10YR 6/6) iron masses in the upper 12 inches of the matrix. A 3-inch-thick layer of undecomposed organic matter was present on the soil surface, indicating prolonged anaerobic conditions. Large pore spaces were observed in the upper 4 inches, possibly from aquatic invertebrates. The sampled soil exhibits indicators of a depleted matrix (F3).

**Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.796 acre).** Features C, D, E, and F (Appendix B4) are lacustrine freshwater emergent-riparian lacustrine fringe wetlands that occur along a narrow perimeter of Crestmore Lake (Feature G). These features have an herbaceous layer dominated by nearly pure stands of cattail, an obligate hydrophyte, with submerged root systems and an intermittent riparian overstory. Shrub and tree layers are composed of shining willow, black willow, California fan palm, Fremont cottonwood, mulefat, and willow baccharis. Because the wetlands were inundated or saturated to the surface, soils were presumed to function as hydric at WL-5. Sampled soils at WL-6 had a high



undecomposed organic matter content and had a depleted matrix (F3) in the upper 8 inches of the soil profile and exhibited sandy mucky mineral (S1) and sandy gleyed matrix (S4) below 8 inches.

### Isolated Waters

**Perennial Other Waters (Crestmore Lake (6.304 acres)).** Crestmore Lake (Feature G; refer to delineation map in Appendix B4-5) is a 6.30-acre water-filled quarry pit with a 200-ft maximum depth created by decades of limestone mining. The OHWM is mapped along the distinctly defined topographic boundary of lake shoreline that is encompassed by nearly vertical rock walls.

### Non-Jurisdictional Artificial Wetlands

**Artificially Created Freshwater Emergent Wetland (0.417 acre).** Non-jurisdictional Features H, I, and J (Appendix B) are artificially created freshwater emergent wetlands supported solely by nuisance flows resulting from failed water infrastructure (below and above ground) associated with the cement processing facility. These wetlands are associated with sample points WL3 and WL4. A mix of cattails, willows, tamarisk, mulefat, willow herb were found at Feature H. Feature I supported cattails and willows. Feature J is located adjacent to a well house and above ground broken water pipes. This feature supports an intermittent canopy composed of individual Fremont cottonwood, California fan palm, and white alder trees with an emergent herbaceous layer of broad-leaved cattail. These wetlands were located on gravel and/or concrete with disturbed/non-native soils. The problematic hydric soil criterion was met due to the presence of primary indicators of wetland hydrology (surface water and/or saturation) and a predominance of hydrophytic vegetation.

## 5.2 RWQCB Jurisdictional Features

The RWQCB protects all waters in its regulatory scope, but has special responsibility for regulating isolated wetlands and headwaters that may not be regulated by Section 404 of the CWA. Therefore, in addition to all features potentially regulated by Section 404 of the CWA, all wetlands and other water features identified as isolated from CWA 404 jurisdiction, as well those not regulated by USACE due to the lack of a significant nexus to a Traditional Navigable Water, may be considered jurisdictional by RWQCB pursuant to the Section 401 of the Clean Water Act and/or Porter-Cologne Act. There is a total of 11.019 acres in the Study Area that would be regulated by RWQCB as Waters of the State (Table 3).

**Table 3: Summary of Features Regulated by RWQCB**

Feature	RWQCB Regulated Feature Type	Acres (ac)
A	Isolated Riparian Wetland	1.536
B	Isolated Freshwater Emergent Wetland	1.005
C, D, E, F	Isolated Freshwater Emergent-Riparian Lacustrine Fringe Wetland	1.796

Feature	RWQCB Regulated Feature Type	Acres (ac)
	<u>Wetlands Subtotal</u>	<u>4.337</u>
G	Isolated Perennial Other Waters (Crestmore Lake)	6.304
	<u>Other Waters Subtotal</u>	<u>6.304 ac</u>
	<b>Total</b>	<b>10.641 ac</b>

### 5.3 CDFW-Jurisdictional Features

Pursuant to Division 2, Chapter 6, Section 1600-1603 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife. The location and extent of CDFW-jurisdictional features is depicted on the jurisdictional delineation map in Appendix B. CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. Approximately 13.032 acres of CDFW jurisdictional areas were mapped on the Study Area, and include streambed and lake features measured from the top of bank and riparian vegetation associated with these features, measured from the dripline (Table 4).

**Table 4: Summary of CDFW Jurisdiction**

Feature	CDFW Feature Type	Acres (ac)
A,B, C, D, E, F, K	CDFW Riparian	4.669
G	CDFW Lake (Crestmore Lake)	6.304
	<b>Total</b>	<b>10.973 ac</b>

Scattered monotypic stands of mulefat scrub and an isolated patch of willow scrub within the former cement plant processing facility would not be subject to CDFW jurisdiction because they: 1) occur in artificially-constructed, shallow depressions on disturbed soils that were graded/excavated during past cement processing or quarry operations; 2) lack the attributes of a natural waterway; 3) provide no habitat for fish, wildlife, aquatic insects, or riparian species; 4) receive ephemeral upland flows from stormwater runoff; and/or 5) do not contain a defined bed, bank, or channel.

Feature A consists of riparian vegetation in an excavated depression that does not have a well-defined bed and bank, but provides important habitat for wildlife, including least Bell's vireo. Features B, C, D, E, F support a predominance of riparian vegetation with an emergent wetland vegetation understory along the well-defined banks of Crestmore Lake (Feature G) and within two quarry borrow areas. Feature K is a small riparian

woodland at the bottom of a quarry pit; this feature is not associated with a waterbody and does not support an emergent wetland understory. These ecological systems are expected to be regulated by CDFW.



## 6 Conclusions

Table 5 provides a summary of USACE, RWQCB, and CDFW jurisdictional areas. These results are considered to be preliminary until verified by the USACE and/or until any permits are issued by federal and state agencies authorizing activities within this area. The conclusion of this delineation is based on conditions observed at the time of the field surveys conducted on July 21, October 11, and October 12, 2016 and April 17-18, 2017.

**Table 5: Summary of All Jurisdictional Features Within the Study Area**

Feature	Potential USACE Jurisdiction (Acres)	RWQCB Jurisdiction (Acres)	CDFW Jurisdiction (Acres)
A	N/A	1.536	1.536
B	N/A	1.005	1.005
C	N/A	0.771	0.771
D	N/A	0.177	0.177
E	N/A	0.158	0.158
F	N/A	0.690	0.690
G	N/A	6.304	6.304
H	N/A	N/A	N/A
I	N/A	N/A	N/A
J	N/A	N/A	N/A
K	N/A	N/A	0.332
<b>TOTAL</b>	<b>0.000</b>	<b>10.641</b>	<b>10.973</b>

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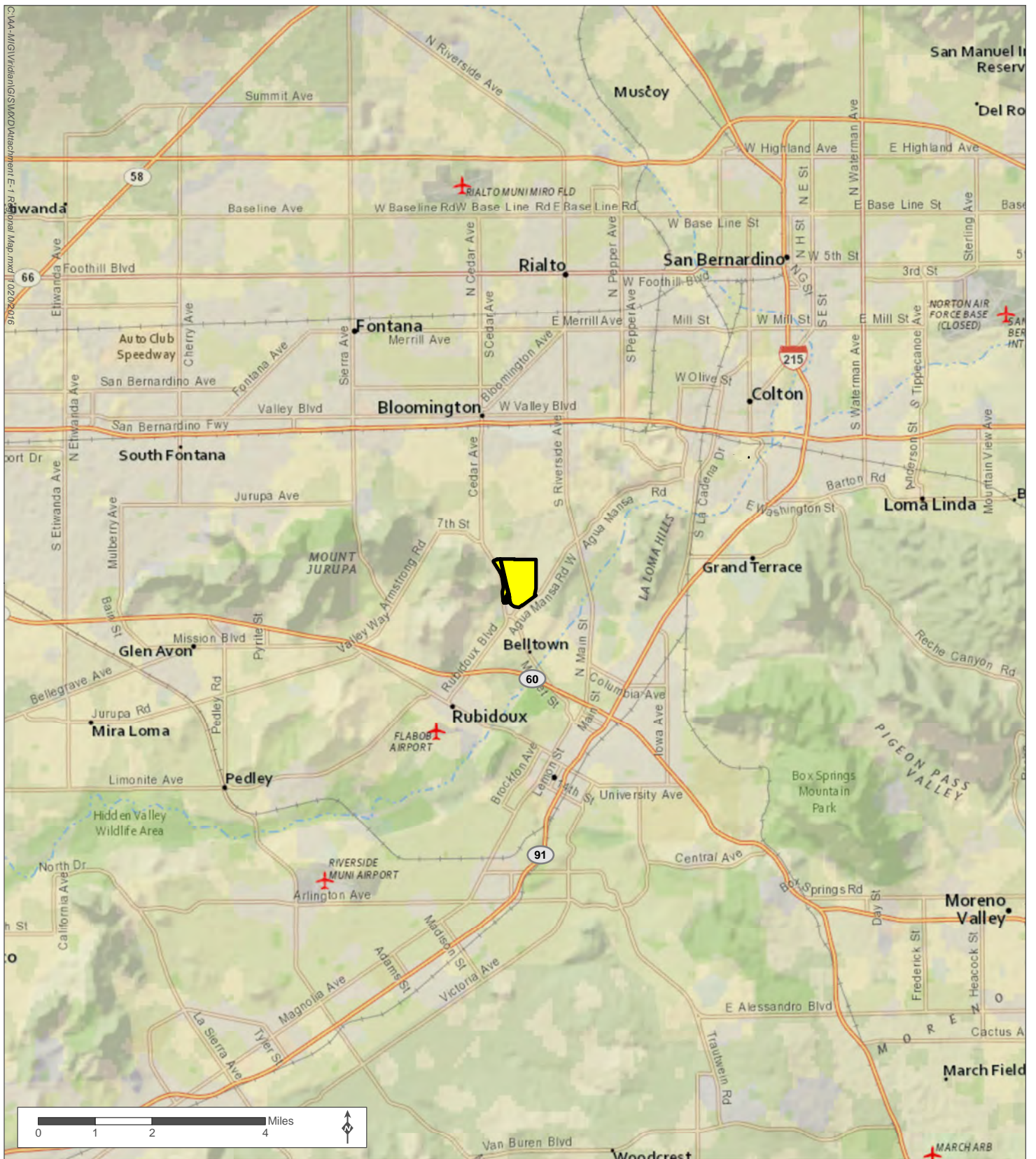
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## FIGURES

**Figure 1 – Regional Vicinity Map**



Source: MIG 2015, National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

 Project Site Boundary



**Figure 2 – Aerial Photograph of Study Area**





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- Project Site Boundary (302.12 ac)\*
- Business Park with Retail Overlay
- Assessor Parcel Numbers
- Industrial Park
- MSHCP Criteria Cells
- Open Space
- Railroad Right-of-Way

Figure 2. Aerial Map

Agua Mansa Commerce Park, Jurupa Valley, CA



**Figure 3 – Map of Soils Within the Study Area**





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |   |  |
|---|--|
| Project Site Boundary (302.12 ac)*  | Hanford coarse sandy loam, 8 to 15 percent slopes, eroded (HcD2): 4.72 acres |
| Cieneba sandy loam, 15 to 50 percent slopes, eroded (ChF2): 4.81 acres    | Pachappa fine sandy loam, 2 to 8 percent slopes, eroded (PaC2): 3.03 acres   |
| Delhi fine sand, 2 to 15 percent slopes, wind-eroded (DaD2): 113.32 acres | Quarries (QU): 85.58 acres   |
| Delhi fine sand (Db): 74.95 acres   | Ramona sandy loam, 0 to 2 percent slopes (RaA): 0.29 acres                   |
| Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2): 12.42 acres  | Ramona sandy loam, 2 to 5 percent slopes, eroded (RaB2): 1.15 acres          |
| Hanford coarse sandy loam, 2 to 8 percent slopes (HcC): 1.88 acres        |  |

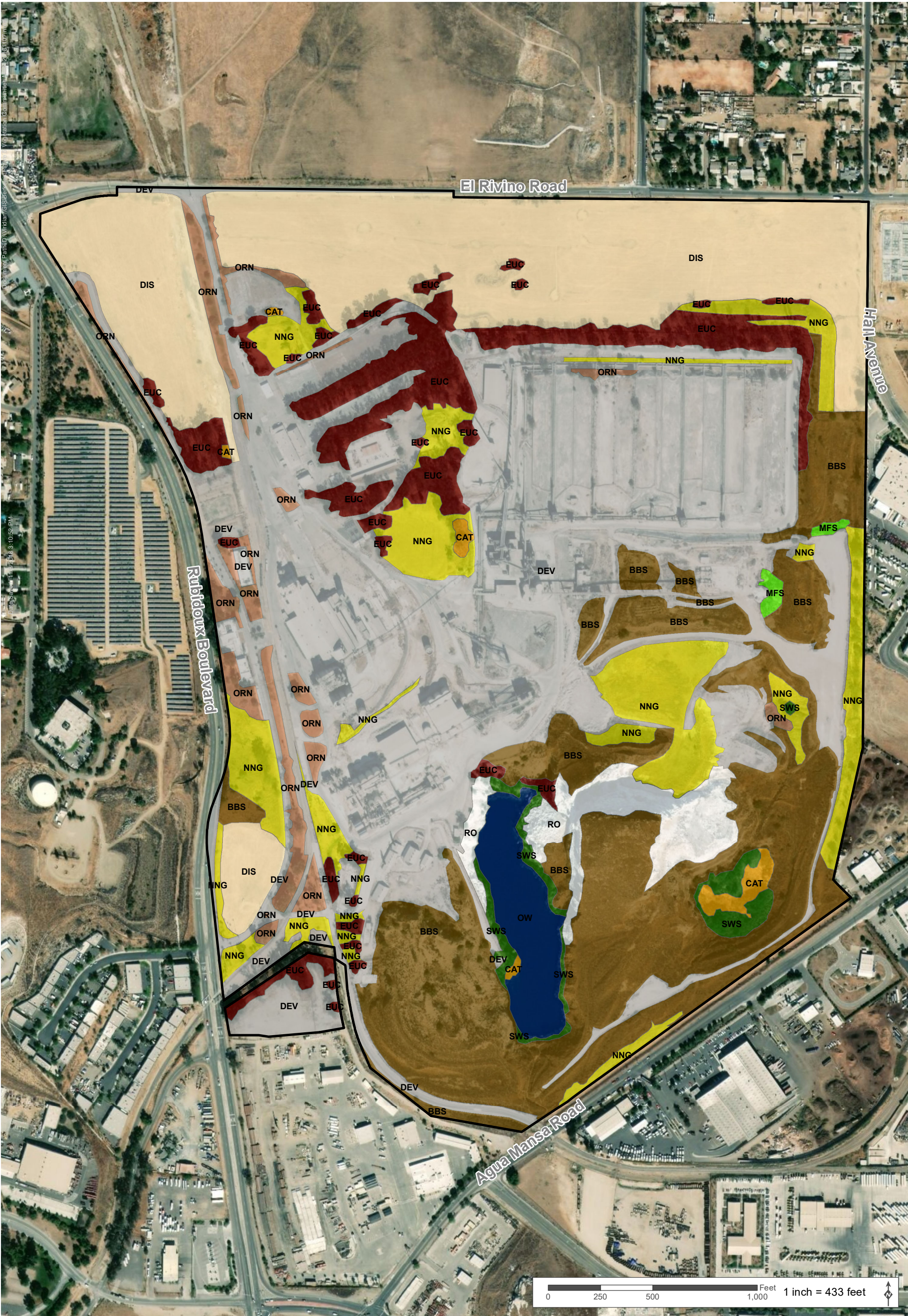
Figure 3. Soils Map

Agua Mansa Commerce Park, Jurupa Valley, CA



**Figure 4 –Vegetation Communities Map**





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

<b>Vegetation Communities</b>			<b>Project Site Boundary (302.12 ac)*</b>		
Developed (DEV): 119.45 ac	Non-Native Grassland (NNG): 24.67 ac	Open Water (OW): 6.30 ac			
Disturbed (DIS): 54.86 ac	Eucalyptus Grove (EUC): 19.20 ac	Southern Willow Scrub (SWS): 3.30 ac			
Brittlebush Scrub (BBS): 56.27 ac	Rock Outcrop (RO): 7.79 ac	Cattails (CAT): 1.53 ac			
	Ornamental (ORN): 8.15 ac	Mulefat Stand (MFS): 0.60 ac			

**Figure 4. Vegetation Communities Map**  
Agua Mansa Commerce Park, Jurupa Valley, CA



## APPENDICES

## **Appendix A – Wetland Delineation Data Forms**

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/11/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: UP1  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): quarry borrow area Local relief (concave, convex, none): undulating Slope (%): 2-15  
 Subregion (LRR): C - Mediterranean California Lat: 34.029437135 Long: -117.380283815 Datum: WGS84  
 Soil Map Unit Name: DaD2 - Delhi Fine Sands NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	
Remarks: Area is in a low-lying U-shaped "saddle" between two rocky berms/spoils created by quarry operations that supports mulefat and tamarisk scrub cover (i.e., CDFW riparian), but does not exhibit wetland indicators.			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)			
4.							
Total Cover: <u>    </u> %							
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>			
1. <i>Baccharis salicifolia</i>	60	Yes	FAC	Total % Cover of:		Multiply by:	
2. <i>Tamarix ramosissima</i>	20	Yes	UPL				
3.				OBL species	<u>    </u> x 1 =	<u>0</u>	
4.				FACW species	<u>    </u> x 2 =	<u>0</u>	
5.				FAC species	<u>60</u> x 3 =	<u>180</u>	
Total Cover: <u>80 %</u>				FACU species	<u>    </u> x 4 =	<u>0</u>	
<u>Herb Stratum</u>				UPL species	<u>20</u> x 5 =	<u>100</u>	
1.				Column Totals:	<u>80</u> (A)	<u>280</u> (B)	
2.				Prevalence Index = B/A = <u>3.50</u>			
3.				<b>Hydrophytic Vegetation Indicators:</b>			
4.				<input checked="" type="checkbox"/> Dominance Test is >50%			
5.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
6.				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
7.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
8.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
Total Cover: <u>    </u> %				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>			
<u>Woody Vine Stratum</u>							
1.							
2.							
Total Cover: <u>    </u> %							
% Bare Ground in Herb Stratum <u>80 %</u>		% Cover of Biotic Crust <u>    </u> %					

Remarks: 20% cover unknown thatch in herb layer.



## SOIL

Sampling Point: UP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input checked="" type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Water-Stained Leaves (B9)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Water-Stained Leaves (B9)				
<b>Field Observations:</b>				
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):		
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):		
Saturation Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):		
(includes capillary fringe)			<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks: Phreatophytic plants that are not supported by near-surface (upper 12 inches) ground water table. Drainage pattern formed from mining activities.				

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/11/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: UP2  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): quarry pit Local relief (concave, convex, none): concave Slope (%): 0-1  
 Subregion (LRR): C - Mediterranean California Lat: 34.026884865 Long: -117.38095494 Datum: WGS84  
 Soil Map Unit Name: QU - Quarry NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks: Non-wetland riparian area (CDFW jurisdiction) at the base of an approximately 50 ft deep quarry pit.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <i>Populus fremontii</i>	15	Yes	UPL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>6</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7 %</u> (A/B)			
4.							
Total Cover: <u>15 %</u>							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. <i>Salix lasiandra</i>	15	Yes	FACW	Total % Cover of: <u>15</u> Multiply by: <u>x 1 = 0</u>			
2. <i>Tamarix ramosissima</i>	20	Yes	UPL	FACW species <u>15</u> x 2 = <u>30</u>			
3. <i>Encelia farinosa</i>	1	No	UPL	FAC species <u>1</u> x 3 = <u>0</u>			
4.				FACU species <u>10</u> x 4 = <u>40</u>			
5.				UPL species <u>62</u> x 5 = <u>310</u>			
Total Cover: <u>36 %</u>				Column Totals: <u>87</u> (A) <u>380</u> (B)			
Herb Stratum				Prevalence Index = B/A = <u>4.37</u>			
1. <i>Centaurea melitensis</i>	15	Yes	UPL	Hydrophytic Vegetation Indicators:			
2. <i>Marrubium vulgare</i>	10	Yes	FACU	<input checked="" type="checkbox"/> Dominance Test is >50%			
3. <i>Sisymbrium irio</i>	10	Yes	UPL	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
4. <i>Croton californicus</i>	1	No	UPL	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
5.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
7.							
8.							
Total Cover: <u>36 %</u>							
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>			
1.							
2.							
Total Cover: <u>  </u> %							
% Bare Ground in Herb Stratum <u>64 %</u>		% Cover of Biotic Crust <u>0 %</u>					

Remarks: Woody riparian canopy and weedy herbaceous understory with remnants of brittlebrush scrub.

## SOIL

Sampling Point: UP2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR5/4	100	--	--			silty sand	quartz granules in matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☐ No ☒

Remarks: Well drained, sandy soils with no redox. Not hydric.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input type="checkbox"/> Surface Water (A1)                            | <input type="checkbox"/> Salt Crust (B11)                              |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☒ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Quarry pit with no outlet = secondary hydro indicator of drainage pattern However, no other indicators were observed.  
Criterion not met.



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/11/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL1  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): quarry pit Local relief (concave, convex, none): concave Slope (%): 0-3  
 Subregion (LRR): C - Mediterranean California Lat: 34.024468871 Long: -117.382029065 Datum: WGS84  
 Soil Map Unit Name: QU - Quarry NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Remarks: Sampled area is within low lying portion of limestone quarry pit partially surrounded by vertical rock walls. Supports nearly monotypic stand of cattail (with ruderal components along drier edges) that is permanently to semipermanently inundated. Based on landscape position and lack of connectivity to a WOUS, this feature is isolated from 404 jurisdiction.			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)			
4.							
Total Cover: <u>    </u> %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1.				Total % Cover of:		Multiply by:	
2.				OBL species	<u>80</u>	x 1 =	<u>80</u>
3.				FACW species		x 2 =	<u>0</u>
4.				FAC species	<u>10</u>	x 3 =	<u>30</u>
5.				FACU species	<u>2</u>	x 4 =	<u>8</u>
Total Cover: <u>    </u> %				UPL species	<u>4</u>	x 5 =	<u>20</u>
				Column Totals:	<u>96</u>	(A)	<u>138</u> (B)
				Prevalence Index = B/A = <u>1.44</u>			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <i>Typha domingensis</i>	<u>80</u>	<u>Yes</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
2. <i>Sonchus asper</i>	<u>10</u>	<u>No</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3. <i>Hirschfeldia incana</i>	<u>2</u>	<u>No</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4. <i>Marrubium vulgare</i>	<u>2</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. <i>Centaurea melitensis</i>	<u>2</u>	<u>No</u>	<u>UPL</u>				
6.							
7.							
8.							
Total Cover: <u>96</u> %							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1.				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>			
2.							
Total Cover: <u>    </u> %							
% Bare Ground in Herb Stratum <u>4</u> %		% Cover of Biotic Crust <u>0</u> %					

Remarks: Pure stand of Southern cattail dominates quarry pit bottom. Likely attributed to sustained drought period, dry season upland plants have colonized areas of toppled and dry cattail thatch. Riparian edge along the base of rock wall slope.

## SOIL

Sampling Point: WL1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR6/2	100					silty clay	large pore spaces, undecomposed
4-6	2.5Y7/2	75	10YR6/6	25	C	M	silty clay	hard/dry due to drought
6							bedrock	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)               |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |  |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: rock

Depth (inches): 6

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: Depositional quarry process spoils (blue-grey color) comprised primarily of poorly drained silty clay above 6 in. Depleted matrix with distinct redox.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input type="checkbox"/> Surface Water (A1)                              | <input type="checkbox"/> Salt Crust (B11)                              |
| <input checked="" type="checkbox"/> High Water Table (A2)                | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input checked="" type="checkbox"/> Saturation (A3)                      | <input checked="" type="checkbox"/> Aquatic Invertebrates (B13)        |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)                  | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)               | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                        | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)       | <input checked="" type="checkbox"/> Other (Explain in Remarks)         |
| <input type="checkbox"/> Water-Stained Leaves (B9)                       |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<u>0</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	<u>0</u>

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Saturation to surface and high water table observed during July 21-22 site visits.

Remarks: Bottom of quarry pit is ponded for significant portions of rainy season during years with normal rainfall. Runs off to low end to the west where cattails remain green year-round and persist in permanently inundated to saturated conditions. Low site elevation of this basin causes seasonal intersection with groundwater table.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/12/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL2  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): quarry pit Local relief (concave, convex, none): concave Slope (%): 0-5  
 Subregion (LRR): C - Mediterranean California Lat: 34.02452049 Long: -117.381369949 Datum: WGS84  
 Soil Map Unit Name: QU - Quarry NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		
Remarks: Isolated riparian wetland at low lying portion of limestone quarry pit.				

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. <i>Salix lasiolepis</i>	20	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)			
2. <i>Salix lasiandra</i>	30	Yes	FACW	Total Number of Dominant Species Across All Strata: 4 (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)			
4.							
Total Cover: 50 %							
Sapling/Shrub Stratum				Prevalence Index worksheet:			
1. <i>Salix lasiandra</i>	15	Yes	FACW	Total % Cover of: Multiply by:			
2.				OBL species	10	x 1 =	10
3.				FACW species	65	x 2 =	130
4.				FAC species		x 3 =	0
5.				FACU species		x 4 =	0
Total Cover: 15 %				UPL species		x 5 =	0
				Column Totals:	75	(A)	140 (B)
				Prevalence Index = B/A = 1.87			
Herb Stratum				Hydrophytic Vegetation Indicators:			
1. <i>Typha domingensis</i>	10	Yes	OBL	<input checked="" type="checkbox"/> Dominance Test is >50%			
2.				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
3.				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
4.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5.							
6.							
7.							
8.							
Total Cover: 10 %							
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
1.				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>			
2.							
Total Cover: %							
% Bare Ground in Herb Stratum 90 %			% Cover of Biotic Crust 0 %				

Remarks: Transitional area between emergent wetland and riparian wetland.



## SOIL

Sampling Point: WL2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR6/2	100					silty loam	crumbly, large pore spaces
4-8	2.5Y7/2	98	10YR5/6	2	C	M	silty clay	moist, ribbon forming
8-18	2.5Y7/2	70	10YR5/6	30	C	M	silty clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)               |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |  |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: High undecomposed OM content in poorly drained silty clay indicates anaerobic soil conditions. Depleted matrix with soft iron masses.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |   |  |
|---|--|
| <input type="checkbox"/> Surface Water (A1)                                       | <input type="checkbox"/> Salt Crust (B11)                              |
| <input checked="" type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input checked="" type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )                  | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )               | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                                 | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☐ No ☒

Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☒ No ☐Depth (inches): 0Saturation Present? Yes ☒ No ☐  
(includes capillary fringe)Depth (inches): 0**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Observed saturation to surface during site visits conducted on July 21-22.

Remarks: Closed basin with no outlet - expected to hold water (at least as saturation) for extended periods throughout wet season. Soil moist below 5 inches. Low site elevation of this basin causes seasonal intersection with groundwater table.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/12/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL3  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): gravel parking lot Local relief (concave, convex, none): none Slope (%): 0-1  
 Subregion (LRR): C - Mediterranean California Lat: 34.03225257 Long: -117.389151707 Datum: WGS84  
 Soil Map Unit Name: Db - Delhi fine sand NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Remarks: Isolated wetland supported entirely by nuisance flows caused by leaking underground pipe or other cement plant water infrastructure. Feature is adjacent to well house.			

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)			
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)			
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0 %</u> (A/B)			
4. _____	_____	_____	_____	Total Cover: <u>_____</u> %			
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:			
1. <i>Salix lasiolepis</i>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____			
2. <i>Salix goodingii</i>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	OBL species	<u>85</u>	x 1 =	<u>85</u>
3. <i>Tamarix ramosissima</i>	<u>1</u>	<u>No</u>	<u>UPL</u>	FACW species	<u>40</u>	x 2 =	<u>80</u>
4. <i>Baccharis salicifolia</i>	<u>1</u>	<u>No</u>	<u>FAC</u>	FAC species	<u>2</u>	x 3 =	<u>6</u>
5. _____	_____	_____	_____	FACU species	_____	x 4 =	<u>0</u>
Total Cover: <u>22 %</u>				UPL species	<u>1</u>	x 5 =	<u>5</u>
<u>Herb Stratum</u>				Column Totals:	<u>128</u>	(A)	<u>176</u> (B)
1. <i>Typha latifolia</i>	<u>85</u>	<u>Yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>1.38</u>			
2. <i>Epilobium ciliatum ssp. ciliatum</i>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:			
3. <i>Artemisia douglasiana</i>	<u>1</u>	<u>No</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>			
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
Total Cover: <u>106 %</u>							
<u>Woody Vine Stratum</u>							
1. _____	_____	_____	_____				
2. _____	_____	_____	_____				
Total Cover: <u>_____</u> %							
% Bare Ground in Herb Stratum <u>0 %</u> % Cover of Biotic Crust <u>0 %</u>							

Remarks: Dense patch of cattail (overlapping herbaceous layer) with willow overstory. Gravel lot - plants growing through cracks

## SOIL

Sampling Point: WL3

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)

- |                          |   |                          |                            |
|--------------------------|---|--------------------------|----------------------------|
| <input type="checkbox"/> | Histosol (A1)                           | <input type="checkbox"/> | Sandy Redox (S5)           |
| <input type="checkbox"/> | Histic Epipedon (A2)                    | <input type="checkbox"/> | Stripped Matrix (S6)       |
| <input type="checkbox"/> | Black Histic (A3)                       | <input type="checkbox"/> | Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> | Hydrogen Sulfide (A4)                   | <input type="checkbox"/> | Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> | Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> | Depleted Matrix (F3)       |
| <input type="checkbox"/> | 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> | Redox Dark Surface (F6)    |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11)       | <input type="checkbox"/> | Depleted Dark Surface (F7) |
| <input type="checkbox"/> | Thick Dark Surface (A12)                | <input type="checkbox"/> | Redox Depressions (F8)     |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1)                | <input type="checkbox"/> | Vernal Pools (F9)          |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4)                |                          |                            |

#### Indicators for Problematic Hydric Soils:<sup>4</sup>

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☒ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

## Restrictive Layer (if present):

Type:

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks: Gravel lot - could not dig. Meets problematic soil definition since hydro and hydrophytic plant criteria are met.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1)                 | <input type="checkbox"/> Salt Crust (B11)                              |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input checked="" type="checkbox"/> Saturation (A3)                    | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

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Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?      Yes ☒      No ☐

Depth (inches): 2

Water Table Present? Yes ☐ No ☒

Depth (inches):

Saturation Present? Yes ☒ No ☐

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydro source is artificial - leaking to ground surface (not a high water table).



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/12/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL4  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): open field Local relief (concave, convex, none): none Slope (%): 0-1  
 Subregion (LRR): C - Mediterranean California Lat: 34.029172082 Long: -117.3861108 Datum: WGS84  
 Soil Map Unit Name: DaD2 - Delhi fine sand, 2 to 15 percent slopes, wind-eroded NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/>	No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Sampled area is adjacent to well house and is created by failed water infrastructure/broken above ground pipes associated with the cement processing facility, which is located directly to the east. Isolated from CWA 404 JD and artificially created wetland feature with disturbed/graded soils.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>Washingtonia filifera</i>	20	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. <i>Eucalyptus globulus</i>	15	Yes	UPL	Total Number of Dominant Species Across All Strata:	3 (B)
3. <i>Alnus rhombifolia</i>	5	No	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 % (A/B)
4. _____					
Total Cover: 40 %					
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species 90	x 1 = 90
3. _____				FACW species 5	x 2 = 10
4. _____				FAC species 20	x 3 = 60
5. _____				FACU species 10	x 4 = 40
Total Cover: %				UPL species 15	x 5 = 75
				Column Totals: 140 (A)	275 (B)
				Prevalence Index = B/A = 1.96	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <i>Typha latifolia</i>	90	Yes	OBL	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <i>Erigeron canadensis</i>	10	No	FACU	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. _____				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____					
7. _____					
8. _____					
Total Cover: 100%					
Woody Vine Stratum				Hydrophytic Vegetation Present?	
1. _____				Yes <input checked="" type="radio"/>	No <input type="radio"/>
2. _____					
Total Cover: %					
% Bare Ground in Herb Stratum 0 %			% Cover of Biotic Crust 0 %		
Remarks: Dense patch of dry/toppled/multilayered cattail with eucalyptus and CA fan palm overstory. Other species in the area include <i>Populus fremontii</i> and <i>Helianthus annuus</i> .					

## SOIL

Sampling Point: WL4**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-12	10YR5/2	100					silty loam	crumbly texture with large pores pebbles in matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☒ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**Type: concreteDepth (inches): 12**Hydric Soil Present?** Yes ☒ No ☐

Remarks: Meets problematic hydric soil criteria because hydrophytic veg and hydrology are met. Soils are not a reliable wetland indicator at this location due to past grading activities.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |   |  |
|---|--|
| <input type="checkbox"/> Surface Water (A1)                                       | <input type="checkbox"/> Salt Crust (B11)                              |
| <input type="checkbox"/> High Water Table (A2)                                    | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)  | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )                  | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )               | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                                 | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Artificial hydrology source is a broken, leaking above ground pipe that is part of the cement processing infrastructure (Gray Finish Mill #2). If water leak was shut off, this feature would not persist.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/12/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL5  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): lake edge/terrace Local relief (concave, convex, none): concave Slope (%): 0-50  
 Subregion (LRR): C - Mediterranean California Lat: 34.02269097 Long: -117.3849032 Datum: WGS84  
 Soil Map Unit Name: QU - Quarry NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>		
Remarks: Closed quarry pit - no hydrologic connection to a WOUS.				

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>Salix lasiandra</i>	10	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2.				Total Number of Dominant Species Across All Strata:	3 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0 % (A/B)
4.					
Total Cover:			10 %		
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. <i>Baccharis salicifolia</i>	5	Yes	FAC	Total % Cover of:	Multiply by:
2.				OBL species	60 x 1 = 60
3.				FACW species	10 x 2 = 20
4.				FAC species	5 x 3 = 15
5.				FACU species	x 4 = 0
Total Cover:			5 %	UPL species	2 x 5 = 10
				Column Totals:	77 (A) 105 (B)
Herb Stratum				Prevalence Index = B/A = 1.36	
1. <i>Typha domingensis</i>	60	Yes	OBL	Hydrophytic Vegetation Indicators:	
2. <i>Pennisetum setaceum rubrum</i>	2	No	UPL	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
3.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
4.				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
5.					
6.					
7.					
8.					
Total Cover:			62 %		
Woody Vine Stratum					
1.					
2.					
Total Cover:			%		
% Bare Ground in Herb Stratum			38 %	% Cover of Biotic Crust	
				0 %	
Remarks: Cattail rooted in eroded quarry soils within aquatic environment. Cattail patches occur around entire lake within inaccessible areas below shear walls. Obligate hydrophytes rooted in 2-3' deep water along edge of lake.					



## SOIL

Sampling Point: WL5**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR5/2	100					silty sand	erosional deposition

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☒ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**Type: bedrockDepth (inches): 4**Hydric Soil Present?** Yes ☒ No ☐

Remarks: Sandy and rocky soils from erosional deposition - unable to dig below 4 in. Considered to meet problematic criteria since hydrophytic veg and hydrology criteria are met.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              |
| <input checked="" type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input checked="" type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )        | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )           | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                             | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                            |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☒ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☒ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☒ No ☐  
 Water Table Present? Yes ☒ No ☐  
 Saturation Present? Yes ☒ No ☐  
 (includes capillary fringe)

Depth (inches): 24-36  
 Depth (inches): 200  
 Depth (inches): 0

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Lake is up to 200' deep. Surrounded by shear rock walls, some nearly vertical and inaccessible.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Agua Mansa Commerce Park City/County: Jurupa Valley/Riverside Sampling Date: 10/12/16  
 Applicant/Owner: Viridian Partners/Riverside Cement Company State: CA Sampling Point: WL6  
 Investigator(s): Laura Moran and Amy Parravano Section, Township, Range: S3, T2S, R5W  
 Landform (hillslope, terrace, etc.): quarry lake terrace Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR): C - Mediterranean California Lat: 34.02362488 Long: -117.3852694 Datum: WGS84  
 Soil Map Unit Name: QU - Quarry NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="radio"/>	No <input type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>			
Remarks: Sample point collected along edge of quarry lake. This feature meets Corps criteria but is physically isolated from CWA 404 JD.					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)			
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)			
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7 %</u> (A/B)			
4.							
Total Cover: <u>    </u> %							
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>			
1. <i>Baccharis salicina</i>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of:		Multiply by:	
2. <i>Populus fremontii</i>	<u>10</u>	<u>Yes</u>	<u>UPL</u>	OBL species	<u>55</u>	x 1 =	<u>55</u>
3. <i>Ficus, sp.</i>	<u>5</u>	<u>No</u>	<u>UPL</u>	FACW species	<u>15</u>	x 2 =	<u>30</u>
4.				FAC species	<u>10</u>	x 3 =	<u>30</u>
5.				FACU species	<u>4</u>	x 4 =	<u>16</u>
Total Cover: <u>30 %</u>				UPL species	<u>17</u>	x 5 =	<u>85</u>
<u>Herb Stratum</u>				Column Totals:	<u>101</u>	(A)	<u>216</u> (B)
1. <i>Typha domingensis</i>	<u>55</u>	<u>Yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u>2.14</u>			
2. <i>Baccharis salicifolia</i>	<u>10</u>	<u>No</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>			
3. <i>Cirsium vulgare</i>	<u>2</u>	<u>No</u>	<u>FACU</u>	<input checked="" type="checkbox"/> Dominance Test is >50%			
4. <i>Pennisetum setaceum rubrum</i>	<u>2</u>	<u>No</u>	<u>UPL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>			
5. <i>Ricinus communis</i>	<u>2</u>	<u>No</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
6.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
7.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.			
8.							
Total Cover: <u>71 %</u>				<b>Hydrophytic Vegetation Present?</b>			
<u>Woody Vine Stratum</u>				Yes <input checked="" type="radio"/> No <input type="radio"/>			
1.							
2.							
Total Cover: <u>    </u> %							
% Bare Ground in Herb Stratum <u>29 %</u>		% Cover of Biotic Crust <u>0 %</u>					

Remarks: Cattail-dominated wetland fringe surrounding quarry lake with riparian overstory.

## SOIL

Sampling Point: WL6**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR5/2	85	7.5YR4/6	15	C	RC	silty clay	high OM content
4-8	2.5Y6/2	80	7.5YR4/6	20	C	M	sandy clay	
8+	2.5Y6/2	60	N4/1	40	RM	M	sandy clay	gleyed matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)          |
| <input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)     | <input type="checkbox"/> Vernal Pools (F9)               |
| <input checked="" type="checkbox"/> Sandy Gleyed Matrix (S4)     |  |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: Depositional edge of quarry lake with anaerobic soils. 4" thick undecomposed organic layer.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |   |   |
|---|---|
| <input type="checkbox"/> Surface Water (A1)                                   | <input type="checkbox"/> Salt Crust (B11)   |
| <input checked="" type="checkbox"/> High Water Table (A2)                     | <input checked="" type="checkbox"/> Biotic Crust (B12)                            |
| <input checked="" type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                              |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                               |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )        | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )           | <input type="checkbox"/> Presence of Reduced Iron (C4)                            |
| <input type="checkbox"/> Surface Soil Cracks (B6)                             | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)               |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                               |
| <input type="checkbox"/> Water-Stained Leaves (B9)                            |   |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☐ No ☒Depth (inches): 0Water Table Present? Yes ☒ No ☐Depth (inches): 3Saturation Present? Yes ☒ No ☐  
(includes capillary fringe)Depth (inches): 0**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Sampled area was saturated to the surface on 7/21/16

Remarks: Edge of quarry lake ("Crestmore Lake") with permanently saturated stand of cattails.



## **Appendix B – Delineation of Jurisdictional Waters of the U.S.**



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Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |



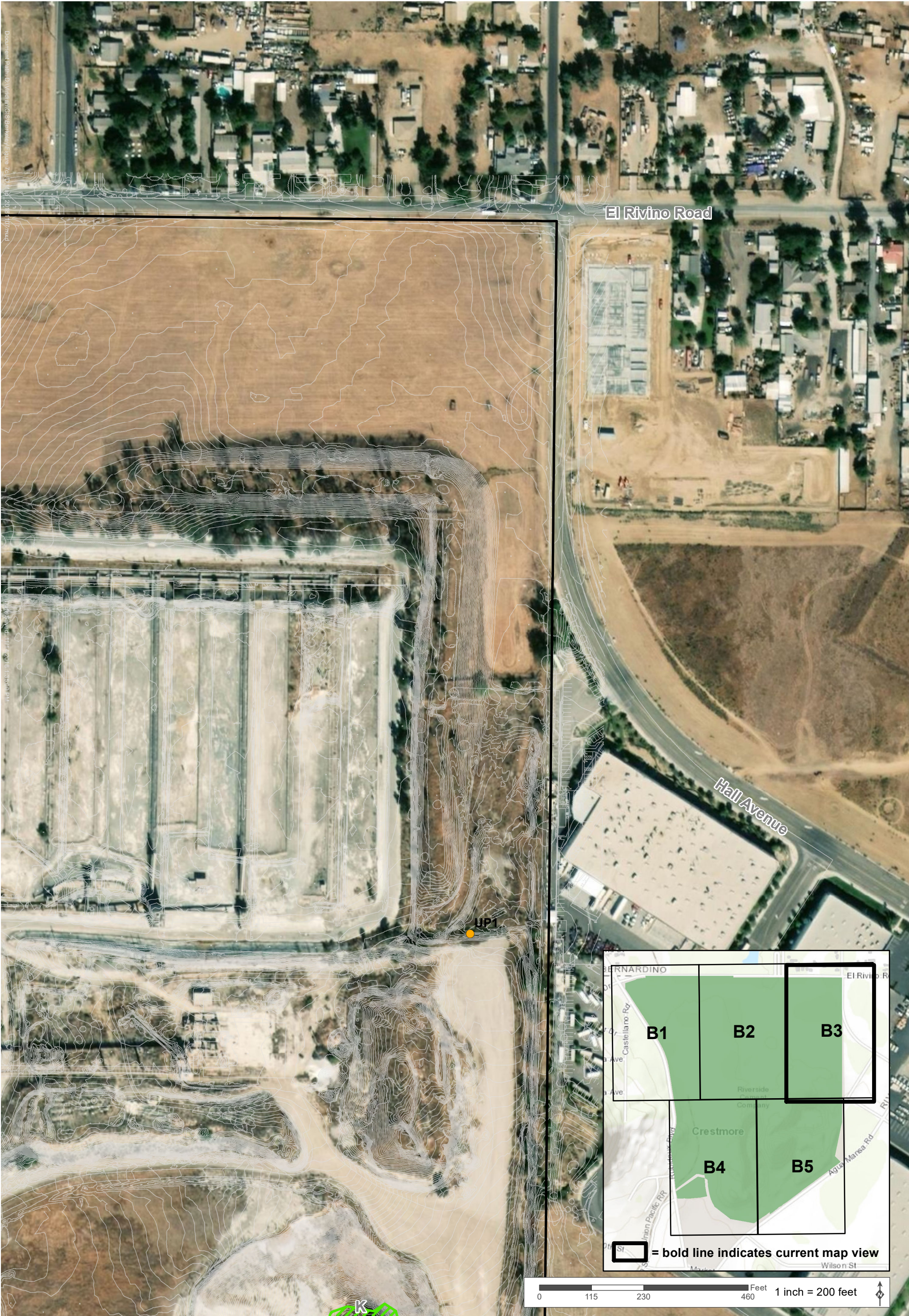
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Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

### Appendix B3. Jurisdictional Delineation Map

Agua Mansa Commerce Park, Jurupa Valley, CA



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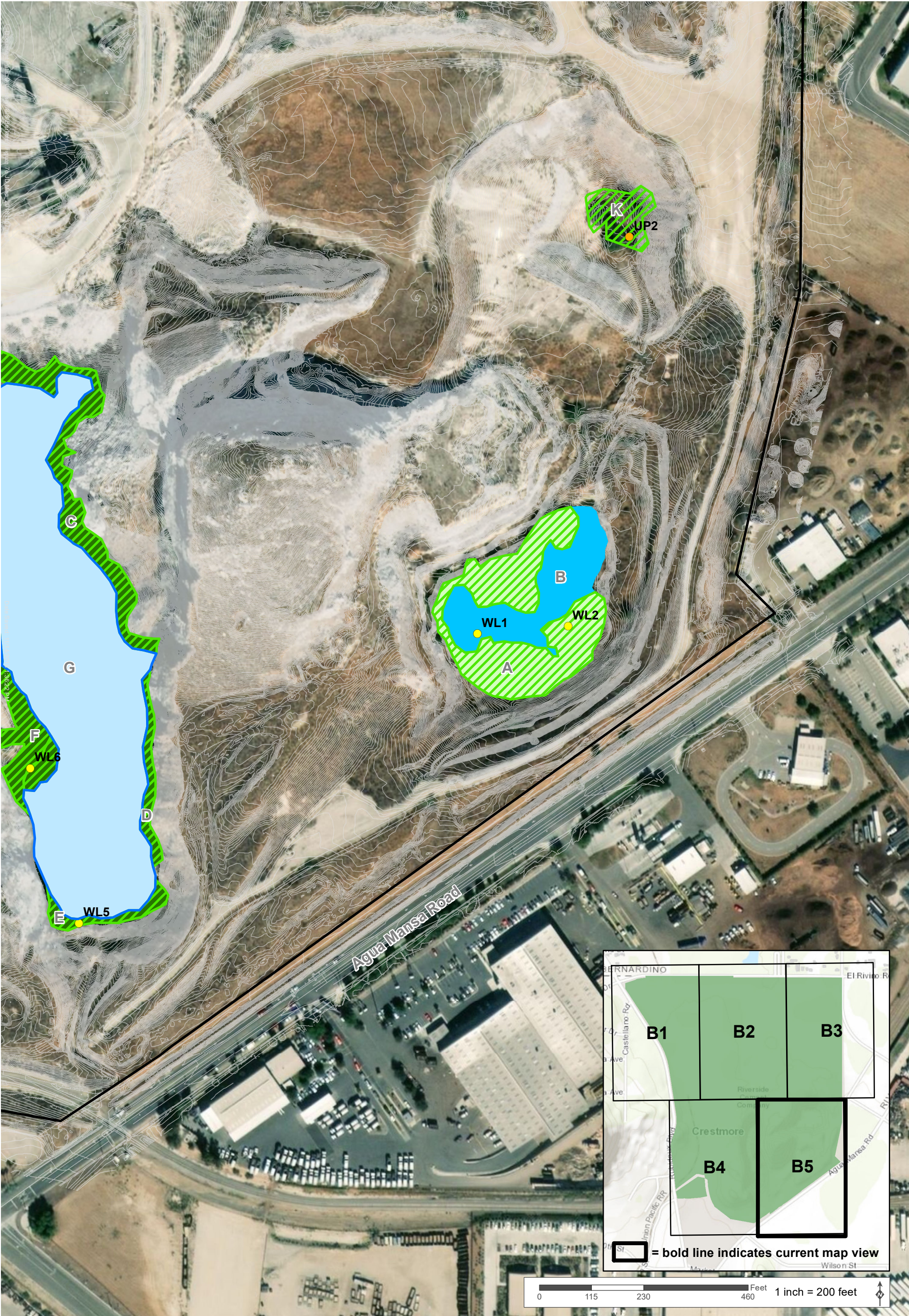
Date Saved: 11/14/2018 1:35:59 PM



Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |  |  |
|------------------------------------|--|--|
| Project Site Boundary* (302.12 ac) | CDFW Jurisdiction (10.97 ac)                               | Isolated from Section 404 Jurisdiction (10.64 ac)                |
| Ordinary High Water Mark (OHWM)    | CDFW Riparian (4.67 ac)                                    | Freshwater Emergent Wetland (1.01 ac)                            |
| Wetland Sample Point (WL1-WL6)     | CDFW Lake (Crestmore Lake) (6.30 ac)                       | Freshwater Emergent-Riparian Lacustrine Fringe Wetland (1.80 ac) |
| Upland Sample Point (UP1-UP2)      | Non-Jurisdictional Features (0.42 ac)                      | Perennial Other Waters (Crestmore Lake) (6.30 ac)                |
|                                    | Artificially Created Freshwater Emergent Wetland (0.42 ac) | Riparian Wetland (1.54 ac)                                       |

## Appendix B5. Jurisdictional Delineation Map

Agua Mansa Commerce Park, Jurupa Valley, CA



## **Appendix C – Summary Table of Wetland and Water Features**

**Appendix C. Summary Table of Wetland and Water Features**

Feature ID	Area (Acres)	Length (feet)	CWA 404/401 Feature Type	CWA 404 Jurisdiction	NWI Classification	CDFW Feature Type	CDFW Jurisdiction
A	1.536	N/A	Riparian	Isolated	PSSJx	Riparian	Yes
B	1.005	N/A	Freshwater emergent wetland	Isolated	PEMFx	Riparian	Yes
C	0.771	N/A	Freshwater emergent-riparian lacustrine fringe wetland	Isolated	PEM/SSFx	Riparian	Yes
D	0.177	N/A	Freshwater emergent-riparian lacustrine fringe wetland	Isolated	PEM/SSFx	Riparian	Yes
E	0.158	N/A	Freshwater emergent-riparian lacustrine fringe wetland	Isolated	PEM/SSFx	Riparian	Yes
F	0.690	N/A	Freshwater emergent-riparian lacustrine fringe wetland	Isolated	PEM/SSFx	Riparian	Yes
G	6.304	N/A	Perennial other waters (Crestmore Lake)	Isolated	LRBHx	Lake	Yes
H	0.066	N/A	Artificially created freshwater emergent wetland	Non-Jurisdictional	PEMK	N/A	No
I	0.053	N/A	Artificially created freshwater emergent wetland	Non-Jurisdictional	PEMK	N/A	No
J	0.299	N/A	Artificially created freshwater emergent wetland	Non-Jurisdictional	PEMK	N/A	No
K	0.318	1,639	Ephemeral other waters	Potentially Jurisdictional	R4SB7Kx	N/A	N/A
L	0.060	269	Ephemeral other waters	Potentially Jurisdictional	R4SB7Kx	N/A	N/A
M	0.580	647	Streambed	N/A	N/A	Streambed	Yes
N	1.479	1,700	Streambed	N/A	N/A	Streambed	Yes
O	0.332		Riparian	N/A	N/A	Riparian	Yes

## **Appendix D – Plant Species Observed During Wetland Delineation Surveys**



Appendix D. Plants observed during the jurisdictional delineation conducted on July 21, and October 11-12, 2016 and April 17-18, 2017.

<i>Scientific Name</i>	<i>Common Name</i>	<i>Wetland Indicator Status</i>
<i>Acmispon glaber</i>	deerweed	UPL
<i>Acourtia microcephala</i>	sacapellote	UPL
<i>Adenostoma fasciculatum</i>	chamise	UPL
<i>Ailanthus altissima</i>	tree of heaven	FACU
<i>Alnus rhombifolia</i>	White alder	FACW
<i>Ambrosia acanthicarpa</i>	Annual burrweed	UPL
<i>Ambrosia artemisiifolia</i>	Common ragweed	FACU
<i>Ambrosia psilostachya</i>	western ragweed	FACU
<i>Amsinckia menziesii</i> ssp. <i>intermedia</i>	common fiddleneck	UPL
<i>Artemisia californica</i>	California sagebrush	UPL
<i>Artemisia douglasiana</i>	mugwort	FAC
<i>Arundo donax</i>	Giant cane	FACW
<i>Atriplex lentiformis</i>	Big saltbush	FAC
<i>Avena barbata</i>	Slender wild oats	UPL
<i>Avena fatua</i>	Wild oats	UPL
<i>Baccharis salicifolia</i>	mulefat	FAC
<i>Baccharis salicina</i>	Emory baccharis	FACW
<i>Brickellia californica</i>	California brickellbush	FACU
<i>Bromus diandrus</i>	ripgut grass	UPL
<i>Bromus hordeaceus</i>	soft chess	FACU
<i>Bromus madritensis</i> spp. <i>rubens</i>	red brome	UPL
<i>Centaurea melitensis</i>	totalote	UPL
<i>Chenopodium album</i>	lamb's quarters	FACU
<i>Cirsium vulgare</i>	Bull thistle	FACU
<i>Corethrogyne filaginifolia</i>	Common sandaster	UPL
<i>Croton californicus</i>	California croton	UPL
<i>Croton setiger</i>	Turkey mullein	UPL
<i>Cupressus sempervirens</i>	Mediterranean cypress	UPL
<i>Cylindropuntia echinocarpa</i>	cholla	UPL
<i>Cynodon dactylon</i>	Bermuda grass	FACU
<i>Cyperus eragrostis</i>	umbrella sedge	FACW
<i>Datura wrightii</i>	false jimson weed	UPL
<i>Digitaria sanguinalis</i>	Hairy crabgrass	FACU
<i>Eleusine indica</i>	Indian goosegrass	UPL
<i>Encelia farinosa</i>	brittlebush	UPL
<i>Epilobium ciliatum</i>	willow herb	FACW
<i>Ericameria linearifolia</i>	Interior goldenbush	UPL
<i>Erigeron canadensis</i>	horseweed	FACU
<i>Eriodictyon californicum</i>	yerba santa	UPL
<i>Eriogonum fasciculatum</i>	California buckwheat	UPL
<i>Erodium botrys</i>	broad leaf filaree	FACU
<i>Erodium cicutarium</i>	red-stemmed filaree	UPL
<i>Eucalyptus camaldulensis</i>	Red gum	UPL
<i>Eucalyptus globulus</i>	Blue gum	FAC
<i>Eucalyptus rudis</i>	Flooded gum	UPL

<i>Scientific Name</i>	<i>Common Name</i>	<i>Wetland Indicator Status</i>
<i>Eucalyptus tereticornis</i>	Forest red gum	UPL
<i>Eucalyptus viminalis</i>	ribbon gum	UPL
<i>Fraxinus uhdei</i>	Shamel ash	UPL
<i>Gleditsia triacanthos</i>	honey locust	FAC
<i>Hedera helix</i>	Common ivy	FACU
<i>Helianthus annuus</i>	annual sunflower	FACU
<i>Hesperoyucca whipplei</i>	chaparral yucca	UPL
<i>Heterotheca grandiflora</i>	telegraph weed	UPL
<i>Hirschfeldia incana</i>	short pod mustard	UPL
<i>Hordeum murinum</i>	Foxtail barley	FACU
<i>Juglans californica</i>	Southern California walnut	FACU
<i>Lactuca serriola</i>	Prickly lettuce	FACU
<i>Lamarckia aurea</i>	Goldentop grass	FACU
<i>Lantana camara</i>	lantana	FACU
<i>Lepidospartum squamatum</i>	scalebroom	FACU
<i>Malva parviflora</i>	cheeseweed	UPL
<i>Marrubium vulgare</i>	horehound	FACU
<i>Matricaria discoides</i>	Pineapple weed	UPL
<i>Melilotus albus</i>	White sweetclover	UPL
<i>Melilotus officinalis</i>	yellow sweetclover	FACU
<i>Nerium oleander</i>	oleander	UPL
<i>Nicotiana glauca</i>	tree tobacco	FAC
<i>Oncosiphon piluliferum</i>	stinknet	FACU
<i>Opuntia littoralis</i>	coastal prickly pear	UPL
<i>Parkinsonia aculeata</i>	Mexican palo verde	FAC
<i>Pennisetum setaceum</i>	African fountain grass	UPL
<i>Phacelia sp.</i>		
<i>Plantago major</i>	Broadleaf plantain	FAC
<i>Populus fremontii</i>	Fremont cottonwood	UPL
<i>Raphanus sativus</i>	wild radish	UPL
<i>Ricinus communis</i>	castor bean	FACU
<i>Salix gooddingii</i>	black willow	FACW
<i>Salix lasiandra</i>	yellow willow	FACW
<i>Salix lasiolepis</i>	Arroyo willow	FACW
<i>Salsola tragus</i>	Russian thistle	FACU
<i>Schinus molle</i>	Peruvian pepper tree	FACU
<i>Schinus terebinthifolius</i>	Brazilian pepper tree	FAC
<i>Schismus arabicus</i>	Arabian schismus	UPL
<i>Schismus barbatus</i>	Common Mediterranean grass	UPL
<i>Sisymbrium irio</i>	London rocket	UPL
<i>Sisymbrium orientale</i>	Oriental hedge mustard	UPL
<i>Solanum elaeagnifolium</i>	Silver leaf nightshade	UPL
<i>Strelitzia reginae</i>	Bird of paradise	UPL
<i>Tamarix ramosissima</i>	Mediterranean tamarisk	UPL
<i>Typha domingensis</i>	Southern cattail	OBL
<i>Typha latifolia</i>	cattail	OBL
<i>Verbesina encelioides</i>	golden crownbeard	FACU

<i>Scientific Name</i>	<i>Common Name</i>	<i>Wetland Indicator Status</i>
<i>Vicia villosa ssp. varia</i>	Smooth vetch	UPL
<i>Washingtonia filifera</i>	California fan palm	FAC
<i>Xanthium strumarium</i>	Rough cocklebur	FAC



## **Appendix E – Representative Photographs of Wetland Sample Points**



PHOTOGRAPH 1 - View of sample point CDFW1 in a mulefat-tamarisk in borrow area. No primary/secondary hydrology indicators observed and soils are disturbed/denuded from quarry operations.



PHOTOGRAPH 2 - View of sample point CDFW2 in a quarry pit with non-wetland riparian community. No primary/secondary hydrology indicators observed and soils did not exhibit and redox or other hydric indicators.

## **Attachment E: Representative Project Site Photographs**

*Agua Mansa Park, Crestmore CA*





PHOTOGRAPH 3 - View of sample point WL1 in a freshwater emergent wetland dominated by Southern cattail within a limestone quarry pit.



PHOTOGRAPH 4 - View of sample point WL2 collected in a riparian wetland at the base of a quarry pit.

## Attachment E: Representative Project Site Photographs

*Agua Mansa Park, Crestmore CA*





PHOTOGRAPH 5 - View of sample point WL3 within an artificially created wetland sustained by nuisance flows from cement refinery water infrastructure.



PHOTOGRAPH 6 - View of sample point WL4 located adjacent to broken water pipe within the refinery processing area.

## Attachment E: Representative Project Site Photographs

*Agua Mansa Park, Crestmore CA*





PHOTOGRAPH 7 - View of sample point WL5 in a lacustrine freshwater emergent fringe wetland along Crestmore Lake.



PHOTOGRAPH 8 - View of sample point WL6 within a lacustrine freshwater emergent fringe wetland along Crestmore Lake.

## **Attachment E: Representative Project Site Photographs**

*Agua Mansa Park, Crestmore CA*





PHOTOGRAPH 9 - View of West Riverside Canal segment (Feature L; Appendix B4) located in southwestern portion of Project Site, east of Rubidoux Blvd.



PHOTOGRAPH 10 - View of West Riverside Canal segment along Agua Mansa Rd (Feature K; Appendix B5)

## Attachment E: Representative Project Site Photographs

*Agua Mansa Park, Crestmore CA*



## **Appendix F: USDA NRCS Soils Report**



United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for San Bernardino County Southwestern Part, California, and Western Riverside Area, California



September 14, 2015

# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the



individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map






# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:15,800 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California  
Survey Area Data: Version 6, Sep 26, 2014

Soil Survey Area: Western Riverside Area, California  
Survey Area Data: Version 7, Sep 17, 2014

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 5, 2015—Jan 18, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

San Bernardino County Southwestern Part, California (CA677)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Db	Delhi fine sand	4.4	1.3%
GtC	Greenfield sandy loam, 2 to 9 percent slopes	0.6	0.2%
<b>Subtotals for Soil Survey Area</b>		<b>5.0</b>	<b>1.5%</b>
<b>Totals for Area of Interest</b>		<b>331.1</b>	<b>100.0%</b>

Western Riverside Area, California (CA679)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChF2	Cieneba sandy loam, 15 to 50 percent slopes, eroded	6.6	2.0%
DaD2	Delhi fine sand, 2 to 15 percent slopes, wind-eroded	114.2	34.5%
Db	Delhi fine sand	80.8	24.4%
GP	Gravel pits	7.5	2.3%
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	16.2	4.9%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	0.1	0.0%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	6.0	1.8%
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, eroded	6.5	2.0%
PaC2	Pachappa fine sandy loam, 2 to 8 percent slopes, eroded	2.8	0.8%
QU	Quarries	84.7	25.6%
RaA	Ramona sandy loam, 0 to 2 percent slopes	0.7	0.2%
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	0.2	0.1%
<b>Subtotals for Soil Survey Area</b>		<b>326.1</b>	<b>98.5%</b>
<b>Totals for Area of Interest</b>		<b>331.1</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named

according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or



## Custom Soil Resource Report

anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## San Bernardino County Southwestern Part, California

### Db—Delhi fine sand

#### Map Unit Setting

*National map unit symbol:* hcjq  
*Elevation:* 30 to 1,400 feet  
*Mean annual precipitation:* 10 to 16 inches  
*Mean annual air temperature:* 59 to 64 degrees F  
*Frost-free period:* 225 to 310 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Delhi and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Delhi

##### Setting

*Landform:* Alluvial fans  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy alluvium derived from granite

##### Typical profile

*H1 - 0 to 18 inches:* fine sand  
*H2 - 18 to 60 inches:* sand

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat excessively drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Low (about 4.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* A

#### Minor Components

##### Unnamed

*Percent of map unit:* 5 percent  
*Landform:* Depressions

##### Tujunga, loamy sand

*Percent of map unit:* 5 percent

**Unnamed**

*Percent of map unit: 5 percent*

**GtC—Greenfield sandy loam, 2 to 9 percent slopes**

**Map Unit Setting**

*National map unit symbol: hck0*

*Elevation: 100 to 3,500 feet*

*Mean annual precipitation: 9 to 20 inches*

*Mean annual air temperature: 63 degrees F*

*Frost-free period: 200 to 300 days*

*Farmland classification: Prime farmland if irrigated*

**Map Unit Composition**

*Greenfield and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Greenfield**

**Setting**

*Landform: Alluvial fans*

*Landform position (two-dimensional): Backslope*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Alluvium derived from granite*

**Typical profile**

*H1 - 0 to 16 inches: sandy loam*

*H2 - 16 to 50 inches: fine sandy loam*

*H3 - 50 to 60 inches: sandy loam*

**Properties and qualities**

*Slope: 2 to 9 percent*

*Depth to restrictive feature: More than 80 inches*

*Natural drainage class: Well drained*

*Runoff class: Low*

*Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)*

*Available water storage in profile: Moderate (about 7.9 inches)*

**Interpretive groups**

*Land capability classification (irrigated): 2e*

*Land capability classification (nonirrigated): 3e*

*Hydrologic Soil Group: A*



**Minor Components**

**Unnamed**

*Percent of map unit: 5 percent*

**Hanford**

*Percent of map unit: 5 percent*

**Ramona**

*Percent of map unit: 5 percent*

## Western Riverside Area, California

### ChF2—Cieneba sandy loam, 15 to 50 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* hcsc  
*Elevation:* 500 to 4,000 feet  
*Mean annual precipitation:* 12 to 35 inches  
*Mean annual air temperature:* 57 to 64 degrees F  
*Frost-free period:* 200 to 300 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Cieneba and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Cieneba

##### Setting

*Landform:* Hills  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from igneous rock

##### Typical profile

*H1 - 0 to 14 inches:* sandy loam  
*H2 - 14 to 22 inches:* weathered bedrock

##### Properties and qualities

*Slope:* 15 to 50 percent  
*Depth to restrictive feature:* 10 to 20 inches to paralithic bedrock  
*Natural drainage class:* Somewhat excessively drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Very low (about 1.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* D  
*Ecological site:* SHALLOW LOAMY (1975) (R019XD060CA)

#### Minor Components

##### Friant

*Percent of map unit:* 5 percent

##### Fallbrook

*Percent of map unit:* 5 percent

**Vista**

*Percent of map unit: 5 percent*

**DaD2—Delhi fine sand, 2 to 15 percent slopes, wind-eroded**

**Map Unit Setting**

*National map unit symbol: hcsx*

*Elevation: 200 to 1,400 feet*

*Mean annual precipitation: 13 inches*

*Mean annual air temperature: 63 degrees F*

*Frost-free period: 225 to 310 days*

*Farmland classification: Prime farmland if irrigated*

**Map Unit Composition**

*Delhi and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Delhi**

**Setting**

*Landform: Alluvial fans, dunes*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Linear, convex*

*Parent material: Wind modified alluvium derived from granite*

**Typical profile**

*H1 - 0 to 10 inches: fine sand*

*H2 - 10 to 48 inches: sand*

*H3 - 48 to 60 inches: fine sandy loam*

**Properties and qualities**

*Slope: 2 to 15 percent*

*Depth to restrictive feature: More than 80 inches*

*Natural drainage class: Somewhat excessively drained*

*Runoff class: Very low*

*Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water storage in profile: Low (about 5.0 inches)*

**Interpretive groups**

*Land capability classification (irrigated): 3e*

*Land capability classification (nonirrigated): 4e*

*Hydrologic Soil Group: A*

*Ecological site: SANDY (1975) (R019XD035CA)*



**Minor Components**

**Tujunga**

*Percent of map unit: 5 percent*

**Hilmar**

*Percent of map unit: 5 percent*

**Unnamed**

*Percent of map unit: 5 percent*

**Db—Delhi fine sand**

**Map Unit Setting**

*National map unit symbol: sqq6  
Elevation: 30 to 1,400 feet  
Mean annual precipitation: 10 to 16 inches  
Mean annual air temperature: 59 to 64 degrees F  
Frost-free period: 225 to 310 days  
Farmland classification: Prime farmland if irrigated*

**Map Unit Composition**

*Delhi and similar soils: 85 percent  
Minor components: 15 percent  
Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Delhi**

**Setting**

*Landform: Alluvial fans  
Landform position (two-dimensional): Backslope  
Landform position (three-dimensional): Tread  
Down-slope shape: Linear  
Across-slope shape: Linear  
Parent material: Sandy alluvium derived from granite*

**Typical profile**

*H1 - 0 to 18 inches: fine sand  
H2 - 18 to 60 inches: sand*

**Properties and qualities**

*Slope: 0 to 2 percent  
Depth to restrictive feature: More than 80 inches  
Natural drainage class: Somewhat excessively drained  
Runoff class: Negligible  
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)  
Depth to water table: More than 80 inches  
Frequency of flooding: None  
Frequency of ponding: None  
Available water storage in profile: Low (about 4.4 inches)*

**Interpretive groups**

*Land capability classification (irrigated): 3e*  
*Land capability classification (nonirrigated): 4e*  
*Hydrologic Soil Group: A*

**Minor Components**

**Unnamed**

*Percent of map unit: 5 percent*

**Unnamed**

*Percent of map unit: 5 percent*  
*Landform: Depressions*

**Tujunga, loamy sand**

*Percent of map unit: 5 percent*

**GP—Gravel pits**

**Map Unit Composition**

*Gravel pits: 100 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Gravel Pits**

**Setting**

*Landform position (two-dimensional): Toeslope*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Parent material: Sandy and gravelly alluvium*

**GyC2—Greenfield sandy loam, 2 to 8 percent slopes, eroded**

**Map Unit Setting**

*National map unit symbol: hcvw*  
*Elevation: 100 to 3,500 feet*  
*Mean annual precipitation: 9 to 20 inches*  
*Mean annual air temperature: 63 degrees F*  
*Frost-free period: 200 to 300 days*  
*Farmland classification: Prime farmland if irrigated*

**Map Unit Composition**

*Greenfield and similar soils: 85 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Greenfield

### Setting

*Landform:* Terraces, alluvial fans  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from granite

### Typical profile

*H1 - 0 to 26 inches:* sandy loam  
*H2 - 26 to 43 inches:* fine sandy loam  
*H3 - 43 to 60 inches:* loam  
*H4 - 60 to 72 inches:* stratified loamy sand to sandy loam

### Properties and qualities

*Slope:* 2 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* Moderate (about 8.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* A  
*Ecological site:* LOAMY (1975) (R019XD029CA)

## Minor Components

### Hanford

*Percent of map unit:* 3 percent

### Pachappa

*Percent of map unit:* 3 percent

### Arlington

*Percent of map unit:* 3 percent

### Ramona

*Percent of map unit:* 3 percent

### Unnamed

*Percent of map unit:* 3 percent



## **GyD2—Greenfield sandy loam, 8 to 15 percent slopes, eroded**

### **Map Unit Setting**

*National map unit symbol:* hcvx

*Elevation:* 100 to 3,500 feet

*Mean annual precipitation:* 9 to 20 inches

*Mean annual air temperature:* 63 degrees F

*Frost-free period:* 200 to 300 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Greenfield and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Greenfield**

#### **Setting**

*Landform:* Alluvial fans, terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from granite

#### **Typical profile**

*H1 - 0 to 26 inches:* sandy loam

*H2 - 26 to 43 inches:* fine sandy loam

*H3 - 43 to 60 inches:* loam

#### **Properties and qualities**

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* A

*Ecological site:* LOAMY (1975) (R019XD029CA)

### Minor Components

#### Hanford

*Percent of map unit:* 5 percent

#### Arlington

*Percent of map unit:* 5 percent

#### Pachappa

*Percent of map unit:* 5 percent

## HcC—Hanford coarse sandy loam, 2 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* hcw2

*Elevation:* 150 to 900 feet

*Mean annual precipitation:* 9 to 20 inches

*Mean annual air temperature:* 63 to 64 degrees F

*Frost-free period:* 250 to 280 days

*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Hanford and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hanford

#### Setting

*Landform:* Alluvial fans

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from granite

#### Typical profile

*H1 - 0 to 8 inches:* coarse sandy loam

*H2 - 8 to 40 inches:* fine sandy loam

*H3 - 40 to 60 inches:* stratified loamy sand to coarse sandy loam

#### Properties and qualities

*Slope:* 2 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Moderate (about 7.0 inches)

**Interpretive groups**

*Land capability classification (irrigated): 2e*  
*Land capability classification (nonirrigated): 3e*  
*Hydrologic Soil Group: A*  
*Ecological site: SANDY (R020XD012CA)*

**Minor Components**

**Ramona**

*Percent of map unit: 5 percent*

**Greenfield**

*Percent of map unit: 5 percent*

**Tujunga**

*Percent of map unit: 2 percent*

**Unnamed**

*Percent of map unit: 2 percent*

**Unnamed**

*Percent of map unit: 1 percent*

**HcD2—Hanford coarse sandy loam, 8 to 15 percent slopes, eroded**

**Map Unit Setting**

*National map unit symbol: hcw3*  
*Elevation: 150 to 900 feet*  
*Mean annual precipitation: 9 to 20 inches*  
*Mean annual air temperature: 63 to 64 degrees F*  
*Frost-free period: 250 to 280 days*  
*Farmland classification: Farmland of statewide importance*

**Map Unit Composition**

*Hanford and similar soils: 85 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Hanford**

**Setting**

*Landform: Alluvial fans*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Concave*  
*Across-slope shape: Linear*  
*Parent material: Alluvium derived from granite*

**Typical profile**

*H1 - 0 to 8 inches: coarse sandy loam*  
*H2 - 8 to 40 inches: fine sandy loam*  
*H3 - 40 to 60 inches: stratified loamy sand to coarse sandy loam*



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### Properties and qualities

*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat excessively drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Moderate (about 7.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* A  
*Ecological site:* SANDY (R020XD012CA)

### Minor Components

#### Tujunga

*Percent of map unit:* 5 percent

#### Greenfield

*Percent of map unit:* 5 percent

#### Ramona

*Percent of map unit:* 5 percent

## PaC2—Pachappa fine sandy loam, 2 to 8 percent slopes, eroded

### Map Unit Setting

*National map unit symbol:* hcxp  
*Elevation:* 1,000 feet  
*Mean annual precipitation:* 14 inches  
*Mean annual air temperature:* 63 degrees F  
*Frost-free period:* 270 days  
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Pachappa and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pachappa

#### Setting

*Landform:* Alluvial fans  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from granite

**Typical profile**

*H1 - 0 to 20 inches: fine sandy loam*  
*H2 - 20 to 40 inches: loam*  
*H3 - 40 to 63 inches: fine sandy loam*

**Properties and qualities**

*Slope: 2 to 8 percent*  
*Depth to restrictive feature: More than 80 inches*  
*Natural drainage class: Well drained*  
*Runoff class: Medium*  
*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high*  
*(0.57 to 1.98 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*  
*Frequency of ponding: None*  
*Calcium carbonate, maximum in profile: 5 percent*  
*Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)*  
*Available water storage in profile: Moderate (about 8.4 inches)*

**Interpretive groups**

*Land capability classification (irrigated): 2e*  
*Land capability classification (nonirrigated): 3e*  
*Hydrologic Soil Group: B*  
*Ecological site: LOAMY (1975) (R019XD029CA)*

**Minor Components**

**Hanford**

*Percent of map unit: 5 percent*

**San emigdio**

*Percent of map unit: 5 percent*

**Greenfield**

*Percent of map unit: 5 percent*

**QU—Quarries**

**Map Unit Composition**

*Quarries: 100 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Quarries**

**Setting**

*Down-slope shape: Concave*  
*Across-slope shape: Convex*

**Properties and qualities**

*Depth to restrictive feature: More than 80 inches*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*

*Frequency of ponding:* None

## **RaA—Ramona sandy loam, 0 to 2 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* hcy4

*Elevation:* 250 to 3,500 feet

*Mean annual precipitation:* 10 to 20 inches

*Mean annual air temperature:* 63 degrees F

*Frost-free period:* 230 to 320 days

*Farmland classification:* Prime farmland if irrigated

### **Map Unit Composition**

*Ramona and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Ramona**

#### **Setting**

*Landform:* Terraces, alluvial fans

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from granite

#### **Typical profile**

*H1 - 0 to 14 inches:* sandy loam

*H2 - 14 to 23 inches:* fine sandy loam

*H3 - 23 to 68 inches:* sandy clay loam

*H4 - 68 to 74 inches:* gravelly sandy loam

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Rare

*Frequency of ponding:* None

*Calcium carbonate, maximum in profile:* 1 percent

*Available water storage in profile:* Moderate (about 8.1 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 1

*Land capability classification (nonirrigated):* 3c

*Hydrologic Soil Group:* C

*Ecological site:* LOAMY (1975) (R019XD029CA)



**Minor Components**

**Hanford**

*Percent of map unit: 5 percent*

**Greenfield**

*Percent of map unit: 5 percent*

**Tujunga**

*Percent of map unit: 5 percent*

**RaB2—Ramona sandy loam, 2 to 5 percent slopes, eroded**

**Map Unit Setting**

*National map unit symbol: hcy5*

*Elevation: 250 to 3,500 feet*

*Mean annual precipitation: 10 to 20 inches*

*Mean annual air temperature: 63 degrees F*

*Frost-free period: 230 to 320 days*

*Farmland classification: Prime farmland if irrigated*

**Map Unit Composition**

*Ramona and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Ramona**

**Setting**

*Landform: Alluvial fans, terraces*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Alluvium derived from granite*

**Typical profile**

*H1 - 0 to 14 inches: sandy loam*

*H2 - 14 to 23 inches: fine sandy loam*

*H3 - 23 to 68 inches: sandy clay loam*

*H4 - 68 to 74 inches: gravelly sandy loam*

**Properties and qualities**

*Slope: 2 to 5 percent*

*Depth to restrictive feature: More than 80 inches*

*Natural drainage class: Well drained*

*Runoff class: Low*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

## Custom Soil Resource Report

*Calcium carbonate, maximum in profile:* 1 percent

*Available water storage in profile:* Moderate (about 8.1 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 2e

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C

*Ecological site:* LOAMY (1975) (R019XD029CA)

### **Minor Components**

#### **Hanford**

*Percent of map unit:* 4 percent

#### **Greenfield**

*Percent of map unit:* 4 percent

#### **Arlington**

*Percent of map unit:* 4 percent

#### **Tujunga**

*Percent of map unit:* 3 percent

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## Custom Soil Resource Report

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## **Appendix G: NWI Wetland Map**



U.S. Fish and Wildlife Service

# National Wetlands Inventory

## Appendix G. NWI Map for Agua Mansa Commerce Park Project



September 19, 2016

- |                                |                                   |          |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other    |
| Estuarine and Marine Wetland   | Freshwater Pond                   | Riverine |
| Freshwater Emergent Wetland    | Lake                              |          |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



## Appendix H: FEMA Map

## NOTES TO USERS

is for use in administering the National Flood Insurance Program. It is necessary to identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be updated for possible updated or additional flood hazard information.

For more detailed information in areas where **Base Flood Elevations** and/or **floodways** have been determined, users are encouraged to consult Profiles and Floodway Data and/or Summary of Stillwater Elevations obtained within the Flood Insurance Study (FIS) report that accompanies this map. Users should be aware that BFEs shown on the FIRM represent whole-foot elevations. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of flood and/or floodplain management.

**Base Flood Elevations** shown on this map apply only to landward of the American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study report for this jurisdiction. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of flood and/or floodplain management.

**Floodway Data** were computed at cross sections and interpolated cross sections. The floodways were based on hydraulic considerations and to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

**Flood Hazard Areas** may be protected by **flood** structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

**Projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD 83. CRS80 spheroid was used. The map was projected to UTM zone 11. The projection of adjacent jurisdictions may result in slight positional differences in map across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

**Elevations** on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding the difference between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

Information Services  
NAD83/29  
Geodetic Survey  
#0202  
261 West Highway  
Spring, Maryland 20710-3282  
3-3242

**Current elevation, description, and/or location information for bench** shown on this map, please contact this Information Services Branch of the National Geodetic Survey at (202) 713-3242, or visit its website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

**Map information** shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from aerial photography dated 1994 or later.

**Map** may reflect more detailed and up-to-date **stream channel** information than those shown on the previous FIRM for this jurisdiction. The maps and floodways that were transferred from the previous FIRM may have been updated to conform to these new stream channel configurations. As a result, profiles and floodway data in the Flood Insurance Study report (which contain authoritative hydraulic data) may reflect stream channel data that is what is shown on this map.

**Map limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact appropriate city officials to verify current corporate limit locations.

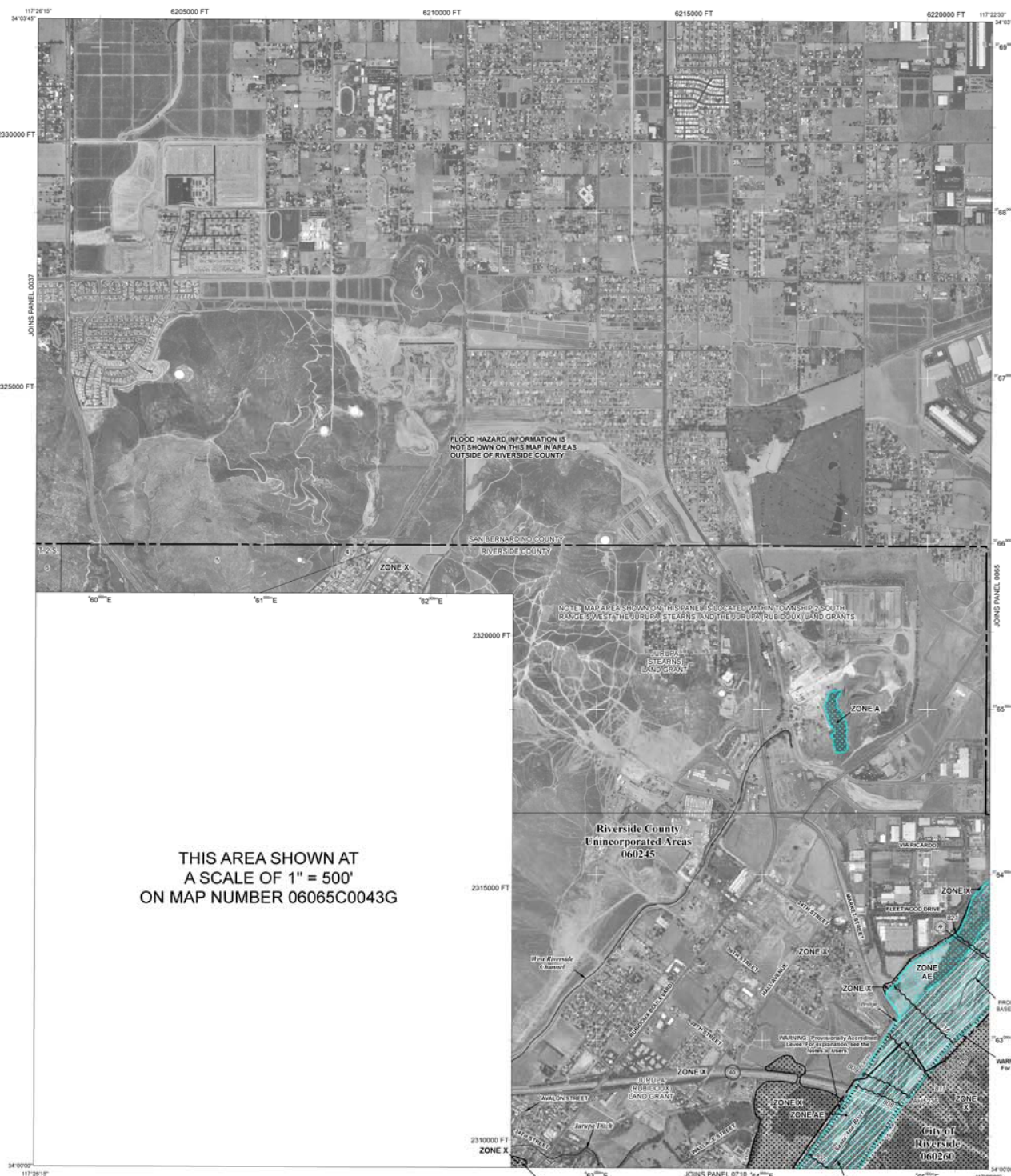
**Refer** to the separately printed **Map Index** for an overview map of the community showing the layout of map panels, community map repository addresses, and listing of communities containing National Flood Insurance Program flood insurance for each community as well as a listing of the panels on which each city is located.

**For the FEMA Map Service Center** at 1-800-358-9616 for information on products associated with this FIRM. Available products may include Floodway Letters of Map Change, a Flood Insurance Study report, and/or information of this map. The FEMA Map Service Center may also be reached at 1-800-358-9620 and its website at <http://map.fema.gov>.

**For questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or the FEMA website at <http://www.fema.gov>.

**WARNING:** This map contains levees, dikes, or other structures that have been previously accredited and mapped as providing protection from the 1-percent-annual-chance flood. To maintain accreditation, the levee owner or community is to submit documentation necessary to comply with 44 CFR Section 65.10 (a) & (b), 2009. Because of the risk of overtopping or failure of the structure, levee owners should take proper precautions to protect lives and minimize property damage in these areas, such as securing an evacuation plan and encouraging property owners to purchase flood insurance.

THIS AREA SHOWN AT  
A SCALE OF 1" = 500'  
ON MAP NUMBER 06065C0043G



**WARNING:** This area is shown as being protected from the 1-percent-annual-chance or greater flood hazard by levee, dike, or other structure that has been provisionally accredited. For explanation, see the Notes to Users.

### LEGEND

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard are designated as Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water elevation of the 1% annual chance flood.

**ZONE A:** No Base Flood Elevations determined.

**ZONE AE:** Base Flood Elevations determined.

**ZONE AH:** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO:** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined. For areas of alluvial fan flooding, velocity determined.

**ZONE AR:** Special Flood Hazard Area formerly protected from the 1% annual flood by a flood control system that was subsequently destroyed, indicates that the former flood control system is being restored to protect from the 1% annual chance or greater flood.

**ZONE A99:** Area to be protected from 1% annual chance flood by a Federal system under construction; no Base Flood Elevation determined.

**ZONE V:** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.

**ZONE VE:** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE:**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS:**

**ZONE X:** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and are protected by levees from 1% annual chance flood.

**OTHER AREAS:**

**ZONE D:** Areas determined to be outside the 0.2% annual chance floodplain; Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS:**

**OTHERWISE PROTECTED AREAS (OPAs):**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

**1% annual chance floodplain boundary:** Solid line.

**0.2% annual chance floodplain boundary:** Dashed line.

**Floodway boundary:** Dotted line.

**Zone D boundary:** Dashed line.

**CBRS and OPA boundary:** Dotted line.

**Boundary dividing Special Flood Hazard Area Zone boundary dividing Special Flood Hazard Area Zone boundary:** Dotted line.

**Base Flood Elevation line and value, elevation in feet:** Solid line with elevation value.

**Base Flood Elevation value where uniform within zone, in feet:** Solid line with elevation value.

**\* Referenced to the North American Vertical Datum of 1988**

**Cross section line:** Solid line with cross section symbol.

**Transect line:** Solid line with transect symbol.

**Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere:** Solid line with coordinates.

**1000-meter Universal Transverse Mercator grid values, in UTM:** Solid line with UTM values.

**5000-foot grid ticks: California State Plane coordinate system, zone 11 (NAD 83), Lambert Conformal projection:** Solid line with grid ticks.

**Bench mark (see explanation in Notes to Users section 060245):** Solid line with bench mark symbol.

**River Mile:** Solid line with river mile symbol.

**MAP REPOSITORY:** Refer to listing of Map Repositories on Map Index.

**EFFECTIVE DATE OF COMMUNITY FLOOD INSURANCE RATE MAP:** August 28, 2008.

**EFFECTIVE DATE OF REVISIONS TO THIS PANEL:**

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6622.

**NFIP**

**PANEL 0045G**

**FIRM**

**FLOOD INSURANCE RATE**

**RIVERSIDE COUNTY, CALIFORNIA AND INCORPORATED AREAS**

**PANEL 45 OF 3805**

(SEE MAP INDEX FOR FIRM PANEL LISTING)

CONTAINS	COMMUNITY	SUBDIVISION	PANEL
RIVERSIDE COUNTY	06065C	0045G	0045G
RIVERSIDE, CITY OF	06065C	0045G	0045G

**WARNING:** Provisionally Accredited Levees. For explanation, see the Notes to Users.

Notice to User: The Map Number shown below is used when placing map orders. The Community Map Number shown above should be used on insurance applications and other documents.

**MAP NUMBER 06065C0045G**

**EFFECTIVE DATE: AUGUST 28, 2008**

**Federal Emergency Management Agency**

**Appendix J**  
**Special-Status Plant Survey Results for the Agua Mansa Commerce Park Project Site**





October 17, 2017 (REVISED November 15, 2018)

Erik Zitek  
Crestmore Redevelopment, LLC an Indirect  
Subsidiary of VCP Management, LLC (Viridian Partners)  
1805 Shea Center Drive, Suite 250  
Highlands Ranch, CO 80129  
Via email: ezitek@viridianpartners.com

**RE:** Special-Status Plant Survey Results for Agua Mansa Commerce Park Project Site

Dear Mr. Zitek:

This memorandum documents results of focused surveys for special-status plants conducted by MIG botanists for the Agua Mansa Commerce Park Project (Project) located in Riverside County, California (Attachment 1). The Project site is located entirely within the Riverside Multiple Species Habitat Conservation Plan (MSHCP), which is a comprehensive multi-jurisdictional effort that includes western Riverside County and eighteen (18) cities. The MSHCP identifies specific habitat areas within designated Individual Criteria Area Cells, Cell Groups, wildlife corridors, and habitat core areas for long term preservation and/or conservation. The MSHCP includes specific survey and mitigation requirements which vary depending on the location of the project within certain plan areas and/or proposed conservation areas. The Project site is located within MSHCP Jurupa Area Plan Criteria Cells (22 and 23; Attachment 2) and is in a predetermined Survey Area for the following Narrow Endemic Plant Species (MSHCP 2004): San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Clinopodium chandleri*). A General Biological Habitat Assessment (GBHA) was conducted during July 2016 to determine the Project site's potential to support sensitive biological resources and ensure consistency with MSHCP provisions and California Environmental Quality Act (CEQA) guidelines. The GBHA did not identify potentially suitable habitat for Narrow Endemic Species; however, focused surveys for all other special status plant species not covered by the MSHCP were conducted during July and October 2016 and April 2017.

## PROJECT LOCATION AND DESCRIPTION

The 302.12-acre<sup>1</sup> Project site is located south of El Rivino Road, east of Rubidoux Boulevard, north of the North Riverside & Jurupa Company canal and Market Street, and west of Hall Avenue in the City of Jurupa Valley (City), Riverside County, California, APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009 (Figure 1, and Figure 2). The Project Site occurs within the U.S. Geological Survey (USGS) 7.5' series Fontana Quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986). The site is bordered to the north by El Rivino Blvd, to the west by Rubidoux Blvd, and to the south by Agua Mansa Road. The site consists of a decommissioned cement plant (Riverside Cement Plant) and currently has offices and dismantled processing equipment and facilities on-site. Land uses bordering the Project site include light industrial, residential, and open space to the west. Land uses to the east

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<sup>1</sup> The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur due to rounding differences

and south are primarily manufacturing, while land uses to the north are a mix of open space and residential. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986).

The Agua Mansa Commerce Park Specific Plan (Project) is a proposed industrial business park with retail overlay and open space development located on the former Riverside Cement facility. The Site has previously been utilized for mining and cement production, until operations ceased in 2014. The brownfield site is being decommissioned and prepared for environmental remediation and successful redevelopment under the requirements of the Specific Plan. The Specific Plan will allow for the development of approximately 4,500,000 square feet of total building area and a 70.96-acre Open Space/Recreation Park. The Specific Plan area (heretofore referred to as "Project Site") encompasses approximately 302.12 acres of land in the City of Jurupa Valley. The Project will consist of three primary land uses, discussed in more detail below: 1) an Industrial Park, 2) a Business Park (with possible retail component) and 3) Open Space with Recreation Park.

### Industrial Park

The Industrial Park area will be 189.7 acres in size and is planned for approximately 4,216,000 square feet (3,452,000 square feet of building footprint and up to 764,000 square feet of mezzanine area) of industrial park uses, such as manufacturing, research and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution, and cross-dock facilities.

### Business Park

The Business Park with Retail Overlay district is 42.2 acres that will support 200,000 square feet of business park uses along with an existing 23,000 square-foot research and development building (CalPortland area). The Business Park with Retail Overlay district includes an option to build up to 25,000 square feet of retail and/or food service uses along with 170,000 of business park square footage in lieu of the 200,000 square feet of business park uses. The Specific Plan allows for an additional 41,000 square feet of business park use(s) in the CalPortland area – either through expansion of the existing building or new construction. A Union Pacific Railroad right-of-way and a portion of the North Riverside and Jurupa Canal bisect the Specific Plan and accounts for 8.4 acres within the Specific Plan boundary.

### Open Space/Recreation Park

There is a proposed approximately 70.96-acre Open Space area in the southern portion of the Specific Plan area. Portions of the Open Space area may be developed as a recreation area, contingent upon successful remediation of the Site. Recreational and cultural facilities that are planned within the Open Space area would include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children's play areas, and cultural interpretive facilities to highlight the history of the Site and cement industry. Any proposed trail or activity would be separated from the Open Space area by fencing, signage, and/or other means of buffering, while still allowing visitors to experience the view of the unique landscape the Site has to offer. Preserved habitat areas lay approximately 80-feet below grade and will be inaccessible to visitors and undisturbed.

## ENVIRONMENTAL SETTING

### Topography and Soils

The northern extent of the Project site is relatively flat and contains much of the machinery and buildings used to operate the cement plant, with elevations ranging between approximately 900-960 feet above mean sea level

(AMSL). The southern extent of the Project site contains a large hill and the former quarry, which is now filled with water, forming Crestmore Lake. The topography in this area is rugged and variable, with elevations ranging between approximately 820 and 1,160 feet. In addition to Crestmore Lake, the southeastern portion of the Project site features two closed basins created by limestone mining activities. The Project site is located in the Santa Ana Watershed with headwaters located in the San Gabriel Mountains, the San Bernardino Mountains, San Jacinto Mountains, and the Santa Ana Mountains.

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has identified ten soil types that are mapped within the Project site shown on Attachment 3 and described below (USDA, NRCS 2017):

Cieneba sandy loam, 15 to 50 percent slopes, eroded (ChF2). This map unit occurs in the southwestern corner of the Project site. The Cieneba series consists of somewhat excessively drained, strongly sloping to steep soils. This soil type formed in residuum weathered from igneous rock on uplands. Typical vegetation is chaparral, chamise, and annual grasses and forbs.

Delhi fine sand, 2 to 15 percent slopes, wind-eroded (DaD2) and Delhi fine sand (Db). These soils are located in the northern half of the Project site. The Delhi series consist of excessively drained soils on dunes and alluvial fans, with slopes ranging from 0 to 15 percent.

Hanford coarse sandy loam, 8 to 15 percent slopes, eroded (HcD2) and Hanford coarse sandy loam, 2 to 8 percent slopes (HcC). These map units occur in the southwestern corner of the Project site along Rubidoux Blvd. Hanford series consists of well-drained, nearly level to strongly sloping soils that formed in recent granitic alluvium on valley floors and alluvial fans.

Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2). These soils are located in the northeastern corner and southern corner of the Project site. This gently to moderately sloping soil occurs on alluvial fans and terraces. This well-drained soil developed in alluvium consisting mainly of granitic materials. The vegetation is chiefly annual grasses, forbs, sumac, and chamise but includes some scattered oak trees.

Pachappa fine sandy loam, 2 to 8 percent slopes, eroded (PaC2). These soils are located in the northeastern corner of the Project site, between the eastern boundary and the Greenfield sandy loam soils. This gently to moderately sloping soil occurs on alluvial fans. These soils developed in predominantly granitic alluvium. Vegetation is chiefly annual grasses, forbs, and chamise. In a typical profile, the surface layer is brown fine sandy loam and very fine sandy loam about 29 inches thick.

Quarries (QU). About 1/3 of the Project site is classified by USDA NRCS as Quarry, including Crestmore lake in the south-central portion. Since this area is located adjacent to the Delhi, Greenfield, and Ramona soil series, a combination of these soils is expected to be found in this area. This area has undergone extensive disturbance due to mining activities and thus might include other soil materials.

Ramona sandy loam, 0 to 2 percent slopes (RaA) and Ramona sandy loam, 2 to 5 percent slopes, eroded (RaB2). These map units are located in the southeastern corner of the Project site. The Ramona series consist of well-drained soils on alluvial fans and terraces. These soils developed in alluvium consisting mainly of granitic materials. The vegetation consists chiefly of annual grasses, forbs, chamise, salvia, and flat-top buckwheat.

## Climate and Precipitation

The length of the growing season in the Project site was obtained from the NCDC WETS table (NCDC 2016) for the closest National Weather Service cooperative station with weather data pertaining to the Study Area, which is the



Riverside Citrus Experiment (CA7473) station. Climate data from this weather station indicate that the growing season (based on air temperature thresholds of greater than 32 degrees Fahrenheit [°F] at a frequency of 5 years in 10) is approximately 365 days. The climate within the Study Area is characterized as Mediterranean, bordering on a semi-arid climate with dry, hot summers and mild, wet winters.

Table 1 provides a summary of precipitation data observed at the nearest National Weather Service weather station to the Project site: Riverside Gas Co. (RVRC1) (NOAA, CNRFC 2017). During the July and October 2016 surveys, Water Year to-date precipitation was 57 and 54 percent of normal, respectively. Water Year to-date precipitation was 139 percent of normal at the time the April 2017 surveys were conducted.

Table 1. RVRC1 Precipitation Data For 2016-2017 Survey Dates (NOAA, CNRFC 2017)

Survey Dates	Observed Water Year-to-Date Precipitation	Average Water Year-to-Date Precipitation	Water Year-to-date Percent of Normal Precipitation
July 21, 2016	5.24	9.12	57
October 10-11, 2016	5.24	9.71	54
April 17-18, 2017	12.60	9.04	139

## Vegetation Communities

Vegetation communities were mapped in the field onto a color aerial photograph and classified according to *A Manual of California Vegetation, Second Edition* (Sawyer et al 2009) or *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), as most applicable to descriptions in the literature (Attachment 4). The site generally consists of fragmented and disturbed plant communities surrounded by developed areas associated with the cement processing facilities, graded and excavated slopes of rock quarries, office buildings, paved and gravel access roads, and parking lots. Nomenclature used for dominant plant species discussed below follows *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al 2012). Nomenclature changes made after the publication date of this manual follow the Jepson eFlora (2017) website. Representative photographs of vegetation communities and land cover types are provided in Attachment 5. The Project site supports 11 vegetation communities and/or land cover types, shown on Attachment 4 and described below in more detail.

Developed (119.45 acres). The Project site is a former rock quarry and cement plant and thus is predominantly covered by paved and unpaved roads, abandoned buildings, and decommissioned industrial machinery. Vegetation is sparse in these areas and consists primarily of non-native and/or invasive plant species such as wild lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), oleander (*Nerium oleander*), Russian thistle (*Salsola tragus*), white sweet clover (*Melilotus albus*), castor bean (*Ricinus communis*), tamarisk (*Tamarix ramosissima*), summer mustard (*Hirschfeldia incana*), tree of heaven (*Ailanthus altissima*), Mexican fan palm (*Washingtonia robusta*), and African fountain grass (*Pennisetum setaceum*). Native disturbance-adapted species, such as horseweed (*Erigeron canadensis*) and annual burweed (*Ambrosia acanthicarpa*) are occasional as well. A representative photograph of this land cover type is provided in Attachment 5, Photograph 1.

Disturbed (54.86 acres). The northern portion of the Project site has received continuous disturbance from disking in recent years for fire protection along Agua Mansa Road and remains sparsely vegetated by weedy, non-native, disturbance-adapted, and ruderal plant species such as red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), London rocket (*Sisymbrium irio*), tocolote (*Centaurea melitensis*), Russian thistle, and tree tobacco (Attachment 5, Photograph 2).

Brittlebush Scrub Alliance (56.27 acres). Brittlebush (*Encelia farinosa*) scrub (Attachment 5, Photographs 3 and 12) occurs on steep, often vertical, excavated slopes of the Crestmore Quarry in the southern portion of the Project site and in scattered patches on excavated spoils covered with concrete rubble and cement slurry in the cement processing areas operations area. Ruderal species including London rocket, summer mustard, Russian thistle, wild oat (*Avena barbata*), tocalote (*Centaurea melitensis*), annual ragweed (*Ambrosia artemisiifolia*), and red brome (*Bromus madritensis*) are common associates throughout this community. Occasional co-dominant native shrub and/or succulent species occur in low numbers and include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), coastal prickly pear (*Opuntia littoralis*), cholla (*Cylindropuntia echinocarpa*), and lanceleaf liveforever (*Dudleya lanceolata*).

Non-Native Grassland (24.67 acres). Patches of non-native grassland (Attachment 5, Photograph 4) are found scattered throughout the Project site. These areas have been disturbed by quarry and cement processing operations and are characterized primarily by non-native species such as red brome, ripgut brome, wild oat, Russian thistle, jimsonweed (*Datura stramonium*), Peruvian peppertree (*Schinus molle*), fountain grass, and Bermuda grass (*Cynodon dactylon*). Native species are occasional in this community and include common sunflower (*Helianthus annuus*) and common fiddleneck (*Amsinckia intermedia*).

Eucalyptus Grove (19.20 acres). Eucalyptus groves (Attachment 5, Photograph 5) have been planted throughout the northern portions of the Project site. Based on the tree surveys conducted in September 12-16 and October 10-12, 2016, red gum (*Eucalyptus camaldulensis*) and red ironbark (*Eucalyptus sideroxylon*) are the most commonly observed here, although blue gum (*Eucalyptus globulus*) and silver dollar gum (*Eucalyptus polyanthemus*) are occasional. Red gum consisted of 67.8% of the total 2,316 trees. The understory of these groves is primarily covered in dense leaf litter with occasional non-native forb and grass species such as London rocket, Russian thistle, lamb's quarters (*Chenopodium album*), red brome, ripgut brome, and wild oat.

Rock Outcrop (7.79 acres). Rock outcrops are found around the former cement plant and the large central hill on the Project site. These areas are generally devoid of vegetation (Attachment 5, Photograph 6).

Ornamental (8.15 acres). Ornamental plants (Attachment 5, Photograph 7) are commonly found within the western portion of the Project site near buildings, parking lots, and roads. Ornamental plant species commonly observed include Mexican fan palm, California fan palm (*Washingtonia filifera*), pine trees (*Pinus* sp.), oleander (*Nerium oleander*), silk tree (*Albizia julibrissin*), agapanthus (*Agapanthus africanus*), and English ivy (*Hedera helix*).

Open Water (6.30 acres). The southern portion of the site supports a large depression created by quarry operations, known as Crestmore Lake, in area that was excavated to a depth that intersects the ground water table and is surrounded on all sides by steep rock wall. This open water body is ringed by intermittent patches of cattails and southern willow scrub vegetation, as described below (Attachment 5, Photograph 8).

Southern Willow Scrub (3.30 acres). Several relatively mesic areas located in low lying quarry borrow areas are characterized as Southern willow scrub (Attachment 5, Photograph 9). Black willow (*Salix gooddingii*) and yellow willow (*Salix lasiandra*) tends to dominate in these areas, with other common associated tree species including red willow (*Salix laevigata*) and Fremont cottonwood (*Populus fremontii*). Other common native species in this community include mulefat (*Baccharis salicifolia*), willow baccharis (*Baccharis salicina*), branching phacelia (*Phacelia ramosissima*), willow herb (*Epilobium ciliatum*), California everlasting (*Pseudognaphalium californicum*), and common sunflower. Non-native species commonly observed in these communities include tree tobacco, summer mustard, castor bean, tocalote, horehound (*Marrubium vulgare*), tocolote, Mexican fan palm, London rocket, African fountain grass, red gum, bull thistle (*Cirsium vulgare*), and tamarisk. Due to its limited distribution in the region, southern willow scrub is considered a sensitive natural community (G3 S2.1) by the California Department of Fish and Wildlife (CDFW) and the California Native Plant Society (CNPS)(CDFW 2017).

Cattail Alliance (1.53 acres). Cattail Alliance (Attachment 5, Photograph 10), dominated by southern cattail (*Typha domingensis*) and occasional broad leaf cattail (*Typha latifolia*), forms pure stands in the wettest low lying areas, including the fringe of Crestmore Lake, near leaking water control structures, and in the large depression at the southern extent of the Project site created by quarry operations.

Mulefat Stand (0.60 acres). Similar to the Cattail Alliance community, mulefat stand (Attachment 5, Photograph 11), occurs in small (consisting of 2-10 individual plants), widely scattered, and isolated monocultures in mesic, depressional areas of the Project site surrounding the cement processing facility and adjacent to dirt roads and parking areas.

### Special Status Plant Species

Special-status plants are defined here to include: (1) Riverside MSHCP Narrow Endemic Plants, (2) plants that are federal- or state-listed as rare, threatened or endangered, (3) federal and state candidates for listing, (4) plants included in Lists 1 through 4 of the CNPS Inventory, and (5) plants that qualify under the definition of "rare" in the California Environmental Quality Act, section 15380.

A total of 28 special-status plant species were evaluated for their potential to occur in the Project site based on the proximity of the project to previously recorded occurrences in the region, past land uses, vegetation and habitat quality, topography, elevation, soil types and other species-specific habitat requirements, and geographic ranges of special-status plant species known to occur in the region.

## METHODS

### Data Compilation and Background Research

A background information search was initially conducted to develop a list of potential special-status plant species that may occur in the Project site vicinity. A table of these species, their protection status, habitat requirements, and likelihood to occur in the Project site is provided in Attachment 6. Sources for this search included the USFWS List of Proposed, and Candidate Species Which May Occur in San Bernardino County (USFWS 2017), California Natural Diversity Database (CNDDDB) records (CDFW 2017) and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2017). Other general resources consulted included: *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986); *A Manual of California Vegetation* (Sawyer and Keeler Wolf 2008); *The Jepson Desert Manual: Vascular Plants of Southeastern California* (Baldwin et al. 2002); *The Jepson manual: vascular plants of California, second edition* (Baldwin et. al 2012); and the Online Soil Survey of San Bernardino County, California (USDA, NRCS 2017).

### Field Surveys

On July 21 and October 11-12, 2016 and April 17-18 2017, focused surveys of the 302.12-acre Project site were conducted by botanists from MIG that have specific experience with identifying the special-status plant species that could occur in the area. The surveys coincided with peak blooming periods for the special-status plant species with potential to occur within the Project site. These surveys were conducted according to CNPS (2001), CDFW (2009) and USFWS (2002) protocols. The Project site was systematically examined for potential special status plant species, including MSHCP covered species. Site coverage consisted of slowly walking along parallel transects over undeveloped portions of the site where intact vegetation was present to allow accurate identification of plants detectable at the time of the site visits. Each observed plant species was identified to species and/or subspecies level



and recorded (Attachment 7). All plant species encountered were identified using dichotomous keys and other resources listed in the previous section to the taxonomic level necessary to determine whether or not they were special-status.

## RESULTS

No special-status plant species were observed within the Project site. Based upon a review of available databases and literature, familiarity with local flora, the presence of specific vegetation types, and other pertinent background information, the Project site was surveyed for several special-status plant species that had a low potential to be present on the Project site. A table presenting the special-status plant species considered and evaluated for their potential occurrence on the Project site, including plant species' habitat requirements and reported blooming periods, is provided in Attachment 6. The requirements of these species were evaluated in comparison to the conditions observed during surveys to determine their potential presence. The focused plant surveys were timed during the typical blooming periods of all target species to allow for certainty of taxonomic identification and to maximize the probability of their detection. During the initial surveys during July and October 2016, some plant species encountered were still in bloom and easily identifiable by their flowers or inflorescences. However, a majority of species were past or near the end of their blooming periods; therefore, additional surveys were scheduled and completed in April 2017. Approximately 115 plant species were observed within the Project site during surveys and are listed in Attachment 7. Over the course of the surveys, all plant species observed were positively identified through an examination of a combination of vegetative parts, fruit, or reproductive structures (i.e., flower parts) in order to determine their protection status. All plants encountered were recognizable to species or subspecies level; those that were not immediately recognized in the field were identified using dichotomous keys.

The Project Site occurs within a predetermined Survey Area for Narrow Endemic Plant Species. A habitat assessment was conducted for the following three Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Satureja chandleri*). Although suitable habitat was not found for Narrow Endemic Plant Species, focused surveys were conducted for other special status species that had a low potential for occurrence. Results of the habitat assessment for Narrow Endemic species are discussed below.

### San Diego Ambrosia

San Diego ambrosia is designated as a Group 3 species in the MSHCP (Riverside County 2003), a federally listed endangered species, and a CNPS Rare Plant Rank 1B species. This perennial herb occurs in open habitats in coarse substrates on floodplain terraces or on the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated with open, gently sloped grasslands and is generally associated with alkaline soils. San Diego ambrosia is distributed from western Riverside County and western San Diego County, south in widely scattered populations along the west coast of Baja California, Mexico to the vicinity of Cabo Colón (Munz 1974; Reiser 2001 in Riverside County 2003). The species is threatened by habitat loss, due to urbanization, fragmentation, isolation, and associated impacts from non-native species competition. While it is considered tenacious in appropriate habitat, it is thought to be a weak competitor with invasive herbaceous and non-native grass species. No floodplain terraces, vernal pools, vernal pool conditions, or alkaline conditions occur within the Project Site and this species was not observed during protocol level surveys that focused on mesic undeveloped portions of the Project Site. Therefore, the Project Site does not support suitable habitat for San Diego ambrosia and this species is not expected to be present.

### Brand's Phacelia

Brand's phacelia is designated as a Group 3 species in the MSHCP (Riverside County 2003) and a CNPS Rare Plant Rank 1B.1 species. Suitable habitat for this annual herb includes coastal dunes and /or coastal scrub in sandy openings, sandy benches, dunes, sandy washes, or flood plains of rivers and is restricted to clay soils at elevations between 0 and 400 meters usually near the coast (CNDDDB 2017, CNPS 2017, and Wilken et al. 1993 in Riverside County 2003). Brand's phacelia historically occurred from Los Angeles, Riverside, and San Diego counties and northern Baja California, Mexico (CNPS 2017). This species blooms from March to June (CNPS 2017). Within Riverside County, Brand's phacelia is restricted to sandy benches along the Santa Ana River terrace. This species is considered extremely rare as only one known extant occurrence in Riverside County. The Project Site does not contain any suitable habitat such as sandy washes or river floodplains, and this species was not observed during protocol surveys for non-covered species that were conducted in all in undeveloped portions of the site. Therefore, Brand's phacelia is not expected to occur within the Project Site.

### San Miguel Savory

San Miguel savory is designated as a Group 3 species in the MSHCP (Riverside County 2003) and a CNPS Rare Plant Rank 1B.2 species. Suitable habitat for this perennial herb includes rocky, gabbroic and metavolcanic substrates in coastal sage scrub, chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands between 120 and 1,005 meters. In San Diego County and Northern Baja California, this species is associated with open, chamise-dominated slopes. However, in the Santa Ana Mountains, it may occur in more mesic habitat. No chaparral, foothill woodland, or coastal sage scrub communities are located within the Project site. San Miguel savory was not observed on the Project site within undeveloped portions of the site, including brittlebush scrub or non-native grassland communities in the industrial business park development area, and riparian scrub located within the limestone quarry pits located in the Open Space area. Therefore, San Miguel savory is not expected to be present within the Project Site.

Suitable habitat for Brand's phacelia, San Miguel savory, or San Diego ambrosia was not observed on site during the initial habitat assessment conducted during July 2016, nor were these species observed during focused surveys conducted during April 2017. Given the site's absence of sandy washes and/or benches associated with alluvial flood plains, and extreme rarity of the species in the site vicinity, Brand's phacelia is not expected to occur on the Project Site. Likewise, due to the absence of rocky, gabbroic woodlands and valley and foothill grasslands, The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur due to rounding differences. San Miguel savory is not expected to occur on site. Finally, given the absence of sandy floodplain terraces, vernal pools, sparse non-native grasslands or ruderal habitats in association with river terraces, vernal pools, and/or alkali playas, San Diego ambrosia is also not expected to occur on site.

## **DISCUSSION**

In general, plant species diversity was typically low throughout the 11-vegetation community and/or land cover types. The site lacked suitable vegetation types for many of the special status species considered during the site evaluation, such as alkali meadows and playas, vernal pools, freshwater marsh plains, montane coniferous forest, oak woodlands, and alluvial fan sage scrub. The site also lacks landforms where target species have been documented from, such as floodplain terraces and sandy washes. One native shrub-dominated habitat classified as brittlebush scrub was evaluated as potential habitat for several special status species. However, this community exhibited low

species diversity, limited vegetation structure and occurred on disturbed soils that have been significantly altered by the application of cement slurry and other contaminants, construction and operation of cement processing facilities, development of roads and parking lots, as well as major earth moving activities conducted during mining operations. Despite the low probability of the site supporting special status species, brittlebush scrub, as well as all other vegetated areas, were thoroughly surveyed over the course of multiple site visits in order to accurately identify all plant species present and determine their potential protection status.

Plant species observed during the surveys that shared the same genus, including *Ambrosia* and *Phacelia*, were distinguished from special status plant taxa based upon their known distributions, habitat requirements, and/or one or more recognizable morphological characteristics. For example, annual burweed, common ragweed, and western ragweed (*Ambrosia acanthicarpa*, *A. artemisiifolia*, and *A. psilostachya*) were observed within non-native annual grassland, brittlebush scrub, and ruderal/developed areas. These species were determined not be San Diego ambrosia (*Ambrosia pumilla*), a taxon listed as federally threatened and covered by the MSCHP as a Narrow Endemic species. This distinction is based on this species' documented range, habitat requirements, and morphological features. Two of the common members of the *Ambrosia* genus found onsite (annual and common ragweed) are annual or perennial herbs that come from a slender taproot. While western ragweed and San Diego ambrosia both have rhizomatous roots or a woody caudex (robust underground root structure), western ragweed tends grow much larger than San Diego ambrosia, and their leaf shapes are easily distinguished by the number of pinnately divided lobes. Also, Brand's star phacelia (*Phacelia stellaris*), a Narrow Endemic species, can be easily distinguished from branching phacelia (*Phacelia ramosissima*), that was observed in the quarry areas by their growth habit, leaf shape and arrangement, and floral characteristics. Branching phacelia is common, disturbance-adapted, and widely distributed throughout its range in California. The Project site does not contain coastal sage scrub, coastal dunes, or sandy substrate that would be suitable to support Brand's star phacelia.

The timing of these surveys coincided with reported blooming periods for all potentially occurring special-status plant species and none were observed during the surveys; therefore, no additional surveys are recommended within the Project site.

## CONCLUSION AND RECOMMENDATIONS

No special-status plants were found within the Project site. The surveys conducted during Summer and Fall 2016 and Spring 2017 were adequate to accurately detect all plant species present and allow for a determination that no special-status plants are expected to be impacted by the proposed Project. Therefore, it is the professional opinion of MIG that Project-related construction and usage of the site as an industrial and business park and City park/recreation facility will not impact special-status plants. No further surveys or additional mitigation for impacts to special-status plants are recommended to comply with CEQA guidelines or MSHCP provisions.

Because the Project is located within MSHCP Criteria Area Cells, it is subject to a Habitat Acquisition and Negotiation Strategy (HANS) analysis in order to determine whether all or part of the property is necessary for inclusion in any MSHCP Conservation Areas. These survey results will be incorporated into a HANS application and provided to the County of Riverside Environmental Programs Department (EPD) for evaluation. If it is determined that all or a portion of the property is not needed for inclusion in the MSHCP Conservation Area, the HANS application will be forwarded to the RCA for a Joint Project Review (JPR) to ensure compliance with all other MSHCP requirements.



Please do not hesitate to contact me at (415) 250-8900 if you have any questions or concerns about the findings in this report.

Sincerely,  
MIG

A handwritten signature in black ink, reading "Amy Parravano", with a long horizontal flourish extending to the right.

Amy Parravano  
Senior Biologist

Enclosures:

- Attachment 1. Regional Location Map
- Attachment 2. Project Site Map Showing MSHCP Criteria Cells
- Attachment 3. Map of Soil Types
- Attachment 4. Map of Plant Communities and Land Cover Types
- Attachment 5. Representative Site Photographs
- Attachment 6. Special-Status Plant Species Reported to Occur, or With Potential to Occur, in the Vicinity of the Project site
- Attachment 7. Plant Species Observed Within the Project site on during October 2016, April 2017, and June 2017 Surveys

**Appendix K**  
**Tree Removal Impact Analysis and Mitigation Determination Memorandum**  
**for the Agua Mansa Commerce Park Project Site**



# memo berkeley

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to **Viridian Partners, LLC.**

from **MIG, Inc.**

re **Tree Removal Impact Analysis and Mitigation Determination for the Agua Mansa Commerce Park Project Site**

date **08/10/2017**

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This memorandum is intended to serve as a supplement to the Tree Survey – Agua Mansa Commerce Park, Jurupa Valley, CA for Viridian Partners, LLC prepared by MIG on June 2, 2017. This supplemental memo integrates new information from the conceptual site plan to determine the number of trees removed, and the number of replacement trees that would need to be installed on-site during project development.

## **Methodology**

MIG overlaid the conceptual site plan<sup>1</sup> over the existing tree survey map to determine which trees would be preserved and which trees would be removed due to development activities. Our assumption was that any tree within the open space area/potential park area (71 acres) and the small parcels on the western portion of the property would be retained. All trees within the development area (Buildings 1, 2, and 3; additional parking lots; and retail/business park area) would be removed.

Next, we determined tree mitigation ratio (number of trees planted to number of trees removed) based on whether the tree was native or non-native, and the overall condition (combination of health and structure) of the tree. For example, native tree species with very good overall condition would yield the highest mitigation ratio at 3:1, while non-native tree species with very poor overall condition would yield the lowest mitigation ratio, at 0:1. A more detailed explanation behind the mitigation ratio assigned to trees is included in [Table 1](#).

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<sup>1</sup> Conceptual site plan prepared by RGA Office of Architectural Design for Viridian Partners, dated May 31, 2017.



**Table 1: Tree Value Ranking and Mitigation Ratio Determination**

<b>Native/Non-Native</b>	<b>Health Rating</b>	<b>Mitigation Ratio</b>	<b>Justification</b>
Native	Very Good	3:1	Typical replacement ratio for well-established native trees in sensitive habitats.
Native	Good	3:1	Same reason as above.
Native	Fair	2:1	Reduced replacement ratio due to fair health status.
Native	Poor	1:1	Habitat values of any native tree are still valuable, even if they are in poor to very poor condition. A native tree in very poor health can still provide habitat for wildlife (e.g. dead trees provide perching/foraging habitat for raptors).
Native	Very Poor	1:1	Same reason as above.
Non-native	Very Good	2:1	Any tree in very good condition is still valuable because the number of ecosystem services provided by the tree would still be very high (high biomass = high amounts of carbon sequestration, nesting habitat for birds, noise attenuation, dust abatement, shading, etc.). The replacement ratio is not as high as native trees in very good health because non-native trees can sometimes be invasive, and are not well-adapted to the local ecosystem. For example, eucalyptus trees often have allelopathic properties which inhibit the growth of native plants in the understory. If not managed properly, eucalyptus trees may also pose a high fire risk. Some non-native trees may also outcompete native species, which has a negative impact on local flora and fauna.
Non-native	Good	1:1	Reduced replacement ratio due to health status.
Non-native	Fair	1:1	Same reason as above.
Non-native	Poor	0:1	Overall health is unlikely to improve without serious intervention, not worth replacement.
Non-native	Very Poor	0:1	Potentially dangerous trees, plus non-native status, does not warrant replacement.

Using the field data from the tree survey conducted by MIG on September 12-16 and October 10-12, 2016 (Attachment 1), we assigned the following values to individual trees: whether it would be removed (Yes/No), if it was a tree species native to the region (Yes/No), and the number of replacement trees needed following removal (range from 3 to 0). A detailed breakdown of the trees to be removed within each health condition category and the assigned mitigation ratio (mentioned previously) are included in Table 2. A map of trees to be removed as part of the proposed project is provided as Attachment 2.

**Table 2. Tree Removal Analysis and Mitigation Estimate**

<b>Tree Condition Category</b>	<b>Quantity Removed</b>	<b>Mitigation Ratio</b>	<b>Number of Replacement Trees</b>
Native trees in very good health	0	3:1	0
Native trees in good health	10	3:1	30
Native trees in fair health	10	2:1	20
Native trees in poor health	7	1:1	7
Native trees in very poor health	4	1:1	4
			61
Non-native trees in very good health	3	2:1	6
Non-native trees in good health	119	1:1	119
Non-native trees in fair health	382	1:1	382
Non-native trees in poor health	504	0:1	0
Non-native trees in very poor health	565	0:1	0
<b>Total trees to be removed</b>	<b>1,604</b>		
<b>Total mitigation trees required</b>			<b>568</b>

## **Attachment 1 – Tree Survey and Removal Data**



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1	Red gum	Eucalyptus camaldulensis	-	yes	20,7,10,27	45	good	good	good	2	82	No	1	Yes
2	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	60	No	1	Yes
3	Red gum	Eucalyptus camaldulensis	-	yes	7,13	24	fair	fair	fair	3	60	No	1	Yes
4	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	60	No	0	Yes
5	Red gum	Eucalyptus camaldulensis	-	yes	5,7	12	poor	very poor	very poor	5	20	No	0	Yes
6	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	fair	fair	fair	3	20	No	1	Yes
7	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	3	60	No	1	Yes
8	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	4	60	No	0	Yes
9	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	good	fair	3	55	No	1	Yes
10	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	55	No	0	Yes
11	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	30	No	0	Yes
12	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	poor	fair	3	65	No	1	Yes
13	Red gum	Eucalyptus camaldulensis	-	yes	6,7	17	poor	very poor	very poor	5	30	No	0	Yes
14	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	good	good	2	65	No	1	Yes
15	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	good	good	2	25	No	1	Yes
16	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
17	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	very poor	poor	4	35	No	0	Yes
18	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	38	No	0	Yes
19	Red gum	Eucalyptus camaldulensis	-	yes	16,6	32	poor	good	fair	3	45	No	1	Yes
20	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	35	No	0	Yes
21	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	3	35	No	1	Yes
22	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
23	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	3	35	No	1	Yes
24	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	40	No	0	Yes
25	Red gum	Eucalyptus camaldulensis	13	no	-	-	good	good	good	2	40	No	1	Yes
26	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	fair	poor	4	24	No	0	Yes
27	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	28	No	1	Yes
28	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	55	No	1	Yes
29	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	good	good	2	30	No	1	Yes
30	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	3	45	No	1	Yes
31	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	22	No	0	Yes
32	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	25	No	0	Yes
33	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	fair	3	65	No	1	Yes
34	Red gum	Eucalyptus camaldulensis	-	yes	8,6	19	fair	poor	poor	4	33	No	0	Yes
35	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	48	No	1	Yes
36	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	2	80	No	1	Yes
37	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	19	No	0	Yes
38	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	5	38	No	0	Yes
39	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	35	No	0	Yes
40	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	poor	4	38	No	0	Yes
41	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	fair	good	fair	3	36	No	1	Yes
42	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
43	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	good	good	2	30	No	1	Yes
44	Flooded gum	Eucalyptus rudis	12	no	-	-	fair	good	fair	3	40	No	1	Yes
45	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	poor	poor	4	35	No	0	Yes
46	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	5	43	No	0	Yes
47	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	poor	fair	3	40	No	1	Yes
48	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	5	25	No	0	Yes
49	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	good	good	2	48	No	1	Yes
50	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	fair	3	35	No	1	Yes
51	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	3	40	No	1	Yes
52	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
53	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
54	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	poor	poor	4	35	No	0	Yes
55	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	fair	3	50	No	1	Yes
56	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	good	fair	3	25	No	1	Yes
57	Flooded gum	Eucalyptus rudis	18	no	-	-	very good	good	good	2	65	No	1	Yes
58	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	good	fair	good	2	33	No	1	Yes
59	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	good	poor	fair	3	28	No	1	Yes
60	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
61	Red gum	Eucalyptus camaldulensis	-	yes	14,9	34	fair	fair	fair	3	50	No	1	Yes
62	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	5	43	No	0	Yes
63	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	fair	poor	4	22	No	0	Yes
64	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	fair	good	2	53	No	1	Yes
65	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	good	fair	fair	3	40	No	1	Yes
66	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	good	fair	fair	3	35	No	1	Yes
67	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
68	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	45	No	0	Yes
69	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	poor	poor	4	30	No	0	Yes
70	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	poor	4	50	No	0	Yes
71	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	poor	poor	poor	4	45	No	0	Yes
72	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	poor	4	30	No	0	Yes
73	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	fair	fair	fair	3	50	No	1	Yes
74	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	poor	poor	4	40	No	0	Yes
75	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	40	No	0	Yes
76	Flooded gum	Eucalyptus rudis	-	yes	8,11,9	29	very poor	good	fair	3	45	No	1	Yes
77	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
78	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	very poor	very poor	very poor	5	10	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
79	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	poor	4	55	No	0	Yes
80	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	4	25	No	0	Yes
81	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	fair	fair	3	60	No	1	Yes
82	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	poor	fair	3	30	No	1	Yes
83	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	poor	poor	4	45	No	0	Yes
84	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
85	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
86	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	good	good	good	2	35	No	1	Yes
87	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	good	fair	3	25	No	1	Yes
88	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	20	No	0	Yes
89	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
90	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	4	45	No	0	Yes
91	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
92	Red gum	Eucalyptus camaldulensis	19	no	-	-	good	fair	fair	3	50	No	1	Yes
93	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	fair	poor	4	35	No	0	Yes
94	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	very poor	poor	4	45	No	0	Yes
95	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	4	35	No	0	Yes
96	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
97	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	very poor	very poor	5	6	No	0	Yes
98	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
99	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	3	25	No	1	Yes
100	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	poor	fair	3	45	No	1	Yes
101	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	fair	poor	poor	4	30	No	0	Yes
102	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
103	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
104	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	5	62	No	0	Yes
105	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
106	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
107	Red ironbark	Eucalyptus sideroxylon	19	no	-	-	poor	fair	fair	3	65	No	1	Yes
108	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	fair	poor	poor	4	25	No	0	Yes
109	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	very poor	poor	4	50	No	0	Yes
110	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
111	Flooded gum	Eucalyptus rudis	8	no	-	-	poor	fair	fair	3	40	No	1	Yes
112	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	poor	poor	4	50	No	0	Yes
113	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	poor	poor	4	35	No	0	Yes
114	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
115	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	50	No	0	Yes
116	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	very poor	very poor	5	50	No	0	Yes
117	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
118	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	45	No	0	Yes
119	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	poor	poor	4	30	No	0	Yes
120	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	40	No	0	Yes
121	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
122	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	4	60	No	0	Yes
123	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	fair	poor	4	35	No	0	Yes
124	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
125	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	poor	poor	4	35	No	0	Yes
126	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	good	fair	3	35	No	1	Yes
127	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
128	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
129	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	40	No	0	Yes
130	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	3	40	No	1	Yes
131	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	4	25	No	0	Yes
132	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	very poor	very poor	5	30	No	0	Yes
133	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	30	No	0	Yes
134	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
135	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	4	63	No	0	Yes
136	Flooded gum	Eucalyptus rudis	20	no	-	-	poor	good	fair	3	60	No	1	Yes
137	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	poor	4	50	No	0	Yes
138	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	40	No	0	Yes
139	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	3	55	No	1	Yes
140	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	3	30	No	1	Yes
141	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	50	No	0	Yes
142	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	40	No	0	Yes
143	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	5	65	No	0	Yes
144	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
145	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
146	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
147	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	very poor	very poor	5	50	No	0	Yes
148	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	very poor	very poor	5	30	No	0	Yes
149	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	fair	3	40	No	1	Yes
150	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	4	35	No	0	Yes
151	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	very poor	poor	4	40	No	0	Yes
152	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
153	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
154	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	40	No	0	Yes
155	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
156	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	3	73	No	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
157	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
158	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
159	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	60	No	0	Yes
160	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
161	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
162	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	4	60	No	0	Yes
163	Red gum	Eucalyptus camaldulensis	41	no	-	-	very poor	good	fair	3	90	No	1	Yes
164	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
165	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
166	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
167	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
168	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	60	No	0	Yes
169	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	poor	very poor	5	40	No	0	Yes
170	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	poor	4	35	No	0	Yes
171	Red gum	Eucalyptus camaldulensis	-	yes	19,10,11,7	37	very poor	poor	poor	4	65	No	0	Yes
172	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	poor	poor	4	65	No	0	Yes
173	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
174	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	4	40	No	0	Yes
175	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	poor	4	70	No	0	Yes
176	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
177	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	55	No	0	Yes
178	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	fair	fair	fair	3	50	No	1	Yes
179	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	fair	3	35	No	1	Yes
180	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	poor	very poor	5	40	No	0	Yes
181	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
182	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
183	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	poor	very poor	5	12	No	0	Yes
184	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	fair	fair	3	35	No	1	Yes
185	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	50	No	0	Yes
186	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	4	55	No	0	Yes
187	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	40	No	0	Yes
188	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	poor	4	36	No	0	Yes
189	Red gum	Eucalyptus camaldulensis	-	yes	7,9	27	very poor	poor	poor	4	25	No	0	Yes
190	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
191	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	fair	3	50	No	1	Yes
192	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
193	Flooded gum	Eucalyptus rudis	7	no	-	-	poor	poor	poor	4	40	No	0	Yes
194	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	4	80	No	0	Yes
195	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
196	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	60	No	0	Yes
197	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	fair	3	70	No	1	Yes
198	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
199	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	55	No	0	Yes
200	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	poor	poor	4	80	No	0	Yes
201	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
202	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
203	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
204	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	90	No	1	Yes
205	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
206	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	fair	poor	4	65	No	0	Yes
207	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	4	50	No	0	Yes
208	Red gum	Eucalyptus camaldulensis	-	yes	8,7	17	very poor	poor	poor	4	45	No	0	Yes
209	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	25	No	0	Yes
210	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	20	No	0	Yes
211	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
212	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
213	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	good	fair	3	70	No	1	Yes
214	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
215	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	55	No	0	Yes
216	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
217	Red gum	Eucalyptus camaldulensis	-	yes	9,9	22	very poor	poor	poor	4	45	No	0	Yes
218	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	55	No	0	Yes
219	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
220	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
221	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	fair	fair	3	70	No	1	Yes
222	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	4	70	No	0	Yes
223	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
224	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	60	No	1	Yes
225	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	25	No	0	Yes
226	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
227	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
228	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
229	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	60	No	0	Yes
230	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	very poor	fair	poor	4	35	No	0	Yes
231	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5,5	27	very poor	good	poor	4	30	No	0	Yes
232	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	4	25	No	0	Yes
233	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	70	No	0	Yes
234	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	30	No	0	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
235	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	good	fair	3	65	No	1	Yes
236	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	fair	3	55	No	1	Yes
237	Red gum	Eucalyptus camaldulensis	26	no	-	-	good	fair	fair	3	85	No	1	Yes
238	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	60	No	0	Yes
239	Red gum	Eucalyptus camaldulensis	-	yes	14.9	26	poor	poor	poor	4	60	No	0	Yes
240	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	4	70	No	0	Yes
241	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	50	No	0	Yes
242	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
243	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
244	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
245	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	40	No	0	Yes
246	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
247	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	30	No	0	Yes
248	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	3	80	No	1	Yes
249	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	40	No	0	Yes
250	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	poor	4	60	No	0	Yes
251	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	fair	3	70	No	1	Yes
252	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	4	55	No	0	Yes
253	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	fair	fair	fair	3	55	No	1	Yes
254	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
255	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	very poor	poor	4	50	No	0	Yes
256	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
257	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
258	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	poor	poor	4	65	No	0	Yes
259	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
260	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	4	85	No	0	Yes
261	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
262	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	4	35	No	0	Yes
263	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	fair	fair	3	75	No	1	Yes
264	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
265	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
266	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	50	No	0	Yes
267	Red gum	Eucalyptus camaldulensis	-	yes	26.10	29	poor	good	fair	3	60	No	1	Yes
268	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
269	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	65	No	0	Yes
270	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
271	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
272	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	fair	fair	3	105	No	1	Yes
273	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	4	40	No	0	Yes
274	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	40	No	0	Yes
275	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	70	No	0	Yes
276	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
277	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	30	No	0	Yes
278	Red gum	Eucalyptus camaldulensis	7	no	-	-	vp	poor	poor	4	35	No	0	Yes
279	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	poor	4	80	No	0	Yes
280	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	45	No	0	Yes
281	Red gum	Eucalyptus camaldulensis	-	yes	7.6	14	very poor	very poor	very poor	5	45	No	0	Yes
282	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
283	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	poor	poor	4	30	No	0	Yes
284	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
285	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	65	No	0	Yes
286	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	40	No	0	Yes
287	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
288	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
289	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
290	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	60	No	0	Yes
291	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
292	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	good	fair	3	40	No	1	Yes
293	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
294	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	55	No	1	Yes
295	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
296	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
297	Red ironbark	Eucalyptus sideroxylon	4	no	-	-	poor	fair	poor	4	30	No	0	Yes
298	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	fair	3	90	No	1	Yes
299	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	45	No	0	Yes
300	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	poor	4	70	No	0	Yes
301	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	4	50	No	0	Yes
302	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
303	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
304	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	3	80	No	1	Yes
305	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	fair	3	80	No	1	Yes
306	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	fair	3	35	No	1	Yes
307	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	fair	3	65	No	1	Yes
308	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	55	No	0	Yes
309	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
310	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	fair	fair	3	90	No	1	Yes
311	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	55	No	0	Yes
312	Red gum	Eucalyptus camaldulensis	-	yes	10.9	29	very poor	poor	poor	4	45	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
313	Red ironbark	Eucalyptus sideroxylon	14	no	-	-	poor	fair	poor	4	45	No	0	Yes
314	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
315	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	70	No	0	Yes
316	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	fair	poor	fair	3	35	No	1	Yes
317	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
318	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	poor	poor	4	90	No	0	Yes
319	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
320	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
321	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	75	No	0	Yes
322	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	65	No	0	Yes
323	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	poor	fair	3	55	No	1	Yes
324	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	fair	poor	poor	4	45	No	0	Yes
325	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	35	No	0	Yes
326	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	4	70	No	0	Yes
327	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	poor	4	50	No	0	Yes
328	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	4	40	No	0	Yes
329	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
330	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
331	Red ironbark	Eucalyptus sideroxylon	18	no	-	-	fair	fair	fair	3	75	No	1	Yes
332	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	50	No	0	Yes
333	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
334	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	65	No	0	Yes
335	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	poor	poor	4	35	No	0	Yes
336	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	60	No	0	Yes
337	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	60	No	0	Yes
338	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
339	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	4	40	No	0	Yes
340	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	40	No	0	Yes
341	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	poor	4	40	No	0	Yes
342	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	poor	4	50	No	0	Yes
343	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
344	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	poor	poor	4	35	No	0	Yes
345	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	25	No	0	Yes
346	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	fair	poor	4	30	No	0	Yes
347	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	4	45	No	0	Yes
348	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	4	40	No	0	Yes
349	Flooded gum	Eucalyptus rudis	12	no	-	-	fair	poor	fair	3	55	No	1	Yes
350	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
351	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
352	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
353	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	fair	fair	3	95	No	1	Yes
354	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
355	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
356	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	50	No	0	Yes
357	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
358	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	poor	very poor	5	45	No	0	Yes
359	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	good	fair	3	80	No	1	Yes
360	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
361	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	fair	poor	4	40	No	0	Yes
362	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	35	No	0	Yes
363	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
364	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
365	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	3	70	No	1	Yes
366	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	good	fair	3	70	No	1	Yes
367	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
368	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5	19	very poor	fair	poor	4	40	No	0	Yes
369	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
370	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	good	fair	3	55	No	1	Yes
371	Red gum	Eucalyptus camaldulensis	-	yes	19,14	43	poor	good	good	3	75	No	1	Yes
372	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	good	good	good	2	60	No	1	Yes
373	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	good	good	good	2	60	No	1	Yes
374	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	good	fair	3	40	No	1	Yes
375	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	good	fair	3	40	No	1	Yes
376	Red gum	Eucalyptus camaldulensis	-	yes	11,10	26	very poor	poor	poor	4	40	No	0	Yes
377	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	45	No	0	Yes
378	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	50	No	0	Yes
379	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
380	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	50	No	0	Yes
381	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	good	good	2	75	No	1	Yes
382	Peruvian pepper	Schinus molle	6	no	-	-	poor	fair	poor	4	20	No	0	Yes
383	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	poor	fair	3	60	No	1	Yes
384	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	good	fair	3	50	No	1	Yes
385	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	45	No	0	Yes
386	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	3	85	No	1	Yes
387	Red gum	Eucalyptus camaldulensis	-	yes	12,7	21	very poor	poor	poor	4	55	No	0	Yes
388	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	30	No	0	Yes
389	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	2	115	No	1	Yes
390	Red gum	Eucalyptus camaldulensis	34	no	-	-	very poor	very poor	very poor	5	75	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
391	Red gum	Eucalyptus camaldulensis	5	no	-	-	fair	fair	fair	3	30	No	1	Yes
392	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	fair	3	80	No	1	Yes
393	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
394	Red gum	Eucalyptus camaldulensis	-	yes	15,6	23	poor	poor	poor	4	40	No	0	Yes
395	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	40	No	0	Yes
396	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	3	65	No	1	Yes
397	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	fair	3	40	No	1	Yes
398	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	fair	fair	fair	3	65	No	1	Yes
399	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	fair	fair	3	35	No	1	Yes
400	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
401	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	good	fair	3	70	No	1	Yes
402	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
403	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	90	No	1	Yes
404	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	55	No	0	Yes
405	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	45	No	0	Yes
406	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
407	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	25	No	0	Yes
408	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	good	fair	3	55	No	1	Yes
409	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	good	fair	3	100	No	1	Yes
410	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
411	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
412	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	good	fair	3	75	No	1	Yes
413	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	55	No	0	Yes
414	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	fair	poor	4	40	No	0	Yes
415	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	3	80	No	1	Yes
416	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
417	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	20	No	0	Yes
418	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	75	No	0	Yes
419	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
420	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	good	fair	3	85	No	1	Yes
421	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	4	70	No	0	Yes
422	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	poor	4	35	No	0	Yes
423	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	45	No	0	Yes
424	Red gum	Eucalyptus camaldulensis	26	no	-	-	good	good	good	2	95	No	1	Yes
425	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
426	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
427	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
428	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
429	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	fair	good	2	75	No	1	Yes
430	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
431	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
432	Red gum	Eucalyptus camaldulensis	23	no	-	-	good	good	good	2	85	No	1	Yes
433	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	poor	fair	3	50	No	1	Yes
434	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	poor	poor	4	45	No	0	Yes
435	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	35	No	0	Yes
436	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	fair	fair	3	70	No	1	Yes
437	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	45	No	0	Yes
438	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	55	No	0	Yes
439	Red gum	Eucalyptus camaldulensis	35	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
440	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	3	85	No	1	Yes
441	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
442	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	fair	poor	4	80	No	0	Yes
443	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
444	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	fair	3	75	No	1	Yes
445	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	poor	4	40	No	0	Yes
446	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	5	55	No	0	Yes
447	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	30	No	0	Yes
448	Red gum	Eucalyptus camaldulensis	-	yes	9,9	25	very poor	very poor	very poor	5	40	No	0	Yes
449	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	35	No	0	Yes
450	Red gum	Eucalyptus camaldulensis	-	yes	16,13	32	poor	poor	poor	4	70	No	0	Yes
451	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
452	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
453	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	fair	poor	4	40	No	0	Yes
454	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	4	25	No	0	Yes
455	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
456	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	40	No	0	Yes
457	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	40	No	0	Yes
458	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	30	No	0	Yes
459	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	poor	4	45	No	0	Yes
460	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
461	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
462	Red ironbark	Eucalyptus sideroxylon	4	no	-	-	poor	poor	poor	4	25	No	0	Yes
463	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
464	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	poor	poor	poor	4	45	No	0	Yes
465	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	4	25	No	0	Yes
466	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	fair	poor	4	45	No	0	Yes
467	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
468	Red gum	Eucalyptus camaldulensis	-	yes	13,9	32	poor	poor	poor	4	70	No	0	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
469	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	poor	4	60	No	0	Yes
470	Red gum	Eucalyptus camaldulensis	-	yes	7,6	17	very poor	very poor	very poor	5	35	No	0	Yes
471	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
472	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	poor	very poor	5	45	No	0	Yes
473	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	55	No	0	Yes
474	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	40	No	0	Yes
475	Red gum	Eucalyptus camaldulensis	-	yes	10,7	21	very poor	very poor	very poor	5	50	No	0	Yes
476	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	55	No	0	Yes
477	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
478	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
479	Red gum	Eucalyptus camaldulensis	-	yes	16,10	36	poor	poor	poor	4	75	No	0	Yes
480	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	4	50	No	0	Yes
481	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	4	45	No	0	Yes
482	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	poor	fair	poor	4	50	No	0	Yes
483	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	poor	poor	poor	4	50	No	0	Yes
484	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	poor	fair	3	75	No	1	Yes
485	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	35	No	0	Yes
486	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	45	No	0	Yes
487	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	40	No	0	Yes
488	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	4	30	No	0	Yes
489	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5,5	12	very poor	very poor	very poor	5	35	No	0	Yes
490	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	poor	fair	fair	3	65	No	1	Yes
491	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	4	35	No	0	Yes
492	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	50	No	0	Yes
493	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
494	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
495	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	poor	4	75	No	0	Yes
496	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
497	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
498	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
499	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	40	No	0	Yes
500	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	poor	poor	poor	4	30	No	0	Yes
501	Red ironbark	Eucalyptus sideroxylon	6	no	-	-	poor	poor	poor	4	30	No	0	Yes
502	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
503	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
504	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	95	No	0	Yes
505	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	5	85	No	0	Yes
506	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	45	No	0	Yes
507	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
508	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
509	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	50	No	0	Yes
510	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	3	70	No	1	Yes
511	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	fair	poor	4	55	No	0	Yes
512	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	4	75	No	0	Yes
513	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	4	25	No	0	Yes
514	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
515	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	poor	4	35	No	0	Yes
516	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
517	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	60	No	0	Yes
518	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	3	75	No	1	Yes
519	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	4	30	No	0	Yes
520	Red gum	Eucalyptus camaldulensis	-	yes	13,6	18	very poor	fair	poor	4	45	No	0	Yes
521	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	50	No	0	Yes
522	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	fair	3	60	No	1	Yes
523	Red ironbark	Eucalyptus sideroxylon	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
524	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
525	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	fair	fair	fair	3	50	No	1	Yes
526	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	65	No	0	Yes
527	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	5	60	No	0	Yes
528	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	30	No	0	Yes
529	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	3	90	No	1	Yes
530	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
531	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
532	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
533	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
534	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
535	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	80	No	0	Yes
536	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	3	80	No	1	Yes
537	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
538	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	fair	fair	3	80	No	1	Yes
539	Red gum	Eucalyptus camaldulensis	-	yes	5,3	11	very poor	very poor	very poor	5	30	No	0	Yes
540	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
541	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
542	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	50	No	0	Yes
543	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	fair	fair	fair	3	65	No	1	Yes
544	Red ironbark	Eucalyptus sideroxylon	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
545	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	good	poor	4	20	No	0	Yes
546	Red gum	Eucalyptus camaldulensis	-	yes	8,7,8	48	very poor	very poor	very poor	5	45	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
547	Red ironbark	Eucalyptus sideroxylon	-	yes	7,7,8	55	very poor	poor	very poor	5	40	No	0	Yes
548	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
549	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
550	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
551	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	60	No	0	Yes
552	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	very poor	poor	4	35	No	0	Yes
553	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	50	No	0	Yes
554	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	50	No	0	Yes
555	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	85	No	1	Yes
556	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	poor	very poor	5	45	No	0	Yes
557	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	55	No	0	Yes
558	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	very poor	poor	4	75	No	0	Yes
559	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
560	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	poor	poor	4	100	No	0	Yes
561	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	85	No	1	Yes
562	Red gum	Eucalyptus camaldulensis	-	yes	14,4,5	18	very poor	fair	poor	4	25	No	0	Yes
563	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	3	85	No	1	Yes
564	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	5	25	No	0	Yes
565	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
566	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	poor	very poor	5	75	No	0	Yes
567	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	fair	fair	3	85	No	1	Yes
568	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
569	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	30	No	0	Yes
570	Red gum	Eucalyptus camaldulensis	-	yes	10,10	24	very poor	fair	poor	4	55	No	0	Yes
571	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	30	No	0	Yes
572	Red gum	Eucalyptus camaldulensis	-	yes	31,14,20,14,6,21,20	120	very poor	good	fair	3	55	No	1	Yes
573	Red ironbark	Eucalyptus sideroxylon	-	yes	8,8,7	19	very poor	poor	fair	3	45	No	1	Yes
574	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5	16	very poor	very poor	very poor	5	40	No	0	Yes
575	Red ironbark	Eucalyptus sideroxylon	-	yes	6,5,6,9,9,5	36	very poor	poor	poor	4	55	No	0	Yes
576	Red gum	Eucalyptus camaldulensis	-	yes	13,8	22	poor	very poor	poor	4	40	No	0	Yes
577	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	90	No	1	Yes
578	Red gum	Eucalyptus camaldulensis	-	yes	14,16	26	poor	poor	poor	4	60	No	0	Yes
579	Red gum	Eucalyptus camaldulensis	-	yes	8,13	18	poor	poor	poor	4	70	No	0	Yes
580	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	good	good	2	100	No	1	Yes
581	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	75	No	0	Yes
582	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	fair	poor	4	30	No	0	Yes
583	Red gum	Eucalyptus camaldulensis	36	no	-	-	good	good	good	2	100	No	1	Yes
584	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	good	fair	3	50	No	1	Yes
585	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	3	80	No	1	Yes
586	Red ironbark	Eucalyptus sideroxylon	24	no	-	-	poor	fair	fair	3	45	No	1	Yes
587	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	40	No	0	Yes
588	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	3	65	No	1	Yes
589	Red gum	Eucalyptus camaldulensis	-	yes	8,7	10	poor	poor	poor	4	25	No	0	Yes
590	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	65	No	0	Yes
591	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	4	25	No	0	Yes
592	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	poor	4	85	No	0	Yes
593	Red gum	Eucalyptus camaldulensis	-	yes	8,10	15	poor	fair	poor	4	30	No	0	Yes
594	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	60	No	0	Yes
595	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	4	60	No	0	Yes
596	Red gum	Eucalyptus camaldulensis	-	yes	7,10	37	very poor	poor	poor	4	30	No	0	Yes
597	Red gum	Eucalyptus camaldulensis	-	yes	5,12	17	very poor	poor	poor	4	35	No	0	Yes
598	Red gum	Eucalyptus camaldulensis	-	yes	12	23	poor	poor	poor	4	50	No	0	Yes
599	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	50	No	0	Yes
600	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
601	Red gum	Eucalyptus camaldulensis	-	yes	12,5,5,5	32	very poor	fair	poor	4	25	No	0	Yes
602	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	4	45	No	0	Yes
603	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	3	75	No	1	Yes
604	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	poor	fair	3	60	No	1	Yes
605	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	poor	fair	3	70	No	1	Yes
606	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
607	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
608	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	75	No	1	Yes
609	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	5	65	No	0	Yes
610	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
611	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	70	No	0	Yes
612	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	45	No	0	Yes
613	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
614	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	poor	4	35	No	0	Yes
615	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	3	75	No	1	Yes
616	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	4	60	No	0	Yes
617	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
618	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	55	No	0	Yes
619	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
620	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
621	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	60	No	0	Yes
622	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	fair	3	45	No	1	Yes
623	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	fair	3	45	No	1	Yes
624	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	35	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
625	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	55	No	0	Yes
626	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	40	No	0	Yes
627	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	4	60	No	0	Yes
628	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	5	55	No	0	Yes
629	Red gum	Eucalyptus camaldulensis	-	yes	8,6	10	very poor	poor	poor	4	20	No	0	Yes
630	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
631	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	30	No	0	Yes
632	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	good	good	2	85	No	1	Yes
633	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	40	No	0	Yes
634	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	fair	fair	3	80	No	1	Yes
635	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	3	75	No	1	Yes
636	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	4	55	No	0	Yes
637	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
638	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
639	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
640	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
641	Red gum	Eucalyptus camaldulensis	26	no	-	-	fair	poor	fair	3	85	No	1	Yes
642	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	55	No	0	Yes
643	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
644	Red gum	Eucalyptus camaldulensis	-	yes	16,12	30	poor	fair	fair	3	60	No	1	Yes
645	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	3	80	No	1	Yes
646	Red gum	Eucalyptus camaldulensis	-	yes	6,8,9	9	very poor	poor	poor	4	45	No	0	Yes
647	Red gum	Eucalyptus camaldulensis	-	yes	15,13	32	very poor	poor	poor	4	70	No	0	Yes
648	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	poor	4	80	No	0	Yes
649	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	good	good	2	75	No	1	Yes
650	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	4	85	No	0	Yes
651	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4	22	very poor	poor	poor	4	40	No	0	Yes
652	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
653	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	5	70	No	0	Yes
654	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
655	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	70	No	1	Yes
656	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	45	No	0	Yes
657	Manna gum	Eucalyptus viminalis	17	no	-	-	good	good	good	2	55	No	1	Yes
658	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
659	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	good	good	2	100	No	1	Yes
660	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
661	Manna gum	Eucalyptus viminalis	-	yes	8,7	31	very poor	very poor	very poor	5	40	No	0	Yes
662	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
663	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	60	No	0	Yes
664	Red gum	Eucalyptus camaldulensis	-	yes	4,6	12	very poor	fair	poor	4	30	No	0	Yes
665	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	70	No	1	Yes
666	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	3	80	No	1	Yes
667	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
668	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	60	No	1	Yes
669	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
670	Red gum	Eucalyptus camaldulensis	42	no	-	-	poor	good	good	2	90	No	1	Yes
671	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	good	good	2	85	No	1	Yes
672	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	3	75	No	1	Yes
673	Red gum	Eucalyptus camaldulensis	-	yes	13,21	34	poor	good	good	2	65	No	1	Yes
674	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	good	good	2	105	No	1	Yes
675	Red gum	Eucalyptus camaldulensis	-	yes	5,4	26	very poor	good	poor	4	20	No	0	Yes
676	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	70	No	1	Yes
677	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
678	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	good	fair	3	80	No	1	Yes
679	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	poor	poor	4	80	No	0	Yes
680	Red gum	Eucalyptus camaldulensis	-	yes	5,4,4,5,4	19	very poor	very poor	very poor	5	15	No	0	Yes
681	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	poor	4	40	No	0	Yes
682	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	60	No	0	Yes
683	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	4	75	No	0	Yes
684	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	95	No	1	Yes
685	Red gum	Eucalyptus camaldulensis	31	no	-	-	good	fair	fair	3	95	No	1	Yes
686	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	good	good	2	105	No	1	Yes
687	Red gum	Eucalyptus camaldulensis	-	yes	15,12,5,12,4	40	very poor	fair	poor	4	55	No	0	Yes
688	Red gum	Eucalyptus camaldulensis	-	yes	5,10,13	39	very poor	fair	poor	4	50	No	0	Yes
689	Red gum	Eucalyptus camaldulensis	-	yes	9,6	23	very poor	very poor	very poor	5	35	No	0	Yes
690	Red gum	Eucalyptus camaldulensis	32	no	-	-	fair	good	good	2	70	No	1	Yes
691	Peruvian pepper	Schinus molle	44	no	-	-	fair	good	good	2	50	No	1	Yes
692	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	good	fair	3	70	No	1	Yes
693	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	3	50	No	1	Yes
694	Red gum	Eucalyptus camaldulensis	25	no	-	-	poor	good	fair	3	55	No	1	Yes
695	Red gum	Eucalyptus camaldulensis	-	yes	19,12	42	very poor	good	fair	3	55	No	1	Yes
696	Red gum	Eucalyptus camaldulensis	-	yes	15,13,12	42	very poor	good	fair	3	65	No	1	Yes
697	Red gum	Eucalyptus camaldulensis	-	yes	4,4,6	21	very poor	very poor	very poor	5	25	No	0	Yes
698	Red gum	Eucalyptus camaldulensis	-	yes	7,11,7	24	very poor	poor	poor	4	50	No	0	Yes
699	Red gum	Eucalyptus camaldulensis	-	yes	6,6,6	37	very poor	poor	poor	4	40	No	0	Yes
700	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	35	No	0	Yes
701	Red gum	Eucalyptus camaldulensis	27	no	-	-	fair	poor	poor	4	75	No	0	Yes
702	Manna gum	Eucalyptus viminalis	-	yes	21,7	28	very poor	poor	very poor	5	50	No	0	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
703	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
704	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	45	No	0	Yes
705	Manna gum	Eucalyptus viminalis	-	yes	16,8	20	poor	fair	poor	4	45	No	0	Yes
706	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	3	60	No	1	Yes
707	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	poor	4	55	No	0	Yes
708	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	fair	3	90	No	1	Yes
709	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	45	No	0	Yes
710	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	40	No	0	Yes
711	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
712	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	poor	poor	4	40	No	0	Yes
713	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
714	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
715	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	4	60	No	0	Yes
716	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	4	70	No	0	Yes
717	Manna gum	Eucalyptus viminalis	-	yes	13,18	36	poor	good	fair	3	45	No	1	Yes
718	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	45	No	0	Yes
719	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	35	No	0	Yes
720	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	5	70	No	0	Yes
721	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	poor	poor	4	40	No	0	Yes
722	Red gum	Eucalyptus camaldulensis	31	no	-	-	very poor	poor	poor	4	70	No	0	Yes
723	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
724	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
725	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
726	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	4	80	No	0	Yes
727	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
728	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	very poor	very poor	5	65	No	0	Yes
729	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
730	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	50	No	0	Yes
731	Red gum	Eucalyptus camaldulensis	-	yes	8,8,6	19	very poor	poor	poor	4	40	No	0	Yes
732	Red gum	Eucalyptus camaldulensis	-	yes	8,6,4	18	very poor	poor	poor	4	30	No	0	Yes
733	Red gum	Eucalyptus camaldulensis	-	yes	8,7,8,6	23	very poor	fair	poor	4	30	No	0	Yes
734	Red gum	Eucalyptus camaldulensis	-	yes	8,8,7	22	very poor	poor	poor	4	45	No	0	Yes
735	Red gum	Eucalyptus camaldulensis	-	yes	6,7	18	very poor	very poor	very poor	5	45	No	0	Yes
736	Red gum	Eucalyptus camaldulensis	-	yes	6,4,8	17	very poor	poor	very poor	5	45	No	0	Yes
737	Red gum	Eucalyptus camaldulensis	-	yes	8,7,4	15	very poor	fair	poor	4	40	No	0	Yes
738	Red gum	Eucalyptus camaldulensis	-	yes	8,7,5,6,5	23	very poor	good	fair	3	35	No	1	Yes
739	Red gum	Eucalyptus camaldulensis	-	yes	5,6,7	15	very poor	very poor	very poor	5	15	No	0	Yes
740	Red gum	Eucalyptus camaldulensis	-	yes	8,6	16	very poor	fair	poor	4	25	No	0	Yes
741	Red gum	Eucalyptus camaldulensis	-	yes	7,11,10,14,7,10,9,15,9,13,4	57	very poor	good	fair	3	25	No	1	Yes
742	Red gum	Eucalyptus camaldulensis	-	yes	8,8,8	42	very poor	very poor	very poor	5	20	No	0	Yes
743	Red gum	Eucalyptus camaldulensis	-	yes	8,9	18	very poor	very poor	very poor	5	25	No	0	Yes
744	Red gum	Eucalyptus camaldulensis	-	yes	7,10,12,12	40	very poor	very poor	very poor	5	25	No	0	Yes
745	Red gum	Eucalyptus camaldulensis	-	yes	7,8	30	very poor	good	fair	3	45	No	1	Yes
746	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	4	35	No	0	Yes
747	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	40	No	0	Yes
748	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	45	No	0	Yes
749	Red gum	Eucalyptus camaldulensis	-	yes	5,3	19	very poor	poor	poor	4	35	No	0	Yes
750	Red gum	Eucalyptus camaldulensis	-	yes	10,9,3	30	poor	poor	poor	4	50	No	0	Yes
751	Red gum	Eucalyptus camaldulensis	-	yes	-	-	-	-	fair	3	-	No	1	Yes
752	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	poor	poor	4	60	No	0	Yes
753	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	poor	poor	4	50	No	0	Yes
754	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
755	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	45	No	0	Yes
756	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
757	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
758	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	40	No	0	Yes
759	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	35	No	0	Yes
760	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	45	No	0	Yes
761	Red gum	Eucalyptus camaldulensis	-	yes	7,7	16	very poor	poor	poor	4	45	No	0	Yes
762	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	35	No	0	Yes
763	Double Tag/760								N/A	N/A		N/A		Yes
764	Red gum	Eucalyptus camaldulensis	-	yes	10,6	13	poor	fair	fair	3	60	No	1	Yes
765	Red gum	Eucalyptus camaldulensis	-	yes	5,4	19	very poor	fair	poor	4	35	No	0	Yes
766	Red gum	Eucalyptus camaldulensis	-	yes	9,5	25	poor	poor	poor	4	45	No	0	Yes
767	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	60	No	0	Yes
768	Red gum	Eucalyptus camaldulensis	-	yes	31,44	108	good	good	good	2	100	No	1	Yes
769	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	poor	poor	4	20	No	0	Yes
770	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
771	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	3	50	No	1	Yes
772	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	45	No	1	Yes
773	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	35	No	0	Yes
774	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	45	No	1	Yes
775	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	3	40	No	1	Yes
776	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	3	40	No	1	Yes
777	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	poor	poor	4	30	No	0	Yes
778	Red gum	Eucalyptus camaldulensis	-	yes	10,10	26	very poor	good	fair	3	50	No	1	Yes
779	Lost Tag								N/A	N/A		N/A		Yes
780	Peruvian pepper	Schinus molle	-	yes	10,7,4	25	poor	good	fair	3	25	No	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
781	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	poor	poor	4	65	No	0	Yes
782	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	good	good	2	80	No	1	Yes
783	Red gum	Eucalyptus camaldulensis	-	yes	6,6,5	19	very poor	very poor	very poor	5	20	No	0	Yes
784	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
785	Red gum	Eucalyptus camaldulensis	-	yes	14,10	26	very poor	poor	poor	4	40	No	0	Yes
786	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
787	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	very poor	very poor	5	55	No	0	Yes
788	Red gum	Eucalyptus camaldulensis	-	yes	9,10	19	very poor	poor	poor	4	30	No	0	Yes
789	Red gum	Eucalyptus camaldulensis	-	yes	9,8	16	very poor	very poor	very poor	5	30	No	0	Yes
790	Red gum	Eucalyptus camaldulensis	23	no	-	-	good	fair	good	2	65	No	1	Yes
791	Red gum	Eucalyptus camaldulensis	-	yes	13,16,15,16,20,15	120	poor	fair	fair	3	50	No	1	Yes
792	Red gum	Eucalyptus camaldulensis	-	yes	12,9,7	48	poor	poor	poor	4	35	No	0	Yes
793	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	fair	poor	4	55	No	0	Yes
794	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	fair	poor	4	40	No	0	Yes
795	Red gum	Eucalyptus camaldulensis	-	yes	12,8	21	poor	good	fair	3	55	No	1	Yes
796	Red gum	Eucalyptus camaldulensis	-	yes	18,7,5	32	poor	good	fair	3	60	No	1	Yes
797	Red gum	Eucalyptus camaldulensis	-	yes	5,13,7	24	very poor	very poor	very poor	5	35	No	0	Yes
798	Red gum	Eucalyptus camaldulensis	-	yes	14,6	22	poor	good	fair	3	60	No	1	Yes
799	Red gum	Eucalyptus camaldulensis	-	yes	22,10	30	poor	poor	poor	4	45	No	0	Yes
800	Red gum	Eucalyptus camaldulensis	-	yes	15,10,12	54	very poor	good	fair	3	55	No	1	Yes
801	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	4	45	No	0	Yes
802	Red gum	Eucalyptus camaldulensis	-	yes	14,22	40	very poor	very poor	very poor	5	55	No	0	Yes
803	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	30	No	0	Yes
804	Red gum	Eucalyptus camaldulensis	-	yes	9,7	20	poor	poor	poor	4	45	No	0	Yes
805	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	35	No	0	Yes
806	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
807	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	3	65	No	1	Yes
808	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	fair	poor	4	70	No	0	Yes
809	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
810	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
811	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
812	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
813	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	70	No	1	Yes
814	Red gum	Eucalyptus camaldulensis	58	no	-	-	poor	poor	poor	4	65	No	0	Yes
815	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	fair	3	35	No	1	Yes
816	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
817	Red gum	Eucalyptus camaldulensis	36	no	-	-	poor	fair	fair	3	80	No	1	Yes
818	Red gum	Eucalyptus camaldulensis	-	yes	6,4,3	19	very poor	poor	poor	4	30	No	0	Yes
819	Red gum	Eucalyptus camaldulensis	-	yes	16,5	34	poor	good	fair	3	60	No	1	Yes
820	Red gum	Eucalyptus camaldulensis	-	yes	19,7	33	poor	good	good	2	75	No	1	Yes
821	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
822	Red gum	Eucalyptus camaldulensis	-	yes	21,6	41	poor	fair	fair	3	70	No	1	Yes
823	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	60	No	0	Yes
824	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	4	50	No	0	Yes
825	Red gum	Eucalyptus camaldulensis	-	yes	21,21,14	80	poor	fair	fair	3	55	No	1	Yes
826	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
827	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
828	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
829	Red gum	Eucalyptus camaldulensis	-	yes	16,5	32	poor	fair	fair	3	55	No	1	Yes
830	Red gum	Eucalyptus camaldulensis	-	yes	5,19	24	fair	good	fair	3	65	No	1	Yes
831	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
832	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	fair	3	50	No	1	Yes
833	Red gum	Eucalyptus camaldulensis	-	yes	22,7	50	poor	fair	fair	3	65	No	1	Yes
834	Red gum	Eucalyptus camaldulensis	-	yes	44,10,7	46	poor	fair	poor	4	45	No	0	Yes
835	Red gum	Eucalyptus camaldulensis	-	yes	10,12,12	27	poor	good	fair	3	55	No	1	Yes
836	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
837	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	very poor	poor	4	35	No	0	Yes
838	Red gum	Eucalyptus camaldulensis	-	yes	11,10,8,52	88	fair	good	good	2	100	No	1	Yes
839	Red gum	Eucalyptus camaldulensis	-	yes	6,5,4	35	poor	good	fair	3	40	No	1	Yes
840	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	45	No	1	Yes
841	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	45	No	1	Yes
842	Red gum	Eucalyptus camaldulensis	-	yes	8,5,3	50	poor	fair	fair	3	60	No	1	Yes
843	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	3	55	No	1	Yes
844	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	good	2	65	No	1	Yes
845	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	fair	3	25	No	1	Yes
846	Double Tag/843								N/A	N/A		N/A		Yes
847	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	2	40	No	1	Yes
848	Red gum	Eucalyptus camaldulensis	-	yes	5,6	8	poor	good	good	2	40	No	1	Yes
849	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	2	35	No	1	Yes
850	Red gum	Eucalyptus camaldulensis	-	yes	6,5	12	poor	good	fair	3	15	No	1	Yes
851	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	good	good	2	65	No	1	Yes
852	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	good	fair	3	40	No	1	Yes
853	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	fair	fair	3	30	No	1	Yes
854	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	55	No	1	Yes
855	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
856	Red gum	Eucalyptus camaldulensis	-	yes	7,16,5,13	51	poor	poor	poor	4	65	No	0	Yes
857	Red gum	Eucalyptus camaldulensis	-	yes	33,14,14	48	fair	good	good	2	90	No	1	Yes
858	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	fair	3	25	No	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
859	Red gum	Eucalyptus camaldulensis	-	yes	11,10	14	fair	fair	fair	3	30	No	1	Yes
860	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
861	Red gum	Eucalyptus camaldulensis	-	yes	25,26,5,34	88	good	very good	very good	1	85	No	2	Yes
862	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	good	fair	3	40	No	1	Yes
863	Red gum	Eucalyptus camaldulensis	-	yes	7,17	28	poor	poor	poor	4	60	No	0	Yes
864	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
865	Red gum	Eucalyptus camaldulensis	5	no	-	-	fair	poor	poor	4	25	No	0	Yes
866	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	4	55	No	0	Yes
867	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
868	Red gum	Eucalyptus camaldulensis	35	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
869	Red gum	Eucalyptus camaldulensis	-	yes	13,33,9,7	72	fair	fair	fair	3	75	No	1	Yes
870	Red gum	Eucalyptus camaldulensis	59	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
871	Red gum	Eucalyptus camaldulensis	-	yes	23,20	70	very poor	very poor	very poor	5	70	No	0	Yes
872	Red gum	Eucalyptus camaldulensis	-	yes	7,13	24	poor	good	fair	3	80	No	1	Yes
873	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	fair	3	50	No	1	Yes
874	Red gum	Eucalyptus camaldulensis	-	yes	7,6,7,20	45	very poor	very poor	very poor	5	70	No	0	Yes
875	Red gum	Eucalyptus camaldulensis	-	yes	15,4,5	44	very poor	very poor	very poor	5	60	No	0	Yes
876	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
877	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
878	Red gum	Eucalyptus camaldulensis	-	yes	10,5	12	very poor	very poor	very poor	5	35	No	0	Yes
879	Red gum	Eucalyptus camaldulensis	-	yes	5,11	21	very poor	very poor	very poor	5	55	No	0	Yes
880	Red gum	Eucalyptus camaldulensis	-	yes	8,5,7	35	very poor	poor	poor	4	30	No	0	Yes
881	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
882	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	55	No	0	Yes
883	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	fair	fair	3	60	No	1	Yes
884	Red gum	Eucalyptus camaldulensis	-	yes	16,9,13	50	poor	good	fair	3	95	No	1	Yes
885	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	fair	fair	3	55	No	1	Yes
886	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
887	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	70	No	0	Yes
888	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
889	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	fair	3	60	No	1	Yes
890	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	3	55	No	1	Yes
891	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	fair	poor	4	25	No	0	Yes
892	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	3	65	No	1	Yes
893	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	poor	poor	4	45	No	0	Yes
894	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	fair	fair	3	55	No	1	Yes
895	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	4	45	No	0	Yes
896	Red gum	Eucalyptus camaldulensis	-	yes	6,6	16	very poor	very poor	very poor	5	20	No	0	Yes
897	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
898	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
899	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
900	Red gum	Eucalyptus camaldulensis	-	yes	10,6	12	very poor	very poor	very poor	5	30	No	0	Yes
901	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
902	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	poor	poor	4	40	No	0	Yes
903	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	poor	poor	4	40	No	0	Yes
904	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	65	No	0	Yes
905	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
906	Red gum	Eucalyptus camaldulensis	-	yes	15,6	23	poor	fair	poor	4	55	No	0	Yes
907	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	3	70	No	1	Yes
908	Red gum	Eucalyptus camaldulensis	-	yes	25,7,6,25	70	fair	good	good	2	95	No	1	Yes
909	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	fair	3	50	No	1	Yes
910	Red gum	Eucalyptus camaldulensis	-	yes	14,19,8	36	very poor	good	fair	3	50	No	1	Yes
911	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	fair	poor	4	75	No	0	Yes
912	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
913	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
914	Red gum	Eucalyptus camaldulensis	-	yes	17,18,11,6	48	poor	poor	poor	4	60	No	0	Yes
915	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
916	Black elderberry	Sambucus nigra	5	no	-	-	very poor	very poor	very poor	5	15	Yes	1	Yes
917	Red gum	Eucalyptus camaldulensis	-	yes	6,4	16	very poor	fair	poor	4	30	No	0	Yes
918	Red gum	Eucalyptus camaldulensis	-	yes	9,5,3,3	21	very poor	poor	poor	4	30	No	0	Yes
919	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	poor	poor	4	35	No	0	Yes
920	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	40	No	0	Yes
921	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	fair	poor	4	45	No	0	Yes
922	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	fair	poor	4	40	No	0	Yes
923	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	3	75	No	1	Yes
924	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	fair	fair	3	45	No	1	Yes
925	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	good	fair	3	45	No	1	Yes
926	Red gum	Eucalyptus camaldulensis	-	yes	17,13,8,9,4	60	poor	good	fair	3	55	No	1	Yes
927	Red gum	Eucalyptus camaldulensis	-	yes	15,10,13,9,19	42	poor	good	fair	3	55	No	1	Yes
928	Red gum	Eucalyptus camaldulensis	-	yes	10,3,6,7,4	40	very poor	good	fair	3	40	No	1	Yes
929	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	3	50	No	1	Yes
930	White alder	Alnus rhombifolia	14	no	-	-	good	poor	poor	4	20	Yes	1	Yes
931	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	very poor	poor	4	55	No	0	Yes
932	Red gum	Eucalyptus camaldulensis	-	yes	9,5,6,20	36	very poor	poor	poor	4	40	No	0	Yes
933	Fremont cottonwood	Populus fremontii	39	no	-	-	good	fair	good	2	45	Yes	3	Yes
934	Red ironbark	Eucalyptus sideroxylon	23	no	-	-	fair	fair	fair	3	40	No	1	Yes
935	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
936	Red gum	Eucalyptus camaldulensis	-	yes	36,17	52	fair	good	good	2	80	No	1	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
937	Red gum	Eucalyptus camaldulensis	-	yes	6,13	17	very poor	poor	poor	4	35	No	0	Yes
938	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
939	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
940	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
941	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	fair	fair	3	20	No	1	Yes
942	Red ironbark	Eucalyptus sideroxylon	-	yes	10,19,13,9,13	32	poor	very poor	very poor	5	30	No	0	Yes
943	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
944	Red gum	Eucalyptus camaldulensis	-	yes	20,14	50	fair	very good	good	2	60	No	1	Yes
945	Red gum	Eucalyptus camaldulensis	-	yes	19,13,22,23	48	very poor	very poor	very poor	5	50	No	0	Yes
946	Bishop pine	Pinus muricata	-	yes	17,13	32	very poor	very poor	very poor	5	30	Yes	1	Yes
947	Red gum	Eucalyptus camaldulensis	-	yes	7,8,9,11,6,10,12	48	poor	good	good	2	80	No	1	Yes
948	Red gum	Eucalyptus camaldulensis	46	no	-	-	fair	good	good	2	95	No	1	Yes
949	Red ironbark	Eucalyptus sideroxylon	18	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
950	Bishop pine	Pinus muricata	23	no	-	-	fair	very good	good	2	20	Yes	3	Yes
951	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	fair	poor	4	60	No	0	Yes
952	Red ironbark	Eucalyptus sideroxylon	-	yes	24,16	33	poor	poor	poor	4	40	No	0	Yes
953	Red gum	Eucalyptus camaldulensis	24	yes	21,32	60	very poor	very poor	very poor	5	75	No	0	Yes
954	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	fair	3	45	No	1	Yes
955	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	35	No	0	Yes
956	Red gum	Eucalyptus camaldulensis	-	yes	16,9,14	33	very poor	poor	poor	4	50	No	0	Yes
957	Red gum	Eucalyptus camaldulensis	-	yes	34,19	44	poor	good	good	2	80	No	1	Yes
958	Bishop pine	Pinus muricata	18	no	-	-	very poor	good	fair	3	25	Yes	2	Yes
959	Red gum	Eucalyptus camaldulensis	-	yes	8,32	35	poor	poor	poor	4	55	No	0	Yes
960	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	poor	poor	4	25	No	0	Yes
961	Red gum	Eucalyptus camaldulensis	-	yes	29,50	60	very poor	very poor	very poor	5	70	No	0	Yes
962	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
963	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	fair	fair	3	40	No	1	Yes
964	Red gum	Eucalyptus camaldulensis	-	yes	6,5	23	poor	fair	fair	3	30	No	1	Yes
965	Red gum	Eucalyptus camaldulensis	-	yes	5,4,3	18	poor	fair	fair	3	25	No	1	Yes
966	Red gum	Eucalyptus camaldulensis	-	yes	6,11	22	poor	fair	fair	3	20	No	1	Yes
967	Red gum	Eucalyptus camaldulensis	-	yes	23,22,12,13	52	poor	fair	fair	3	70	No	1	Yes
968	Red gum	Eucalyptus camaldulensis	-	yes	18,27	45	very poor	very poor	very poor	5	75	No	0	Yes
969	Red gum	Eucalyptus camaldulensis	-	yes	13,18,14	35	poor	very poor	poor	4	70	No	0	Yes
970	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
971	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	very poor	poor	4	60	No	0	Yes
972	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	fair	fair	3	45	No	1	Yes
973	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	40	No	1	Yes
974	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	very poor	poor	4	30	No	0	Yes
975	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	40	No	0	Yes
976	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	poor	poor	4	45	No	0	Yes
977	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	poor	very poor	5	30	No	0	Yes
978	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
979	Red gum	Eucalyptus camaldulensis	49	no	-	-	fair	good	good	2	90	No	1	Yes
980	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	3	35	No	1	Yes
981	Red gum	Eucalyptus camaldulensis	5	no	-	-	good	good	good	2	25	No	1	Yes
982	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	2	25	No	1	Yes
983	Red gum	Eucalyptus camaldulensis	-	yes	12,22	39	good	good	good	2	60	No	1	Yes
984	Bishop pine	Pinus muricata	18	no	-	-	poor	good	fair	3	40	Yes	2	Yes
985	Red gum	Eucalyptus camaldulensis	-	yes	8,9,12	40	poor	good	fair	3	40	No	1	Yes
986	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	3	70	No	1	Yes
987	Bishop pine	Pinus muricata	17	no	-	-	poor	fair	fair	3	45	Yes	2	Yes
988	Red gum	Eucalyptus camaldulensis	-	yes	5,11,20	33	very poor	very poor	very poor	5	40	No	0	Yes
989	Red gum	Eucalyptus camaldulensis	-	yes	15,11	25	very poor	very poor	very poor	5	45	No	0	Yes
990	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	3	50	No	1	Yes
991	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	fair	poor	4	25	No	0	Yes
992	Red gum	Eucalyptus camaldulensis	-	yes	16,18	27	poor	poor	poor	4	50	No	0	Yes
993	Red ironbark	Eucalyptus sideroxylon	24	no	-	-	fair	fair	fair	3	50	No	1	Yes
994	Red ironbark	Eucalyptus sideroxylon	30	no	-	-	fair	fair	fair	3	60	No	1	Yes
995	Red gum	Eucalyptus camaldulensis	-	yes	11,13	22	poor	good	fair	3	50	No	1	Yes
996	Red gum	Eucalyptus camaldulensis	-	yes	14,8,12,5	6	poor	good	fair	3	75	No	1	Yes
997	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	50	No	0	Yes
998	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	45	No	1	Yes
999	Red gum	Eucalyptus camaldulensis	-	yes	18,24	39	fair	good	fair	3	70	No	1	Yes
1000	Red gum	Eucalyptus camaldulensis	-	yes	11,13	21	fair	fair	fair	3	45	No	1	Yes
1001	Lost Tag								N/A	N/A		N/A		Yes
1002	Lost Tag								N/A	N/A		N/A		Yes
1003	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	fair	3	50	No	1	Yes
1004	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	60	No	1	Yes
1005	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	poor	fair	3	50	No	1	Yes
1006	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	3	40	No	1	Yes
1007	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	45	No	1	Yes
1008	Red gum	Eucalyptus camaldulensis	-	yes	13,17	29	very poor	very poor	very poor	5	40	No	0	Yes
1009	Red gum	Eucalyptus camaldulensis	-	yes	7,12	14	poor	poor	poor	4	35	No	0	Yes
1010	Red-cap gum	Eucalyptus erythrocorys	12	no	-	-	poor	good	fair	3	25	No	1	Yes
1011	Red-cap gum	Eucalyptus erythrocorys	-	yes	9,8	20	poor	good	fair	3	20	No	1	Yes
1012	Red-cap gum	Eucalyptus erythrocorys	-	yes	14,7	29	poor	fair	fair	3	25	No	1	Yes
1013	Red-cap gum	Eucalyptus erythrocorys	-	yes	5,6,9	19	poor	poor	poor	4	25	No	0	Yes
1014	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1015	Red-cap gum	Eucalyptus erythrocorys	-	yes	4,10	20	poor	poor	poor	4	20	No	0	Yes
1016	Red-cap gum	Eucalyptus erythrocorys	14	no	-	-	poor	good	fair	3	20	No	1	Yes
1017	Red-cap gum	Eucalyptus erythrocorys	-	yes	7,8,9	22	poor	good	fair	3	20	No	1	Yes
1018	Red-cap gum	Eucalyptus erythrocorys	-	yes	7,8	14	poor	fair	poor	4	20	No	0	Yes
1019	Red-cap gum	Eucalyptus erythrocorys	8	no	-	-	poor	poor	poor	4	25	No	0	Yes
1020	Red gum	Eucalyptus camaldulensis	36	no	-	-	fair	poor	poor	4	65	No	0	Yes
1021	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
1022	Red-cap gum	Eucalyptus erythrocorys	11	no	-	-	poor	fair	fair	3	20	No	1	Yes
1023	Red-cap gum	Eucalyptus erythrocorys	-	yes	12,7	33	poor	fair	fair	3	20	No	1	Yes
1024	Red gum	Eucalyptus camaldulensis	-	yes	18,21	45	very poor	very poor	very poor	5	45	No	0	Yes
1025	Red gum	Eucalyptus camaldulensis	-	yes	8,3	48	poor	poor	poor	4	60	No	0	Yes
1026	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	3	20	No	1	Yes
1027	Flooded gum	Eucalyptus rudis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1028	Red-cap gum	Eucalyptus erythrocorys	-	yes	11,14	16	poor	fair	fair	3	25	No	1	Yes
1029	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	good	fair	3	55	No	1	Yes
1030	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	poor	poor	4	75	No	0	Yes
1031	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	very poor	very poor	5	55	No	0	Yes
1032	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	45	No	0	Yes
1033	Red-cap gum	Eucalyptus erythrocorys	10	no	-	-	poor	good	fair	3	25	No	1	Yes
1034	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1035	Red-cap gum	Eucalyptus erythrocorys	12	no	-	-	poor	good	fair	3	25	No	1	Yes
1036	Red-cap gum	Eucalyptus erythrocorys	-	yes	10,9	19	poor	fair	poor	4	20	No	0	Yes
1037	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	poor	poor	poor	4	35	No	0	Yes
1038	Red ironbark	Eucalyptus sideroxylon	41	no	-	-	poor	fair	fair	3	75	No	1	Yes
1039	Red gum	Eucalyptus camaldulensis	-	yes	16,25,21	50	poor	very poor	poor	4	60	No	0	Yes
1040	Red ironbark	Eucalyptus sideroxylon	-	yes	13,21	26	poor	poor	poor	4	45	No	0	Yes
1041	Red ironbark	Eucalyptus sideroxylon	-	yes	6,17,12	30	poor	good	fair	3	30	No	1	Yes
1042	Red gum	Eucalyptus camaldulensis	-	yes	28,18	38	very poor	very poor	very poor	5	60	No	0	Yes
1043	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
1044	Red-cap gum	Eucalyptus erythrocorys	7	no	-	-	poor	poor	poor	4	20	No	0	Yes
1045	Red gum	Eucalyptus camaldulensis	51	no	-	-	fair	good	good	2	75	No	1	Yes
1046	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1047	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1048	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
1049	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1050	Red gum	Eucalyptus camaldulensis	31	no	-	-	good	good	good	2	50	No	1	Yes
1051	Red gum	Eucalyptus camaldulensis	-	yes	7,5,7	23	poor	poor	poor	4	30	No	0	Yes
1052	Red gum	Eucalyptus camaldulensis	-	yes	14,9	24	poor	very good	good	2	35	No	1	Yes
1053	Red ironbark	Eucalyptus sideroxylon	13	no	-	-	poor	poor	poor	4	45	No	0	Yes
1054	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	40	No	0	Yes
1055	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	35	No	0	Yes
1056	Red gum	Eucalyptus camaldulensis	31	no	-	-	fair	fair	fair	3	80	No	1	Yes
1057	Red gum	Eucalyptus camaldulensis	-	yes	16,10,11	31	very poor	very poor	very poor	5	45	No	0	Yes
1058	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
1059	Red ironbark	Eucalyptus sideroxylon	46	no	-	-	very poor	very poor	very poor	5	70	No	0	Yes
1060	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1061	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	25	No	0	Yes
1062	Red gum	Eucalyptus camaldulensis	-	yes	15,24,29	60	very poor	very poor	very poor	5	65	No	0	Yes
1063	Red gum	Eucalyptus camaldulensis	25	no	-	-	fair	fair	fair	3	65	No	1	Yes
1064	Red gum	Eucalyptus camaldulensis	-	yes	16,18	60	poor	good	fair	3	65	No	1	Yes
1065	Red ironbark	Eucalyptus sideroxylon	-	yes	17,25	33	very poor	very poor	very poor	5	50	No	0	Yes
1066	Red ironbark	Eucalyptus sideroxylon	29	no	-	-	poor	poor	poor	4	60	No	0	Yes
1067	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	20	No	0	Yes
1068	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	good	fair	3	80	No	1	Yes
1069	Red gum	Eucalyptus camaldulensis	-	yes	18,18	32	very poor	very poor	very poor	5	40	No	0	Yes
1070	Red gum	Eucalyptus camaldulensis	-	yes	10,11	19	very poor	very poor	very poor	5	45	No	0	Yes
1071	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	45	No	0	Yes
1072	Red gum	Eucalyptus camaldulensis	-	yes	5,9	11	poor	poor	poor	4	40	No	0	Yes
1073	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
1074	Red gum	Eucalyptus camaldulensis	-	yes	17,14	23	poor	fair	fair	3	45	No	1	Yes
1075	Red ironbark	Eucalyptus sideroxylon	11	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1076	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	fair	poor	4	35	No	0	Yes
1077	Red gum	Eucalyptus camaldulensis	-	yes	8,22	23	poor	good	fair	3	50	No	1	Yes
1078	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	40	No	0	Yes
1079	Red gum	Eucalyptus camaldulensis	-	yes	7,8	16	poor	fair	poor	4	45	No	0	Yes
1080	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	fair	fair	3	35	No	1	Yes
1081	Red gum	Eucalyptus camaldulensis	5	no	-	-	poor	poor	poor	4	45	No	0	Yes
1082	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	40	No	0	Yes
1083	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	fair	3	20	No	1	Yes
1084	Green ash	Fraxinus pennsylvanica	-	yes	23,6	38	very poor	very poor	very poor	5	35	No	0	Yes
1085	Green ash	Fraxinus pennsylvanica	33	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
1086	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	70	No	1	Yes
1087	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	70	No	1	Yes
1088	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1089	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1090	Red gum	Eucalyptus camaldulensis	-	yes	16,28	52	fair	poor	fair	3	60	No	1	Yes
1091	Green ash	Fraxinus pennsylvanica	18	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1092	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	fair	fair	3	90	No	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1093	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1094	Red gum	Eucalyptus camaldulensis	-	yes	24,14	36	very poor	very poor	very poor	5	55	No	0	Yes
1095	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1096	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1097	Red gum	Eucalyptus camaldulensis	-	yes	20,8	29	poor	fair	poor	4	65	No	0	Yes
1098	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	65	No	0	Yes
1099	Red gum	Eucalyptus camaldulensis	-	yes	11,10	15	poor	poor	poor	4	40	No	0	Yes
1100	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	good	fair	3	75	No	1	Yes
1101	Red gum	Eucalyptus camaldulensis	-	yes	15,5	25	poor	good	fair	3	60	No	1	Yes
1102	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	4	65	No	0	Yes
1103	Red gum	Eucalyptus camaldulensis	-	yes	17,21	40	poor	good	fair	3	20	No	1	Yes
1104	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	55	No	1	Yes
1105	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	20	No	0	Yes
1106	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1107	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1108	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	40	No	1	Yes
1109	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	3	65	No	1	Yes
1110	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1111	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	fair	fair	3	30	No	1	Yes
1112	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	30	No	1	Yes
1113	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1114	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	good	fair	3	65	No	1	Yes
1115	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1116	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1117	Red gum	Eucalyptus camaldulensis	-	yes	11,18	36	poor	good	fair	3	60	No	1	Yes
1118	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1119	Red gum	Eucalyptus camaldulensis	-	yes	12,10	28	very poor	very poor	very poor	5	30	No	0	Yes
1120	Red gum	Eucalyptus camaldulensis	-	yes	12,20	28	very poor	very poor	very poor	5	50	No	0	Yes
1121	Red gum	Eucalyptus camaldulensis	-	yes	5,10	14	very poor	very poor	very poor	5	35	No	0	Yes
1122	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	2	25	No	1	Yes
1123	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1124	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	30	No	0	Yes
1125	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	25	No	1	Yes
1126	Peruvian pepper	Schinus molle	6	no	-	-	fair	poor	poor	4	20	No	0	Yes
1127	Red gum	Eucalyptus camaldulensis	-	yes	16,7	25	very poor	very poor	very poor	5	40	No	0	Yes
1128	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	good	good	2	30	No	1	Yes
1129	Red gum	Eucalyptus camaldulensis	-	yes	6,13,6,5,6	43	very poor	poor	poor	4	20	No	0	Yes
1130	Red gum	Eucalyptus camaldulensis	-	yes	8,7,5,8,6	36	very poor	very poor	very poor	5	25	No	0	Yes
1131	Red gum	Eucalyptus camaldulensis	-	yes	5,11,7	40	very poor	very poor	very poor	5	35	No	0	Yes
1132	Red gum	Eucalyptus camaldulensis	-	yes	6,7,11	30	very poor	very poor	very poor	5	25	No	0	Yes
1133	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	33	No	0	Yes
1134	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1135	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1136	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	poor	poor	4	25	No	0	Yes
1137	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	3	75	No	1	Yes
1138	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1139	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	fair	fair	3	35	No	1	Yes
1140	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	33	No	0	Yes
1141	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1142	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1143	Peruvian pepper	Schinus molle	-	yes	9,7,6	30	poor	poor	poor	4	15	No	0	Yes
1144	Red gum	Eucalyptus camaldulensis	-	yes	5,6,8,4	24	very poor	very poor	very poor	5	35	No	0	Yes
1145	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	good	good	2	35	No	1	Yes
1146	Red gum	Eucalyptus camaldulensis	-	yes	8,19	21	good	good	good	2	35	No	1	Yes
1147	Red gum	Eucalyptus camaldulensis	-	yes	6,6,6	14	poor	fair	poor	4	30	No	0	Yes
1148	Red gum	Eucalyptus camaldulensis	-	yes	6,8	9	very poor	very poor	very poor	5	25	No	0	Yes
1149	Red gum	Eucalyptus camaldulensis	-	yes	8,7	19	poor	fair	fair	3	30	No	1	Yes
1150	Red gum	Eucalyptus camaldulensis	-	yes	10,6	21	very poor	very poor	very poor	5	15	No	0	Yes
1151	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1152	Red gum	Eucalyptus camaldulensis	-	yes	7,6,5	16	poor	poor	poor	4	25	No	0	Yes
1153	Red gum	Eucalyptus camaldulensis	-	yes	16,10	21	fair	poor	fair	3	50	No	1	Yes
1154	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1155	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	good	good	2	40	No	1	Yes
1156	Red gum	Eucalyptus camaldulensis	-	yes	12,16	23	very poor	very poor	very poor	5	20	No	0	Yes
1157	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1158	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	good	good	2	30	No	1	Yes
1159	Red gum	Eucalyptus camaldulensis	-	yes	3,6,5	25	very poor	very poor	very poor	5	15	No	0	Yes
1160	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1161	Red gum	Eucalyptus camaldulensis	-	yes	5,7	20	very poor	very poor	very poor	5	25	No	0	Yes
1162	Red gum	Eucalyptus camaldulensis	-	yes	8,9,8,7	33	very poor	very poor	very poor	5	25	No	0	Yes
1163	Red gum	Eucalyptus camaldulensis	-	yes	5,7,6,3,3	23	very poor	very poor	very poor	5	25	No	0	Yes
1164	Red gum	Eucalyptus camaldulensis	-	yes	15,5,11	24	fair	good	good	2	50	No	1	Yes
1165	Red gum	Eucalyptus camaldulensis	-	yes	8,5,11	20	very poor	very poor	very poor	5	35	No	0	Yes
1166	Red gum	Eucalyptus camaldulensis	-	yes	7,6	22	very poor	very poor	very poor	5	25	No	0	Yes
1167	Red gum	Eucalyptus camaldulensis	-	yes	5,7,14,4	36	very poor	very poor	very poor	5	25	No	0	Yes
1168	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1169	Red gum	Eucalyptus camaldulensis	-	yes	15,6	19	fair	good	good	2	40	No	1	Yes
1170	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1171	Red gum	Eucalyptus camaldulensis	-	yes	13,6	19	very poor	very poor	very poor	5	35	No	0	Yes
1172	Red gum	Eucalyptus camaldulensis	-	yes	5,12	17	very poor	very poor	very poor	5	30	No	0	Yes
1173	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1174	Red gum	Eucalyptus camaldulensis	-	yes	17,8,7,8	29	very poor	very poor	very poor	5	40	No	0	Yes
1175	Red gum	Eucalyptus camaldulensis	-	yes	9,6	11	very poor	very poor	very poor	5	30	No	0	Yes
1176	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1177	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	10	No	0	Yes
1178	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	good	good	2	40	No	1	Yes
1179	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	poor	poor	4	35	No	0	Yes
1180	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1181	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	good	good	2	30	No	1	Yes
1182	Red gum	Eucalyptus camaldulensis	-	yes	12,4,3	22	good	good	good	2	50	No	1	Yes
1183	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1184	Red gum	Eucalyptus camaldulensis	-	yes	7,7	16	very poor	very poor	very poor	5	20	No	0	Yes
1185	Red gum	Eucalyptus camaldulensis	-	yes	8,12	16	very poor	very poor	very poor	5	35	No	0	Yes
1186	Red gum	Eucalyptus camaldulensis	-	yes	5,10,10	20	very poor	very poor	very poor	5	40	No	0	Yes
1187	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1188	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1189	Peruvian pepper	Schinus molle	-	yes	5,4	23	very poor	poor	poor	4	15	No	0	Yes
1190	Red gum	Eucalyptus camaldulensis	-	yes	14,14	20	very poor	very poor	very poor	5	35	No	0	Yes
1191	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1192	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	good	fair	3	25	No	1	Yes
1193	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	2	30	No	1	Yes
1194	Red gum	Eucalyptus camaldulensis	12	no	-	-	good	very good	good	2	35	No	1	Yes
1195	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	very good	good	2	30	No	1	Yes
1196	Red gum	Eucalyptus camaldulensis	-	yes	8,7,4	23	good	good	good	2	40	No	1	Yes
1197	Red gum	Eucalyptus camaldulensis	-	yes	13,5,5	18	good	very good	good	2	40	No	1	Yes
1198	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	45	No	1	Yes
1199	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	good	fair	3	80	No	1	Yes
1200	Red gum	Eucalyptus camaldulensis	44	no	-	-	good	good	good	2	110	No	1	Yes
1201	Red gum	Eucalyptus camaldulensis	33	no	-	-	fair	very good	good	2	55	No	1	Yes
1202	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1203	Red gum	Eucalyptus camaldulensis	-	yes	6,4,5,21	38	very poor	poor	poor	4	50	No	0	Yes
1204	Red gum	Eucalyptus camaldulensis	-	yes	17,26	39	fair	good	good	2	55	No	1	Yes
1205	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	good	fair	3	55	No	1	Yes
1206	Red gum	Eucalyptus camaldulensis	-	yes	16,9	22	poor	very good	good	2	60	No	1	Yes
1207	Red gum	Eucalyptus camaldulensis	34	no	-	-	good	fair	fair	3	60	No	1	Yes
1208	Red gum	Eucalyptus camaldulensis	29	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1209	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	good	good	2	35	No	1	Yes
1210	Red gum	Eucalyptus camaldulensis	-	yes	15,20	42	fair	fair	fair	3	40	No	1	Yes
1211	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1212	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1213	Red gum	Eucalyptus camaldulensis	-	yes	3,4,8,16,3	34	very poor	poor	very poor	5	45	No	0	Yes
1214	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1215	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1216	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	2	55	No	1	Yes
1217	Peruvian pepper	Schinus molle	9	no	-	-	poor	good	good	3	25	No	1	Yes
1218	Unk3		-	yes	9,5,7	14	very poor	very poor	very poor	5	15	?		Yes
1219	Unk3		-	yes	6,6,5,3	27	very poor	very poor	very poor	5	20	?		Yes
1220	Unk3		-	yes	6,6,4,3	24	very poor	very poor	very poor	5	15	?		Yes
1221	Peruvian pepper	Schinus molle	21	no	-	-	fair	fair	fair	3	30	No	1	Yes
1222	Peruvian pepper	Schinus molle	6	no	-	-	very poor	poor	poor	4	15	No	0	Yes
1223	Lost Tag								N/A	N/A		N/A		Yes
1224	Lost Tag								N/A	N/A		N/A		Yes
1225	White alder	Alnus rhombifolia	-	yes	8,6,5,4,2	15	very poor	very poor	very poor	5	20	Yes	1	Yes
1226	Unk3		-	yes	7,7,5,4,3	24	very poor	poor	poor	4	20	?		Yes
1227	Unk3		-	yes	6,4,4	28	very poor	poor	poor	4	20	?		Yes
1228	White alder	Alnus rhombifolia	10	no	-	-	very poor	very poor	very poor	5	25	Yes	1	Yes
1229	Unk3		-	yes	8,7,5,5	28	very poor	poor	poor	4	25	?		Yes
1230	Unk3		-	yes	10,8	26	poor	poor	poor	4	25	?		Yes
1231	Unk3		-	yes	7,8,7,6,4	30	very poor	very poor	very poor	5	20	?		Yes
1232	White alder	Alnus rhombifolia	10	no	-	-	very poor	poor	poor	4	25	Yes	1	Yes
1233	White alder	Alnus rhombifolia	-	yes	8,8,8,6	40	very poor	poor	poor	4	20	Yes	1	Yes
1234	Unk3		-	yes	8,6,5,5	23	poor	poor	poor	4	25	?		Yes
1235	White alder	Alnus rhombifolia	7	no	-	-	fair	fair	fair	3	25	Yes	2	Yes
1236	Tree of heaven	Ailanthus altissima	-	yes	5,10,4	24	fair	good	good	2	25	No	1	Yes
1237	Unk3		-	yes	6,4,5	13	very poor	poor	poor	4	20	?		Yes
1238	Unk3		-	yes	8,4,5,6	25	poor	poor	poor	4	25	?		Yes
1239	Red gum	Eucalyptus camaldulensis	35	no	-	-	very good	good	good	2	65	No	1	Yes
1240	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1241	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	good	fair	3	90	No	1	Yes
1242	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	60	No	0	Yes
1243	Red gum	Eucalyptus camaldulensis	-	yes	20,17	36	poor	poor	poor	4	35	No	0	Yes
1244	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	poor	fair	3	60	No	1	Yes
1245	Red gum	Eucalyptus camaldulensis	21	no	-	-	fair	fair	fair	3	35	No	1	Yes
1246	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	good	fair	3	70	No	1	Yes
1247	Red gum	Eucalyptus camaldulensis	-	yes	32,12	42	fair	good	good	2	60	No	1	Yes
1248	Red gum	Eucalyptus camaldulensis	28	no	-	-	good	good	good	2	50	No	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1249	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	2	100	No	1	Yes
1250	Red gum	Eucalyptus camaldulensis	29	no	-	-	good	fair	fair	3	70	No	1	Yes
1251	Red gum	Eucalyptus camaldulensis	28	no	-	-	good	fair	good	2	50	No	1	Yes
1252	Red gum	Eucalyptus camaldulensis	-	yes	24,35	48	good	very good	very good	1	75	No	2	Yes
1253	Red gum	Eucalyptus camaldulensis	-	yes	24,40	46	fair	good	good	2	65	No	1	Yes
1254	Red gum	Eucalyptus camaldulensis	-	yes	11,10,12,10,34	42	fair	good	fair	3	55	No	1	Yes
1255	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1256	Red gum	Eucalyptus camaldulensis	37	no	-	-	good	fair	fair	3	60	No	1	Yes
1257	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1258	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1259	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1260	Red gum	Eucalyptus camaldulensis	37	no	-	-	good	good	good	2	90	No	1	Yes
1261	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	fair	fair	3	40	No	1	Yes
1262	Red gum	Eucalyptus camaldulensis	-	yes	5,7	9	very poor	very poor	very poor	5	40	No	0	Yes
1263	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	poor	poor	4	25	No	0	Yes
1264	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	very poor	very poor	5	55	No	0	Yes
1265	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	fair	fair	3	90	No	1	Yes
1266	Red ironbark	Eucalyptus sideroxylon	19	no	-	-	poor	fair	poor	4	40	No	0	Yes
1267	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	4	30	No	0	Yes
1268	Red ironbark	Eucalyptus sideroxylon	16	no	-	-	fair	poor	poor	4	85	No	0	Yes
1269	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1270	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	poor	4	25	No	0	Yes
1271	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1272	Red gum	Eucalyptus camaldulensis	11	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
1273	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1274	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	Yes
1275	Red ironbark	Eucalyptus sideroxylon	8	no	-	-	fair	poor	fair	3	35	No	1	Yes
1276	Red gum	Eucalyptus camaldulensis	-	yes	6,7	15	very poor	very poor	very poor	5	40	No	0	Yes
1277	Red ironbark	Eucalyptus sideroxylon	12	no	-	-	poor	poor	poor	4	55	No	0	Yes
1278	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1279	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	very poor	very poor	5	30	No	0	Yes
1280	Red gum	Eucalyptus camaldulensis	-	yes	12,7	20	poor	very poor	very poor	5	50	No	0	Yes
1281	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1282	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1283	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1284	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	poor	poor	4	25	No	0	Yes
1285	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	poor	poor	4	25	No	0	Yes
1286	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	3	30	No	1	Yes
1287	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	fair	fair	3	40	No	1	Yes
1288	Red ironbark	Eucalyptus sideroxylon	26	no	-	-	fair	fair	fair	3	55	No	1	Yes
1289	Red gum	Eucalyptus camaldulensis	-	yes	8,9	14	very poor	very poor	very poor	5	40	No	0	Yes
1290	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1291	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1292	Red gum	Eucalyptus camaldulensis	-	yes	6,5,10	20	very poor	very poor	very poor	5	45	No	0	Yes
1293	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1294	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	very poor	very poor	5	30	No	0	Yes
1295	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1296	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1297	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
1298	Red gum	Eucalyptus camaldulensis	12	no	-	-	good	fair	fair	3	45	No	1	Yes
1299	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1300	Red gum	Eucalyptus camaldulensis	7	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
1301	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
1302	Red gum	Eucalyptus camaldulensis	22	no	-	-	good	poor	fair	3	75	No	1	Yes
1303	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	poor	poor	poor	4	35	No	0	Yes
1304	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	fair	poor	4	35	No	0	Yes
1305	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1306	Red ironbark	Eucalyptus sideroxylon	-	yes	9,9	18	fair	good	fair	3	40	No	1	Yes
1307	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	3	60	No	1	Yes
1308	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1309	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	poor	poor	4	25	No	0	Yes
1310	Red gum	Eucalyptus camaldulensis	25	no	-	-	good	fair	good	2	70	No	1	Yes
1311	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1312	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	fair	fair	3	75	No	1	Yes
1313	Red gum	Eucalyptus camaldulensis	16	no	-	-	good	fair	fair	3	50	No	1	Yes
1314	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1315	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	40	No	1	Yes
1316	Red ironbark	Eucalyptus sideroxylon	15	no	-	-	fair	good	fair	3	50	No	1	Yes
1317	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1318	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1319	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1320	Flooded gum	Eucalyptus rudis	18	no	-	-	fair	fair	fair	3	35	No	1	Yes
1321	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1322	Flooded gum	Eucalyptus rudis	-	yes	7,8,11	26	poor	fair	poor	4	30	No	0	Yes
1323	Flooded gum	Eucalyptus rudis	-	yes	7,4,3,4	20	very poor	very poor	very poor	5	25	No	0	Yes
1324	Flooded gum	Eucalyptus rudis	-	yes	7,3,3,8,6	30	poor	good	fair	3	25	No	1	Yes
1325	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	3	35	No	1	Yes
1326	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1327	Red gum	Eucalyptus camaldulensis	-	yes	50,15	62	very poor	very poor	very poor	5	45	No	0	Yes
1328	Red gum	Eucalyptus camaldulensis	-	yes	10,9,9,8,34,7	70	very poor	very poor	very poor	5	35	No	0	Yes
1329	Red gum	Eucalyptus camaldulensis	-	yes	7,9,9,7,5	26	very poor	fair	fair	3	30	No	1	Yes
1330	Red gum	Eucalyptus camaldulensis	-	yes	20,11	35	fair	good	fair	3	45	No	1	Yes
1331	Flooded gum	Eucalyptus rudis	-	yes	12,9	19	very poor	very poor	very poor	5	35	No	0	Yes
1332	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1333	Flooded gum	Eucalyptus rudis	-	yes	9,5	30	very poor	very poor	very poor	5	25	No	0	Yes
1334	Flooded gum	Eucalyptus rudis	-	yes	4,4,4,8,6,3,4	25	very poor	good	fair	3	25	No	1	Yes
1335	Flooded gum	Eucalyptus rudis	17	no	-	-	fair	good	good	2	40	No	1	Yes
1336	Flooded gum	Eucalyptus rudis	14	no	-	-	poor	poor	poor	4	35	No	0	Yes
1337	Flooded gum	Eucalyptus rudis	-	yes	19,18	23	poor	poor	poor	4	30	No	0	Yes
1338	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	4	25	No	0	Yes
1339	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1340	Flooded gum	Eucalyptus rudis	12	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1341	Flooded gum	Eucalyptus rudis	-	yes	18,8	24	fair	fair	fair	3	25	No	1	Yes
1342	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1343	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	poor	fair	3	40	No	1	Yes
1344	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	very poor	poor	4	45	No	0	Yes
1345	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1346	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1347	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1348	Red gum	Eucalyptus camaldulensis	20	no	-	-	good	fair	fair	3	50	No	1	Yes
1349	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	5	35	No	0	Yes
1350	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1351	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	poor	4	50	No	0	Yes
1352	Red gum	Eucalyptus camaldulensis	-	yes	8,4,6,5,4,7	16	very poor	very poor	very poor	5	20	No	0	Yes
1353	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	poor	fair	3	45	No	1	Yes
1354	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	very poor	very poor	5	50	No	0	Yes
1355	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1356	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1357	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1358	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1359	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1360	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1361	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1362	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1363	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1364	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	5	60	No	0	Yes
1365	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1366	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	3	30	No	1	Yes
1367	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1368	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1369	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	fair	fair	3	65	No	1	Yes
1370	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1371	Red gum	Eucalyptus camaldulensis	-	yes	5,9	27	very poor	very poor	very poor	5	45	No	0	Yes
1372	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1373	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1374	Red gum	Eucalyptus camaldulensis	-	yes	9,6,10	30	very poor	very poor	very poor	5	30	No	0	Yes
1375	Flooded gum	Eucalyptus rudis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1376	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1377	Flooded gum	Eucalyptus rudis	-	yes	5,7	22	very poor	very poor	very poor	5	30	No	0	Yes
1378	Red ironbark	Eucalyptus sideroxylon	17	no	-	-	fair	poor	poor	4	60	No	0	Yes
1379	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
1380	Red gum	Eucalyptus camaldulensis	9	no	-	-	good	fair	fair	3	35	No	1	Yes
1381	Red gum	Eucalyptus camaldulensis	-	yes	10,3,10	19	fair	poor	poor	4	45	No	0	Yes
1382	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1383	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	30	No	0	Yes
1384	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1385	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	10	No	0	Yes
1386	Red gum	Eucalyptus camaldulensis	-	yes	5,7,7	26	fair	fair	fair	3	35	No	1	Yes
1387	Red gum	Eucalyptus camaldulensis	-	yes	13,8,6	30	very poor	poor	very poor	5	50	No	0	Yes
1388	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1389	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1390	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1391	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	poor	poor	4	45	No	0	Yes
1392	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	3	55	No	1	Yes
1393	Red gum	Eucalyptus camaldulensis	-	yes	11,5	25	very poor	very poor	very poor	5	50	No	0	Yes
1394	Red gum	Eucalyptus camaldulensis	-	yes	9,11	24	very poor	very poor	very poor	5	45	No	0	Yes
1395	Flooded gum	Eucalyptus rudis	-	yes	6,4	9	poor	fair	poor	4	30	No	0	Yes
1396	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1397	Red gum	Eucalyptus camaldulensis	-	yes	11,12	26	very poor	very poor	very poor	5	55	No	0	Yes
1398	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	fair	fair	3	55	No	1	Yes
1399	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1400	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1401	Red gum	Eucalyptus camaldulensis	-	yes	11,12	24	poor	fair	fair	3	45	No	1	Yes
1402	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1403	Red gum	Eucalyptus camaldulensis	-	yes	6,7	18	very poor	very poor	very poor	5	30	No	0	Yes
1404	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1405	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
1406	Red ironbark	Eucalyptus sideroxylon	10	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1407	Red gum	Eucalyptus camaldulensis	-	yes	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1408	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	3	45	No	1	Yes
1409	Red gum	Eucalyptus camaldulensis	-	yes	4,5,4,5,3,8,12,9,7,5,5	35	very poor	poor	very poor	5	35	No	0	Yes
1410	Red ironbark	Eucalyptus sideroxylon	9	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1411	Red ironbark	Eucalyptus sideroxylon	-	yes	13,12	19	very poor	very poor	very poor	5	20	No	0	Yes
1412	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1413	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1414	Red gum	Eucalyptus camaldulensis	-	yes	6,2,2,2,3	20	very poor	very poor	very poor	5	25	No	0	Yes
1415	Red gum	Eucalyptus camaldulensis	-	yes	11,10	24	very poor	very poor	very poor	5	35	No	0	Yes
1416	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	good	good	2	50	No	1	Yes
1417	Flooded gum	Eucalyptus rudis	9	no	-	-	fair	fair	fair	3	30	No	1	Yes
1418	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	40	No	1	Yes
1419	Flooded gum	Eucalyptus rudis	-	yes	8,8	17	poor	poor	poor	4	25	No	0	Yes
1420	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1421	Red gum	Eucalyptus camaldulensis	-	yes	9,9,10,15	48	very poor	very poor	very poor	5	40	No	0	Yes
1422	Red gum	Eucalyptus camaldulensis	-	yes	5,5	35	very poor	very poor	very poor	5	35	No	0	Yes
1423	Red ironbark	Eucalyptus sideroxylon	-	yes	9,7,9	25	very poor	very poor	very poor	5	25	No	0	Yes
1424	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	very poor	very poor	5	30	No	0	Yes
1425	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1426	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1427	Red gum	Eucalyptus camaldulensis	11	no	-	-	good	fair	fair	3	60	No	1	Yes
1428	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	3	35	No	1	Yes
1429	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1430	Red gum	Eucalyptus camaldulensis	-	yes	10,12	35	very poor	very poor	very poor	5	20	No	0	Yes
1431	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1432	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1433	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
1434	Red gum	Eucalyptus camaldulensis	-	yes	5,8	16	very poor	very poor	very poor	5	35	No	0	Yes
1435	Red gum	Eucalyptus camaldulensis	8	no	-	-	good	poor	fair	3	30	No	1	Yes
1436	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1437	Red gum	Eucalyptus camaldulensis	-	yes	12,17	35	fair	poor	poor	4	55	No	0	Yes
1438	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1439	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1440	Red gum	Eucalyptus camaldulensis	35	no	-	-	good	poor	fair	3	70	No	1	Yes
1441	Red gum	Eucalyptus camaldulensis	-	yes	5,19	25	very poor	very poor	very poor	5	55	No	0	Yes
1442	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1443	Red gum	Eucalyptus camaldulensis	21	no	-	-	good	fair	fair	3	60	No	1	Yes
1444	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1445	Red gum	Eucalyptus camaldulensis	17	no	-	-	good	good	good	2	60	No	1	Yes
1446	Red gum	Eucalyptus camaldulensis	-	yes	9,3	15	fair	very poor	poor	4	40	No	0	Yes
1447	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1448	Red gum	Eucalyptus camaldulensis	-	yes	16,7,19	40	poor	poor	poor	4	60	No	0	Yes
1449	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1450	Red gum	Eucalyptus camaldulensis	-	yes	11,8	25	very poor	very poor	very poor	5	50	No	0	Yes
1451	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1452	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	very poor	poor	4	55	No	0	Yes
1453	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	40	No	0	Yes
1454	Red gum	Eucalyptus camaldulensis	-	yes	8,8,8,4	31	very poor	poor	very poor	5	25	No	0	Yes
1455	Red gum	Eucalyptus camaldulensis	-	yes	9,13	25	very poor	very poor	very poor	5	45	No	0	Yes
1456	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	very poor	very poor	5	50	No	0	Yes
1457	Red gum	Eucalyptus camaldulensis	-	yes	9,10,15	36	poor	poor	poor	4	50	No	0	Yes
1458	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1459	Flooded gum	Eucalyptus rudis	13	no	-	-	poor	very poor	very poor	5	45	No	0	Yes
1460	Flooded gum	Eucalyptus rudis	11	no	-	-	very poor	poor	poor	4	20	No	0	Yes
1461	Lost Tag								N/A	N/A		N/A		Yes
1462	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1463	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1464	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
1465	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1466	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	55	No	0	Yes
1467	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	50	No	0	Yes
1468	Red gum	Eucalyptus camaldulensis	5	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1469	Red gum	Eucalyptus camaldulensis	9	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
1470	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	very poor	very poor	5	40	No	0	Yes
1471	Red gum	Eucalyptus camaldulensis	8	no	-	-	very poor	very poor	very poor	5	30	No	0	Yes
1472	Goodding's willow	Salix gooddingii	18	no	-	-	very poor	good	fair	3	30	Yes	2	No
1473	Goodding's willow	Salix gooddingii	-	yes	13,20,16	60	very poor	good	fair	3	40	Yes	2	No
1474	Goodding's willow	Salix gooddingii	-	yes	9,4,4,5	24	very poor	poor	very poor	5	25	Yes	1	No
1475	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
1476	Goodding's willow	Salix gooddingii	-	yes	9,8	12	very poor	very poor	very poor	5	25	Yes	1	No
1477	Tamarisk	Tamarix ramosissima	-	yes	7,6,4	24	poor	fair	poor	4	25	No	0	No
1478	Black elderberry	Sambucus nigra	-	yes	5,4,6,4,3,3	17	very poor	very poor	very poor	5	20	Yes	1	No
1479	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
1480	Goodding's willow	Salix gooddingii	-	yes	14,5	22	very poor	fair	poor	4	20	Yes	1	No
1481	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
1482	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1483	Goodding's willow	Salix gooddingii	13	no	-	-	very poor	very poor	very poor	5	20	Yes	1	No
1484	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	fair	poor	4	25	Yes	1	No
1485	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	5	10	Yes	1	No
1486	Goodding's willow	Salix gooddingii	19	no	-	-	very poor	fair	poor	4	35	Yes	1	No
1487	Goodding's willow	Salix gooddingii	-	yes	11,21	24	very poor	very poor	very poor	5	25	Yes	1	No
1488	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	5	30	Yes	1	No
1489	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	5	30	Yes	1	No
1490	Goodding's willow	Salix gooddingii	8	no	-	-	poor	poor	poor	4	20	Yes	1	No
1491	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	poor	very poor	5	15	Yes	1	No
1492	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	5	10	Yes	1	No
1493	Goodding's willow	Salix gooddingii	6	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
1494	Goodding's willow	Salix gooddingii	-	yes	15,5	29	very poor	very poor	very poor	5	20	Yes	1	No
1495	Goodding's willow	Salix gooddingii	-	yes	9,5	14	very poor	very poor	very poor	5	20	Yes	1	No
1496	Goodding's willow	Salix gooddingii	-	yes	5,6,7,6,5,4,3,3,12,11,12	48	very poor	fair	poor	4	35	Yes	1	No
1497	Goodding's willow	Salix gooddingii	7	no	-	-	very poor	very poor	very poor	5	20	Yes	1	No
1498	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	5	30	Yes	1	No
1499	Lost Tag								N/A	N/A		N/A		No
1500	Goodding's willow	Salix gooddingii	17	no	-	-	very poor	fair	poor	3	25	Yes	2	No
1501	Red gum	Eucalyptus camaldulensis	38	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1502	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1503	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	4	35	No	0	No
1504	Red gum	Eucalyptus camaldulensis	-	yes	21,13,17	60	fair	fair	fair	3	45	No	1	No
1505	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	35	No	0	No
1506	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	poor	poor	4	45	No	0	No
1507	Red gum	Eucalyptus camaldulensis	29	no	-	-	fair	poor	poor	4	40	No	0	No
1508	Red gum	Eucalyptus camaldulensis	42	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1509	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1510	Red gum	Eucalyptus camaldulensis	33	no	-	-	very poor	very poor	very poor	5	25	No	0	No
1511	Red gum	Eucalyptus camaldulensis	34	no	-	-	very poor	very poor	very poor	5	45	No	0	Yes
1512	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1513	Red gum	Eucalyptus camaldulensis	32	no	-	-	poor	poor	poor	4	40	No	0	Yes
1514	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1515	Red gum	Eucalyptus camaldulensis	40	no	-	-	very poor	very poor	very poor	5	15	No	0	Yes
1516	Red gum	Eucalyptus camaldulensis	-	yes	10,9,8	16	fair	very good	good	2	35	No	1	Yes
1517	Red gum	Eucalyptus camaldulensis	-	yes	11,15,8,16,7	25	very poor	good	fair	3	30	No	1	Yes
1518	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	good	2	25	No	1	Yes
1519	Red gum	Eucalyptus camaldulensis	-	yes	19,7,14	25	very poor	very poor	very poor	5	25	No	0	Yes
1520	Red gum	Eucalyptus camaldulensis	24	no	-	-	very good	fair	good	2	40	No	1	Yes
1521	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	fair	fair	3	40	No	1	Yes
1522	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	4	30	No	0	Yes
1523	Silverleaf mountain gum	Eucalyptus pulverulenta	23	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1524	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	fair	poor	3	38	No	1	Yes
1525	Silverleaf mountain gum	Eucalyptus pulverulenta	15	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1526	Peruvian pepper	Schinus molle	10	no	-	-	fair	good	good	2	20	No	1	Yes
1527	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	26,22	48	poor	poor	poor	4	25	No	0	Yes
1528	Peruvian pepper	Schinus molle	9	no	-	-	fair	good	good	2	15	No	1	Yes
1529	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	10,18,13,8,16,17,11	40	poor	poor	poor	4	30	No	0	Yes
1530	Silverleaf mountain gum	Eucalyptus pulverulenta	32	no	-	-	fair	poor	fair	3	30	No	1	Yes
1531	Silverleaf mountain gum	Eucalyptus pulverulenta	34	no	-	-	poor	good	fair	3	40	No	1	Yes
1532	Silverleaf mountain gum	Eucalyptus pulverulenta	30	no	-	-	poor	poor	poor	4	30	No	0	Yes
1533	Red gum	Eucalyptus camaldulensis	14	no	-	-	good	good	good	2	45	No	1	Yes
1534	Silverleaf mountain gum	Eucalyptus pulverulenta	37	no	-	-	fair	fair	fair	3	30	No	1	Yes
1535	Silverleaf mountain gum	Eucalyptus pulverulenta	22	no	-	-	very poor	very poor	very poor	5	25	No	0	Yes
1536	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	22,9	30	fair	fair	fair	3	45	No	1	Yes
1537	Red gum	Eucalyptus camaldulensis	-	yes	16,35	36	fair	good	good	2	55	No	1	Yes
1538	Bishop pine	Pinus muricata	17	no	-	-	good	fair	fair	3	40	Yes	2	Yes
1539	Bishop pine	Pinus muricata	19	no	-	-	good	fair	good	2	50	Yes	3	Yes
1540	Red gum	Eucalyptus camaldulensis	13	no	-	-	good	fair	good	2	35	No	1	Yes
1541	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	20,17,26	40	very poor	very poor	very poor	5	30	No	0	Yes
1542	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	9,8,10	24	very poor	very poor	very poor	5	20	No	0	Yes
1543	Red gum	Eucalyptus camaldulensis	-	yes	17,30	48	poor	poor	poor	4	45	No	0	Yes
1544	Bishop pine	Pinus muricata	19	no	-	-	good	good	good	2	55	Yes	3	Yes
1545	Silverleaf mountain gum	Eucalyptus pulverulenta	44	no	-	-	very poor	very poor	very poor	5	5	No	0	Yes
1546	Silverleaf mountain gum	Eucalyptus pulverulenta	-	yes	8,23,14	50	very poor	very poor	very poor	5	35	No	0	Yes
1547	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	very poor	5	40	No	0	Yes
1548	Red gum	Eucalyptus camaldulensis	-	yes	6,8	18	very poor	very poor	very poor	5	15	No	0	Yes
1549	Red gum	Eucalyptus camaldulensis	-	yes	13,8,10,7,25,11,20	60	poor	fair	fair	3	60	No	1	Yes
1550	Red gum	Eucalyptus camaldulensis	-	yes	23,9,10	48	poor	fair	fair	3	40	No	1	Yes
1551	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1552	Southern California walnut	Juglans californica	-	yes	6,7,7,13	19	fair	poor	poor	4	30	Yes	1	Yes
1553	Black elderberry	Sambucus nigra	-	yes	5,4,6,5,4	40	fair	good	fair	3	15	Yes	2	Yes
1554	Southern California walnut	Juglans californica	6	no	-	-	poor	poor	poor	4	20	Yes	1	Yes
1555	Black elderberry	Sambucus nigra	-	yes	5,4,6,5,4	48	poor	good	fair	3	20	Yes	2	Yes
1556	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	poor	poor	4	70	No	0	No
1557	Red gum	Eucalyptus camaldulensis	45	no	-	-	very good	fair	good	2	95	No	1	No
1558	Red gum	Eucalyptus camaldulensis	-	yes	14,27	32	fair	fair	poor	3	55	No	1	No
1559	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1560	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	poor	poor	4	45	No	0	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1561	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	4	65	No	0	No
1562	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1563	Red gum	Eucalyptus camaldulensis	28	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1564	Red gum	Eucalyptus camaldulensis	29	no	-	-	good	fair	fair	3	85	No	1	No
1565	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1566	Red gum	Eucalyptus camaldulensis	36	no	-	-	poor	poor	poor	4	60	No	0	No
1567	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	poor	poor	4	60	No	0	No
1568	Unk1/2		18	no	-	-	very good	very good	very good	1	50	?		No
1569	Unk2/1		13	no	-	-	good	poor	fair	3	35	?		No
1570	Unk1/2		14	no	-	-	fair	fair	fair	3	40	?		No
1571	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1572	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	poor	poor	4	55	No	0	No
1573	Unk1/2		14	no	-	-	good	good	good	2	40	?		No
1574	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	3	65	No	1	No
1575	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1576	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	45	No	1	No
1577	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	4	65	No	0	No
1578	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	7	No	0	No
1579	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1580	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	poor	poor	4	75	No	0	No
1581	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1582	Unk1/2		19	no	-	-	good	good	good	2	60	?		No
1583	Unk1/2		20	no	-	-	poor	fair	fair	3	50	?		No
1584	Red gum	Eucalyptus camaldulensis	36	no	-	-	very poor	very poor	very poor	5	65	No	0	No
1585	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1586	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1587	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1588	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1589	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1590	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	60	No	0	No
1591	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	fair	poor	4	50	No	0	No
1592	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1593	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1594	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1595	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1596	Red gum	Eucalyptus camaldulensis	23	no	-	-	poor	poor	poor	4	65	No	0	No
1597	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1598	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	5	65	No	0	No
1599	Red gum	Eucalyptus camaldulensis	30	no	-	-	good	good	good	2	65	No	1	No
1600	Unk1/2		21	no	-	-	good	fair	fair	3	60	?		No
1601	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	2	80	No	1	No
1602	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1603	Red gum	Eucalyptus camaldulensis	24	no	-	-	poor	poor	poor	4	45	No	0	No
1604	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1605	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1606	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1607	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1608	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1609	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	55	No	0	No
1610	Red gum	Eucalyptus camaldulensis	16	no	-	-	poor	fair	poor	4	45	No	0	No
1611	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1612	Red gum	Eucalyptus camaldulensis	41	no	-	-	good	good	good	2	55	No	1	No
1613	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1614	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	very poor	very poor	5	55	No	0	No
1615	Red gum	Eucalyptus camaldulensis	33	no	-	-	good	good	good	2	60	No	1	No
1616	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1617	Red gum	Eucalyptus camaldulensis	8	no	-	-	poor	good	fair	3	25	No	1	No
1618	Red gum	Eucalyptus camaldulensis	-	yes	7,5,5,6,6	60	very poor	good	good	2	40	No	1	No
1619	Red gum	Eucalyptus camaldulensis	-	yes	10,3,4	12	fair	good	good	2	30	No	1	No
1620	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	good	fair	3	20	No	1	No
1621	Red gum	Eucalyptus camaldulensis	-	yes	6,7	20	poor	good	fair	3	25	No	1	No
1622	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	45	No	1	No
1623	Olive	Olea europaea	-	yes	18,14,12,11	68	fair	good	fair	3	20	No	1	No
1624	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	2	40	No	1	No
1625	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	55	No	1	No
1626	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	55	No	1	No
1627	Olive	Olea europaea	-	yes	13,20	60	fair	good	good	2	25	No	1	No
1628	Canary Island date palm	Phoenix canariensis	16	no	-	-	good	good	good	2	30	No	1	No
1629	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	2	25	No	1	No
1630	Canary Island date palm	Phoenix canariensis	16	no	-	-	fair	fair	fair	3	20	No	1	No
1631	Canary Island date palm	Phoenix canariensis	26	no	-	-	poor	fair	fair	3	15	No	1	No
1632	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	2	65	No	1	No
1633	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	65	No	1	No
1634	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	2	70	No	1	No
1635	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	2	70	No	1	No
1636	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	2	65	No	1	No
1637	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	65	No	1	No
1638	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	75	No	1	No



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1639	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	70	No	1	No
1640	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	2	65	No	1	No
1641	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	70	No	1	No
1642	Mexican fan palm	Washingtonia robusta	12	no	-	-	fair	good	good	2	70	No	1	No
1643	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	60	No	1	No
1644	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	65	No	1	No
1645	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	65	No	1	No
1646	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	65	No	1	No
1647	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	75	No	1	No
1648	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	80	No	1	No
1649	Canary Island date palm	Phoenix canariensis	12	no	-	-	fair	good	good	2	35	No	1	No
1650	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	good	good	2	40	No	1	No
1651	Canary Island date palm	Phoenix canariensis	13	no	-	-	good	good	good	2	40	No	1	No
1652	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	fair	fair	3	30	No	1	No
1653	Canary Island date palm	Phoenix canariensis	11	no	-	-	good	fair	fair	3	40	No	1	No
1654	Mexican fan palm	Washingtonia robusta	12	no	-	-	good	good	good	2	75	No	1	No
1655	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	80	No	1	No
1656	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	80	No	1	No
1657	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	80	No	1	No
1658	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	80	No	1	No
1659	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	80	No	1	No
1660	Mexican fan palm	Washingtonia robusta	11	no	-	-	good	good	good	2	65	No	1	No
1661	Canary Island date palm	Phoenix canariensis	17	no	-	-	very good	very good	very good	1	45	No	2	No
1662	Canary Island date palm	Phoenix canariensis	21	no	-	-	very good	very good	very good	1	45	No	2	No
1663	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	2	20	No	1	No
1664	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	2	75	No	1	No
1665	Red gum	Eucalyptus camaldulensis	-	yes	7,3,6	22	poor	good	fair	3	25	No	1	No
1666	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	2	25	No	1	No
1667	California fan palm	Washingtonia filifera	22	no	-	-	good	good	good	2	25	Yes	3	No
1668	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	good	good	2	25	No	1	No
1669	Bishop pine	Pinus muricata	19	no	-	-	fair	fair	fair	3	25	Yes	2	No
1670	Coast redwood	Sequoia sempervirens	27	no	-	-	fair	poor	poor	4	45	Yes	1	No
1671	Mexican fan palm	Washingtonia robusta	15	no	-	-	poor	poor	poor	4	45	No	0	No
1672	California fan palm	Washingtonia filifera	28	no	-	-	fair	fair	fair	3	45	Yes	2	No
1673	Canary Island date palm	Phoenix canariensis	13	no	-	-	very poor	very poor	very poor	5	20	No	0	No
1674	Mexican fan palm	Washingtonia robusta	7	no	-	-	fair	fair	fair	3	20	No	1	No
1675	Loquat	Eriobotrya japonica	-	yes	7,4	11	fair	fair	fair	3	25	No	1	No
1676	Olive	Olea europaea	-	yes	17,17	33	fair	good	fair	3	40	No	1	No
1677	Bishop pine	Pinus muricata	24	no	-	-	poor	fair	poor	4	30	Yes	1	No
1678	Pine	Pinus sp.	33	no	-	-	poor	fair	fair	3	50	?	?	No
1679	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	poor	poor	4	80	No	0	No
1680	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1681	Red gum	Eucalyptus camaldulensis	20	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1682	Pine	Pinus sp.	22	no	-	-	good	fair	good	2	80	?	?	No
1683	Red gum	Eucalyptus camaldulensis	26	no	-	-	poor	poor	poor	4	80	No	0	No
1684	Pine	Pinus sp.	20	no	-	-	good	fair	good	2	75	?	?	No
1685	Red gum	Eucalyptus camaldulensis	30	no	-	-	very poor	very poor	very poor	5	75	No	0	No
1686	Bishop pine	Pinus muricata	26	no	-	-	poor	fair	fair	3	40	Yes	2	No
1687	Pine	Pinus sp.	30	no	-	-	very poor	fair	poor	4	25	?	?	No
1688	Red gum	Eucalyptus camaldulensis	34	no	-	-	fair	poor	fair	3	70	No	1	No
1689	Podocarpus	Podocarpus sp.	18	no	-	-	fair	good	good	2	45	?	?	No
1690	Podocarpus	Podocarpus sp.	12	no	-	-	fair	good	good	2	40	?	?	No
1691	Podocarpus	Podocarpus sp.	16	no	-	-	fair	fair	fair	3	50	?	?	No
1692	Bishop pine	Pinus muricata	36	no	-	-	good	good	good	2	90	Yes	3	No
1693	White alder	Alnus rhombifolia	17	no	-	-	fair	poor	poor	4	35	Yes	1	No
1694	Olive	Olea europaea	16	no	-	-	poor	fair	fair	3	25	No	1	No
1695	Canary Island date palm	Phoenix canariensis	23	no	-	-	good	good	good	2	40	No	1	No
1696	Canary Island date palm	Phoenix canariensis	24	no	-	-	very good	very good	very good	1	35	No	2	No
1697	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	60	No	1	No
1698	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	60	No	1	No
1699	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	55	No	1	No
1700	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	55	No	1	No
1701	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	good	good	2	75	No	1	No
1702	Mexican fan palm	Washingtonia robusta	13	no	-	-	good	good	good	2	75	No	1	No
1703	California fan palm	Washingtonia filifera	31	no	-	-	good	good	good	2	80	Yes	3	No
1704	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	75	No	1	No
1705	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	70	No	1	No
1706	California fan palm	Washingtonia filifera	23	no	-	-	good	fair	good	2	45	Yes	3	No
1707	Mexican fan palm	Washingtonia robusta	6	no	-	-	good	good	good	2	25	No	1	No
1708	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	fair	good	2	30	No	1	No
1709	California fan palm	Washingtonia filifera	21	no	-	-	fair	fair	fair	3	30	Yes	2	No
1710	Black poui	Jacaranda mimosifolia	-	yes	3,9,13,5,4,4,3,10	48	very poor	good	fair	3	35	No	1	No
1711	Canary Island date palm	Phoenix canariensis	27	no	-	-	good	good	good	2	25	No	1	No
1712	California fan palm	Washingtonia filifera	36	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
1713	Bishop pine	Pinus muricata	13	no	-	-	very poor	fair	poor	4	25	Yes	1	No
1714	Double Tag/1710								N/A	N/A		N/A		No
1715	Canary Island date palm	Phoenix canariensis	36	no	-	-	poor	poor	poor	4	20	No	0	No
1716	Red gum	Eucalyptus camaldulensis	-	yes	5,5,3,2,2	15	very poor	good	fair	3	25	No	1	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1717	Red gum	Eucalyptus camaldulensis	-	yes	10,16,16	34	poor	fair	fair	3	40	No	1	No
1718	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1719	Red gum	Eucalyptus camaldulensis	-	yes	9,11	27	poor	fair	poor	4	40	No	0	No
1720	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	very poor	very poor	5	10	No	0	No
1721	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	fair	fair	3	30	No	1	No
1722	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	3	40	No	1	No
1723	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	3	40	No	1	No
1724	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	3	40	No	1	No
1725	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	fair	3	35	Yes	2	No
1726	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	good	2	35	Yes	3	No
1727	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	fair	fair	3	45	No	1	No
1728	California fan palm	Washingtonia filifera	24	no	-	-	good	fair	fair	3	25	Yes	2	No
1729	Moreton Bay fig	Ficus macrophylla	48	no	-	-	good	very good	very good	1	60	No	2	No
1730	Canary Island date palm	Phoenix canariensis	28	no	-	-	fair	good	good	2	25	No	1	No
1731	California fan palm	Washingtonia filifera	-	yes	6,5,5,5	32	very poor	fair	poor	4	15	Yes	1	No
1732	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	good	good	2	55	No	1	No
1733	English ivy	Hedera helix	-	yes	6,5,4	9	very poor	good	fair	3	10	No	1	No
1734	Bishop pine	Pinus muricata	25	no	-	-	poor	fair	poor	4	35	Yes	1	No
1735	Pine	Pinus sp.	29	no	-	-	poor	poor	poor	4	80	?		No
1736	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	3	35	No	1	No
1737	Pine	Pinus sp.	17	no	-	-	fair	poor	poor	4	70	?		No
1738	Red gum	Eucalyptus camaldulensis	-	yes	15,6	22	very poor	very poor	very poor	5	50	No	0	No
1739	Red gum	Eucalyptus camaldulensis	-	yes	13,17,15,17,7	60	poor	fair	poor	4	85	No	0	No
1740	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	poor	4	65	No	0	No
1741	Red gum	Eucalyptus camaldulensis	70	no	-	-	fair	fair	fair	3	70	No	1	No
1742	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	25	Yes	3	No
1743	Red gum	Eucalyptus camaldulensis	24	no	-	-	very poor	poor	very poor	5	65	No	0	No
1744	Brazilian orchid tree	Bauhinia forficata	-	yes	9,7,6,5	21	poor	good	fair	3	25	No	1	No
1745	Brazilian orchid tree	Bauhinia forficata	-	yes	15,10,14	24	very poor	very poor	very poor	5	20	No	0	No
1746	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	5	25	No	0	No
1747	Red gum	Eucalyptus camaldulensis	38	no	-	-	good	fair	good	2	70	No	1	No
1748	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1749	Peruvian pepper	Schinus molle	6	no	-	-	very poor	poor	very poor	5	20	No	0	No
1750	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	3	70	No	1	No
1751	Red gum	Eucalyptus camaldulensis	-	yes	22,17	36	fair	fair	fair	3	70	No	1	No
1752	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	3	30	No	1	No
1753	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	45	No	0	No
1754	Red gum	Eucalyptus camaldulensis	29	no	-	-	fair	fair	fair	3	60	No	1	No
1755	Peruvian pepper	Schinus molle	-	yes	8,12	18	very poor	poor	poor	4	20	No	0	No
1756	Peruvian pepper	Schinus molle	-	yes	7,5	9	poor	fair	poor	4	10	No	0	No
1757	Peruvian pepper	Schinus molle	-	yes	5,5,3,4,3	18	poor	poor	poor	4	10	No	0	No
1758	Peruvian pepper	Schinus molle	-	yes	5,5,4,4,3,2	24	poor	poor	poor	4	10	No	0	No
1759	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1760	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	fair	fair	3	75	No	1	No
1761	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1762	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1763	Peruvian pepper	Schinus molle	-	yes	5,6	7	poor	fair	fair	3	15	No	1	No
1764	Peruvian pepper	Schinus molle	-	yes	12,6,11	22	poor	poor	poor	4	15	No	0	No
1765	Red gum	Eucalyptus camaldulensis	24	no	-	-	fair	fair	fair	3	60	No	1	No
1766	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	fair	3	25	No	1	No
1767	Green ash	Fraxinus pennsylvanica	32	no	-	-	good	good	good	2	45	No	1	No
1768	Green ash	Fraxinus pennsylvanica	20	no	-	-	good	fair	fair	3	35	No	1	No
1769	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	3	40	No	1	No
1770	Green ash	Fraxinus pennsylvanica	17	no	-	-	very poor	very poor	very poor	5	20	No	0	No
1771	Mexican fan palm	Washingtonia robusta	19	no	-	-	fair	fair	fair	3	35	No	1	No
1772	Green ash	Fraxinus pennsylvanica	35	no	-	-	good	good	good	2	40	No	1	No
1773	Green ash	Fraxinus pennsylvanica	22	no	-	-	poor	fair	fair	3	45	No	1	No
1774	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	3	35	No	1	No
1775	Green ash	Fraxinus pennsylvanica	-	yes	16,10,9	55	poor	fair	poor	4	55	No	0	No
1776	Peruvian pepper	Schinus molle	-	yes	7,5	13	poor	poor	poor	4	20	No	0	No
1777	Green ash	Fraxinus pennsylvanica	18	no	-	-	fair	fair	fair	3	55	No	1	No
1778	Green ash	Fraxinus pennsylvanica	-	yes	10,9,12	70	very poor	very poor	very poor	5	40	No	0	No
1779	Peruvian pepper	Schinus molle	-	yes	6,6,4	18	poor	fair	poor	4	30	No	0	No
1780	Green ash	Fraxinus pennsylvanica	-	yes	8,3	22	very poor	very poor	very poor	5	30	No	0	No
1781	Green ash	Fraxinus pennsylvanica	-	yes	11,10	28	poor	poor	poor	4	30	No	0	No
1782	Green ash	Fraxinus pennsylvanica	28	no	-	-	fair	fair	fair	3	55	No	1	No
1783	Green ash	Fraxinus pennsylvanica	30	no	-	-	poor	poor	poor	4	40	No	0	No
1784	Green ash	Fraxinus pennsylvanica	24	no	-	-	fair	fair	fair	3	35	No	1	No
1785	Bishop pine	Pinus muricata	45	no	-	-	fair	good	good	2	80	Yes	3	No
1786	Green ash	Fraxinus pennsylvanica	21	no	-	-	poor	poor	poor	4	20	No	0	No
1787	Bishop pine	Pinus muricata	-	yes	25,31	58	poor	good	fair	3	80	Yes	2	No
1788	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	fair	fair	3	25	No	1	No
1789	Bishop pine	Pinus muricata	36	no	-	-	good	good	good	2	85	Yes	3	No
1790	Green ash	Fraxinus pennsylvanica	20	no	-	-	fair	poor	fair	3	35	No	1	No
1791	Bishop pine	Pinus muricata	32	no	-	-	poor	good	fair	3	65	Yes	2	No
1792	Bishop pine	Pinus muricata	34	no	-	-	poor	good	fair	3	55	Yes	2	No
1793	Canary Island date palm	Phoenix canariensis	20	no	-	-	good	fair	good	2	35	No	1	No
1794	Canary Island date palm	Phoenix canariensis	26	no	-	-	very poor	very poor	very poor	5	15	No	0	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1795	Canary Island date palm	Phoenix canariensis	25	no	-	-	good	good	good	2	35	No	1	No
1796	Red gum	Eucalyptus camaldulensis	-	yes	18,16	30	poor	fair	fair	3	65	No	1	No
1797	Canary Island date palm	Phoenix canariensis	28	no	-	-	fair	good	fair	3	35	No	1	No
1798	Canary Island date palm	Phoenix canariensis	25	no	-	-	good	fair	good	2	35	No	1	No
1799	Canary Island date palm	Phoenix canariensis	25	no	-	-	very poor	very poor	very poor	5	25	No	0	No
1800	Canary Island date palm	Phoenix canariensis	26	no	-	-	good	good	good	2	35	No	1	No
1801	Mexican fan palm	Washingtonia robusta	13	no	-	-	poor	fair	fair	3	55	No	1	No
1802	Canary Island date palm	Phoenix canariensis	27	no	-	-	good	good	good	2	25	No	1	No
1803	Bishop pine	Pinus muricata	40	no	-	-	fair	good	good	2	80	Yes	3	No
1804	Bishop pine	Pinus muricata	27	no	-	-	fair	good	good	2	75	Yes	3	No
1805	Bishop pine	Pinus muricata	40	no	-	-	poor	good	good	2	75	Yes	3	No
1806	Crimson bottlebrush	Callistemon citrinus	10	no	-	-	fair	good	fair	3	25	No	1	No
1807	Crimson bottlebrush	Callistemon citrinus	11	no	-	-	fair	fair	fair	3	30	No	1	No
1808	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	good	fair	3	55	No	1	No
1809	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	3	40	No	1	No
1810	Mexican fan palm	Washingtonia robusta	12	no	-	-	fair	poor	fair	3	25	No	1	No
1811	Mexican fan palm	Washingtonia robusta	12	no	-	-	poor	very poor	poor	4	20	No	0	No
1812	Bishop pine	Pinus muricata	24	no	-	-	fair	good	good	2	25	Yes	3	No
1813	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	25	No	1	No
1814	Mexican fan palm	Washingtonia robusta	12	no	-	-	poor	fair	fair	3	25	No	1	No
1815	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	20	No	1	No
1816	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	3	35	No	1	No
1817	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	30	No	1	No
1818	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	poor	poor	4	25	No	0	No
1819	California fan palm	Washingtonia filifera	25	no	-	-	fair	good	good	2	55	Yes	3	No
1820	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	20	No	1	No
1821	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	25	No	1	No
1822	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	25	No	1	No
1823	Mexican fan palm	Washingtonia robusta	11	no	-	-	fair	fair	fair	3	25	No	1	No
1824	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	40	No	1	No
1825	Mexican fan palm	Washingtonia robusta	10	no	-	-	fair	fair	fair	3	30	No	1	No
1826	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	60	No	1	No
1827	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	good	fair	3	40	No	1	No
1828	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	30	No	1	No
1829	Mexican fan palm	Washingtonia robusta	16	no	-	-	fair	fair	fair	3	65	No	1	No
1830	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	good	fair	3	45	No	1	No
1831	Mexican fan palm	Washingtonia robusta	13	no	-	-	fair	fair	fair	3	35	No	1	No
1832	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	3	50	No	1	No
1833	Mexican fan palm	Washingtonia robusta	17	no	-	-	poor	fair	fair	3	65	No	1	No
1834	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	fair	fair	3	60	No	1	No
1835	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	good	good	2	35	No	1	No
1836	Mexican fan palm	Washingtonia robusta	15	no	-	-	fair	good	fair	3	50	No	1	No
1837	Mexican fan palm	Washingtonia robusta	17	no	-	-	fair	good	fair	3	50	No	1	No
1838	Red gum	Eucalyptus camaldulensis	-	yes	25,15	41	poor	good	fair	3	55	No	1	No
1839	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	good	fair	3	60	No	1	No
1840	Red gum	Eucalyptus camaldulensis	40	no	-	-	fair	good	good	2	105	No	1	No
1841	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	good	fair	3	75	No	1	No
1842	Red gum	Eucalyptus camaldulensis	-	yes	9,14,10,10,15,18	50	poor	good	fair	3	85	No	1	No
1843	Red gum	Eucalyptus camaldulensis	-	yes	13,29	60	poor	good	fair	3	45	No	1	No
1844	Red gum	Eucalyptus camaldulensis	40	no	-	-	good	good	good	2	100	No	1	No
1845	Red gum	Eucalyptus camaldulensis	18	no	-	-	very poor	fair	poor	4	45	No	0	No
1846	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	fair	fair	3	50	No	1	No
1847	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	good	good	2	90	No	1	No
1848	Red gum	Eucalyptus camaldulensis	37	no	-	-	fair	fair	fair	3	90	No	1	No
1849	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	poor	poor	4	50	No	0	No
1850	Red gum	Eucalyptus camaldulensis	16	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1851	Red gum	Eucalyptus camaldulensis	-	yes	28,10,14	54	poor	good	fair	3	50	No	1	No
1852	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	4	85	No	0	No
1853	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	4	60	No	0	No
1854	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	70	No	0	No
1855	Red gum	Eucalyptus camaldulensis	15	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1856	Red gum	Eucalyptus camaldulensis	13	no	-	-	fair	poor	poor	4	40	No	0	No
1857	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	poor	fair	3	50	No	1	No
1858	Red gum	Eucalyptus camaldulensis	13	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1859	Red gum	Eucalyptus camaldulensis	27	no	-	-	fair	poor	fair	3	85	No	1	No
1860	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1861	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1862	Red gum	Eucalyptus camaldulensis	-	yes	18,21	34	poor	poor	poor	4	70	No	0	No
1863	Red gum	Eucalyptus camaldulensis	21	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1864	Red gum	Eucalyptus camaldulensis	10	no	-	-	very poor	very poor	very poor	5	25	No	0	No
1865	Red gum	Eucalyptus camaldulensis	19	no	-	-	very poor	poor	very poor	5	45	No	0	No
1866	Red gum	Eucalyptus camaldulensis	54	no	-	-	poor	fair	fair	3	105	No	1	No
1867	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	4	80	No	0	No
1868	Red gum	Eucalyptus camaldulensis	26	no	-	-	very poor	very poor	very poor	5	80	No	0	No
1869	Red gum	Eucalyptus camaldulensis	30	no	-	-	poor	fair	poor	4	75	No	0	No
1870	Red gum	Eucalyptus camaldulensis	19	no	-	-	fair	poor	poor	4	55	No	0	No
1871	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	35	No	0	No
1872	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	25	No	0	No



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1873	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1874	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1875	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1876	Red gum	Eucalyptus camaldulensis	31	no	-	-	poor	fair	poor	4	85	No	0	No
1877	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	poor	poor	4	80	No	0	No
1878	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	fair	fair	3	85	No	1	No
1879	Red gum	Eucalyptus camaldulensis	39	no	-	-	fair	poor	fair	3	110	No	1	No
1880	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	50	No	0	No
1881	Red gum	Eucalyptus camaldulensis	19	no	-	-	poor	poor	poor	4	70	No	0	No
1882	Red gum	Eucalyptus camaldulensis	-	yes	7,13	19	very poor	very poor	very poor	5	15	No	0	No
1883	Red gum	Eucalyptus camaldulensis	-	yes	11,14,6,7,8	54	very poor	poor	poor	4	40	No	0	No
1884	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1885	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1886	Red gum	Eucalyptus camaldulensis	25	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1887	Red gum	Eucalyptus camaldulensis	17	no	-	-	fair	fair	fair	3	45	No	1	No
1888	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	fair	poor	4	60	No	0	No
1889	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	3	45	No	1	No
1890	Red gum	Eucalyptus camaldulensis	38	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1891	Canary Island date palm	Phoenix canariensis	19	no	-	-	good	good	good	2	25	No	1	No
1892	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1893	Red gum	Eucalyptus camaldulensis	-	yes	20,36	60	poor	poor	poor	4	75	No	0	No
1894	Red gum	Eucalyptus camaldulensis	23	no	-	-	fair	poor	poor	4	65	No	0	No
1895	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	poor	poor	4	70	No	0	No
1896	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	very poor	poor	4	90	No	0	No
1897	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	50	No	0	No
1898	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	40	No	0	No
1899	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1900	Red gum	Eucalyptus camaldulensis	22	no	-	-	very poor	very poor	very poor	5	55	No	0	No
1901	Red gum	Eucalyptus camaldulensis	14	no	-	-	very poor	very poor	very poor	5	25	No	0	No
1902	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	poor	poor	4	75	No	0	No
1903	Red gum	Eucalyptus camaldulensis	15	no	-	-	poor	poor	poor	4	50	No	0	No
1904	Red gum	Eucalyptus camaldulensis	34	no	-	-	poor	poor	poor	4	75	No	0	No
1905	Red gum	Eucalyptus camaldulensis	35	no	-	-	poor	poor	poor	4	60	No	0	No
1906	Red gum	Eucalyptus camaldulensis	23	no	-	-	very poor	very poor	very poor	5	60	No	0	No
1907	Red gum	Eucalyptus camaldulensis	17	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1908	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	4	50	No	0	No
1909	Red gum	Eucalyptus camaldulensis	33	no	-	-	poor	poor	poor	4	80	No	0	No
1910	Red gum	Eucalyptus camaldulensis	47	no	-	-	poor	poor	poor	4	90	No	0	No
1911	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	5	45	No	0	No
1912	Red gum	Eucalyptus camaldulensis	54	no	-	-	good	fair	fair	3	95	No	1	No
1913	Red gum	Eucalyptus camaldulensis	-	yes	6,7,8,8,40	60	fair	good	fair	3	80	No	1	No
1914	Red gum	Eucalyptus camaldulensis	-	yes	7,6,4,7,11,16,5,9	72	poor	good	fair	3	50	No	1	No
1915	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	poor	poor	4	30	No	0	No
1916	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	35	No	1	No
1917	Red gum	Eucalyptus camaldulensis	-	yes	23,25	42	fair	good	fair	3	75	No	1	No
1918	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	3	35	No	1	No
1919	Red gum	Eucalyptus camaldulensis	6	no	-	-	poor	poor	poor	4	25	No	0	No
1920	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	poor	fair	3	25	No	1	No
1921	Red gum	Eucalyptus camaldulensis	6	no	-	-	very poor	very poor	very poor	5	15	No	0	No
1922	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	very poor	very poor	5	35	No	0	No
1923	Red gum	Eucalyptus camaldulensis	11	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1924	Red gum	Eucalyptus camaldulensis	7	no	-	-	very poor	very poor	very poor	5	30	No	0	No
1925	Red gum	Eucalyptus camaldulensis	-	yes	7,13,10	25	poor	poor	poor	4	40	No	0	No
1926	Red gum	Eucalyptus camaldulensis	46	no	-	-	very good	very good	very good	1	90	No	2	Yes
1927	Red gum	Eucalyptus camaldulensis	-	yes	19,23	42	poor	poor	poor	4	45	No	0	Yes
1928	Red gum	Eucalyptus camaldulensis	-	yes	24,52	60	fair	good	good	2	70	No	1	Yes
1929	Peruvian pepper	Schinus molle	42	no	-	-	fair	good	fair	3	35	No	1	Yes
1930	Peruvian pepper	Schinus molle	44	no	-	-	fair	fair	fair	3	55	No	1	Yes
1931	Peruvian pepper	Schinus molle	28	no	-	-	poor	poor	poor	4	30	No	0	Yes
1932	Peruvian pepper	Schinus molle	40	no	-	-	poor	poor	poor	4	45	No	0	Yes
1933	Peruvian pepper	Schinus molle	48	no	-	-	poor	poor	poor	4	35	No	0	Yes
1934	Canary Island date palm	Phoenix canariensis	28	no	-	-	good	fair	fair	3	40	No	1	Yes
1935	California fan palm	Washingtonia filifera	20	no	-	-	fair	fair	fair	3	20	Yes	2	Yes
1936	Canary Island date palm	Phoenix canariensis	28	no	-	-	very poor	very poor	very poor	5	35	No	0	Yes
1937	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	fair	fair	3	65	No	1	Yes
1938	Peruvian pepper	Schinus molle	38	no	-	-	poor	poor	poor	4	35	No	0	Yes
1939	Sanbox tree	Hura crepitans	13	no	-	-	fair	fair	fair	3	15	No	1	Yes
1940	Sanbox tree	Hura crepitans	9	no	-	-	fair	fair	fair	3	15	No	1	Yes
1941	Western sycamore	Platanus racemosa	-	yes	17,14	30	fair	good	good	2	20	Yes	3	Yes
1942	Sanbox tree	Hura crepitans	30	no	-	-	good	good	good	2	30	No	1	Yes
1943	California fan palm	Washingtonia filifera	26	no	-	-	good	good	good	2	35	Yes	3	Yes
1944	Southern California walnut	Juglans californica	-	yes	7,13	16	good	good	good	2	20	Yes	3	Yes
1945	Green ash	Fraxinus pennsylvanica	16	no	-	-	fair	fair	fair	3	20	No	1	Yes
1946	Green ash	Fraxinus pennsylvanica	22	no	-	-	poor	good	fair	3	25	No	1	Yes
1947	Sanbox tree	Hura crepitans	15	no	-	-	fair	poor	poor	4	20	No	0	Yes
1948	Green ash	Fraxinus pennsylvanica	24	no	-	-	fair	good	good	2	30	No	1	Yes
1949	Carob	Ceratonia siliqua	-	yes	20,12,13	38	fair	good	good	2	25	No	1	Yes
1950	White alder	Alnus rhombifolia	-	yes	16,12	20	fair	poor	poor	4	20	Yes	1	Yes

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
1951	White alder	Alnus rhombifolia	-	yes	15,11	17	fair	good	fair	3	30	Yes	2	Yes
1952	Carob	Ceratonia siliqua	12	no	-	-	good	good	good	2	25	No	1	Yes
1953	Carob	Ceratonia siliqua	-	yes	13,9	17	poor	fair	fair	3	20	No	1	Yes
1954	Carob	Ceratonia siliqua	19	no	-	-	fair	fair	fair	3	25	No	1	Yes
1955	Carob	Ceratonia siliqua	16	no	-	-	fair	good	fair	3	20	No	1	Yes
1956	Red gum	Eucalyptus camaldulensis	29	no	-	-	very poor	very poor	very poor	5	85	No	0	Yes
1957	Arizona Cypress	Cupressus arizonica	7	no	-	-	good	good	good	2	20	Yes	3	Yes
1958	Arizona cypress	Cupressus arizonica	-	yes	9,5	13	poor	good	fair	3	25	Yes	2	Yes
1959	Fremont cottonwood	Populus fremontii	7	no	-	-	good	good	good	2	25	Yes	3	No
1960	Goodding's willow	Salix gooddingii	8	no	-	-	poor	poor	poor	4	25	Yes	1	No
1961	Fremont cottonwood	Populus fremontii	7	no	-	-	fair	fair	fair	3	30	Yes	2	No
1962	Fremont cottonwood	Populus fremontii	17	no	-	-	fair	good	good	2	30	Yes	3	No
1963	Peruvian pepper	Schinus molle	-	yes	15,10	20	fair	good	fair	3	25	No	1	No
1964	Fremont cottonwood	Populus fremontii	8	no	-	-	fair	fair	fair	3	20	Yes	2	No
1965	Fremont cottonwood	Populus fremontii	9	no	-	-	fair	fair	fair	3	25	Yes	2	No
1966	Goodding's willow	Salix gooddingii	6	no	-	-	poor	poor	poor	4	30	Yes	1	No
1967	Fremont cottonwood	Populus fremontii	9	no	-	-	fair	fair	fair	3	25	Yes	2	No
1968	Peruvian pepper	Schinus molle	15	no	-	-	good	good	good	2	30	No	1	No
1969	Red gum	Eucalyptus camaldulensis	-	yes	12,14,13	26	fair	fair	fair	3	35	No	1	No
1970	Peruvian pepper	Schinus molle	-	yes	8,8,7,5,4,3,3	48	fair	fair	fair	3	15	No	1	No
1971	Peruvian pepper	Schinus molle	-	yes	13,9,8	36	fair	good	fair	3	30	No	1	No
1972	Peruvian pepper	Schinus molle	-	yes	18,10,10	48	poor	good	fair	3	35	No	1	No
1973	Peruvian pepper	Schinus molle	24	no	-	-	fair	fair	fair	3	30	No	1	No
1974	Peruvian pepper	Schinus molle	7	no	-	-	poor	fair	fair	3	15	No	1	No
1975	Red gum	Eucalyptus camaldulensis	-	yes	8,5,4,4	36	poor	poor	poor	4	15	No	0	No
1976	Red gum	Eucalyptus camaldulensis	-	yes	7,4,4	24	very poor	very poor	very poor	5	15	No	0	No
1977	Red gum	Eucalyptus camaldulensis	-	yes	8,7,6	36	very poor	very poor	very poor	5	45	No	0	No
1978	Peruvian pepper	Schinus molle	12	no	-	-	poor	poor	poor	4	25	No	0	No
1979	Peruvian pepper	Schinus molle	-	yes	14,9	30	poor	poor	poor	4	35	No	0	No
1980	Peruvian pepper	Schinus molle	17	no	-	-	fair	fair	fair	3	30	No	1	No
1981	Peruvian pepper	Schinus molle	-	yes	18,11	25	poor	poor	poor	4	20	No	0	No
1982	Arizona cypress	Cupressus arizonica	21	no	-	-	fair	good	fair	3	45	Yes	2	No
1983	Arizona cypress	Cupressus arizonica	21	no	-	-	very poor	very poor	very poor	5	35	Yes	1	No
1984	Arizona cypress	Cupressus arizonica	19	no	-	-	fair	good	fair	3	40	Yes	2	No
1985	Red gum	Eucalyptus camaldulensis	27	no	-	-	good	fair	fair	3	70	No	1	No
1986	Red gum	Eucalyptus camaldulensis	48	no	-	-	fair	good	fair	3	70	No	1	No
1987	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	good	good	2	65	No	1	No
1988	Green ash	Fraxinus pennsylvanica	12	no	-	-	poor	poor	poor	4	25	No	0	No
1989	Green ash	Fraxinus pennsylvanica	11	no	-	-	fair	poor	poor	4	30	No	0	No
1990	Red gum	Eucalyptus camaldulensis	29	no	-	-	poor	poor	poor	4	35	No	0	No
1991	Red gum	Eucalyptus camaldulensis	9	no	-	-	very poor	fair	poor	4	35	No	0	No
1992	Red gum	Eucalyptus camaldulensis	-	yes	14,10,6	45	fair	fair	fair	3	35	No	1	No
1993	Red gum	Eucalyptus camaldulensis	22	no	-	-	fair	fair	fair	3	45	No	1	No
1994	Red gum	Eucalyptus camaldulensis	58	no	-	-	good	good	good	2	75	No	1	No
1995	Red gum	Eucalyptus camaldulensis	36	no	-	-	fair	good	good	2	35	No	1	No
1996	Peruvian pepper	Schinus molle	32	no	-	-	good	good	good	2	60	No	1	No
1997	Red gum	Eucalyptus camaldulensis	15	no	-	-	good	fair	fair	3	30	No	1	No
1998	Red gum	Eucalyptus camaldulensis	20	no	-	-	good	fair	fair	3	65	No	1	No
1999	Red gum	Eucalyptus camaldulensis	-	yes	20,11	31	poor	poor	poor	4	45	No	0	No
2000	Red gum	Eucalyptus camaldulensis	-	yes	6,4,5	12	fair	fair	fair	3	30	No	1	No
2001	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2002	Goodding's willow	Salix gooddingii	20	no	-	-	very poor	good	fair	3	35	Yes	2	No
2003	Goodding's willow	Salix gooddingii	-	yes	8,11	20	very poor	poor	very poor	5	20	Yes	1	No
2004	Goodding's willow	Salix gooddingii	-	yes	7,11	12	poor	fair	poor	4	20	Yes	1	No
2005	Goodding's willow	Salix gooddingii	11	no	-	-	poor	poor	poor	4	25	Yes	1	No
2006	Black elderberry	Sambucus nigra	8	no	-	-	very poor	poor	poor	4	20	Yes	1	No
2007	Black elderberry	Sambucus nigra	13	no	-	-	poor	poor	poor	4	20	Yes	1	No
2008	Goodding's willow	Salix gooddingii	14	no	-	-	fair	good	fair	3	45	Yes	2	No
2009	Goodding's willow	Salix gooddingii	-	yes	6,6,3	10	poor	good	fair	3	25	Yes	2	No
2010	Goodding's willow	Salix gooddingii	-	yes	8,6	24	poor	good	fair	3	30	Yes	2	No
2011	Goodding's willow	Salix gooddingii	-	yes	8,10,11	36	very poor	very poor	very poor	5	20	Yes	1	No
2012	Goodding's willow	Salix gooddingii	-	yes	10,12	24	very poor	good	fair	3	20	Yes	2	No
2013	Goodding's willow	Salix gooddingii	18	no	-	-	poor	very good	good	2	25	Yes	3	No
2014	Goodding's willow	Salix gooddingii	11	no	-	-	fair	fair	fair	3	25	Yes	2	No
2015	Goodding's willow	Salix gooddingii	-	yes	12,12	30	poor	fair	poor	4	30	Yes	1	No
2016	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
2017	Goodding's willow	Salix gooddingii	11	no	-	-	fair	poor	poor	4	25	Yes	1	No
2018	Goodding's willow	Salix gooddingii	-	yes	10,12	30	poor	poor	poor	4	30	Yes	1	No
2019	Goodding's willow	Salix gooddingii	-	yes	10,6	19	very poor	very poor	very poor	5	20	Yes	1	No
2020	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	5	20	Yes	1	No
2021	Goodding's willow	Salix gooddingii	14	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
2022	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2023	Goodding's willow	Salix gooddingii	10	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2024	Goodding's willow	Salix gooddingii	6	no	-	-	very poor	very poor	very poor	5	10	Yes	1	No
2025	Goodding's willow	Salix gooddingii	14	no	-	-	poor	fair	fair	3	25	Yes	2	No
2026	Goodding's willow	Salix gooddingii	12	no	-	-	very poor	poor	poor	4	30	Yes	1	No
2027	Goodding's willow	Salix gooddingii	-	yes	13,8	30	poor	poor	poor	4	30	Yes	1	No
2028	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	fair	poor	4	30	Yes	1	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
2029	Goodding's willow	Salix gooddingii	-	yes	26,13	40	fair	fair	fair	3	40	Yes	2	No
2030	Goodding's willow	Salix gooddingii	-	yes	9,4	30	very poor	fair	poor	4	30	Yes	1	No
2031	Goodding's willow	Salix gooddingii	9	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2032	Fremont cottonwood	Populus fremontii	-	yes	15,14	23	good	good	good	2	25	Yes	3	No
2033	Goodding's willow	Salix gooddingii	18	no	-	-	poor	good	fair	3	30	Yes	2	No
2034	Goodding's willow	Salix gooddingii	15	no	-	-	very poor	fair	poor	4	30	Yes	1	No
2035	Goodding's willow	Salix gooddingii	-	yes	23,24	70	very poor	fair	poor	4	30	Yes	1	No
2036	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	5	20	Yes	1	No
2037	Goodding's willow	Salix gooddingii	16	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
2038	Goodding's willow	Salix gooddingii	-	yes	17,10	38	very poor	poor	very poor	5	40	Yes	1	No
2039	Goodding's willow	Salix gooddingii	11	no	-	-	very poor	very poor	very poor	5	40	Yes	1	No
2040	Goodding's willow	Salix gooddingii	-	yes	13,10	20	very poor	fair	poor	4	20	Yes	1	No
2041	Goodding's willow	Salix gooddingii	18	no	-	-	very poor	poor	poor	4	40	Yes	1	No
2042	Goodding's willow	Salix gooddingii	21	no	-	-	poor	fair	fair	3	40	Yes	2	No
2043	Goodding's willow	Salix gooddingii	15	no	-	-	very poor	poor	poor	4	15	Yes	1	No
2044	Goodding's willow	Salix gooddingii	24	no	-	-	fair	very good	good	2	35	Yes	3	No
2045	Goodding's willow	Salix gooddingii	13	no	-	-	very poor	poor	poor	4	25	Yes	1	No
2046	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	very poor	very poor	5	20	Yes	1	No
2047	Goodding's willow	Salix gooddingii	17	no	-	-	very poor	fair	poor	4	35	Yes	1	No
2048	Goodding's willow	Salix gooddingii	-	yes	8,4,5,4	25	very poor	fair	poor	4	30	Yes	1	No
2049	Tamarisk	Tamarix ramosissima	-	yes	6,4,4	22	poor	fair	fair	3	20	No	1	No
2050	Goodding's willow	Salix gooddingii	-	yes	13,6	19	poor	good	fair	3	20	Yes	2	No
2051	Tamarisk	Tamarix ramosissima	-	yes	8,4,6	14	fair	very poor	poor	4	20	No	0	No
2052	Goodding's willow	Salix gooddingii	8	no	-	-	very poor	poor	very poor	5	15	Yes	1	No
2053	Arroyo willow	Salix lasiolepis	-	yes	6,3,4,5,4	50	very poor	fair	poor	4	15	Yes	1	No
2054	Peruvian pepper	Schinus molle	-	yes	16,10,8	24	fair	good	fair	3	25	No	1	No
2055	Fremont cottonwood	Populus fremontii	-	yes	24,26	36	fair	good	good	2	45	Yes	3	No
2056	Fremont cottonwood	Populus fremontii	9	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2057	Fremont cottonwood	Populus fremontii	-	yes	7,5	8	very poor	very poor	very poor	5	15	Yes	1	No
2058	Fremont cottonwood	Populus fremontii	10	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
2059	Fremont cottonwood	Populus fremontii	17	no	-	-	very poor	very poor	very poor	5	15	Yes	1	No
2060	Fremont cottonwood	Populus fremontii	-	yes	19,22	36	poor	poor	poor	4	50	Yes	1	No
2061	Fremont cottonwood	Populus fremontii	21	no	-	-	poor	fair	fair	3	35	Yes	2	No
2062	Fremont cottonwood	Populus fremontii	14	no	-	-	very poor	very poor	very poor	5	25	Yes	1	No
2063	Peruvian pepper	Schinus molle	23	no	-	-	very poor	very poor	very poor	5	35	No	0	No
2064	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	fair	fair	3	80	No	1	No
2065	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	fair	fair	3	80	No	1	No
2066	Red gum	Eucalyptus camaldulensis	-	yes	11,24,15	75	poor	good	fair	3	95	No	1	No
2067	Red gum	Eucalyptus camaldulensis	38	no	-	-	fair	fair	fair	3	80	No	1	No
2068	Red gum	Eucalyptus camaldulensis	30	no	-	-	fair	fair	fair	3	95	No	1	No
2069	Peruvian pepper	Schinus molle	13	no	-	-	fair	good	good	2	20	No	1	Yes
2070	Peruvian pepper	Schinus molle	9	no	-	-	poor	fair	fair	3	20	No	1	Yes
2071	Bishop pine	Pinus muricata	29	no	-	-	fair	good	good	2	55	Yes	3	Yes
2072	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	fair	good	2	20	No	1	Yes
2073	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	fair	good	2	35	No	1	Yes
2074	Red gum	Eucalyptus camaldulensis	-	yes	4,12,8,8,4,6	buried	good	fair	good	2	30	No	1	Yes
2075	Red gum	Eucalyptus camaldulensis	-	yes	8,8,5,8	buried	poor	fair	fair	3	30	No	1	Yes
2076	Red gum	Eucalyptus camaldulensis	8	no	-	-	good	fair	good	2	30	No	1	Yes
2077	Red gum	Eucalyptus camaldulensis	-	yes	4,7	buried	fair	fair	fair	3	20	No	1	Yes
2078	Red gum	Eucalyptus camaldulensis	-	yes	11,9,10,5	27	good	fair	good	2	45	No	1	Yes
2079	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	3	20	No	1	Yes
2080	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	3	25	No	1	Yes
2081	Red gum	Eucalyptus camaldulensis	-	yes	9,5,9,7,6,9	buried	poor	fair	fair	3	30	No	1	Yes
2082	Red gum	Eucalyptus camaldulensis	-	yes	8,10,4,4,8,8,12,12	buried	good	fair	good	2	25	No	1	Yes
2083	Red gum	Eucalyptus camaldulensis	-	yes	8,5,9	buried	fair	fair	fair	3	15	No	1	Yes
2084	Red gum	Eucalyptus camaldulensis	-	yes	6,3	buried	good	good	good	2	15	No	1	Yes
2085	Peruvian pepper	Schinus molle	11	no	-	-	poor	fair	fair	3	25	No	1	Yes
2086	Peruvian pepper	Schinus molle	-	yes	8,17	21	poor	poor	poor	4	25	No	0	Yes
2087	Peruvian pepper	Schinus molle	-	yes	13,16	28	poor	poor	poor	4	35	No	0	Yes
2088	Peruvian pepper	Schinus molle	-	yes	9,13,12	28	fair	good	good	2	45	No	1	Yes
2089	Fremont cottonwood	Populus fremontii	-	yes	4,4,4,6,10	12	poor	poor	poor	4	35	Yes	1	Yes
2090	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	fair	fair	3	25	No	1	Yes
2091	Unk2/1		11	no	-	-	very poor	very poor	very poor	5	25	?		No
2092	Unk2/1		13	no	-	-	very poor	very poor	very poor	5	30	?		No
2093	Unk2/1		18	no	-	-	fair	good	fair	3	30	?		No
2094	Unk2/1		17	no	-	-	fair	fair	fair	3	35	?		No
2095	Green ash	Fraxinus pennsylvanica	37	no	-	-	good	good	good	2	35	No	1	No
2096	Green ash	Fraxinus pennsylvanica	33	no	-	-	fair	fair	fair	3	30	No	1	No
2097	Green ash	Fraxinus pennsylvanica	31	no	-	-	fair	fair	fair	3	35	No	1	No
2098	Unk2/1		19	no	-	-	good	good	good	2	40	?		No
2099	Unk2/1		21	no	-	-	fair	good	fair	3	35	?		No
2100	Lost Tag								N/A	N/A		N/A		
2101	Red gum	Eucalyptus camaldulensis	-	yes	9,6	10	poor	good	fair	3	25	No	1	Yes
2102	Red gum	Eucalyptus camaldulensis	-	yes	7,4,6	11	fair	good	good	2	30	No	1	Yes
2103	Red gum	Eucalyptus camaldulensis	-	yes	7,5,6,10	20	fair	good	fair	3	50	No	1	Yes
2104	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	fair	3	40	No	1	Yes
2105	Red gum	Eucalyptus camaldulensis	8	no	-	-	fair	good	good	2	35	No	1	Yes
2106	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	2	35	No	1	Yes



## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
2107	Red gum	Eucalyptus camaldulensis	-	yes	6,5	14	fair	good	fair	3	45	No	1	Yes
2108	Red gum	Eucalyptus camaldulensis	-	yes	8,6	14	fair	good	fair	3	25	No	1	Yes
2109	Red gum	Eucalyptus camaldulensis	-	yes	7,7,7	22	fair	good	fair	3	45	No	1	Yes
2110	Red gum	Eucalyptus camaldulensis	-	yes	10,8,7,3,4,6	28	fair	good	fair	3	40	No	1	Yes
2111	Red gum	Eucalyptus camaldulensis	7	no	-	-	good	good	good	2	15	No	1	Yes
2112	Red gum	Eucalyptus camaldulensis	-	yes	9,8,8,6	40	poor	good	fair	3	60	No	1	Yes
2113	Red gum	Eucalyptus camaldulensis	6	no	-	-	good	good	good	2	45	No	1	Yes
2114	Red gum	Eucalyptus camaldulensis	-	yes	8,9,9,8,10,5,4,3	48	poor	good	fair	3	35	No	1	Yes
2115	Red gum	Eucalyptus camaldulensis	-	yes	7,4,3,3	10	fair	very good	good	2	25	No	1	Yes
2116	Red gum	Eucalyptus camaldulensis	-	yes	5,10,9,4,8,8	48	fair	fair	fair	3	45	No	1	Yes
2117	Red gum	Eucalyptus camaldulensis	-	yes	6,8	15	fair	fair	fair	3	40	No	1	Yes
2118	Red gum	Eucalyptus camaldulensis	-	yes	7,10,7,6,3,3	36	fair	good	fair	3	35	No	1	Yes
2119	Red gum	Eucalyptus camaldulensis	-	yes	6,7,8,5,4,7,7,8,4	70	poor	good	fair	3	45	No	1	Yes
2120	Red gum	Eucalyptus camaldulensis	-	yes	10,11,12,8,10,7,10	70	poor	good	fair	3	50	No	1	Yes
2121	Red gum	Eucalyptus camaldulensis	-	yes	6,4	9	poor	poor	poor	4	35	No	0	Yes
2122	Red gum	Eucalyptus camaldulensis	-	yes	7,9,8	30	poor	fair	fair	3	45	No	1	Yes
2123	Red gum	Eucalyptus camaldulensis	-	yes	7,7	18	fair	good	fair	3	45	No	1	Yes
2124	Red gum	Eucalyptus camaldulensis	-	yes	7,3,6	12	poor	fair	fair	3	45	No	1	Yes
2125	Lost Tag								N/A	N/A		N/A		
2126	Unk2/1		19	no	-	-	fair	poor	fair	3	30	?		No
2127	Mexican fan palm	Washingtonia robusta	15	no	-	-	poor	fair	fair	3	40	No	1	No
2128	Olive	Olea eurpaea	20	no	-	-	poor	good	fair	3	25	No	1	No
2129	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	2	45	No	1	No
2130	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	50	No	1	No
2131	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	2	45	No	1	No
2132	Olive	Olea eurpaea	-	yes	15,18,12	50	poor	fair	fair	3	25	No	1	No
2133	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	good	good	2	45	No	1	No
2134	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	2	50	No	1	No
2135	Olive	Olea eurpaea	-	yes	13,16	36	poor	fair	poor	4	25	No	0	No
2136	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	2	55	No	1	No
2137	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	2	50	No	1	No
2138	Mexican fan palm	Washingtonia robusta	17	no	-	-	good	good	good	2	40	No	1	No
2139	Green ash	Fraxinus pennsylvanica	-	yes	11,11,21	30	fair	fair	fair	3	25	No	1	No
2140	Olive	Olea eurpaea	-	yes	18,16	36	poor	good	fair	3	25	No	1	No
2141	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	2	50	No	1	No
2142	California fan palm	Washingtonia filifera	20	no	-	-	good	fair	good	2	40	Yes	3	No
2143	Olive	Olea eurpaea	19	no	-	-	fair	good	fair	3	25	No	1	No
2144	Olive	Olea eurpaea	15	no	-	-	poor	fair	poor	4	15	No	0	No
2145	Olive	Olea eurpaea	-	yes	18,22	48	poor	good	fair	3	25	No	1	No
2146	California fan palm	Washingtonia filifera	38	no	-	-	good	good	good	2	45	Yes	3	No
2147	California fan palm	Washingtonia filifera	38	no	-	-	good	good	good	2	40	Yes	3	No
2148	California fan palm	Washingtonia filifera	21	no	-	-	poor	fair	fair	3	20	Yes	2	No
2149	California fan palm	Washingtonia filifera	25	no	-	-	poor	fair	fair	3	20	Yes	2	No
2150	California fan palm	Washingtonia filifera	28	no	-	-	poor	good	fair	3	25	Yes	2	No
2151	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	25	Yes	3	No
2152	California fan palm	Washingtonia filifera	32	no	-	-	good	good	good	2	30	Yes	3	No
2153	Joshua tree	Yucca brevifolia	-	yes	26,16	72	poor	fair	fair	3	20	Yes	2	No
2154	Flooded gum	Eucalyptus rudis	-	yes	7,10	14	very poor	very poor	very poor	5	20	No	0	Yes
2155	Flooded gum	Eucalyptus rudis	13	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
2156	Flooded gum	Eucalyptus rudis	18	no	-	-	very poor	very poor	very poor	5	20	No	0	Yes
2157	Flooded gum	Eucalyptus rudis	14	no	-	-	poor	poor	poor	4	20	No	0	Yes
2158	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	4	15	No	0	Yes
2159	Flooded gum	Eucalyptus rudis	10	no	-	-	poor	poor	poor	4	20	No	0	Yes
2160	Flooded gum	Eucalyptus rudis	-	yes	15,17,12	32	poor	fair	poor	4	20	No	0	Yes
2161	Flooded gum	Eucalyptus rudis	18	yes	8,12,11	18	very poor	very poor	very poor	5	15	No	0	Yes
2162	Flooded gum	Eucalyptus rudis	20	no	-	-	poor	poor	poor	4	15	No	0	Yes
2163	Flooded gum	Eucalyptus rudis	-	yes	11,17	20	poor	poor	poor	4	15	No	0	Yes
2164	Flooded gum	Eucalyptus rudis	17	no	-	-	poor	poor	poor	4	15	No	0	Yes
2165	Flooded gum	Eucalyptus rudis	16	no	-	-	poor	poor	poor	4	15	No	0	Yes
2166	Flooded gum	Eucalyptus rudis	26	no	-	-	fair	fair	fair	3	20	No	1	Yes
L1	Goodding's willow	Salix gooddingii	-	yes	8,5,6	14	very poor	fair	fair	3	25	Yes	2	No
L10	Fremont cottonwood	Populus fremontii	11	no	-	-	fair	fair	fair	3	35	Yes	2	No
L11	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	30	Yes	3	No
L12	Red gum	Eucalyptus camaldulensis	6	no	-	-	fair	fair	fair	3	45	No	1	No
L13	Mexican fan palm	Washingtonia robusta	18	no	-	-	fair	fair	fair	3	25	No	1	No
L14	Goodding's willow	Salix gooddingii	-	yes	8,8	12	poor	poor	poor	4	35	Yes	1	No
L15	Fremont cottonwood	Populus fremontii	11	no	-	-	fair	fair	fair	3	30	Yes	2	No
L16	Fremont cottonwood	Populus fremontii	8	no	-	-	fair	fair	fair	3	25	Yes	2	No
L17	Goodding's willow	Salix gooddingii	16	no	-	-	fair	fair	fair	3	40	Yes	2	No
L18	Peruvian pepper	Schinus molle	20	no	-	-	fair	fair	fair	3	40	No	1	No
L19	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	30	Yes	3	No
L2	Goodding's willow	Salix gooddingii	6	no	-	-	fair	fair	fair	3	25	Yes	2	No
L20	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	30	Yes	3	No
L21	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	30	Yes	3	No
L22	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	30	Yes	3	No
L23	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	20	No	1	No
L24	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	35	Yes	3	No
L25	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	35	Yes	3	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
L26	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	35	Yes	3	No
L27	Mexican fan palm	Washingtonia robusta	15	no	-	-	good	good	good	2	20	No	1	No
L28	Goodding's willow	Salix gooddingii	10	no	-	-	fair	fair	fair	3	25	Yes	2	No
L29	Peruvian pepper	Schinus molle	25	no	-	-	fair	fair	fair	3	30	No	1	No
L3	Fremont cottonwood	Populus fremontii	6	no	-	-	fair	fair	fair	3	25	Yes	2	No
L30	California fan palm	Washingtonia filifera	35	no	-	-	good	good	good	2	40	Yes	3	No
L31	Fremont cottonwood	Populus fremontii	6	no	-	-	fair	fair	fair	3	25	Yes	2	No
L32	Tamarisk	Tamarix ramosissima	25	no	-	-	poor	poor	poor	4	35	No	0	No
L33	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	30	Yes	3	No
L34	California fan palm	Washingtonia filifera	25	no	-	-	good	good	good	2	300	Yes	3	No
L35	Red gum	Eucalyptus camaldulensis	7	no	-	-	fair	fair	fair	3	50	No	1	No
L36	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	25	Yes	3	No
L37	California fan palm	Washingtonia filifera	30	no	-	-	good	good	good	2	45	Yes	3	No
L38	Red gum	Eucalyptus camaldulensis	9	no	-	-	fair	fair	fair	3	45	No	1	No
L39	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	45	No	1	No
L4	Fremont cottonwood	Populus fremontii	-	yes	8,8	16	poor	fair	fair	3	25	Yes	2	No
L40	California fan palm	Washingtonia filifera	30	no	-	-	fair	good	good	2	50	Yes	3	No
L41	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	25	Yes	3	No
L42	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	25	Yes	3	No
L43	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	25	Yes	3	No
L44	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	20	Yes	3	No
L45	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	60	No	1	No
L46	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	No
L47	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	No
L48	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	No
L49	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	No
L5	Goodding's willow	Salix gooddingii	-	yes	12,10	16	poor	poor	poor	4	35	Yes	1	No
L50	Red gum	Eucalyptus camaldulensis	15	no	-	-	fair	fair	fair	3	60	No	1	No
L51	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L52	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L53	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L54	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L55	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L56	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L57	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L58	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L59	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L6	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	good	good	2	20	No	1	No
L60	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L61	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L62	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L63	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L64	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L65	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	50	No	1	No
L66	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	3	50	No	1	No
L67	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	3	50	No	1	No
L68	Red gum	Eucalyptus camaldulensis	-	yes	10,10	25	fair	fair	fair	3	50	No	1	No
L69	Peruvian pepper	Schinus molle	-	yes	7,5,4,5	28	poor	fair	fair	3	25	No	1	No
L7	Red gum	Eucalyptus camaldulensis	-	yes	14,12	22	poor	poor	poor	4	30	No	0	No
L70	Peruvian pepper	Schinus molle	14	no	-	-	poor	poor	poor	4	30	No	0	No
L71	Peruvian pepper	Schinus molle	-	yes	10,14	25	fair	fair	fair	3	30	No	1	No
L72	Peruvian pepper	Schinus molle	10	no	-	-	poor	poor	poor	4	20	No	0	No
L73	Red gum	Eucalyptus camaldulensis	14	no	-	-	fair	fair	fair	3	50	No	1	No
L74	Red gum	Eucalyptus camaldulensis	20	no	-	-	fair	fair	fair	3	55	No	1	No
L75	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L76	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L77	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L78	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L79	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L8	Goodding's willow	Salix gooddingii	6	no	-	-	poor	fair	fair	3	15	Yes	2	No
L80	Fremont cottonwood	Populus fremontii	20	no	-	-	fair	fair	fair	3	30	Yes	2	No
L81	Red gum	Eucalyptus camaldulensis	12	no	-	-	fair	fair	fair	3	40	No	1	No
L82	Peruvian pepper	Schinus molle	-	yes	8,8	20	poor	poor	poor	4	25	No	0	No
L83	Peruvian pepper	Schinus molle	15	no	-	-	poor	poor	poor	4	30	No	0	No
L84	Peruvian pepper	Schinus molle	-	yes	12,14,8	30	poor	fair	fair	3	30	No	1	No
L85	Peruvian pepper	Schinus molle	-	yes	16,12,12	30	poor	fair	fair	3	30	No	1	No
L86	Peruvian pepper	Schinus molle	-	yes	8,12	20	poor	poor	poor	4	20	No	0	No
L87	Peruvian pepper	Schinus molle	-	yes	10,10,10	30	poor	fair	fair	3	35	No	1	No
L88	Peruvian pepper	Schinus molle	10	no	-	-	fair	fair	fair	3	30	No	1	No
L89	Peruvian pepper	Schinus molle	7	no	-	-	fair	fair	fair	3	15	No	1	No
L9	Fremont cottonwood	Populus fremontii	7	no	-	-	fair	fair	fair	3	25	Yes	2	No
L90	Red gum	Eucalyptus camaldulensis	-	yes	6,5,5,3,4	30	poor	fair	fair	3	40	No	1	No
L91	Red gum	Eucalyptus camaldulensis	-	yes	14,8	20	fair	fair	fair	3	50	No	1	No
L92	Red gum	Eucalyptus camaldulensis	10	no	-	-	good	fair	fair	3	40	No	1	No
L93	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
L94	Goodding's willow	Salix gooddingii	10	no	-	-	poor	poor	poor	4	20	Yes	1	No
untagged	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	2	40	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	16	no	-	-	good	fair	good	2	55	No	1	No

## Attachment 2: Tree Removal Analysis

Tree Number	Common Name	Scientific Name	DBH (inches)	Multi Trunk	Multi Trunk DBH (inches)	Diameter Below Lowest Trunk on Multi-Trunk Tree (inches)	Structure	Health	Overall Condition	Overall Cond. Ranking	Height (feet)	Native	Replacement Ratio	Remove?
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	good	good	2	40	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	2	55	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	18	no	-	-	good	fair	good	2	45	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	19	no	-	-	good	fair	good	2	55	No	1	No
untagged	Red gum	Eucalyptus camaldulensis	-	yes	13,9,12,10	52	very poor	good	fair	3	20	No	1	No
untagged	Canary Island date palm	Phoenix canariensis	10	no	-	-	fair	fair	fair	3	40	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	good	fair	fair	3	35	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	3	30	No	1	No
untagged	Mexican fan palm	Washingtonia robusta	14	no	-	-	fair	fair	fair	3	35	No	1	No
untagged	Red gum	Eucalyptus camaldulensis	12	no	-	-	poor	fair	poor	4	45	No	0	No
untagged	Red gum	Eucalyptus camaldulensis	12	no	-	-	very poor	very poor	very poor	5	65	No	0	No
untagged	Red gum	Eucalyptus camaldulensis	27	no	-	-	very poor	very poor	very poor	5	75	No	0	No
untagged	Red gum	Eucalyptus camaldulensis	-	yes	11,12	37	very poor	very poor	very poor	5	35	No	0	No
untagged	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	25	Yes	3	No
untagged	California fan palm	Washingtonia filifera	20	no	-	-	good	good	good	2	20	Yes	3	No
untagged	Goodding's willow	Salix gooddingii	9	no	-	-	fair	good	fair	3	25	Yes	2	No
untagged	Goodding's willow	Salix gooddingii	13	no	-	-	fair	fair	fair	3	45	Yes	2	No
untagged	White alder	Alnus rhombifolia	10	no	-	-	very poor	poor	poor	4	25	Yes	1	No
untagged	Goodding's willow	Salix gooddingii	20	no	-	-	poor	poor	poor	4	25	Yes	1	No
UT 1	Peruvian pepper	Schinus molle	-	yes	8,8,10	18	poor	poor	poor	4	25	No	0	No
UT 10	Peruvian pepper	Schinus molle	-	yes	10,10	20	fair	fair	fair	3	25	No	1	No
UT 11	Peruvian pepper	Schinus molle	20	no	-	-	fair	fair	fair	3	30	No	1	No
UT 12	Peruvian pepper	Schinus molle	13	no	-	-	poor	poor	poor	4	25	No	0	No
UT 13	Peruvian pepper	Schinus molle	-	yes	8,6	14	poor	poor	poor	4	25	No	0	No
UT 14	Peruvian pepper	Schinus molle	14	no	-	-	poor	poor	poor	4	30	No	0	No
UT 15	Peruvian pepper	Schinus molle	24	no	-	-	poor	fair	fair	3	35	No	1	No
UT 16	Peruvian pepper	Schinus molle	32	no	-	-	fair	good	fair	3	35	No	1	No
UT 17	Red gum	Eucalyptus camaldulensis	22	no	-	-	poor	poor	poor	4	45	No	0	No
UT 18	Red gum	Eucalyptus camaldulensis	28	no	-	-	poor	poor	poor	4	55	No	0	No
UT 19	Red gum	Eucalyptus camaldulensis	20	no	-	-	poor	poor	poor	4	50	No	0	No
UT 2	Peruvian pepper	Schinus molle	14	no	-	-	fair	fair	fair	3	35	No	1	No
UT 20	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	50	No	0	No
UT 21	Red gum	Eucalyptus camaldulensis	21	no	-	-	poor	poor	poor	4	55	No	0	No
UT 22	Red gum	Eucalyptus camaldulensis	18	no	-	-	poor	poor	poor	4	45	No	0	No
UT 23	Red gum	Eucalyptus camaldulensis	14	no	-	-	poor	poor	poor	4	50	No	0	No
UT 24	Red gum	Eucalyptus camaldulensis	17	no	-	-	poor	poor	poor	4	50	No	0	No
UT 25	Red gum	Eucalyptus camaldulensis	32	no	-	-	very poor	very poor	very poor	5	45	No	0	No
UT 26	Red gum	Eucalyptus camaldulensis	38	no	-	-	poor	poor	poor	4	85	No	0	No
UT 27	Red gum	Eucalyptus camaldulensis	-	yes	10,8,10,10,14,12,6	50	poor	fair	poor	4	65	No	0	No
UT 28	Red gum	Eucalyptus camaldulensis	13	no	-	-	poor	poor	poor	4	40	No	0	No
UT 29	Red gum	Eucalyptus camaldulensis	-	yes	7,5,4	22	poor	poor	poor	4	40	No	0	No
UT 3	Southern California walnut	Juglans californica	8	no	-	-	good	good	good	2	35	Yes	3	No
UT 30	Red gum	Eucalyptus camaldulensis	-	yes	7,4	14	poor	poor	poor	4	30	No	0	No
UT 31	Red gum	Eucalyptus camaldulensis	10	no	-	-	poor	poor	poor	4	30	No	0	No
UT 32	Red gum	Eucalyptus camaldulensis	27	no	-	-	poor	fair	poor	4	65	No	0	No
UT 33	Red gum	Eucalyptus camaldulensis	-	yes	10,12,5,8,10	45	poor	poor	poor	4	60	No	0	No
UT 34	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4	20	poor	poor	poor	4	55	No	0	No
UT 35	Red gum	Eucalyptus camaldulensis	-	yes	10,14,4,4	32	poor	poor	poor	4	45	No	0	No
UT 36	Red gum	Eucalyptus camaldulensis	-	yes	16,14,5	26	poor	poor	poor	4	60	No	0	No
UT 37	Red gum	Eucalyptus camaldulensis	-	yes	6,6,5,5,3	24	poor	poor	poor	4	30	No	0	No
UT 38	Red gum	Eucalyptus camaldulensis	-	yes	9,6,4,4,7,10,8,8	60	poor	fair	poor	4	55	No	0	No
UT 39	Red gum	Eucalyptus camaldulensis	-	yes	10,12,12,9	34	poor	fair	fair	3	65	No	1	No
UT 4	Canary Island date palm	Phoenix canariensis	24	no	-	-	good	good	good	2	35	No	1	No
UT 40	Red gum	Eucalyptus camaldulensis	16	no	-	-	fair	fair	fair	3	50	No	1	No
UT 40	Red gum	Eucalyptus camaldulensis	28	no	-	-	fair	fair	fair	3	50	No	1	No
UT 41	Red gum	Eucalyptus camaldulensis	18	no	-	-	fair	fair	fair	3	50	No	1	No
UT 42	Peruvian pepper	Schinus molle	36	no	-	-	fair	good	good	2	35	No	1	No
UT 43	California fan palm	Washingtonia filifera	24	no	-	-	good	good	good	2	45	Yes	3	Yes
UT 44	Peruvian pepper	Schinus molle	-	yes	12,10	18	fair	good	good	2	25	No	1	Yes
UT 45	Peruvian pepper	Schinus molle	-	yes	6,4,6,4	48	poor	fair	poor	4	20	No	0	Yes
UT 46	Peruvian pepper	Schinus molle	14	no	-	-	poor	fair	poor	4	25	No	0	Yes
UT 5	Peruvian pepper	Schinus molle	-	yes	10,10,10	25	fair	fair	fair	3	30	No	1	No
UT 6	Red gum	Eucalyptus camaldulensis	-	yes	10,10,10,5,5,5	50	poor	good	fair	3	45	No	1	No
UT 7	Red gum	Eucalyptus camaldulensis	10	no	-	-	fair	fair	fair	3	45	No	1	No
UT 8	Red gum	Eucalyptus camaldulensis	11	no	-	-	fair	fair	fair	3	45	No	1	No
UT 9	Red gum	Eucalyptus camaldulensis	-	yes	10,6	15	fair	fair	fair	3	45	No	1	No



## **Attachment 2 – Map of Trees to be Removed**





Source: MIG 2018; ParcelQuest, Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* Project Site Boundary lines were obtained from APN boundaries and do not reflect the boundaries shown in the Agua Mansa Commerce Park Specific Plan, which is based off of the Tentative Parcel Map. Biological resources and calculations herein are mapped to the extent of APN boundaries. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

- |                                       |                     |                                   |
|---------------------------------------|---------------------|-----------------------------------|
| Project Site Boundary (303.34 acres)* | Trees to Remain     | Business Park with Retail Overlay |
| Tree Survey Area and Tree Sequences   | Trees to be Removed | Industrial Park                   |
| Tree Survey Points                    |                     | Open Space                        |
|                                       |                     | Railroad Right-of-Way             |

## Attachment 2. Overview Map of Trees to be Removed

Agua Mansa Commerce Park, Jurupa Valley, CA



**Appendix L**  
**Western Riverside County MSHCP Consistency Analysis and Level of Significance Checklist for Biological Resources**



**LEVEL OF SIGNIFICANCE CHECKLIST**  
**For Biological Resources**

**Appendix L**

**APN(s):** 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009

**Case Number:** \_\_\_\_\_ **Lot/APN No.** \_\_\_\_\_ **EA Number** \_\_\_\_\_ **Wildlife & Vegetation**

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

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**No Impact**

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

**Less Than Significant with Mitigation Incorporated**

f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**Findings of Fact:**

The 302.12 acre Project Site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Jurupa Area Plan. The Project Site contains portions of three Independent Criteria Area Cells (21, 22, and 55) and one Area Plan Subunit (SU3 - Delhi Sands Area). The Project Site does not occur within a predetermined Survey Area for criteria area plant species, amphibian, and mammal species. Portions of the Project Site occur within a predetermined Survey Area for 3 narrow endemic plant species (San Diego ambrosia, Brand's phacelia, and San Miguel savory) and focused surveys are required. Portions of the Project Site occur within a predetermined Survey Area for the burrowing owl and focused surveys are required. In addition, a 30-day preconstruction survey will be conducted immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. Suitable habitat for the least Bell's vireo and southwestern willow flycatcher was detected within the Project Site and focused surveys are required. Suitable habitat for the Delhi Sands flower-loving fly was not detected within the Project Site. According to the goals of the onsite Criteria Cells (21, 22, and 55), no surveys are required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2 (MSHCP 2004). Several areas located within the Project Site are subject to the jurisdiction of the US Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and MSHCP (section 6.1.2 riparian/riverine/vernal pool resources). No vernal pool resources were documented onsite. The Project Site does not occur within or adjacent to an MSHCP Linkage or Constrained Linkage. The Project Site does contain a small portion of Existing Core A and all of Proposed Noncontiguous Habitat Blocks 1, 2, and 3. Therefore, an Urban/Wildland Interface analysis pursuant to Section 6.1.4 of the MSHCP is required.

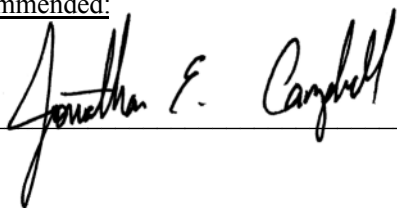
**Proposed Mitigation:**

To be Determined

**Monitoring Recommended:**

To be Determined

Prepared By: \_\_\_\_\_



Date: February 21, 2018

# Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

Agua Mansa Commerce Park Project Site  
Jurupa Valley, Riverside County, California



**Prepared for:**

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November 2018

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Attachment 1. MSHCP Level of Significance Checklist for Biological Resources



## INTRODUCTION

The purpose of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis is to document existing biological resources, identify general vegetation types, and assess the potential biological and regulatory constraints and potential impacts associated with the proposed development within the Project Site as outlined by the MSHCP. The MSHCP Level of Significance Checklist for Biological Resources pertaining to this Project is provided as **Attachment 1**. The following sections summarize the Project description, background, and consistency with all applicable MSHCP compliance guidelines.

## PROJECT LOCATION AND DESCRIPTION

The approximately 302.12-acre<sup>1</sup> Project Site is located south of El Rivino Road, east of Rubidoux Boulevard, north of the North Riverside & Jurupa Company canal and Market Street, and west of Hall Avenue in the City of Jurupa Valley (City), Riverside County, California, APNs 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009 (**Figure 1** and **Figure 2**). The Project Site occurs within the U.S. Geological Survey (USGS) 7.5' series Fontana Quadrangle. This property has been in private ownership since before California joined the United States. It is therefore not part of the Township and Range system, which was a survey of federal lands. The Project Site is located within the boundaries of the Agua Mansa Industrial Corridor Specific Plan (Hansberger & Associates 1986).

The Project Site is located entirely within the MSHCP Jurupa Area Plan and contains MSHCP Criteria Cells 21, 22, and 55, all of which occur within Sub Unit (SU) SU3-Delhi Sands Area (**Figure 2**).

The Agua Mansa Commerce Park Specific Plan (Project) is a proposed industrial business park with retail overlay and open space development located on the former Riverside Cement facility. The Site has previously been utilized for mining and cement production, until operations ceased in 2014. The brownfield site is being decommissioned and prepared for environmental remediation and successful redevelopment under the requirements of the Specific Plan. The Specific Plan will allow for the development of approximately 4,500,000 square feet of total building area and a 70.96-acre Open Space/Recreation Park. The Specific Plan area (heretofore referred to as "Project Site") encompasses 302.12 acres of land in the City of Jurupa Valley. The Project will consist of three primary land uses, discussed in more detail below: 1) an Industrial Park, 2) a Business Park (with possible retail component) and 3) Open Space with Recreation Park.

### Industrial Park

The Industrial Park area will be 189.7 acres in size and is planned for approximately 4,216,000 square feet (3,452,000 square feet of building footprint and up to 764,000 square feet of mezzanine area) of industrial park uses, such as manufacturing, research and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution, and cross-dock facilities.

<sup>1</sup>The 302.12-acre Project Site boundary is derived from a combination of current APN boundaries (<https://gis.rivcoit.org/GIS-Data-2>) and the project engineers' geodetic survey data. Biological resources and impact calculations herein are mapped to the extent of the Project Site boundary. Depending on data used in other maps (e.g. Conceptual Site Plan, Agua Mansa Commerce Park Specific Plan) for the project boundary, slight discrepancies in acreage calculations may occur.

### Business Park

The Business Park with Retail Overlay district is 42.2 acres that will support 200,000 square feet of business park uses along with an existing 23,000 square-foot research and development building (CalPortland area). The Business Park with Retail Overlay district includes an option to build up to 25,000 square feet of retail and/or food service uses along with 150,000 of business park square footage in lieu of the 200,000 square feet of business park uses. The Specific Plan allows for an additional 41,000 square feet of business park use(s) in the CalPortland area – either through expansion of the existing building or new construction. A Union Pacific Railroad right-of-way and a portion of the North Riverside and Jurupa Canal bisect the Specific Plan and accounts for 8.4 acres within the Specific Plan boundary.

### Open Space/Recreation Park

There is a proposed approximately 70.96-acre Open Space/Recreation Park area in the southern portion of the Specific Plan area. Portions of the Open Space area may be developed as a recreation area, contingent upon successful remediation of the Site. Recreational and cultural facilities that are planned within the Open Space area would include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children's play areas, and cultural interpretive facilities to highlight the history of the Site and cement industry. Any proposed trail or activity would be separated from the Open Space area by fencing, signage, and/or other means of buffering, while still allowing visitors to experience the view of the unique landscape the Site has to offer. The commercial quarry and area surrounding Crestmore Lake are habitat areas that lay approximately 80-100 feet below grade and will be inaccessible to visitors and undisturbed.

Table 1 below includes a breakdown and summary of the allowable development within the land use areas.

**Table 1. Land Use Summary**

<b>Specific Plan Land Use Designation</b>	<b>Total Building Area (Square Feet)</b>	<b>Net Site Area (Acres)</b>
Industrial Park (IP)	4,216,000 sf	189.698
Business Park with Retail Overlay (BP)	Alternative Layout for Building 6 (Parcels 14 and 15): A) Up to 25,000 sf of Retail with 170,000 sf of Business Park or B) 180,000 sf of industrial with no retail and	42.162
Business Park with Retail Overlay (BP)	64,000 sf of Business Park, including an existing research and development building approximately 23,000 sf in size	
Open Space/ Potential Park (OS)	N/A	70.963

Specific Plan Land Use Designation	Total Building Area (Square Feet)	Net Site Area (Acres)
<b>TOTAL</b>	<b>4,475,000 sf with option A)</b> <b>4,480,000 sf with option B)</b>	<b>302.823<sup>2</sup></b>

Consistent with the project applicant's objective to redevelop the site for viable and economically productive re-use, the land will need to be remediated in accordance with all applicable laws. Site remediation will address fugitive dust, former cement kiln dust disposal areas and potential releases from operations. In addition, proposed project improvements, including buildings, parking facilities, and landscaped common areas, will incorporate design features to ensure the ongoing effectiveness of site remediation measures.

## BACKGROUND

The Project Site is occupied by the former Riverside Cement Plant and Crestmore mine, which had been in operation from the early 1900s. The Crestmore mine consisted of a mine and four quarries. Quarrying of limestone and of silicate rock began at the Crestmore mine in 1909. The mining of limestone was conducted by a block-caving method, a mass mining process that allows for the bulk mining of large, relatively lower-grade materials. An underground mine was opened in 1930 and furnished most of the plant's requirements until 1939. During the 1940s, hundreds of thousands of tons of rock were removed from the Crestmore operations. Mining of limestone ceased in the late 1980s when the mining operations intersected aquifers and released huge amounts of water so quickly that pumping became cost prohibitive. The underground mine is now completely flooded, creating a deep open water feature referred to as "Crestmore Lake." Mining operations stopped in the 1980s and Cement Plant manufacturing and operations continued until 2014.

## METHODS

The MSHCP survey requirements and conservation measures were identified by conducting a search on the online RCIP Conservation Summary Report Generator and reviewing general conservation requirements identified in Volume 1 of the MSHCP. Table 2 summarizes the surveys needed for the Project.

**Table 2. MSHCP Project Review Checklist**

Checklist Item	Yes	No
Is the project located in a Criteria Area or Public/Quasi-Public Land?	x	
Is the project located in Narrow Endemic Plant Species Survey Area?	x	
Is the project located in Criteria Area Plant Survey Area?		x
Is the project located in Criteria Area Amphibian Survey Area?		x
Is the project located in Criteria Area Mammal Survey Area?		x
Is the project located in Burrowing Owl Survey Area?	x	
Are riverine/riparian/wetland habitats or vernal pools present?		x
Is the project located adjacent to MSHCP Conservation Areas?		x <sup>3</sup>

<sup>2</sup> Acreages in Table 1 are based on the August 2018 Tentative Parcel Map (DRC 2018) and the Agua Mansa Commerce Park Specific Plan and as such the total project area will not add up to the APN/engineering survey data-calculated 302.12-acre Project Site boundary. Please refer to footnote 1

<sup>3</sup> Not located within MSHCP Conservation Area, but adjacent to. See explanation under the MSHCP Consistency Analysis Section - MSHCP Conservation Area.



Table 3 identifies the surveys completed to date to satisfy the survey requirements for the MSHCP and to detect/quantify other protected resources and special status species not covered by the MSHCP (e.g. trees and bats). Detailed methodology and protocols for these surveys can be found in the General Biological Resources Assessment (GBRA) Report.

**Table 3. Summary of Survey Dates and Personnel**

<b>Survey Type</b>	<b>Date</b>	<b>Personnel<sup>4</sup></b>
Biological site reconnaissance	July 21, 2016	JC, LM, AP, SR
Jurisdictional delineation and MSHCP riparian/riverine analysis	July 21 and October 11-12, 2016	LM, AP, IP
Tree survey	September 12-16 and October 10-12, 2016	HAW, JC, LM, AP, IP
Burrowing owl survey	July 7 and 21, 2016 and March 30-31, April 13, 25, and 28, and May 12 and 18, 2017	HAW, JC, SR
Rare plant survey	July 21 and October 11-12, 2016 and April 17-18, 2017	SR, LM, AP
Riparian bird habitat suitability assessment	October 11, 2016	TR
Least Bell's vireo survey	April 13, 26, May 8 and 24, June 9 and 22, and July 5 and 15, 2017	TR
Southwestern willow flycatcher survey	May 24, June 9 and 22, and July 5 and 15, 2017	TR
DSF habitat evaluation	April 18, 2017	TM

## RESULTS AND IMPACTS

### MSHCP CONSISTENCY ANALYSIS

This section summarizes the findings and conservation measures necessary for compliance for each checklist item identified in Table 2. Table 4 summarizes mitigation measures for covered species that are required to comply with the MSHCP.

#### **Criteria Areas – SU3 Delhi Sands Area**

The Project Site is located within the MSHCP Jurupa Area Plan and specifically within Noncontiguous Habitat Block 3 (NCH-3) related to the Delhi Sands Flower Loving Fly (DSF). NCH-3 contains three (3) Criteria Cells (21, 22, and 55) within Area Plan Subunit 3 (SU3). The Project Site is located within portions of Criteria Cells 21, 22, and 55, within SU3 (Figure 2). Specifically:

- Criteria Cell 21 includes all or portions of the following APNs: 175-170-005, 175-170-045, 175-170-046, 175-200-009, 175-200-008, 175-170-040, 175-200-001, and 175-170-036.

<sup>4</sup> HAW=Hayden Agnew-Wieland, JC=Jon Campbell, TM=Tom McGill, LM=Laura Moran, AP=Amy Parravano, IP=Ivy Poisson, SR=Savannah Richards, TR=Tom Ryan

- Criteria Cell 22 includes all or portions of the following APNs: 175-200-009, 175-200-008, 175-200-001, 175-200-002, 175-200-007, 175-200-003, 175-200-004, 175-200-005.
- Criteria Cell 55 includes a portion of the following APN: 175-180-001

The MSHCP Species Conservation plan identifies species-specific requirements for habitat conservation (see MSHCP Table 9-2 - Species Conservation Summary) consistent with Objective 1B. Within Criteria Cells 21, 22 and 55 of SU3 (Agua Mansa), Objective 1B does not require DSF focused surveys, but does require that 50 acres of DSF reserve lands shall be acquired within the geographic areas identified in Objective 1A and according to the reserve configuration guidance included in Objective 1A. Per Objective 1A “These locations include one in the northwestern corner of the Plan Area near Hamner Avenue and SR-60 (Mira Loma), one in the Jurupa Hills, and one in the Agua Mansa Industrial Center. If conservation is not feasible in these areas, those acres may be conserved in other locations within the MSHCP Plan Area and outside the Criteria Area or within San Bernardino County, subject to approval by the Wildlife Agencies and provided the other location has long-term conservation value for the species.” The areas to be conserved under the MSHCP must either include suitable dispersal habitat and/or movement habitat and interconnecting linkages within Core Areas or be contiguous to areas that have already been conserved within and outside the Plan Area, including locations outside the Criteria Area and within San Bernardino County. Conservation value is measured (assessed) by such factors as occupation by DSF and opportunities for connectivity to other areas conserved for the species.

The current rough step analysis prepared by the RCA confirms that, to date, only 7 acres of DSF habitat have been conserved in support of species conservation goals. An additional 43 acres of DSF habitat are needed to complete the entire 50-acre DSF mitigation requirement for Criteria Cells 21, 22 and 55 of SU3 and to keep the MSHCP in rough step.

Focused assessments of potential habitat for DSF at the Project Site have been prepared, including a Soils Investigation (soil mapping and gradation analysis) and a Habitat Suitability Assessment. The focused assessments demonstrate that DSF is not present at the Project Site because the Project Site does not contain eolian sands and therefore cannot support DSF. The Project Site also does not provide dispersal habitat or serve as an interconnected habitat linkage to conservation areas for DSF, because there are no eolian sands on the Project Site and there is no DSF habitat within close proximity to the Project Site. At the JPR Project Introduction meeting on September 21, 2017, the Applicant, RCA, and USFWS discussed the above-mentioned focused assessments, as well as the planned environmental remediation work at the Project Site.

The Project is required to comply with all applicable NCH-3/Agua Mansa mitigation requirements, as defined by the MSHCP. However, due to the lack of onsite DSF habitat and the need to remediate hexavalent chromium and other heavy metals at the Project Site, on-site mitigation is not feasible and off-site mitigation is the only feasible alternative. On March 15, 2018, the Applicant met with the RCA, the USFWS, and the City of Jurupa Valley to discuss potential mitigation scenarios.

The City of Jurupa Valley, RCA, and the USFWS have agreed to cooperate with the Applicant in acquiring suitable DSF habitat to fulfill the NCH-3 mitigation requirement in a manner that is consistent with the mitigation goals for DSF habitat conservation under the MSHCP and keeps the MSHCP in rough step.

The MSHCP does not require mitigation to occur solely within Riverside County and the area of allowed mitigation extends into San Bernardino County. The USFWS and the RCA have identified approximately 472 acres of land located within San Bernardino County which are feasible mitigation sites. The land includes both contiguous and non-contiguous DSF habitat within existing DSF mitigation banks, public land, and private land. The RCA, the USFWS, and the Applicant are evaluating these sites for acquisition as DSF mitigation. The Applicant, the City of Jurupa Valley, the RCA, and the USFWS are also working collaboratively to develop DSF mitigation options to complete the NCH-3 mitigation requirements and maintain the MSHCP in rough step. Mitigation may include, but is not limited to, the funding or purchase of suitable DSF habitat or purchasing conservation credits from an existing DSF mitigation bank.

Final DSF mitigation will be determined through the JPR process, by agreement among the Applicant, RCA, and USFWS, with the goal of providing the Applicant mitigation options that comply and are consistent with the MSHCP goals for DSF habitat conservation. The final mitigation options and the rights and obligations of the parties will be the subject of a cooperative agreement among the Applicant, the RCA, and the USFWS. Following are the mitigation options which will be the subject of the JPR process and cooperative agreement (Mitigation Measure BIO-1b of the GBRA):

**DSF Habitat Option 1 – Acquire DSF Habitat:**

The RCA would purchase 50 acres of DSF mitigation credits from the existing Colton Dunes Conservation Bank (“DSF Habitat”). RCA and the Applicant entered into the agreement for funding and acquisition dated September 10, 2018, that establishes the terms and conditions for Applicant to contribute toward the purchase price of the DSF mitigation credits. Payment by the Applicant to the RCA to acquire the DSF mitigation credits would represent the Project’s compliance and consistency with the MSHCP goals for DSF habitat conservation.

**DSF Habitat Option 2 – Acquire 43 Acres of DSF Habitat that is Acceptable to the RCA and Wildlife Agencies:**

Only if the agreement to purchase the Colton Dunes Conservation Bank DSF mitigation credits cannot be consummated, the Applicant may acquire 43 acres of DSF habitat within Riverside County or San Bernardino County subject to approval by the RCA and Wildlife Agencies and provided the property has long-term conservation value for the species and will be managed in perpetuity.

**Narrow Endemic Plant Species Survey Area**

The Project Site occurs within a predetermined Survey Area for the following Narrow Endemic Plant Species: San Diego ambrosia (April-October), Brand’s star phacelia (March-June), and San Miguel savory (March-May). Based on the results of a habitat assessment conducted on July 21 2016, it was determined that the Project Site does not support vegetation types or landforms that would be suitable to support these species. However, focused surveys were conducted on July 21 and October 11-12, 2016 and April 17-18, 2017 to detect other non-covered special status species that were initially determined to have a low potential for occurrence, based on the Project Site’s proximity to known occurrences. The Special-Status Plant Survey Results for the Agua Mansa Commerce Park Project Site memorandum (**Appendix J of the GBRA**) concluded that no Narrow Endemic or other special status species protected by federal, state, or local environmental regulations were detected during the surveys. Because the site does not support suitable habitat for Narrow Endemic plant species and survey results for all other special status species were negative, no additional actions are required to be consistent with the long-term goals of the MSHCP.



**Criteria Area Plant Species Survey Area**

The Project Site does not occur within a predetermined Survey Area for Criteria Area plant species. No surveys are required.

**Amphibian Species Survey Area**

The Project Site does not occur within a predetermined Survey Area for amphibian species. No surveys are required.

**Mammal Species Survey Area**

The Project Site does not occur within a predetermined Survey Area for mammal species. No surveys are required.

**Burrowing Owl Survey Area**

The Project Site occurs within a predetermined Survey Area for the burrowing owl. Based on the presence of suitable habitat documented during the July 7 and 21, 2016 habitat assessment within and adjacent to the Project Site, focused surveys for burrowing owl were conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (Riverside County 2006) on March 30-31, April 13, 25, and 28, and May 12 and 18, 2017 within the Project Site. No owls were observed onsite during the protocol surveys. Details of the burrowing owl survey, including methodology (survey protocol) and findings can be found in the **Appendix F of the GBRA**. A 30-day preconstruction survey will be conducted prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP (Mitigation Measure BIO-2 of GBRA; Table 4). In conformance with Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (2006) and California Burrowing Owl Consortium's 1993 protocols (which are recommended by the California Department of Fish and Wildlife [CDFW]), the surveys will consist of a minimum of three site visits. If it is determined that BUOW have colonized the Project Site prior to the initiation of construction, the project proponent shall immediately inform RCA and the Wildlife Agencies and will be required to prepare a Burrowing Owl Protection and Relocation Plan for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance.

If burrowing owl is determined to be present in areas proposed for ground disturbance, the following avoidance measures will be implemented:

- Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Owls present onsite after February 1 will be assumed to be nesting unless evidence indicates otherwise. This nest protection buffer will be maintained until August 31, or based upon monitoring evidence, until the young owls are foraging independently, or the nest is no longer active.
- Unless otherwise authorized by CDFW and/or the RCA, a 250-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until August 31 or based upon monitoring evidence, until the young owls are foraging independently. For burrowing owls

present during the non-breeding season (generally September 1 to January 31), a 150-ft buffer zone will be maintained around the occupied burrow(s).

- If there is any possibility that owls will be injured or killed as a result of construction activities, the birds may be passively relocated during the non-breeding season in coordination with the City, RCA and CDFW. Relocation of owls will be performed by a qualified biologist using one-way doors, which should be installed in all burrows within the impact area and left in place for at least two nights. These one-way doors will then be removed and the burrows backfilled immediately prior to the initiation of grading. To avoid the potential for owls evicted from a burrow to occupy other burrows within the impact area, one-way doors will be placed in all potentially suitable burrows within the impact area when eviction occurs.
- Preparation of a Burrowing Owl Protection and Relocation Plan may be required if active and/or passive relocation is necessary. The relocation plan will outline the basic process and provides options for avoidance and mitigation. The relocation plan will be approved by the RCA and Wildlife Agencies prior to implementation.

### **MSHCP Vernal Pools and Riparian/Riverine Resources**

The Project Site does not include vernal pools or riparian/riverine features as defined by the MSHCP. A DBESP is not needed for this Project.

However, suitable habitat for least Bell's vireo (*Vireo bellii pusillus*; LBV) is present onsite in southern willow scrub vegetation communities in the 71-acre Open Space/Recreation Park area in the southern portion of the Project Site. This species was detected on the Project Site during focused protocol surveys for this species during the spring of 2017 by permitted biologist Tom Ryan. The Open Space area may be partially developed and utilized as a recreation park, contingent upon successful remediation of the Project Site in the future. Potential direct and indirect impacts may result from installation of fencing and trails and the operation of recreational and cultural facilities that are planned within the Open Space area. Future planned activities in the Open Space/Recreation Park may include but are not limited to: active and passive recreation (walking and hiking paths) and construction of ecological and cultural interpretive facilities. To avoid potential adverse impacts that may result in substantial interference with normal LBV breeding, feeding, or sheltering behavior, the City of Jurupa Valley (City) or Open Space/Recreation Park developer and industrial business park developer will be responsible for implementing impact avoidance measures (Mitigation Measure BIO-3 of the GBRA; Table 4):

Implement Construction and Operational Impact Avoidance and Minimization Measures for Least Bell's Vireo

### **Nesting LBV Impact Avoidance During Construction of Industrial Business Park and Open Space/Recreation Park Facilities**

Least Bell's vireo (LBV) has been observed in the southern portion of the Project Site around Crestmore Lake and the Commercial Quarry (refer to Figure 8a). To avoid direct and indirect impacts to LBV prior to and during remedial activities followed by construction of the industrial business park and Open Space/Recreation Park facilities, the Applicant will be responsible for implementing the following:

- Construction activities shall be scheduled (to the extent feasible) to commence outside of the LBV nesting season (approximately mid-March to September, depending on when the birds arrive from and depart to wintering areas or whenever nesting birds are present as determined by a biological monitor with demonstrated LBV experience);
- Any construction activities that commence during the LBV nesting season shall require preconstruction surveys for nesting LBV. Such surveys shall be conducted by a qualified biologist that is experienced with accurately identifying LBV and possesses knowledge of the species' biology and life history within three days prior to construction. The survey area shall consist of the impact area and a 500-foot buffer around Crestmore Lake and the commercial quarry.
- If any active LBV nests are detected within the survey area, a nest protection buffer of 500 feet around the nest shall be delineated, flagged, and avoided until the nesting cycle is complete. The avoidance buffer may be modified, and/or other recommendations proposed as determined appropriate by a full-time biological monitor to minimize impacts. Supporting documentation shall be prepared and submitted to the RCA and Wildlife Agencies prior to construction to outline any proposed LBV monitoring activities. In addition, the following measures shall be taken to minimize potential indirect impacts to active LBV nests:
  - Prior to construction, a training program shall be developed and implemented by the Project biologist to inform all construction personnel workers about the federal and state listed LBV, the location of suitable habitat in relation to the work area, and the importance of complying with species avoidance and impact minimization measures pursuant to FESA and CESA.
  - Construction contractors shall stage equipment in areas that will create the greatest distance (minimum of 500 feet) between construction noise sources and LBV suitable habitat.
  - All construction work within 500 feet of LBV habitat shall occur during daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City. Construction contractors shall install properly operating and maintained mufflers on all construction equipment, fixed or mobile, to reduce construction equipment noise. Mufflers shall be installed consistent with manufacturers' standards. Construction contractors shall orient stationary construction equipment so that emitted noise is directed away from any occupied LBV habitat.
  - Any construction-related activities that could occur within 500 feet of an active LBV nest will require daily noise monitoring. A qualified biologist who possesses experience monitoring LBV nesting behavior will establish a baseline of hourly ambient noise levels by collecting measurements at several noise monitoring stations using an RCA-approved sound monitoring device (e.g., Mastech MS6700 digital sound level meter or equivalent). Noise monitoring stations will be located 1) adjacent to construction areas within 500 feet of suitable LBV habitat and 2) along the edge of suitable LBV habitat area where access is feasible. The exact location and number of noise monitoring stations will be determined by the qualified biologist. Baseline noise measurements will be collected at the established monitoring stations prior to the nesting season and prior



to construction (if feasible). On a daily basis during construction, the qualified biologist shall collect hourly noise measurements at the monitoring stations using the RCA-approved noise monitoring device. If the qualified biologist determines that nesting activities are being disturbed at any time during construction, the noise level that triggered the disturbance to nesting LBV will be recorded and identified as the "Disturbance Threshold" and the qualified biologist will issue a stop work order to the contractor immediately. All construction activities within the 500-foot nest protection buffer will cease until the noise levels can be reduced below the Disturbance Threshold that triggered the stop work order. In order to lower construction noise below the Disturbance Threshold, the qualified biologist shall direct the contractor to make operational changes, utilize technology to reduce construction noise such as mufflers, and/or install a barrier to alleviate noise levels during the breeding season. Installation of noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be completed prior to the LBV nesting season and would be done in coordination with the RCA, CDFW, and USFWS.

- Daily noise monitoring will continue following implementation of the corrective actions to ensure that the Disturbance Threshold for nesting LBV is not exceeded and that no further disturbance to nesting LBV occurs. The results of daily noise monitoring measurements will be tabulated and a summary of all monitoring activities and corrective actions will be recorded in daily monitoring reports. These reports will be compiled and submitted to the RCA and Wildlife Agencies on a monthly basis.
- If after all corrective actions are implemented the monitoring biologist determines that the normal expected breeding behavior of birds is still being affected, work shall again be ceased, and the RCA and Wildlife Agencies shall be contacted to discuss the appropriate course of action.

#### LBV Habitat Protection During Operation of the Open Space/Recreation Park

- To avoid direct and indirect impacts to LBV habitat during operation of the Open Space/Recreation Park, the applicant will be responsible for implementing the following avoidance and minimization measures as included in project plans to safeguard long-term conservation and sustainability of the species:
  - The Open Space/Recreation Park will be fenced and will restrict all access, except for areas that are required to undergo remediation, or construction pursuant to approved plans. Prior to public access into the Open Space/Recreation Park and the City's issuance of a Certificate of Occupancy or equivalent documentation for the completion of construction of the Open Space/Recreation Park portion of the Project, the applicant shall execute and record a deed restriction, conservation easement or other instrument ("Instrument") in a form acceptable to the Riverside Conservation Authority that provides for the permanent protection of the occupied LBV habitat as depicted on Figure 9 (Proposed Fencing and Protection Areas) in the GBRA dated October 22, 2018 ("Restricted Area"). The Instrument shall clearly indicate that the Restricted Area shall be preserved and no development within the Restricted Area is allowed, other than environmental remediation and routine property maintenance activities may occur under the guidance of a qualified biologist.

- A fencing plan that uses both geographic site features and fencing will be implemented to prevent access to the protected LBV habitat within the proposed “Restricted Area/LBV Protection Area”. A draft fence alignment and proposed feasible buffer are illustrated on Figure 9 of this GBRA. The location of both the Restricted Area, proposed fencing and any buffer areas are subject to review and approval by the resource agencies party to the MSHCP as well as the DTSC.

### **MSHCP Conservation Area**

The Project Site does not occur within or adjacent to an MSHCP Linkage or Constrained Linkage. The Project Site does contain a small portion of Existing Core A and Proposed Non-Contiguous Habitat Blocks 1, 2, and 3 (**GBRA Appendix H, Exhibit 6**). Project construction in proximity to the MSHCP Conservation Area has the potential to result in indirect effects to natural communities. Therefore, an Urban/Wildland Interface analysis pursuant to Section 6.1.4 of the MSHCP is required for compliance with MSHCP requirements. This is also included as Mitigation Measure BIO-13 in the GBRA.

The Urban/Wildlands Interface Guidelines (UWIG) presented in Section 6.1.4 of the MSHCP address indirect effects associated with locating developments in proximity to an MSHCP Conservation Area. Project development will be consistent with all applicable MSHCP Urban/Wildlands Interface Guidelines and therefore will not result in significant indirect impacts or edge effects to an MSHCP Conservation Area. The following proposed UWIGs will be incorporated into the Project design and implemented as Conditions of Approval for the Project (Mitigation Measure BIO-13 of the GBRA):

**Water Quality/Hydrology.** The project will comply with all applicable water quality regulations, including obtaining and complying with those conditions established in Waste Discharge Reports (WDRs) and NPDES permits. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared for the project as required by the State Water Resource Control Board. Temporary construction BMPs, as well as erosion control measures, would be put in place to reduce construction and post-construction siltation. The project will be designed to minimize off-site storm water runoff that has the potential indirectly affect LBV habitat within the adjacent Open Space area. The installation and proper maintenance of structural BMPs will ensure adequate long-term storage and treatment of water within the industrial business park development. All off-site drainage will be controlled by storm drain and flood control facilities and will not increase substantially beyond existing flow rates. Stormwater runoff will be captured by a combination of trench drains, storm drains, catch basins and drop inlets and pretreated prior to conveyance into existing storm drain systems and ground infiltration. Stormwater infiltration systems including detention basin basins and bioswales will be constructed to retain and treat stormwater onsite. The proposed Project would also be required to comply with the Low Impact Development (LID) standards.

**Toxics.** Storm water treatment systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm habitat for LBV in the preserved Open Space. Toxic sources within the Project Site would be limited to those commonly associated with residential, commercial, and mixed-use development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. To mitigate for the potential effects of these toxics, the project will incorporate structural BMPs, as required in association with compliance with WDRs and the NPDES permit system, in order to reduce the level of toxins introduced into the drainage system and the surrounding areas. Implementation of State and Federal Stormwater quality rules will ensure no significant impacts are anticipated.

Lighting. Night lighting associated with the proposed development that is adjacent to existing or proposed Conservation Areas would be directed away to reduce potential indirect impacts to wildlife species including LBV. No significant impacts are anticipated.

Noise. The project will be constructed to minimize the effects of noise on adjacent LBV habitat within the Open Space area pursuant to applicable rules, regulations and guidelines related to land use noise standards. Wildlife within the preserved Open Space area, including LBV, should not be subject to noise that would exceed residential noise standards, pursuant to MSHCP guidelines (Riverside County 2003). The Noise Impact Analysis prepared for the project (Lawson and Wolfe 2018) includes a noise impact assessment to determine the noise exposure and the necessary noise mitigation measures for the proposed project.

According to the Noise Impact Analysis, background ambient noise levels adjacent to the Open Space area are dominated by transportation-related noise associated with the surrounding arterial transportation network and background industrial land use activities. This includes automobile and heavy truck activities on adjacent roadways near several noise level measurement locations. According to 24-hour existing noise level measurement results measured on Agua Mansa Road adjacent to the eastern boundary of occupied LBV habitat, the average hourly ambient noise levels were measured at 70.6 decibels (dB) during the daytime and 70.7 dB at nighttime.

Operational project-related noise sources are expected to include: roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, parking lot vehicle movements, and regional park activities (playground, and trail activities). The Noise Impact Analysis describes noise level impacts associated with the expected typical operational activities within the industrial business park and recreation facilities in the Open Space Area. Based on the results of this analysis, operational noise levels associated with project development will be less than existing daytime and nighttime noise levels measured at all nearby sensitive receiver locations and are not expected to exceed 60.2 dB at any time. Therefore, operational noise levels are not expected to exceed ambient noise levels that LBV are currently exposed to within the Open Space area. In addition, there are existing geographic landforms between the proposed industrial business park development and Open Space recreation facilities that may attenuate anticipated post-project ambient noise levels identified in the Noise Impact Analysis.

Invasive Species. The landscape plans for the Project shall not include invasive, non-native species for the portions of the development areas adjacent to the Open Space area. Invasive plants that should be avoided are included in Section 6.1, Table 6-2 (Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area) of the MSHCP. The above measures would serve to minimize adverse project effects on conservation configurations and would minimize management challenges that can arise during development located adjacent to preserved LBV habitat areas. The project design and BMPs incorporated into the proposed project design will address and minimize edge effects associated with the Urban/Wildlands Interface.

Fuels Management. The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. The final project design will ensure that no fuel modification will extend into adjacent preserved Open Space lands and LBV habitat areas.



Table 4. MSHCP Consistency for Covered Species<sup>5</sup>

GBRA Mitigation Measure	Summary	Survey Area (acres)	Avoidance Measure	Action Taken if Avoidance is Not Feasible
BIO-1a: MSHCP Covered Species	Payment of local development mitigation fee for conservation of covered species.	n/a	n/a	n/a
BIO-1b: DSF	Acquisition of DSF Habitat	n/a	n/a	n/a
BIO-2: Burrowing owl	Three preconstruction surveys to be performed according to <i>Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area</i> (2006) and California Burrowing Owl Consortium's 1993 protocols. Survey to be completed within 30 days prior to initiation of construction activities (including, but not limited to: mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading).	285	Notify the City, RCA and Wildlife Agencies. Implement 250 ft no disturbance buffer during nesting season (February 1 through August 31) and 150 ft buffer during non-breeding season (generally September 1 to January 31).	Implement relocation plan in coordination with the RCA and Wildlife Agencies.

<sup>5</sup> Subject to change following DEIR circulation

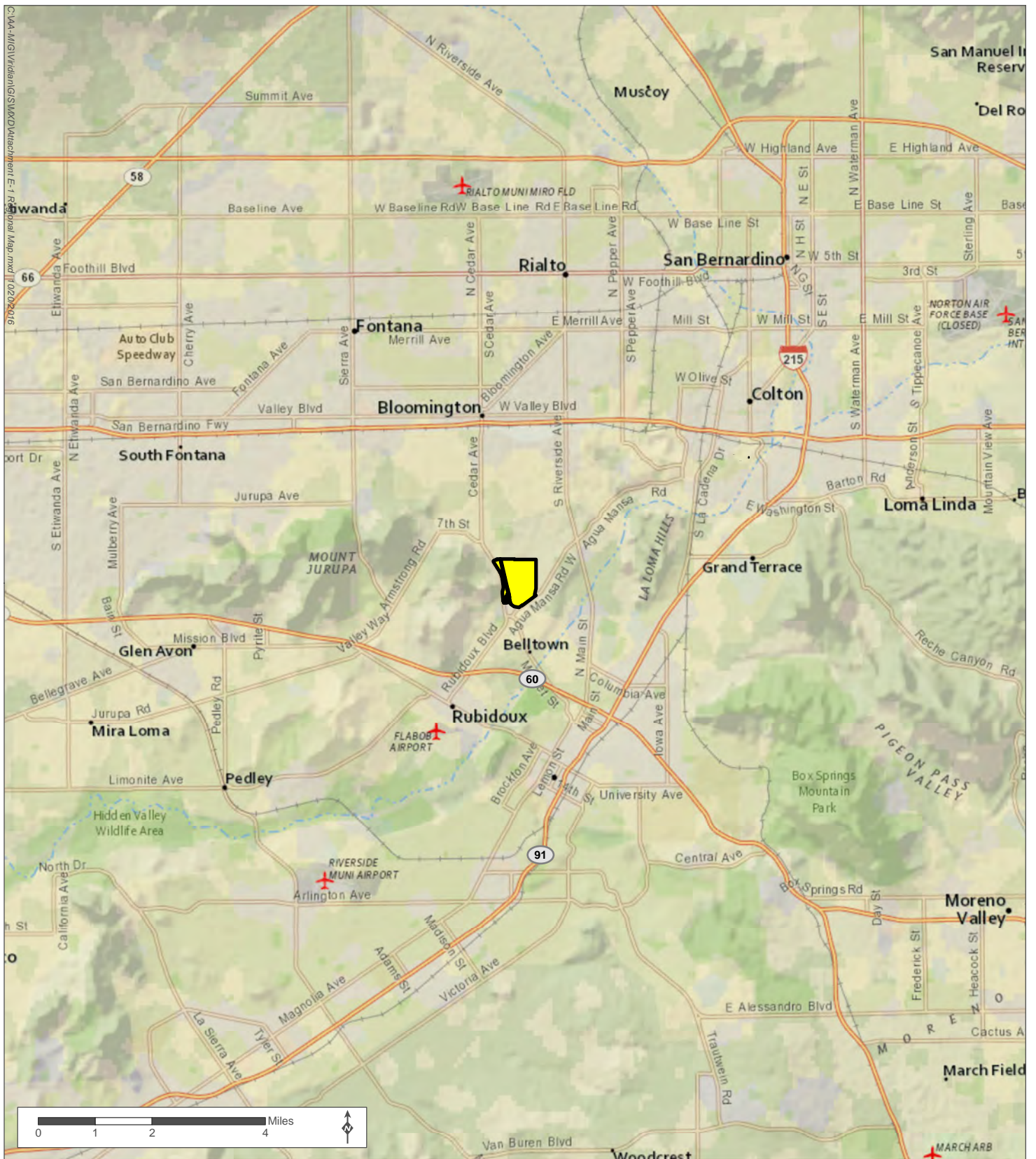
<b>GBRA Mitigation Measure</b>	<b>Summary</b>	<b>Survey Area (acres)</b>	<b>Avoidance Measure</b>	<b>Action Taken if Avoidance is Not Feasible</b>
BIO-3 Least Bell's vireo	One preconstruction survey during nesting season (typically mid-March to September) within 500 ft of suitable habitat located within and adjacent to the development area (where access is feasible). Survey to be completed within 3 days prior to initiation of construction activities.	79	Notify the City, RCA and Wildlife Agencies. Implement 500-foot non-disturbance buffer around active nest. Conduct biological monitoring of active LBV nest during construction. Issue stop work order if disruption of nesting/breeding behavior is observed.	Consult with the RCA and Wildlife Agencies.
BIO-8: Nesting songbirds and raptors	Preconstruction surveys if construction is planned within avian nesting season (February 1 to September 1). Survey areas include all suitable habitats located within the development area and surrounding 500 ft (where access is feasible). Survey to be completed within 5 days prior to initiation of construction activities.	213 acres plus 500 ft surrounding area where feasible	Implement up to 300 ft no disturbance buffer (non-raptors) and 500 ft no disturbance buffer (raptors). Conduct biological monitoring of active nest(s) during construction. Issue stop work order if disruption of nesting/breeding behavior is observed.	Consult with CDFW.

## CONCLUSION

By completing the surveys required by the MSHCP (Table 2 and 3), documenting the survey findings and Project impacts in the GBRA, and following the mitigation measures outlined in Table 4, the Project would be consistent with the MSHCP.



## FIGURES



Source: MIG 2015, National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

 Project Site Boundary





Source: MIG, Inc., LANGAN (Conceptual Site Plan), ParcelQuest (APN layer), ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.  
\* The project boundary is based on a combination of Riverside County APN parcel boundaries and the project engineers' geodetic survey data. Slight discrepancies in the project boundary acreage of less than 1 acre may occur.

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| Project Site Boundary (302.12 ac)* | Business Park with Retail Overlay |
| Assessor Parcel Numbers            | Industrial Park                   |
| MSHCP Criteria Cells               | Open Space                        |
|                                    | Railroad Right-of-Way             |

**Figure 2. MSHCP Conservation Areas**  
Agua Mansa Commerce Park, Jurupa Valley, CA



## ATTACHMENTS

**LEVEL OF SIGNIFICANCE CHECKLIST  
For Biological Resources**

**Attachment 1**

**APN(s):** 175-170-005, 175-170-027, 175-170-028, 175-170-030, 175-170-036, 175-170-040, 175-170-043, 175-170-045, 175-170-046, 175-180-001, 175-200-001, 175-200-002, 175-200-003, 175-200-004, 174-200-005, 175-200-007, 175-200-008, 175-200-009

**Case Number:** \_\_\_\_\_ **Lot/APN No.** \_\_\_\_\_ **EA Number** \_\_\_\_\_ **Wildlife & Vegetation**

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

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**No Impact**

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

**Less Than Significant with Mitigation Incorporated**

f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

**Less Than Significant with Mitigation Incorporated**

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

**Less Than Significant with Mitigation Incorporated**

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

**Findings of Fact:**

The 302.12 acre Project Site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Jurupa Area Plan. The Project Site contains portions of three Independent Criteria Area Cells (21, 22, and 55) and one Area Plan Subunit (SU3 - Delhi Sands Area). The Project Site does not occur within a predetermined Survey Area for criteria area plant species, amphibian, and mammal species. Portions of the Project Site occur within a predetermined Survey Area for 3 narrow endemic plant species (San Diego ambrosia, Brand's phacelia, and San Miguel savory) and focused surveys are required. Portions of the Project Site occur within a predetermined Survey Area for the burrowing owl and focused surveys are required. In addition, a 30-day preconstruction survey will be conducted immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. Suitable habitat for the least Bell's vireo and southwestern willow flycatcher was detected within the Project Site and focused surveys are required. Suitable habitat for the Delhi Sands flower-loving fly was not detected within the Project Site. According to the goals of the onsite Criteria Cells (21, 22, and 55), no surveys are required. Instead, 50 acres of Additional Reserve Lands shall be acquired within the geographic areas identified in Objective 1A of Table 9-2 (MSHCP 2004). Several areas located within the Project Site are subject to the jurisdiction of the US Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and MSHCP (section 6.1.2 riparian/riverine/vernal pool resources). No vernal pool resources were documented onsite. The Project Site does not occur within or adjacent to an MSHCP Linkage or Constrained Linkage. The Project Site does contain a small portion of Existing Core A and all of Proposed Noncontiguous Habitat Blocks 1, 2, and 3. Therefore, an Urban/Wildland Interface analysis pursuant to Section 6.1.4 of the MSHCP is required.

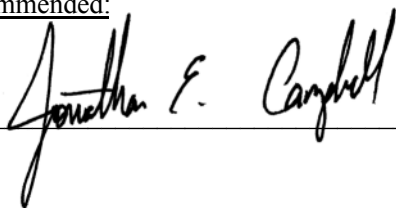
**Proposed Mitigation:**

To be Determined

**Monitoring Recommended:**

To be Determined

Prepared By: \_\_\_\_\_



Date: February 21, 2018



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December 7, 2018

Annette Tam  
City of Jurupa Valley  
8930 Limonite Ave.  
Jurupa Valley, California 92509

Dear Ms. Annette:

Please find the following JPR attached:

JPR 18-09-24-01. The Local Identifier is MA 16170/Agua Mansa Commerce Park Specific Plan. The JPR file attached includes the following:

- RCA JPR
- Exhibit A, Vicinity Map with MSHCP Schematic Cores and Linkages
- Exhibit B, Criteria Area Cells with Riverside County Vegetation and Project Location
- Exhibit C, Criteria Area Cells with MSHCP Soils and Project Location
- Exhibit D, Conservation and Avoidance Areas
- Regional Map.

Thank you,



Wendy Worthey  
Western Riverside County Regional Conservation Authority

cc: Karin Cleary-Rose  
U.S. Fish and Wildlife Service  
777 East Tahquitz Canyon Way,  
Suite 208  
Palm Springs, California 92262

Joanna Gibson  
California Dept. of Fish and Wildlife  
3602 Inland Empire Blvd. #C220  
Ontario, California 91764





## RCA Joint Project Review (JPR)

JPR #: 18-09-24-01

Date: 12/07/2018

### Project Information

Permittee: City of Jurupa Valley  
Case Information: MA 16170/Aqua Mansa Commerce Park Specific Plan  
302.82 acres<sup>1</sup> (includes 270.93 acres development and 31.89 acres of avoided occupied least Bell's Vireo habitat)<sup>2</sup>  
Site Acreage: \_\_\_\_\_  
Portion of Site Proposed for MSHCP Conservation Area: 0 acres

### Criteria Consistency Review

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

#### Data:

Applicable Core/Linkage: Proposed Noncontiguous Habitat Block 3  
Area Plan: Jurupa

APN(s)	Sub-Unit	Cell Group	Cell
175-170-005 175-170-027 175-170-028 175-170-030 175-170-036 175-070-040 175-170-043 175-170-045 175-170-046 175-180-001 175-200-001 175-200-002 175-200-003 175-200-004 174-200-005 175-200-007 175-200-008 175-200-009	SU3 – Subunit 3: Delhi Sands Area	Independent	21,22,55

<sup>1</sup> According to the *Assessment*, the 302.826 acreage total is based on the August 2018 Tentative Parcel Map and the Agua Mansa Specific Plan. The APN boundaries and the project engineering survey data totals 302.12 acres which is reported within the *Assessment*.

<sup>2</sup> The *Assessment* lists proposed development totaling 212.04 acres and depicts areas within the proposed business park and open space/recreation park as being 'avoided.' This includes areas within the proposed business park and open space/recreation park where there is no current development planned by the project proponent; however, these areas could be developed in the future and are therefore included within the total development acreage.



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Date: 12/07/2018

### Criteria and Project Information

#### *Criteria Comments:*

- a. As stated in Section 3.2.3 of the MSHCP, "Proposed Noncontiguous Habitat Block 3 consists of a habitat block containing soils suitable for supporting the Delhi Sands flower-loving fly. This habitat block is constrained by existing adjacent agricultural activities. Maintenance of Delhi Sands soil series is important for this species. As shown in the table below, areas not affected by edge within this habitat block total approximately 120 acres of the total 185 acres occupied by this proposed Noncontiguous Habitat Block. Because this species is adversely affected by agricultural activities such as grazing and disking, and by exotic invasive species, treatment and management of edge conditions will be necessary to maintain intact habitat blocks of Delhi Sands as adjacent planned community Development is developed along the edge of the habitat block. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are presented in *Section 6.1* of this document" [MSHCP].
- b. The project site is located within Cells 21, 22, and 55, independent of a Cell Group. Section 3.3.6 of the MSHCP, Table 3-7 provides the direction, "See species-specific conservation objectives 1A, 1B and 1C for Delhi Sands flower-loving fly in Table 9-2 of this document for Criteria for this Cell." Unlike other covered species, the Permittees were given options for conservation of this species. As part of the MSHCP Implementing Agreement, the Wildlife Agencies and Riverside County jointly opted to follow Delhi sands flower-loving fly species account Objective 1B. Objective 1B mandates that surveys be conducted in areas where suitable habitat exists within the mapped Delhi soils (with the exception of Cells 21, 22, and 55). Within Cells 21, 22, and 55 of Area Plan Subunit 3 of the Jurupa Area Plan, surveys for Delhi Sands flower-loving fly are not required. Instead, 50 acres of Additional Reserve Lands (ARL) shall be acquired within the geographic areas identified in Objective 1A for this species, and according to the reserve configuration guidance included in Objective 1A. Tracking of acreage conserved and lost within these cells shall be in accordance with the Rough Step analysis parameters described in Objective 1A. For purposes of Cells 21, 22 and 25, the total private lands acreage of suitable habitat within the Criteria Area is 270 acres. The ARL acreage goal for suitable habitat is 50 acres. Loss of suitable habitat will be measured only within the Criteria Area. Conservation of suitable habitat will be measured inside and outside the Criteria Area as long as the Conservation meets the configuration parameters of Objective 1A.
- c. Rough Step: The proposed project is within Rough Step Unit 1. Rough Step 1 encompasses 93,945 acres within the northwestern corner of western Riverside County and includes the Prado Basin, Santa Ana River, Delhi Sands flower-loving fly habitat, and the Jurupa Mountains. It is bounded by Interstate 91 to the southeast, Cleveland National Forest to the southwest, and Orange and San Bernardino Counties to the north and west. Within Rough Step 1, there are 9,896 acres within the Criteria Area. Key vegetation communities within Rough Step 1 are coastal sage scrub, grasslands, and riparian scrub, woodland, forest. Through 2016, a total of 492 acres of conservation has been acquired within this Rough Step Unit. Losses totaled 370 acres, with remaining development allowance as follows: 88 acres of coastal



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sage scrub, 25 acres of grasslands, and 18 acres of riparian scrub. According to the MSHCP baseline vegetation mapping, vegetation on the proposed project site is grassland, agricultural land, developed or disturbed land, and water. Based on the 2016 MSHCP Annual Report, all vegetation categories are “in” rough step. Therefore, development on the project site will not conflict with or interfere with the vegetation Rough Step Status of Unit 1.

All suitable habitats for the Delhi Sands flower-loving fly within the MSHCP Plan Area are located in Rough Step 1. The Delhi sands flower-loving fly is found within the fine, sandy Delhi series soils along the northern edge of Rough Step 1. Approximately 192.02 acres is modeled Delhi flower-loving fly habitat. Based on the 2016 MSHCP Annual Report, Delhi soils are “in” rough step within Cells 21, 22 and 25 per Objective 1B. Therefore, development on the project site will not conflict with or interfere with the Delhi soils Rough Step Status of Unit 1.

- d. Project information was provided by the Permittee in the JPR application, including a Joint Project Review Application (11/6/18), a MSHCP Consistency Analysis and Findings (11/27/18), a Multiple Species Habitat Conservation Plan Consistency Analysis prepared by MIG (November 2018), and a General Biological Resources Assessment (*Assessment*) prepared by MIG (revised November 2018). The proposed project, Agua Mansa Commerce Park Specific Plan, includes the development of an industrial business park with retail overlay and open space development located on the former Riverside Cement Plant facility. The project is located 2.5 miles south of Interstate 10 (I-10), 1.4 miles north of State Route 60 (SR-60), and 2.5 miles west of Interstate 215 (I-215) and west of Interstate 15 in the City of Jurupa Valley, Riverside County, and totals 302.12 acres. The project site is bordered by El Rivino Road to the north, Agua Mansa Road to the south, Rubidoux Boulevard to the west, and a portion of Hall Avenue to the east. According to the *Assessment*, the project site has been extensively disturbed and utilized since 1906 for limestone mining and cement production and manufacturing. An underground mine was opened in 1930 and furnished most of the plant's requirements until 1939. During the 1940s, hundreds of thousands of tons of rock were removed from the Crestmore operations. Mining of limestone ceased in the late 1980s when the mining operations intersected aquifers and released huge amounts of water so quickly that pumping became cost prohibitive. The underground mine is now completely flooded, creating a deep open water feature referred to as “Crestmore Lake.” Mining operations stopped in the 1980s and Cement Plant manufacturing and operations continued until 2014. The site is currently occupied by the former Riverside Cement Plant and includes various decommissioned facilities, heavy machinery, and support buildings related to the cement manufacturing plant and limestone quarrying and mining operations. Vegetation communities on-site include 119.45 acres of developed, 54.86 acres of disturbed, 56.27 acres of brittlebush scrub alliance, 24.67 acres of non-native grassland, 19.20 acres of eucalyptus grove, 7.79 acres of rock outcrop, 8.15 acres of ornamental, 3.30 acres of southern willow scrub, 1.53 acres of cattail alliance, 0.60 acre of mulefat, and 6.30 acres of open water. Surrounding land uses include undeveloped open space and residential development to the north and west, and commercial development to the east and south.



The proposed project involves the development of an industrial park, a business park and open space/recreation park. The proposed industrial park includes approximately 4,216,00 square feet of industrial park uses such as manufacturing researching and development, fulfillment centers, e-commerce centers, high-cube, general warehousing and distribution and cross-dock facilities. The proposed business park includes approximately 200,000 square feet along with an existing 23,000 square-foot research and development building within the western portion of the project site and would include potential retail and/or food service uses. A Union Pacific Railroad right-of-way bisects the project and accounts for 6.95 acres<sup>3</sup>. The open space area/recreation park located within the southern portion of the project may be developed as a recreation area, contingent upon successful remediation of the site and may include active and passive recreational activities (walking, hiking trails), picnic/gathering areas, children's play areas, and cultural interpretive facilities. The proposed project would result in permanent impacts to 212.04 acres<sup>4</sup>, specifically 103.33 acres of developed land, 51.05 acres of disturbed lands, 17.35 acres of brittlebush scrub alliance, 17.67 acres of non-native grasslands, 17.18 acres of eucalyptus grove, 0.26 acre of rock outcrop, 4.13 acres of ornamental, 0.06 acre of southern willow scrub, 0.41 acre of cattail alliance, and 0.60 acre of mulefat stands as a result of ground disturbance during construction. The remaining 91.27 acres of the site would be avoided, specifically 16.11 acres of developed land, 3.80 acres of disturbed land, 39.56 acres of brittlebush scrub alliance, 7.58 acres of non-native grasslands, 2.02 acres of eucalyptus grove, 7.53 acres of rock outcrop, 4.01 acres of ornamental, 3.24 acres of southern willow scrub, 1.12 acres of cattail alliance and 6.30 acres of open water. According to the *Assessment*, there are no proposed temporary impacts or off-site impacts. A segment of the West Riverside Canal is located outside of the proposed project, immediately north of Agua Mansa Road. **If project improvements are proposed in the future along the frontage of Agua Mansa Road, the RCA and the Wildlife Agencies shall be notified, and the improvements would be subject to additional review and approval.**

- e. Reserve Assembly: As mentioned above, the project site is located within Cells, 21, 22, and 55, independent of a Cell Group. In this area of the MSHCP, conservation is tied to occupation by the Delhi Sands flower-loving fly. Section 3.3.6 of the MSHCP provides the direction "See species-specific conservation objectives 1A, 1B and 1C for Delhi Sands flower-loving fly in Table 9-2... document for Criteria for this Cell." As stated within objective 1B in Table 9-2 of the MSHCP, "Within Cells 21, 22, and 55 of the Area Plan Subunit 3 of the Jurupa Area Plan, surveys shall not be required. Instead, 50 acres of Additional Reserve Lands (ARL) shall be acquired within the geographic areas identified in Objective 1A and according to the reserve configuration guidance included in Objective 1A." Per Objective 1A, "These locations include one in the northwestern corner of the Plan Area near Hamner

<sup>3</sup> Per the *Assessment*, pg. 2, the City directed to retain the 8.4 acres which includes the North Riverside and Jurupa Canal (APNs 175-170-042 and 175-170-006); however, these APNs are not part of the planned project and this acreage discrepancy does not affect consistency with the MSHCP.

<sup>4</sup> *Assessment* lists permanent impacts totaling 212.04 acres, with 58.89 acres proposed for avoidance (refer to *Assessment*, Figure 8b). This includes areas within the proposed business park and open space/recreation park where currently there is no planned development; however, these areas could be developed in the future and are therefore included within the total development acreage as indicated on Page 1 of these Findings.



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Avenue and SR-60 (Mira Loma), one in the Jurupa Hills, and one in the Agua Mansa Industrial Center. If conservation is not feasible in these areas, those acres may be conserved in other locations within the MSHCP Plan Area and outside the Criteria Area or within San Bernardino County, subject to approval by the Wildlife Agencies and provided the other location has long-term conservation value for the species.”

The total private lands acreage of suitable habitat within the Criteria Area is 270 acres. For purposes of Cells 21, 22 and 25, collectively, the ARL acreage goal included in Objective 1A is 50 acres of suitable habitat for the Delhi Sands flower-loving fly. To date, only 7 acres of Delhi Sands flower-loving fly habitat have been conserved and an additional 43 acres are needed to accomplish the 50-acre ARL acreage goal for Criteria Cells 21, 22, and 55.

An assessment of the site for suitable habitat and Delhi soils to support the Delhi Sands flower-loving fly was conducted by Thomas McGill on April 18, 2017. The assessment focused on the northern portion of the project site in areas mapped as Delhi fine sand. According to the *Assessment*, the habitat assessment determined the site was either incorrectly mapped as Delhi Sands or the soils have been disturbed by placement of non-Aeolian fill soils and/or by routine disking of the site. Therefore, a soils gradation analysis was conducted by Langan Engineering and Environmental Services, Inc. on April 13, 2017 (refer to Appendix B of the *Assessment*). Soils samples were collected from two sites: 1) known DSF-occupied habitat known as the “King-is-Coming Site” located in Colton, California; and 2) an undeveloped portion of the Project site that supports disturbed non-native annual grassland (see Appendix B of the *Assessment*). These samples were analyzed in the lab and results were compared between the two sites to determine if the project site contains Delhi soils. The samples from the project site were classified as silty sands, consisting of fine sands with some silt and trace clay, which is indicative of alluvial deposition. The King-is-Coming site soils were classified as sands consisting of fine sand sands, which is indicative of Aeolian (or wind) deposition. The *Assessment* concludes the soils are not derived from the same geologic depositional process. Therefore, the project site does not contain Delhi soils or other suitable conditions to support the Delhi Sands flower-loving fly, and does not provide conservation value for this species (i.e., dispersal habitat or opportunities for connectivity to other conservation areas) that would fulfill MSCHP goals for acquisition of ARL.

Conservation in other locations within the MSHCP Plan Area and outside the Criteria Area or within San Bernardino County were discussed between the applicant, RCA, USFWS, and the City of Jurupa Valley on March 15, 2018. The applicant shall implement mitigation measure (MM) BIO-1b (DSF Mitigation Options) as described in the *Assessment*. Of the two options, the applicant will implement Option 1 – Acquire DSF Habitat: “RCA will purchase 50 acres of DSF mitigation credits from the existing Colton Dunes Conservation Bank (“DSF Habitat”). RCA and the applicant entered into the agreement for funding and acquisition dated September 10, 2018, or as amended, that establishes the terms and conditions for the applicant to contribute toward the purchase price of the DSF mitigation credits. Payment by the applicant to the RCA to acquire the DSF mitigation credits would represent the Project’s compliance and consistency with the MSHCP goals for DSF habitat conservation.” **If for any**



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reason the applicant pulls out of the Option 1 agreement with RCA, the RCA and the Wildlife Agencies shall be notified immediately. Any option other than Option 1 would be subject to additional review and approval by the RCA and Wildlife Agencies prior to ground disturbance.

Based on the above, development of the proposed project site would not affect assembly or function of the Reserve.

### Other Plan Requirements

#### **Data:**

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

Yes. There are no riparian/riverine resources on the project site that meet the MSHCP definition of riparian or riverine. All features are man-made or not connected to downstream resources, respectively. However, there is riparian habitat that has become established as a result of man-made activities, and this habitat is now occupied by least Bell's vireo. There are no vernal pools or other habitat suitable for fairy shrimp.

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 San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miguel savory (*Satureja chandleri*).

Section 6.3.2 – Was Additional Survey Information Provided?

Yes. The project site is not located within a Criteria Area Species Survey Area (CASSA) for plant species. The site is located in an Additional Survey Needs and Procedures Areas for burrowing owl.

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

Yes. The project site is located near future and existing MSHCP Conservation Areas.

#### **Other Plan Requirement Comments:**

- a. Section 6.1.2: An assessment for riparian/riverine and vernal pool resources was conducted on July 21, and October 11 and 12, 2016. According to the *Assessment*, no riparian or riverine resources are present on the site. All riparian habitats present (i.e., southern willow scrub, cattails, mulefat stands) have been artificially created and therefore, do not meet the MSHCP definition of riparian habitat. Features A through K were artificially created through development and excavation related to cement plant operations. Features A and B (southeastern commercial quarry borrow area) and Features C through G (Crestmore Lake) were pits created for mining and mineral extraction. Crestmore Lake was formed when excavation encountered



unanticipated groundwater. Features H, I, and J were created by artificial water sources on imported fill soils, remnant building foundations, and/or within pavement cracks in parking lots and access roads that are supported by nuisance flows originating from leaking water infrastructure associated with the cement processing facilities.

**Fairy Shrimp:** According to the *Assessment*, no vernal pools or other potential fairy shrimp habitat, such as ephemeral pools or stock ponds, were identified on the project site. Wetlands within the project were created by artificial water sources on imported fill soils, remnant building foundations, and/or within pavement cracks on parking lots and access road. These features are supported by nuisance flows originating from leaking water infrastructure associated with the cement processing facility. These artificial features are not underlain by a clay hardpan, and vernal pool plant species indicators were absent. Soils present are not consistent with those known to support vernal pools and are not considered suitable for vernal pool formation. Therefore, focused surveys for fairy shrimp were not warranted.

**Riparian Birds:** An assessment for riparian bird habitat was conducted on October 11, 2016. The assessment found no suitable habitat for western yellow-billed cuckoo (*Coccyzus americanus*); however, the project site does contain suitable habitat for MSHCP-covered riparian birds, including least Bell's vireo (*Vireo bellii pusillus*; LBV) and southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL); therefore focused surveys were conducted. Suitable habitat includes 3.3 acres of southern willow scrub, 0.6 acre of mulefat, and 1.5 acre of cattail marsh. Focused surveys for LBV were conducted in accordance with *Least Bell's Vireo Survey Guidelines* (USFWS 2001) and were conducted on April 13, 26, May 8 and 24, June 9 and 22, and July 5 and 15, 2017. Focused surveys for SWFL were conducted on May 24, June 9 and 22, and July 5 and 15, 2017. No SWFL were detected during focused surveys. Two individual LBV were detected and the observation of one territory within the proposed open space/recreation park within the southeastern commercial quarry borrow area and at Crestmore Lake during the spring 2017 surveys. According to the *Assessment*, the commercial quarry borrow area and Crestmore Lake are approximately 80-100 feet below grade. A singing male was documented at Crestmore Lake during the May 8 and 24 surveys. A second male was documented singing regularly at the southeastern commercial quarry borrow area and a juvenile was heard during the July 5 and 15 surveys possibly indicating that nesting was successful.

All occupied LBV habitat will be avoided by the proposed project. To avoid indirect impacts to LBV, the project proposed implementation of project design features and MM BIO-3 (refer to *Assessment* Section 5.2) relative to seasonal avoidance, noise monitoring, biological monitoring throughout the duration of the project (required pursuant to MSHCP Appendix C), and the installation of fencing to prevent public access. According to the *Assessment*, the Noise Impact Analysis conducted for the proposed project described noise level impacts associated with the expected operational activities within the industrial business park and recreation facilities in the proposed open space/recreational park. Based on the results of the analysis, operational noise levels associated with project development will be less than existing daytime and nighttime noise levels and are not expected to exceed 60.2 dBA at any time. Therefore, operation noise levels are not expected to exceed ambient noise levels that LBV are currently exposed to



within the proposed open space/recreation park. Furthermore, there are existing geographic landforms between the proposed industrial business park development and the open space/recreation park that may attenuate noise (i.e., areas of occupied LBV habitat are 80-100 feet below grade in the depressed quarry borrow area and Crestmore Lake). The applicant shall execute and record a deed restriction or conservation easement that provides for the permanent protection of the occupied LBV habitats within the proposed open space/recreation park as depicted on **Figure 9** of the *Assessment*. **Recordation of the deed restriction or conservation easement shall be a condition of project approval by the City of Jurupa.**

Based on the information provided in the *Assessment* and the *Least Bell's Vireo and Southwestern Willow Flycatcher Survey Results* (Appendix G of the *Assessment*), the project demonstrates consistency with Section 6.1.2 of the MSHCP.

- b. Section 6.1.3: The project site is located within the Narrow Endemic Plant Species Survey Area (NEPSSA) for San Diego ambrosia, Brand's phacelia, and San Miguel savory. According to the *Assessment* and the *Special-Status Plant Survey Results* (Appendix J of the *Assessment*), there is no suitable habitat for San Diego ambrosia (floodplain terraces, vernal pools, alkaline conditions), Brand's phacelia (sandy washes or river floodplains), San Miguel savory (chaparral, foothill woodland, or coastal sage scrub). Regardless of the absence of suitable habitat for all three species, focused surveys for all three species were conducted on July 21 and October 11 and 12, 2016, and April 17 and 18, 2017. According to *Assessment*, none of these plant species were observed during focused surveys.

Based on the information provided in the *Assessment* and the *Special-Status Plant Survey Results* (Appendix J of the *Assessment*), the project demonstrates consistency with Section 6.1.3 of the MSHCP.

- c. Section 6.3.2: The project site is not within a Criteria Area Species Survey Area (CASSA). However, the project site is located within the Additional Survey Needs and Procedures Areas for burrowing owl. An initial Step I burrowing owl habitat assessment was conducted on July 7 and 21, 2016. The Step I assessment identified suitable burrowing owl habitat throughout a majority of the project site within developed, disturbed, brittlebush scrub, rock outcrop, non-native grassland, and ornamental vegetation communities. Due to the presence of potentially suitable habitat, focused burrow owl surveys were conducted in accordance with current MSHCP guidelines, Step II, Part A and Part B. Focused burrow surveys (Step II, Part A) were conducted on March 30, March 31, April 13, and April 25, 2017. Potential suitable burrows were detected throughout 15.3 acres of the project site, including man-made features such as debris piles. All suitable burrow areas were mapped and are shown on **Exhibit 4**, of Appendix F (Burrowing Owl Focused Survey Report) in the *Assessment*. Consistent with Step II-B, focused burrowing owl surveys were conducted in April 28, and May 12 and 18, 2017. No burrowing owl or burrowing owl sign was observed at any of the potential owl burrow locations, and burrowing owl are currently considered absent. **Due to the potential suitable burrowing owl habitat on site, a 30-day preconstruction survey for burrowing owls is required prior to initial ground-disturbing activities. If burrowing owl have colonized the property site prior to the initiation of construction, the Permittee should immediately inform the Wildlife**





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**Agencies and the RCA, and coordinate on the potential need for a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance.**

Based on the information provided in the *Assessment* and *Burrowing Owl Focused Survey Report* (Appendix F of the *Assessment*), the Project demonstrates consistency with Section 6.3.2 of the MSHCP.

- d. Section 6.1.4: To preserve the integrity of areas described as existing or future MSHCP Conservation Areas, the guidelines contained in Section 6.1.4 Urban Wildlands Interface Guidelines shall be implemented by the Permittee in their actions relative to the project. The intent is to control the potential adverse effects of development on adjacent existing and future MSHCP conservation areas. Specifically, portions of the project site are located within Proposed Non-contiguous Habitat Block 3 which consists of habitat blocks containing soils suitable for supporting Delhi Sands flower-loving fly. Occupied LBV habitat is present within the proposed open space/recreation park and although the applicant has committed to avoidance of this area, this avoidance should also be extended to avoidance of indirect impacts (i.e., edge effects). Specifically, the Permittee should include the following measures as project conditions of approval included as part of the development/entitlement process:
  - i. Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area. In particular, measures shall be required to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas. This measure applies to any discharges upstream of and connecting to existing or future conservation areas including discharges to tributaries to all larger streams\rivers (Santa Ana River, San Jacinto River, Santa Margarita River, Murrieta Creek, Temecula Creek) in western Riverside County. The proposed project will comply with all water quality regulations, including obtaining and complying with those conditions established in Waste Discharge Reports (WDRs) and NPDES permits. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared for the project. The proposed project will implement appropriate BMPs to ensure that the quality and quantity of runoff discharged is not altered in an adverse way when compared to existing conditions.
  - ii. Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure, which 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 run-off. The proposed project will be designed with storm water treatment systems to prevent release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm habitat for LBV within the open space/recreation area. To mitigate for potential effects of toxics, the proposed project will incorporate structural BMPs to ensure reduction of levels of toxins introduced into the drainage system and surrounding areas.
  - iii. 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.



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- iv. 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. The proposed project will be constructed to minimize effects of noise on adjacent LBV habitat within the open space/recreation park and noise should not exceed residential noise standards, pursuant to MSHCP guidelines. According to the *Assessment*, operational noise levels associated with project development will be less than existing daytime and nighttime noise levels and are not expected to exceed 60.2 dBA at any time, and the LBV observed are generally below grade, as noted above in the Section 6.1.2 discussion above. Therefore, operation noise levels are not expected to exceed ambient noise levels that LBV are currently exposed to within the proposed open space/recreation park. **To avoid potential indirect impacts to least Bell's vireo, the applicant has committed to implementation of mitigation to minimize any potential indirect impacts to least Bell's vireo during construction (refer to *Assessment* Section 5.2, MM BIO-3).**
- v. 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.
- vi. 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 appropriate mechanisms. The proposed project will install fencing and signage within the proposed open space/recreation park restricting unauthorized public access to Crestmore Lake and southeastern commercial quarry borrow area (i.e., LBV occupied habitat; see Figure 9 of the *Assessment*).
- vii. Manufactured slopes associated with the proposed site development shall not extend into the MSHCP Conservation Area.
- viii. Weed abatement and fuel modification activities are not permitted in the Conservation Area.
- e. MSHCP Volume I, Appendix C: The following best management practices (BMPs), as applicable, shall be implemented for the duration of construction:
  - i. A condition shall be placed on grading permits requiring a qualified biologist to 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



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- 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.
- ii. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.
  - iii. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.
  - iv. 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.
  - v. 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.
  - vi. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.
  - vii. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream 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.
  - viii. 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, FWS, and CDFG, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
  - ix. 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.
  - x. 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.
  - xi. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.





## RCA Joint Project Review (JPR)

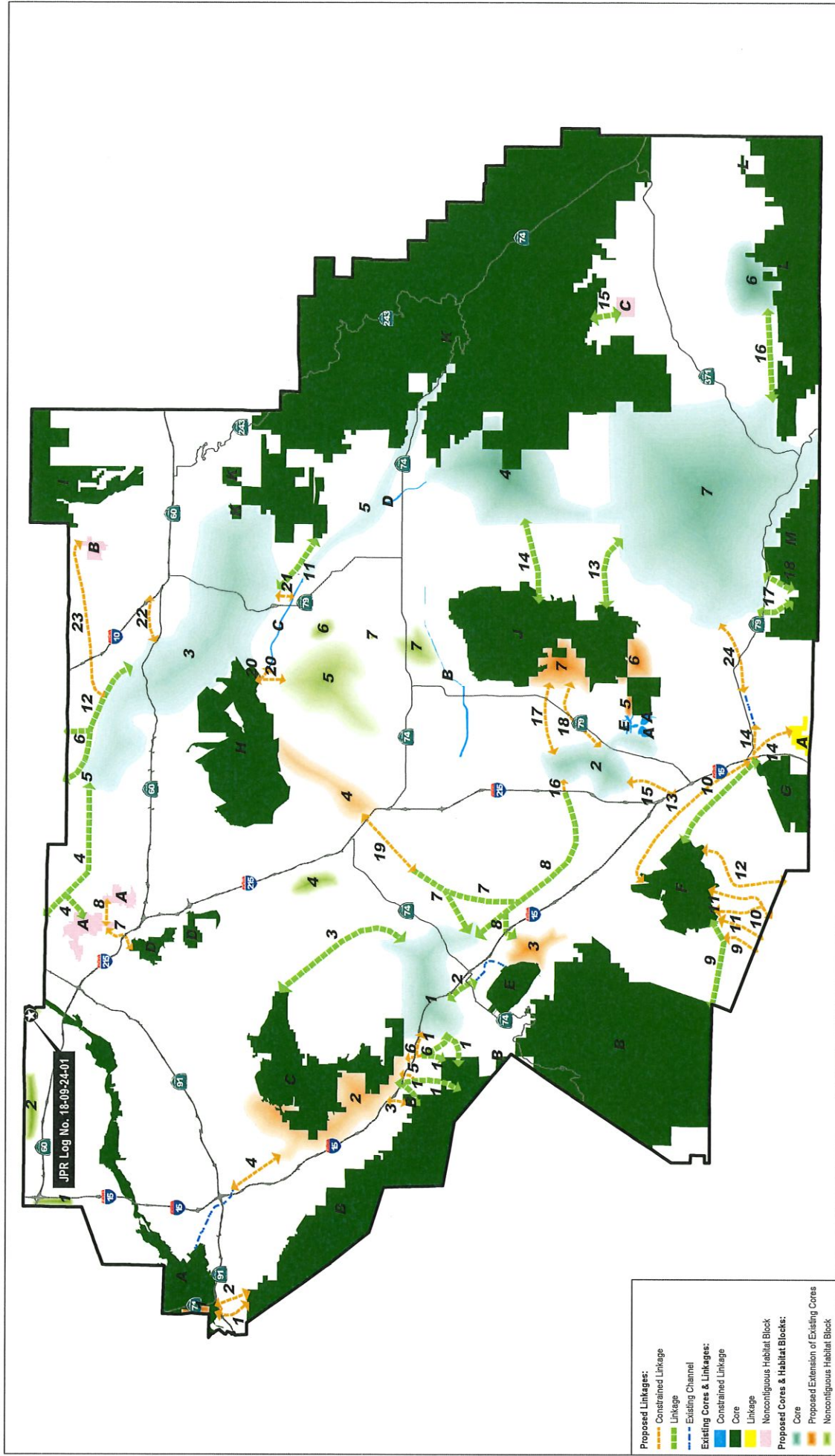
JPR #: 18-09-24-01

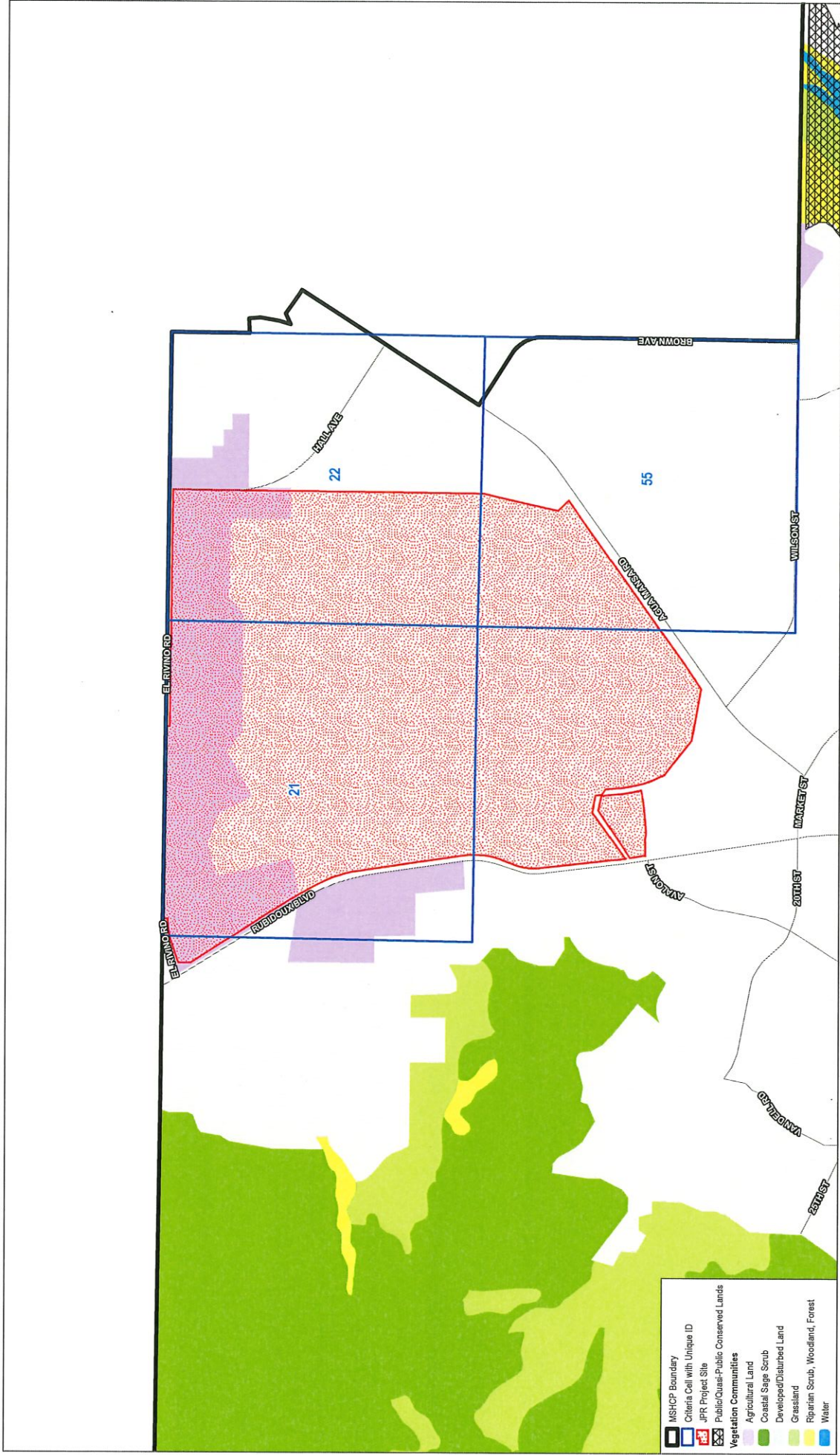
Date: 12/07/2018

- xii. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
- xiii. 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).
- xiv. 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.
- xv. The Permittee 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.

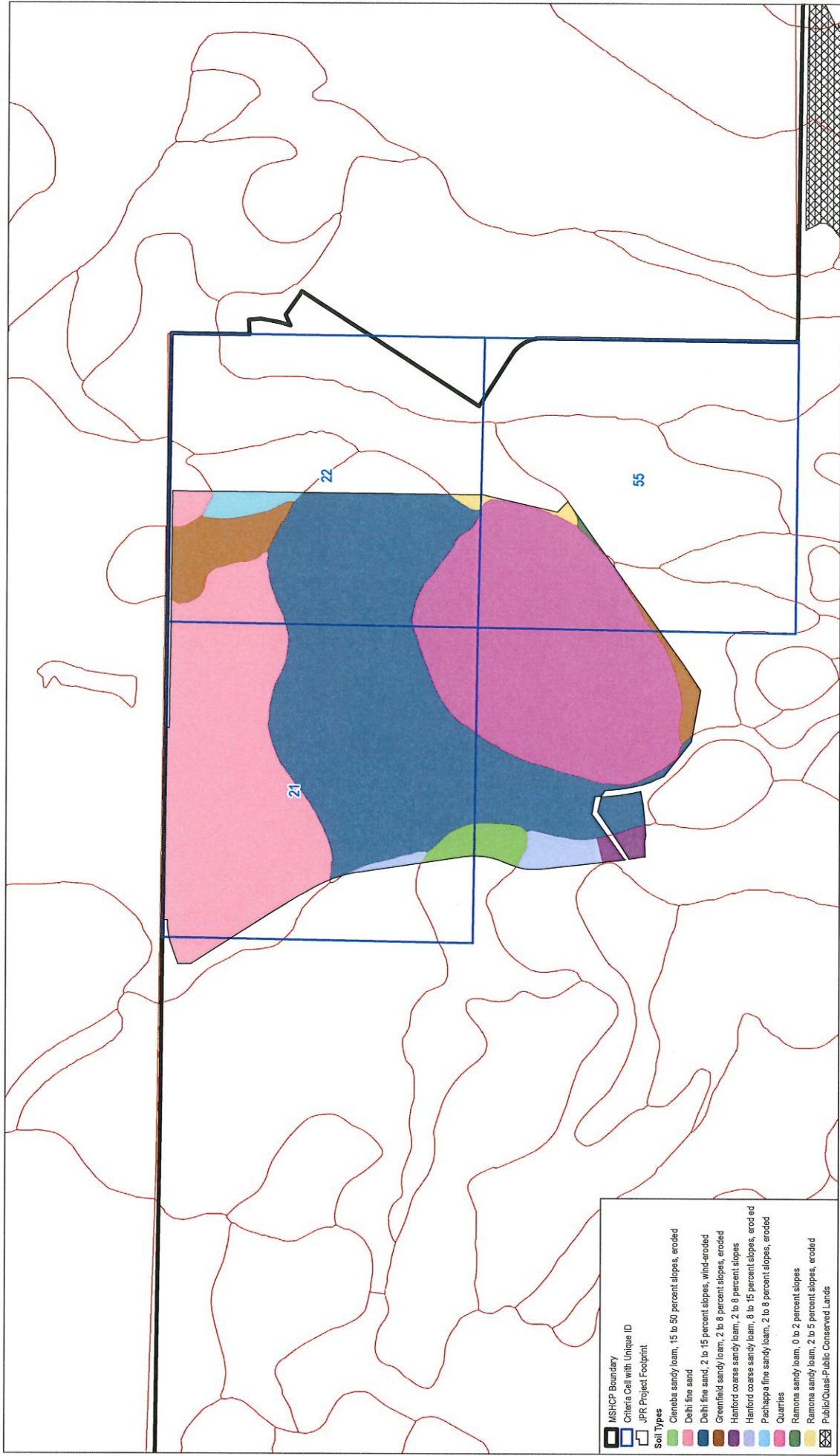
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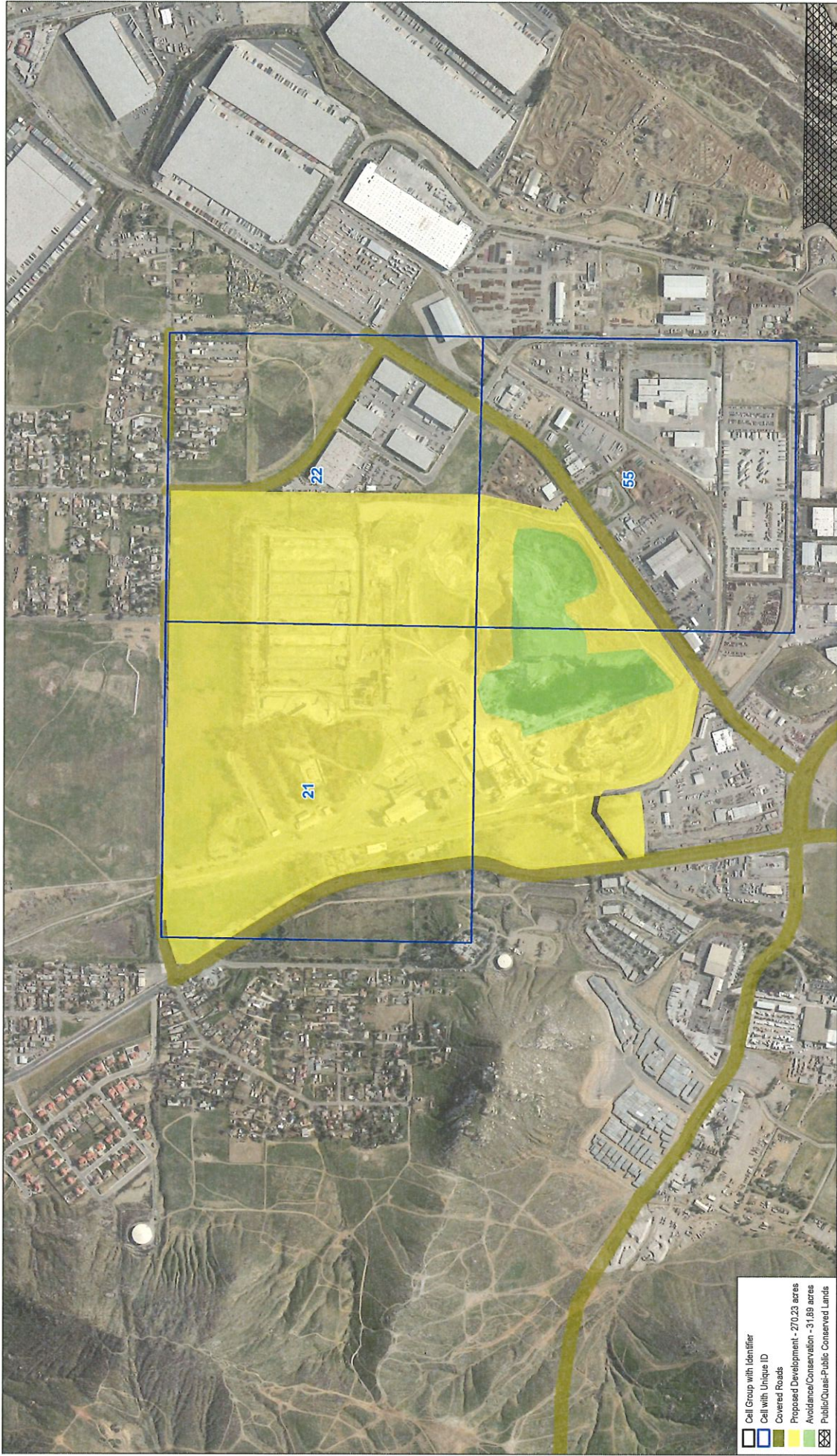




SOURCE: USGS/NRCS Soils, County of Riverside 2017







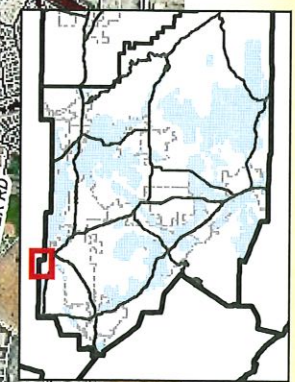
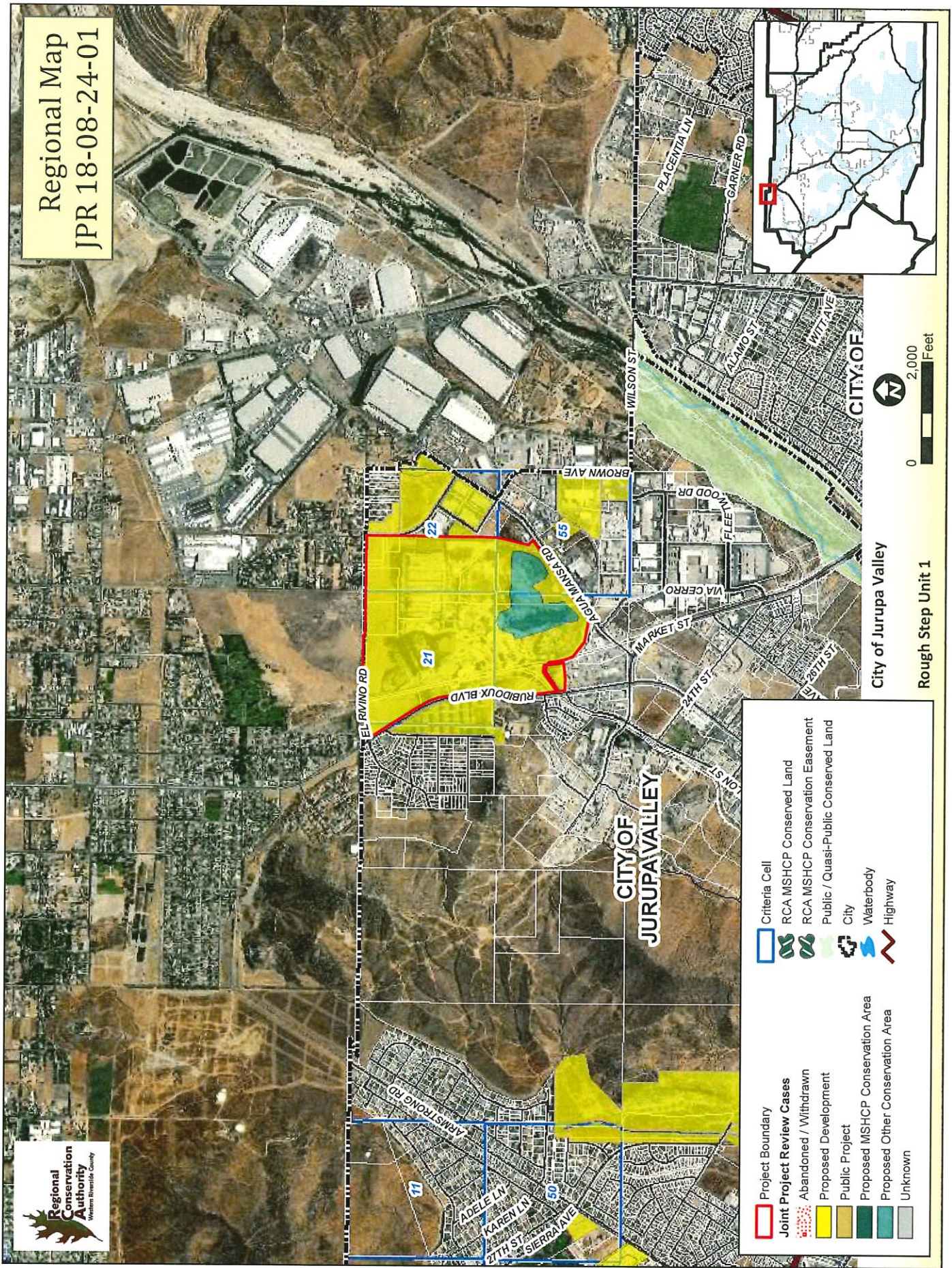
SOURCE: County of Riverside 2017; Bing Maps 2017







Regional Map  
JPR 18-08-24-01



City of Jurupa Valley  
Rough Step Unit 1

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| Project Boundary                 | Criteria Cell                        |
| Joint Project Review Cases       | RCA MSHCP Conserved Land             |
| Abandoned / Withdrawn            | RCA MSHCP Conservation Easement      |
| Proposed Development             | Public / Quasi-Public Conserved Land |
| Public Project                   | City                                 |
| Proposed MSHCP Conservation Area | Waterbody                            |
| Proposed Other Conservation Area | Highway                              |
| Unknown                          |                                      |