

**City of Escondido**  
**Recycled Water Easterly Main Extension Project**  
**Mitigated Negative Declaration**  
***FINAL***



*Lead Agency:*

City of Escondido  
Planning Division  
201 North Broadway  
Escondido, CA 92025-2798

*Prepared By:*



*In Collaboration With:*

PCR Services Corporation

**October 2013**



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## Acronyms and Abbreviations

AB 32	Assembly Bill 32, the California Global Warming Solution Act
afy	Acre-feet per year
APN	Assessor's parcel number
AWT	Advanced water treatment
AWWA	American Water Work Association
Basin Plan	Water Quality Control Plan for the San Diego Region
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDPH	California Department of Public Health
CDFG	California Department of Fish & Game
CDFFP	California Department of Forestry and Fire Protection
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CHRIS-SCIC	California Historical Resources Information System-South Coastal Information Center
CIP	Capital Improvement Program
City	City of Escondido
CMU	Concrete masonry unit
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DIP	Ductile iron pipe
DOC	Department of Conservation
DTSC	California Department of Toxic Substances Control
EWWD	Escondido's Water and Wastewater Division
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse Gas
gpm	Gallon-per-minute

HA	Hydrologic Area
HARRF	Hale Avenue Resource Recovery Facility
HDD	Horizontal directional drilling
HDPE	High-density polyethylene
hp	Horsepower
HSA	Hydrologic Subarea
HU	Hydrologic Unit
IBC	International Building Code
IPR	Indirect Potable Reuse
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
kW	Kilowatt
kWh	Kilowatt-hour
LCA	Land Conservation Act
LID	Low Impact Development
LOS	Levels of Service
Lmax	Maximum instantaneous noise
LUSTs	Leaking underground storage tanks
MBTA	Migratory Bird Treaty Act
MHCP	Multiple Habitat Conservation Program
MG	Million gallons
MGD	Million gallons per day
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZs	Mineral Resources Zones
MSCP	Multiple Species Conservation Plan
MSL	Mean sea level
MT	Metric ton
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NFIP	National Flood Insurance Program
NPDES	National Pollution Discharge Elimination System
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
O <sub>3</sub>	Ozone
OSHA	Occupational Safety and Health Administration
Pb	Lead
PM	Particular Matter
PPV	Peak particle velocity
RAQS	Regional Air Quality Strategy
ROW	Right-of-way
RWQCB	San Diego Regional Water Quality Control Board

SANDAG	San Diego Association of Governments
SCADA	Supervisory Control and Data Acquisition
SCH	State Clearinghouse
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas and Electric
SDNHM	San Diego Natural History Museum
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	Total dissolved solids
UBC	Uniform Building Code
UWMP	Urban Water Management Plan
URBEMIS	Urban Emissions Model
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compounds
WDRs	Waste Discharge Requirements
WQO	Water quality objective

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**CITY OF ESCONDIDO  
PLANNING DEPARTMENT  
201 North Broadway  
Escondido, CA 92025-2798**

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**INITIAL STUDY**

An Initial Study Environmental Checklist was prepared for this project and is included as a separate attachment to this Mitigated Negative Declaration (MND). The information contained in the Initial Study (IS) and the MND (IS/MND) will be used by the City of Escondido to determine potential impacts associated with the Recycled Water Easterly Main Extension Project (Proposed Project).

**PROJECT INFORMATION**

1. Project Title: Recycled Water Easterly Main Extension Project
2. Lead Agency Name and Address: City of Escondido  
Planning Department  
201 North Broadway 201 North Broadway  
Escondido, CA 92025-2798
3. Contact Person and Phone Number: Paul Keck  
760 839-6299
4. Project Location: The Proposed Project is primarily located within the City of Escondido, but includes a small portion that is located within unincorporated San Diego County. The Proposed Project is generally located east of Interstate 15 and north of State Route 78, within northeastern San Diego County.
5. Project Sponsor's Name and Address: City of Escondido  
Planning Department  
201 North Broadway 201 North Broadway  
Escondido, CA 92025-2798
6. Description of the Project: The City of Escondido (City) is proposing to expand its existing recycled water conveyance system to deliver recycled water to customers located east of the City's existing recycled water service area. In order to provide recycled water to additional customers, the City would expand the existing recycled water pipeline by 7.4 miles and construct and operate a recycled water pump station and a recycled water storage tank. Additionally, the Proposed Project would include installation of a 12-inch brine disposal pipeline and fiber optic cables parallel to the proposed recycled water pipeline from existing infrastructure near the City's Hale Avenue Resource Recovery Facility.
7. Other public agencies whose approval is required (e.g. permits, approvals, or participation agreements): Multiple federal, state, and local agencies as listed in Section 2 of this document.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by the Proposed Project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

X	Aesthetics		Greenhouse Gas Emissions		Population and Housing
	Agricultural and Forestry Resources	X	Hazards and Hazardous Materials		Public Services
	Air Quality		Hydrology and Water Quality	X	Recreation
X	Biological Resources	X	Land Use and Planning	X	Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities and Service Systems
	Geology and Soils	X	Noise		Mandatory Findings of Significance

**DETERMINATION:** (to be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment., but at least effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards , and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

\_\_\_\_\_  
Prepared By/Date

\_\_\_\_\_  
Reviewed By/Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

Negative Declaration/Mitigated Negative Declaration adopted on: \_\_\_\_\_

Adoption attested to by: \_\_\_\_\_  
Printed name/Signature Date

## EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
  - 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
  - 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect is significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
  - 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Unless Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 21, “Earlier Analysis,” may be cross-referenced).
  - 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. See CEQA Guidelines Section 15063( c)(3)(D). Earlier analyses are discussed in Section 21 at the end of the checklist.
    - a) Earlier Analysis Used. Identify and state where they are available for review.
    - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    - c) Mitigation Measures. For effects that are “less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier documents and the extent to which address site-specific conditions for the project.
  - 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
  - 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
  - 8) The explanation of each issue should identify:
    - a) The significance criteria or threshold, if any, used to evaluate each question; and
    - b) The mitigation measure identified, if any, to reduce the impact to less than significant
-



## Section 1 Introduction

This document is a Mitigated Negative Declaration (MND) that addresses the potential environmental impacts of construction and operation of the Recycled Water Easterly Main Extension. This MND has been prepared by the City of Escondido (City) as lead agency under the California Environmental Quality Act (CEQA).

The proposed Recycled Water Easterly Main Extension would expand the City's existing recycled water pipeline system to deliver recycled water to customers located east of downtown Escondido (RMC 2012). In order to serve the new potential recycled water customers, a recycled water pump station and storage tank would also be constructed. Additionally, the proposed Recycled Water Easterly Main Extension would also include installation of a 12-inch brine disposal pipeline (brine line) and fiber optic cables parallel to the proposed recycled water pipeline, extending from existing infrastructure near the City's Hale Avenue Resource Recovery Facility (HARRF). Aforementioned actions are collectively referred to as the Proposed Project throughout this MND.

The Proposed Project would consist of the following three construction phases:

- Proposed recycled water pipeline, brine line, and fiber optic cables – November 2013 to February 2015
- Proposed recycled water storage tank – May 2014 to July 2015
- Proposed recycled water pump station – May 2014 to June 2015

### 1.1 Project Background, Purpose, and Need

The City currently produces tertiary-treated recycled water (recycled water), which is used for landscape and industrial purposes (City of Escondido 2011). Recycled water provided by the City is produced at HARRF, a recycled water treatment and disposal facility that is owned and operated by the City. HARRF produces recycled water for recycled water users within the City, but also provides recycled water to other agencies as recycled water production at HARRF currently exceeds recycled water demands within the City (City of Escondido 2011). Further, excess recycled water that is produced at HARRF, but is not used by the City or sold to other recycled water customers, is disposed of via an ocean outfall (City of Escondido 2011).

The City of Escondido is currently researching potential installation of an advanced water treatment (AWT) facility in the vicinity of Lake Dixon, which could be used to improve local water quality and/or to produce purified water for indirect potable reuse purposes (RMC 2012). An AWT facility would produce brine concentrate, which would consist of excess water and water quality constituents that are removed during the advanced water treatment process. Further, the City has existing industrial customers that produce brine concentrate, which is conveyed to HARRF through an existing brine conveyance pipeline (brine line). Existing demand for brine disposal, as well as future potential demand for brine disposal from an AWT facility, warrant expansion of the City's existing brine conveyance pipeline to HARRF.

The City has identified significant recycled water demand east of downtown, beyond the extent of the existing recycled water system (RMC 2012). The primary purpose and need for the Proposed Project is to provide recycled water infrastructure to meet identified recycled water demands that exist beyond the City's existing recycled water system. The Proposed Project is being planned such that infrastructure included within the Proposed Project could provide recycled water to three large irrigation customers: Oak Hill Memorial Park, Eagle Crest Golf Course, and San Diego Zoo Safari Park (RMC 2012). In addition, the Proposed Project would reduce costs and impacts associated with multiple construction projects by extending the City's

existing brine conveyance pipeline in conjunction with construction of the recycled water pipeline. Although the brine line would not be operational immediately after construction, this conveyance structure would be used to convey brine concentrate to HARRF from throughout the City, and would also potentially be used to convey brine concentrate from a potential future AWT plant to HARRF (RMC 2012).

## 1.2 Scope and Limitations of the MND

This MND provides an assessment of the potential impacts to environmental resources that would result from implementing the Proposed Project. The discussion and level of analysis are commensurate with the expected magnitude and severity of each impact to environmental resources. This document primarily addresses the environmental effects of constructing and operating recycled water and brine disposal infrastructure and the effects of using the water supplies under consideration.

## 1.3 Use of This Document

The primary purpose of this document is to inform agencies and the public of significant environmental effects associated with implementation of the Proposed Project as described in *Section 2, Project Description*. This document will be used by the City of Escondido as a tool in evaluating environmental impacts and can be further used to modify, approve, or deny approval of the Proposed Project. Specifically, it is anticipated that this document will help the City determine whether a MND can be adopted or if preparation of an Environmental Impact Report (EIR) is required to further evaluate potential environmental impacts associated with the Proposed Project.

## 1.4 Documents Considered

Below are related documents that were considered during preparation of this MND:

### **Initial Study/Mitigated Negative Declaration for Statewide General Permit for Landscape Irrigation Uses of Municipal Recycled Water (State Clearinghouse [SCH] No. 2009079021)**

In July 2009, the State Water Resources Control Board (SWRCB) adopted General Waste Discharge Requirements (WDRs) for Landscape Irrigation Uses of Municipal Recycled Water General Permit (Order No. 2009-0006-DWQ). For eligible entities, the General Permit allows the use of recycled water<sup>1</sup> for “landscape irrigation” uses including the following:

- Parks, greenbelts, and playgrounds,
- School yards,
- Athletic fields,
- Golf courses,
- Cemeteries,
- Residential landscaping, common areas<sup>2</sup>,
- Commercial landscaping, except eating areas,

<sup>1</sup> “Recycled water” is water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource. “Recycled water” and “reclaimed water” have the same meaning. Water Quality Order No. 2009-0006-DWQ limits the definition of “recycled water” to water which results from the treatment of municipal wastewater.

<sup>2</sup> Individually owned residences are not eligible for coverage under the General Permit. The Regional Water Boards will address individually owned residences on a case-by-case basis.

- Industrial landscaping, except eating areas, and
- Freeway, highway, and street landscaping.

The General Permit IS/MND is specifically incorporated by reference into this IS/MND to address potential surface water and groundwater water quality issues related to use of recycled water associated with the Proposed Project. The Recycled Water Easterly Main Extension Project MND does not revisit issues related to the use of recycled water by users covered under the General Permit.

The General Permit IS/MND may be downloaded from the SWRCB's web site at:

[http://www.swrcb.ca.gov/water\\_issues/programs/water\\_recycling\\_policy/landscape\\_irrigation\\_general\\_permit.shtml](http://www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/landscape_irrigation_general_permit.shtml).

### **Cemetery Area Water Pipeline Replacement Project Mitigated Negative Declaration (MND) (SCH No. 2011121051)**

In September 2012, the City of Escondido published a MND addressing impacts that would occur from implementing a project that would include replacing potable water pipelines and constructing recycled water pipelines within and adjacent to Oak Hill Memorial Park in the City of Escondido. The City adopted the final MND in October 2012.

The Cemetery Area Water Pipeline Replacement Project MND is specifically incorporated by reference into this MND to address potential environmental impacts associated with the Oak Hill Memorial Park Segment (a segment of recycled water pipeline) that would link two components of the Proposed Project: the Glenridge Road segment and the Canyon Crest Drive Segment (refer to *Section 2, Project Description*). This MND does not revisit issues related to the Oak Hill Memorial Park Segment, which is included in the Cemetery Area Water Pipeline Replacement Project MND but is not part of the Proposed Project.

The Cemetery Area Water Pipeline Replacement Project MND may be downloaded from the City of Escondido's website at:

<http://www.escondido.org/Data/Sites/1/media/PDFs/Planning/CemeteryPipeline/FinalMitigatedNegativeDeclaration.pdf>



## Section 2 Project Description

The Proposed Project would consist of a 24-inch recycled water pipeline, recycled water storage tank, recycled water pump station, and 12-inch brine conveyance pipeline. This environmental analysis relied upon information from the City's Preliminary Design Report for the Proposed Project (RMC 2012), which includes recommendations for facilities, including design criteria, facility sizing, and a pipeline alignment evaluation.

### 2.1 Detailed Project Description

The Proposed Project is located in northern San Diego County, primarily in the City of Escondido with a small portion located in unincorporated San Diego County. The City limits, water service area, and surrounding agency water service areas are shown in **Figure 2-1**. The Proposed Project would extend the City of Escondido's recycled water trunk line to allow delivery of recycled water to customers located in the northeast area of the City and adjacent County area in the vicinity of Mountain View Drive.

The City produces recycled water at HARRF and delivers recycled water to approximately 81 recycled water meters within the City and within Rincon del Diablo Municipal Water District service area (City of Escondido 2011; Rincon del Diablo 2011). The City's existing recycled water system is shown in **Figure 2-2**. The Proposed Project would extend the system to deliver recycled water to agricultural customers in the northeast portion of the City and adjacent county area. The project includes:

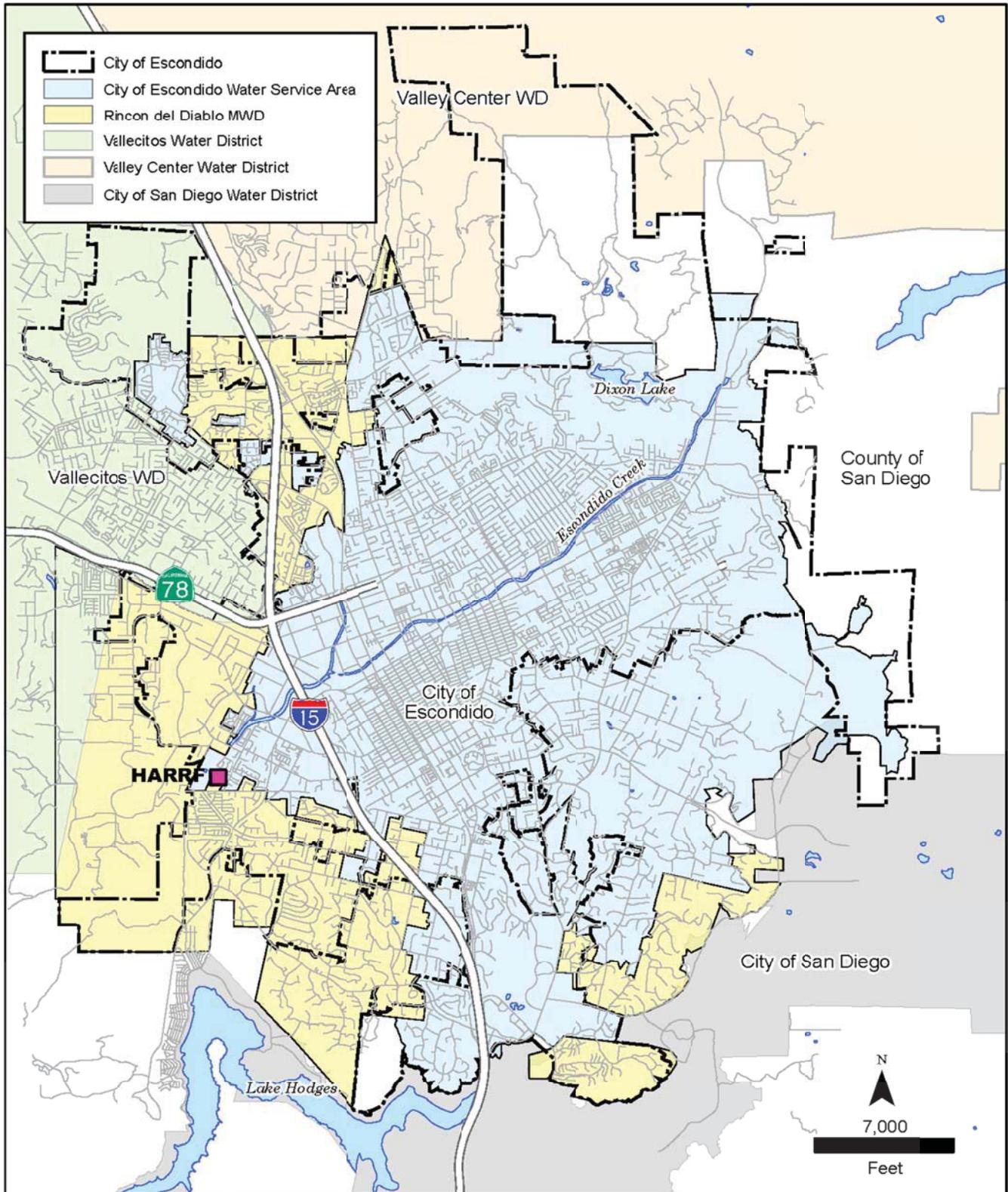
- Approximately 7.4 miles of buried pipeline(s) under flood control channel access roads, streets and private roads; these 7.4 miles of trench would accommodate the following facilities, all of which would be installed in the same trench:
  - Approximately 5.1 miles of 24-inch recycled water pipeline,
  - Approximately 4.9 miles of 12-inch brine conveyance pipeline
  - Approximately 7.4 miles of small diameter (less than 6-inch) fiber optic conduit(s)
- A recycled water storage tank with a storage capacity up to 2 million gallons (MG), and
- A 6,000-gallon per minute (gpm) recycled water pump station.

The City is currently planning to construct the Proposed Project under five separate construction bid packages, described below:

- **Bid Package 1** – 12-inch brine line, 24-inch recycled water main, and small diameter fiber optic conduit from Broadway to Citrus Ave in Escondido Creek Channel (2.6 miles).
- **Bid Package 2** – 24-inch recycled water main and small diameter fiber optic conduit from Citrus Avenue to Oak Hill Memorial Park cemetery and 24-inch recycled water main and small diameter fiber optic conduit from Oak Hill Memorial Park cemetery to the proposed storage tank site (total length of 2.2 miles).
- **Bid Package 3** – Storage tank (up to 2 MG) and 24-inch pipeline and small diameter fiber optic conduit from Mountain View Drive to the tank site (0.3 miles).
- **Bid Package 4** – 6,000 gpm recycled water pump station and onsite piping at Mountain View Park.
- **Bid Package 5** – 12-inch brine line and small diameter fiber optic conduit from Harmony Grove Road to Broadway in Escondido Creek Channel (2.3 miles).

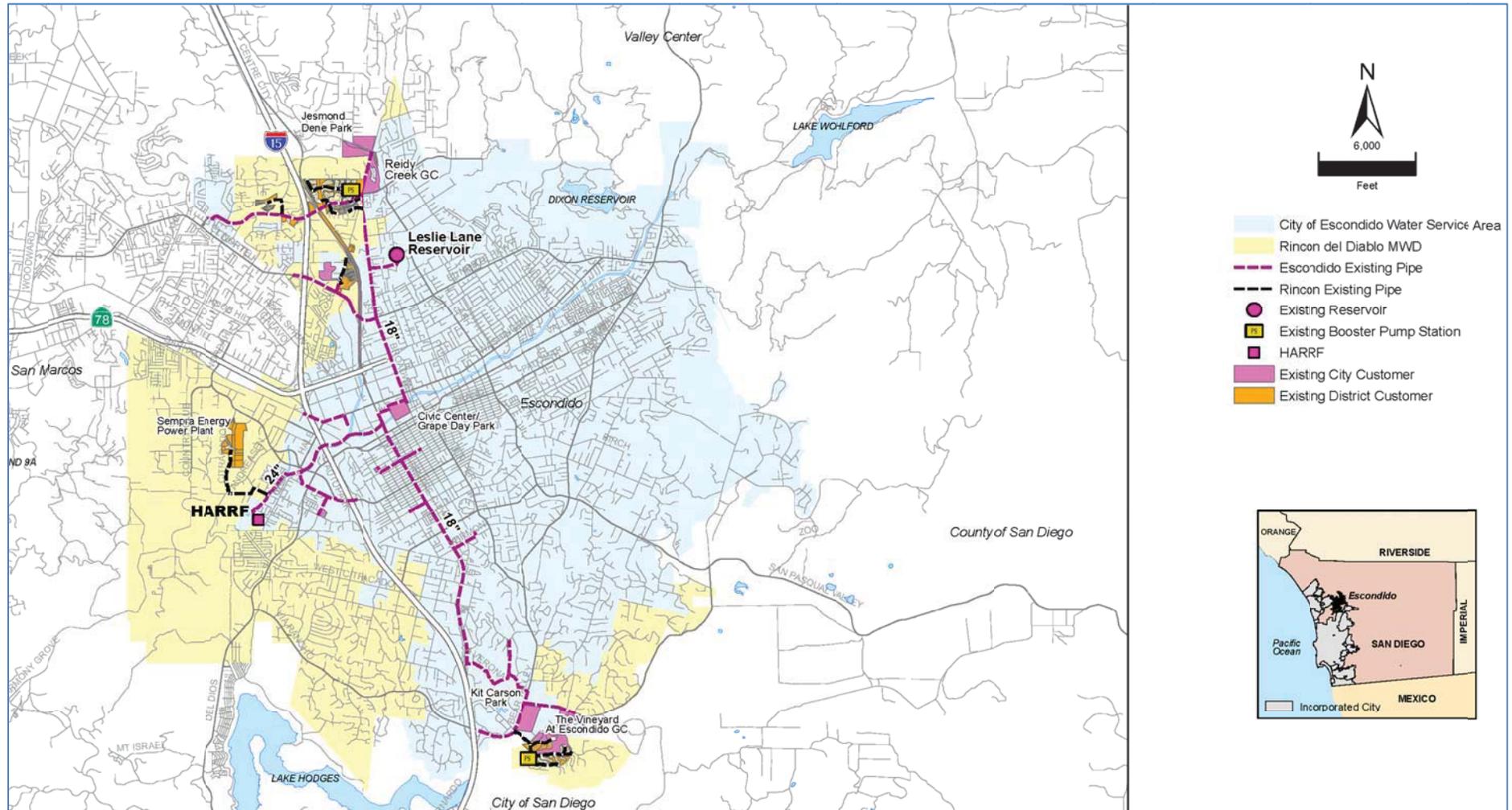
The Proposed Project and recycled water demands are shown in **Figure 2-3**. **Figures 2-4** through **2-6** show the Proposed Project area in three separate, more detailed maps.

Figure 2-1: City and Water Service Area Map



Source: City of Escondido Recycled Water Master Plan, Atkins, June 2011

Figure 2-2: Existing Recycled Water System



Source: City of Escondido Recycled Water Master Plan, Atkins, June 2011

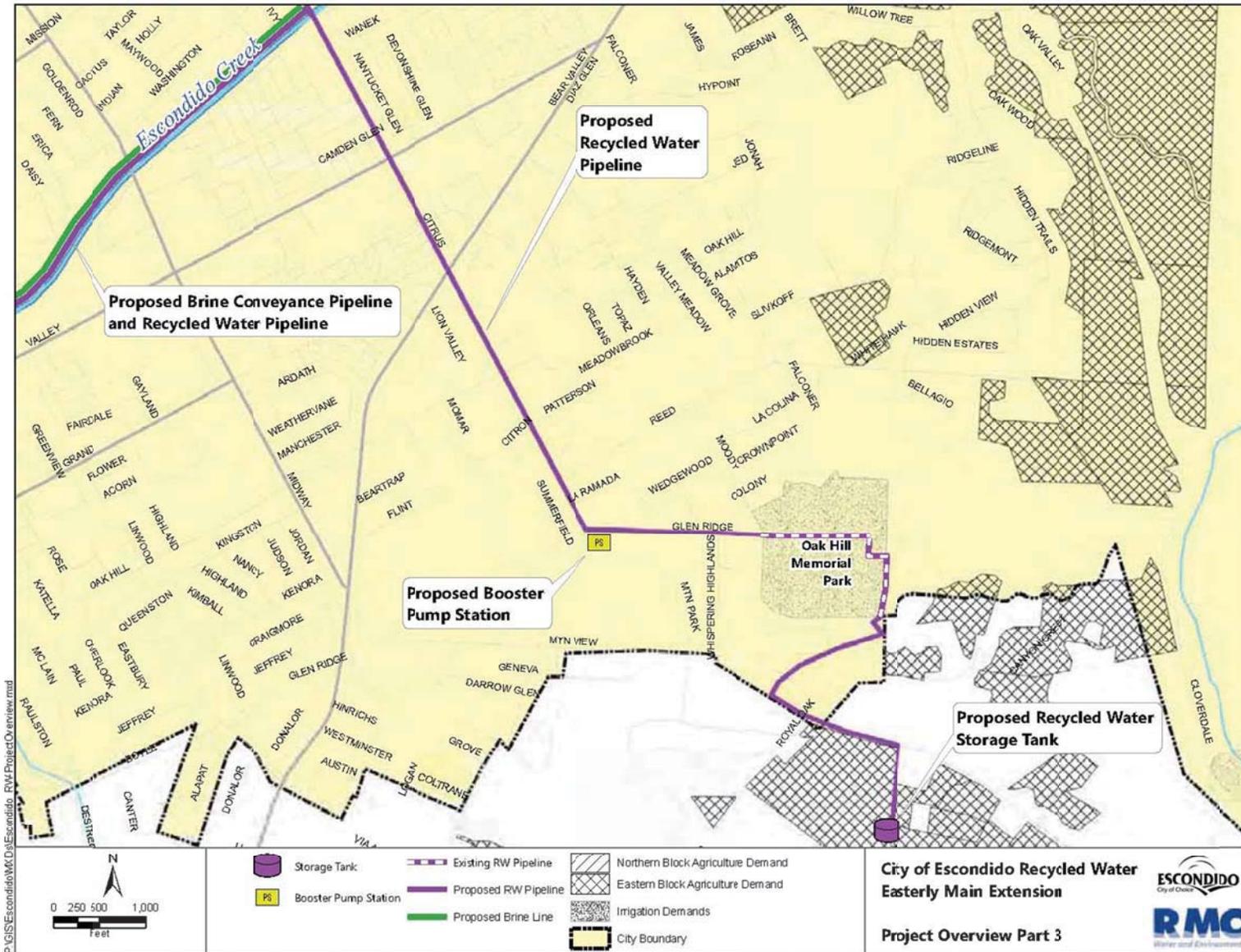


Figure 2-4: Proposed Project, Part 1: Existing Recycled Water Pipeline from HARRF





Figure 2-6: Proposed Project, Part 3: Proposed Recycled Water Facilities – City Streets, Pump Station, and Storage Tank



### 2.1.1 Recycled Water Demands

Although the proposed project will not provide direct connections to potential recycled water customers, instead extending the distribution system trunk line and increasing storage to accommodate potential demand, potential recycled water customer interest has made potential demand estimates reliable. The Proposed Project recycled water demands include the following:

- **Agriculture** – Potential recycled water agriculture demands for the project are divided into two groups or “blocks” based on geography. The blocks are referred to as the Eastern Block and the Northern Block as shown in Figure 2-3. The Eastern Block agriculture demand area is estimated at 870 acres, and the Northern Block irrigation demand area is estimated at 450 acres. These acreages reflect total (gross) parcel acreage, not currently planted or plant-able acreage.
- **Landscape Irrigation** – Potential recycled water landscape irrigation customers include: Oak Hill Memorial Park, Eagle Crest Golf Course and San Diego Zoo Safari Park.

Table 2-1 is a summary of Proposed Project demands.

**Table 2-1: Summary of Project Demands**

Potential Recycled Water Customer	Irrigated Area (Acres)	Average Annual Demand (afy)*	Max Day Demand Peaking Factor	Max Day Demand (mgd)**	Delivery Period (hours)	Peak Hour Demand (gpm)
Agriculture – Eastern Block	870	4,350	1.7	6.6	20	5,501
Agriculture – Northern Block	450	2,250	1.7	3.41	20	2,845
Oak Hill Memorial Park	100	220	2.15	0.42	24	293
Eagle Crest Golf Course	174	338	1.9	0.57	9	1,062
San Diego Zoo Safari Park	Not available	447	1.9	0.76	24	526
<b>TOTAL</b>		<b>7,605</b>		<b>11.76</b>		<b>10,227</b>

\* afy: acre-feet per year

\*\*mgd: million gallons per day

The Proposed Project would deliver recycled water to a storage tank in the general vicinity of the potential recycled water customers above and the project facilities are sized to deliver enough recycled water to meet their demands. The City is in the process of developing plans for a distribution system to deliver recycled water from the tank in the Proposed Project to these potential recycled water customers. The distribution system from the tank to the potential recycled water customers is not included as part of this Proposed Project, but is a future phase of the recycled water program.

## 2.2 Study Area and Proposed Project Components

The Study Area included within this analysis includes the relevant operational and construction footprints required for each component of the Proposed Project, which are described in detail below. The Study Area is generally located east of Interstate 15 and north of State Route 78, within San Diego County. The majority of the Study Area is located within the incorporated City of Escondido, although the eastern edge of the Study Area, including the proposed recycled water storage tank area, are located within unincorporated San Diego County.

## 2.2.1 Recycled Water Pipeline

The Proposed Project includes approximately 5.1 miles of 24-inch diameter recycled water pipeline. The City-preferred material for the pipeline is high-density polyethylene (HDPE) pipe. Some short sections of pipe such as shallow buried segments, special utility crossings, and exposed piping may require ductile iron pipe (DIP) or steel pipe for added stiffness to handle loads.

The pipeline and appurtenances would be specified with the appropriate coloring and markings for recycled water identification in accordance with the California/Nevada Section of the American Water Works Association's (AWWA's) "Guidelines for Distribution of Non-Potable Water".

The pipeline would include appurtenances for operations and maintenance, including isolation valves (butterfly valves or gate valves), air valves, and blowoffs. Isolation valves would be buried with access to the valve through a cast iron cover set in the pavement or ground. Air valves would be installed either below grade in concrete vaults or above grade, housed in a steel air valve cover. Blowoffs would be small diameter (6-inch or less) laterals with a riser that would terminate either below ground with access through a concrete vault, or extend above grade approximately 36-inches with a wharf hydrant on top.

The recycled water pipeline alignment consists of several distinct reaches. Bid Package 1 begins at a connection point to the existing recycled water system where the concrete-lined Escondido Creek Channel crosses North Broadway and lies within the Escondido Creek Channel right-of-way (ROW) to Citrus Avenue. A parallel brine conveyance pipeline would be installed coincident with the recycled water pipeline along this reach (see below for brine line discussion). Bid Package 2 is almost entirely within City streets except for piping on the pump station and tank site.

Prior to construction the City may be required to obtain easements in areas where the ROW is narrow relative to the required pipeline construction footprint. However, the potential easement areas are still being analyzed in the design phase.

### Escondido Creek Channel

The proposed recycled water pipeline would connect to an existing 24-inch recycled water pipeline at the intersection of Woodward Avenue and Broadway. The proposed pipeline would cross Broadway and enter the northwest side of the Escondido Creek Channel ROW. The channel is City-owned and maintained, and concrete-lined in the reaches the pipeline will follow.

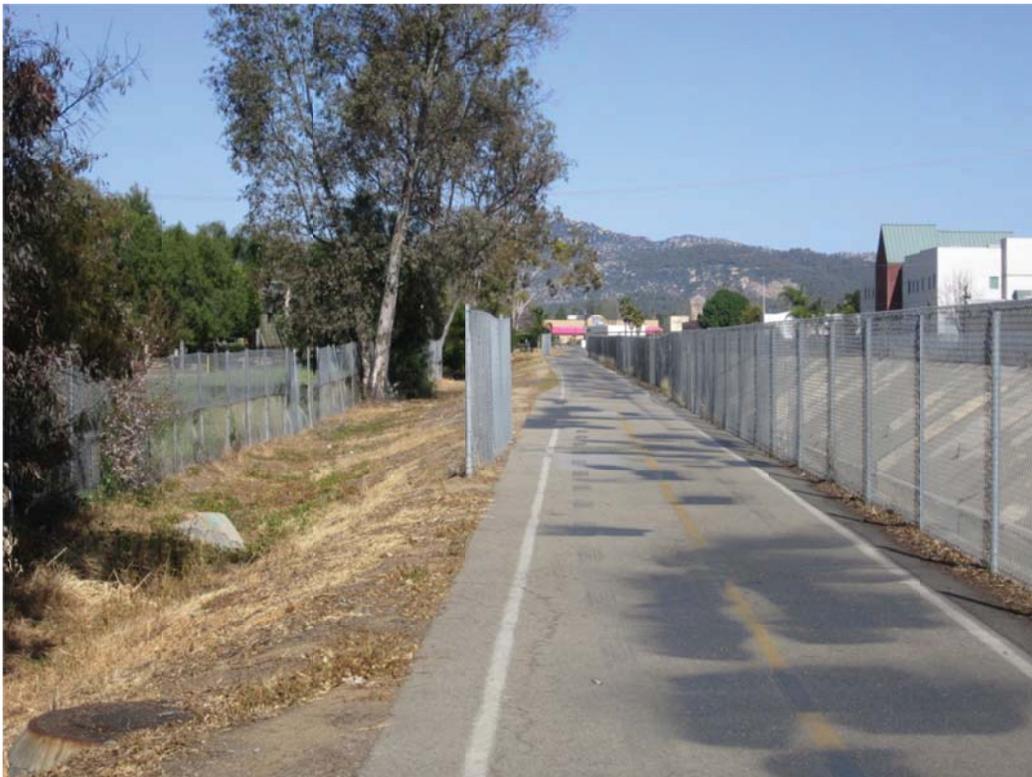
A bike path is located on the north side of the channel ROW from Broadway to Date Street (approximately 4,000 feet). This bike path is an asphalt paved pathway that also provides maintenance access to the Escondido Creek Channel, and would need to be closed during construction and reconstructed after the pipeline is installed. Between Date Street and Citrus Avenue, the bike path shifts to the other side of the channel. As the pipeline would be located north of the Escondido Creek Channel from Broadway Avenue to Citrus Avenue, the southern portion of the bike path (between Date Street and Citrus Avenue) would not be impacted by the proposed pipeline alignment. As shown in **Figure 2-4**, the recycled water pipeline would cross over Ash Street, which is State Highway 78 and would require a Caltrans encroachment permit. The street is heavily traveled and may need to be crossed by trenchless methods (jack and bore) to avoid traffic impacts and to meet permit requirements.

Photographs along this reach are provided in **Figures 2-7 through 2-9**.

**Figure 2-7: Recycled Water Pipeline Alignment South of Juniper Street**



**Figure 2-8: Recycled Water Pipeline Alignment North of Fig Street**



**Figure 2-9: Recycled Water Pipeline Alignment Looking North from Rose Street**



### **City Streets**

At the intersection of the Escondido Creek Channel and Citrus Street, the alignment heads in a southeasterly direction along City streets to the proposed storage tank site. The parallel brine line would be terminated within the channel ROW at Citrus Avenue, so the recycled water pipeline is a single pipe installation within this reach.

#### *Citrus Avenue*

The pipeline would cross the Escondido Creek Channel at Citrus Avenue. This would likely be done by attaching the pipeline to the southwest (downstream) side of the bridge (shown in **Figure 2-10**) in a similar fashion as an existing 10-inch water main crossing on the northeast side the Citrus Avenue bridge, as shown in **Figure 2-11**. The exposed pipeline at the crossing would be steel or ductile iron. The ability of the bridge to structurally accommodate the pipeline would be evaluated during design. If the pipe cannot be attached to the bridge, the channel crossing would be made using trenchless or open cut methods depending on permit conditions.

**Figure 2-10: Recycled Water Pipeline Alignment Southwest Side of Citrus Ave Bridge**



**Figure 2-11: Northeast Side of Citrus Ave Bridge (Ex. Water Main)**



Valley Boulevard would likely be crossed using trenchless installation methods to avoid traffic impacts. A picture of Citrus Avenue between Valley Parkway and Bear Valley Parkway is shown in **Figure 2-12**.

**Figure 2-12: Recycled Water Pipeline Alignment Citrus Ave between Valley Parkway and Bear Valley Parkway**



The pipeline alignment crosses Bear Valley Parkway in Citrus Avenue. Bear Valley Parkway would likely be crossed using trenchless construction methods to avoid traffic impacts. A picture of Citrus Avenue between Bear Valley Parkway and Glenridge Road is shown in **Figure 2-13**.

**Figure 2-13: Recycled Water Pipeline Alignment Citrus Ave between  
Bear Valley Parkway and Glenridge Road**



#### *Glenridge Road*

From Citrus Avenue, the pipeline alignment turns east on Glenridge Road. Near the Mountain View Park parking lot on the south side of Glenridge Road, the pipeline would turn south onto the pump station site at Mountain View Park. One 24-inch pipeline (inlet) would head to the pump station and one 24-inch pipeline (outlet) would head from the pump station then continue to the intersection of Glenridge Road and Moody Drive, near the entrance to Oak Hill Memorial Park.

#### *Oak Hill Memorial Park Segment (not included in Proposed Project)*

At the eastern end of Glenridge Road, the pipeline would enter Oak Hill Memorial Park through the main gate. This segment is being designed and constructed in conjunction with a separate potable water line as part of the Cemetery Area Water Pipeline Replacement Project and addressed in the Cemetery Area Water Pipeline Replacement Project Mitigated Negative Declaration (adopted October 15, 2012, SCH# 2011121051).

#### *Canyon Crest Drive*

The pipeline alignment would continue from the end of the Oak Hill Memorial Park Segment where it exits the Oak Hill Memorial Park property on Canyon Crest Drive. The pipeline would continue southwest on Canyon Crest Drive to Mountain View Drive.

### *Mountain View Drive*

From Canyon Crest Drive, the alignment would head east on Mountain View Drive. A picture of Mountain View Drive is shown in **Figure 2-14**.

**Figure 2-14: Recycled Water Pipeline Alignment Mountain View Drive**



### *Access Drive to Tank Site*

The pipeline would turn south onto an existing access drive at 2601 Mountain View Drive. The access drive is privately owned, but the City has an existing easement to access its Hogback Potable Water Reservoir. A picture of the access drive is shown in **Figure 2-15**.

### **2.2.2 Recycled Water Storage Tank**

The proposed recycled water tank site is located near the City's existing Hogback Potable Reservoir (tank). The proposed recycled water tank facilities would be located on land that is currently two separately-owned private parcels; however, the City is negotiating a land purchase so the tank facilities would be on City-owned property. The tank would be accessed via a privately-owned access road to which the City has an existing easement to access the Hogback Potable Water Tank.

The recycled water tank would be circular, constructed of pre-stressed concrete, partially buried, with up to 2 million gallons (MG) in storage capacity. The tank dimensions would be up to 120 feet in diameter and up to 36 feet tall. The final dimensions would be determined during final design based on the site geotechnical conditions and grading. The site is on a north-south slope with elevation ranging from 1,060 feet to 1,120 feet above mean sea level (MSL).

**Figure 2-15: Recycled Water Pipeline Alignment Access Drive to Tank Site**



The tank would be painted the City's standard tank color (beige or brown). The tank would include an emergency overflow that would release recycled water to grade level adjacent to the tank in the event of a major system failure. The tank would also include a potable water backup supply connected through an air gap into the top of tank. The potable water connection would be used only in emergency or shut-down situations where recycled water supply is not available to meet demand.

Additional facilities to be constructed on the tank site would include:

- Exterior site lighting, which would be on only when maintenance personnel are on the site.
- An asphalt tank access road, which would wrap around a portion or the entire tank. The access road would be up to approximately 16 feet wide.
- Buried concrete vaults (up to two), up to 12 feet x 12 feet square and 10 feet deep.
- Yard piping, which would include storm drainage pipes and buried concrete structures such as drainage inlets, and recycled water piping to and from the tank.
- Electrical and controls facilities, including electrical and control panels, conduit and cables.

Due to the grade of the recycled water storage tank site (2% in some places), site grading would be required. Construction would include cut and fill, during which trenches would be backfilled to grade; although some backfill could result in steeper slopes than are currently present on the storage tank site. If this occurs, the City will obtain a grading exemption from the County of San Diego in accordance with the County of San Diego's Grading Ordinance.

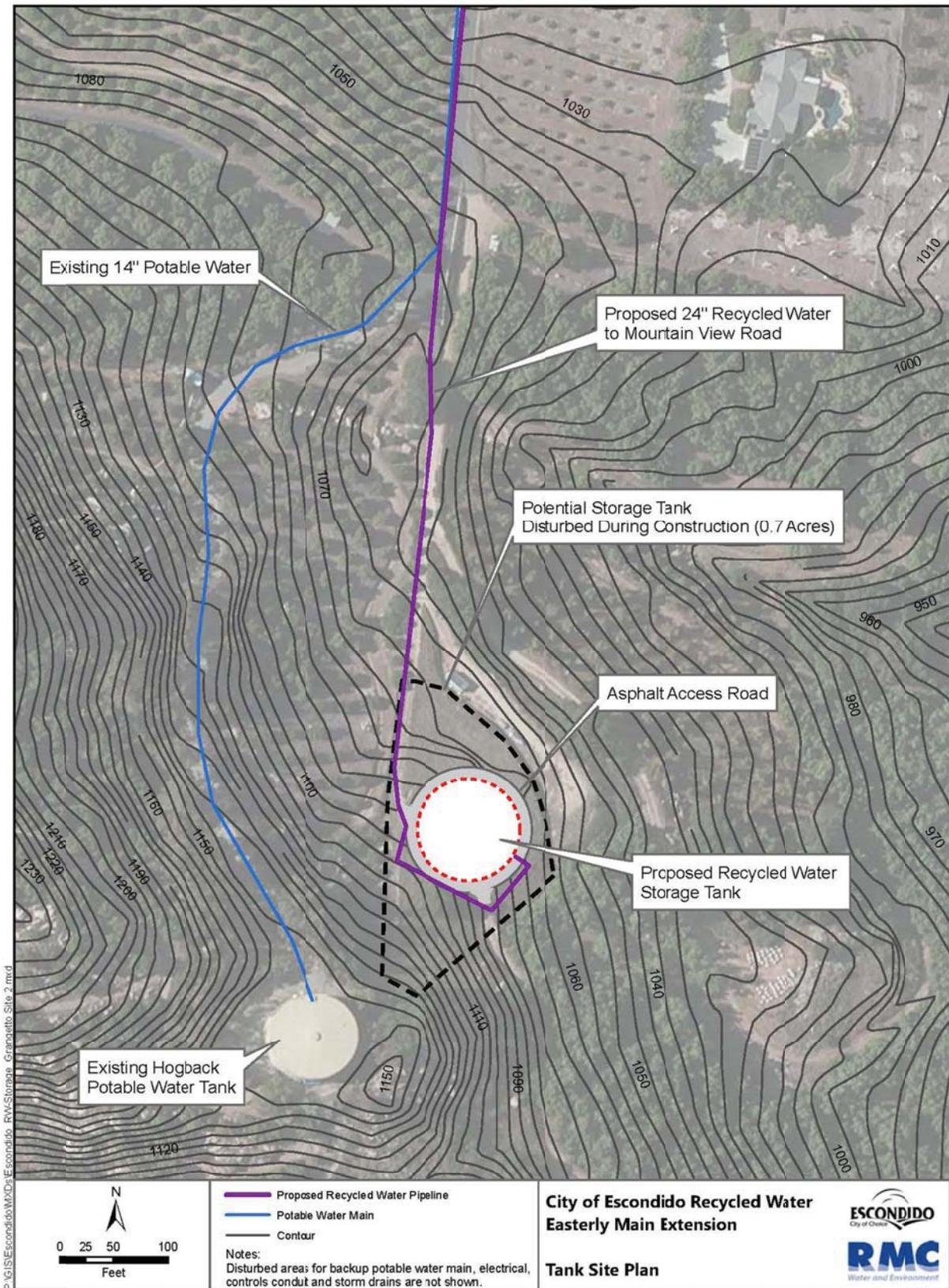
After completion of construction, work would include restoration (re-planting) of all contractor storage and lay-down areas.

**Figure 2-16** is a photograph of the tank site, **Figure 2-17** is a preliminary layout of the facilities and **Figure 2-18** is a similar pre-stressed water tank in the City potable water system.

**Figure 2-16: Tank Site Photograph**



Figure 2-17: Preliminary Tank Site Layout



**Figure 2-18: Existing Reed Reservoir Potable Water Tank Photograph**



### **2.2.3 Recycled Water Pump Station**

The recycled water pump station will be located at the City of Escondido Mountain View Park. The park is adjacent to the proposed pipeline on Glenridge Road and has suitable space in the northeast corner of the parking lot; see **Figure 2-19** for photograph of the site.

The area where the proposed pump station would be located is shown in **Figure 2-20**. Elevation at the site ranges from approximately 735 to 740 feet above MSL. The site is owned by the City. Depending on the selected location of the building within the site, up to 250 feet of parallel suction and discharge lines would need to be constructed from Glenridge Road to the pump station for the inlet and outlet to the main pipeline. **Figure 2-21** shows the concept design for the pump station site.

Firm capacity of the pump station (capacity with the largest pump out of service) would be 6,000 gpm, which is equal to the maximum daily demand of potential recycled water customers downstream of the pump station. The required flow rate would be accomplished using four pumps (three duty pumps and one standby) each rated at 2,000 gpm with up to 250 horsepower (hp) electric motors. At buildout, up to three pumps could operate continuously for 24 hours a day. The station would include a 700-kilowatt (kW) permanent backup diesel-powered generator, sized to power up to two pumps. The backup generator would be enclosed and sound attenuated (silencer) to produce less than the one-hour average sound level limit of 75 dB under full load in accordance with the City's Municipal Code. The generator would be up to approximately 14 feet long by 6 feet wide and 7 feet tall. Because the facility will have a maximum production capability of more than five kilowatts of power, a Conditional Use Permit

for the generator may be required. If a Conditional Use Permit is required, the City will acquire the permit in accordance with the City's Municipal Code.

**Figure 2-19: Mountain View Park Site – Parking Lot (Northeast Corner)**



The City of Escondido Design Standards for water booster stations requires a building for all pump stations. The building would be up to 50 feet x 50 feet and 16 feet tall. The building architectural treatment would blend with other buildings on the park site, which are basic textured concrete masonry unit (CMU) construction on a reinforced concrete slab with a gabled roof. Ventilation in the pump room would be provided using intake louver(s) and an exhaust fan(s). The electrical room would be provided with air conditioning to protect equipment. Skylights would be provided on the roof for pump removal.

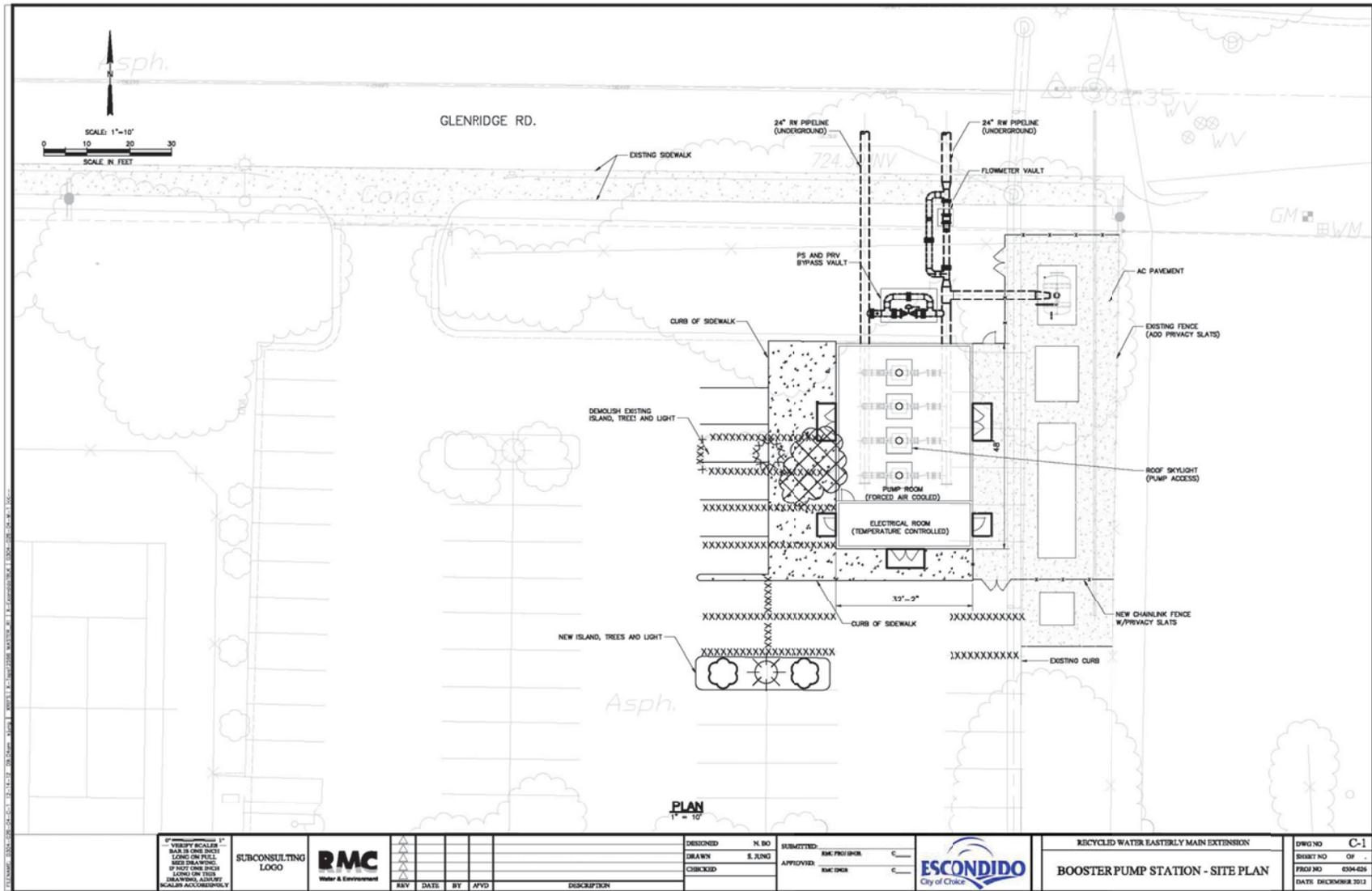
Additional facilities at the pump station site would include:

- Site lighting, which would only be on when personnel are working at the site.
- Two horizontal pressure surge tank up to 10,000-gallons in capacity, (up to 10 feet diameter and 20 feet long) located outdoors and mounted on a concrete pad.
- Miscellaneous buried and above grade site piping and appurtenances, and electrical conduit.
- Buried electrical service conduit and cable would need to be installed to the pump station site from a location determined by San Diego Gas and Electric (SDG&E). SDG&E indicated that overhead 12kV service is available from Glenridge Road (1,300 feet from the site).
- A pad mounted electrical transformer, up to 10 feet x 10 feet footprint.
- Site improvements, such as sidewalks and landscaping.

Figure 2-20: Pump Station Site Plan



Figure 2-21: Pump Station Concept Design



## 2.2.4 Brine Line Extension

In order to reduce costs and impacts to residents involved with multiple construction projects, the Proposed Project includes construction of an extension of an existing brine conveyance pipeline in conjunction with construction of the recycled water pipeline. Although it would not be operational immediately after construction, the brine line extension is anticipated to convey brine concentrate from industry throughout the City and a potential future Advanced Water Treatment (AWT) Plant in the vicinity of Lake Dixon, which would be used to reduce total dissolved solids (TDS) for agriculture use and potentially to provide high quality water for Indirect Potable Reuse (IPR).

The brine conveyance pipeline would be 12-inch HDPE pipe. Steel or DIP may be required at special locations to handle design loads. The pipeline and its appurtenances would be specified with the appropriate coloring and markings for sewer with a green stripe for identification.

The brine line would require accessways for inspection and cleaning, air valves, and siphons for locations where the pipeline needs to dive under existing obstructions such as utilities or channels. Accessways would be installed approximately every 1,000 feet to provide access for inspection and flushing of the brine line. Air valves would be similar to those described above for recycled water pipeline facilities. Drains would be required to remove liquid from the brine line for inspection and maintenance. Drains would be similar to blowoffs described above for recycled water facilities.

The proposed brine conveyance pipeline alignment would begin at a connection point to the existing brine line terminus in Harmony Grove Road at the Escondido Creek Channel. The proposed brine line would head northeast, along the channel, parallel to an existing 24-inch recycled water line to Broadway, where it would then be installed parallel to the proposed 24-inch recycled water line to Citrus Avenue (see above for information on the alignment along the proposed recycled water pipeline).

The alignment is primarily within the channel ROW under the north access road, with the exception of short segments along Centre City Parkway, within an existing easement through a shopping center, along Escondido Boulevard, and along Woodward Avenue where the existing recycled water pipeline alignment deviates from the channel ROW.

### *Harmony Grove Road to Auto Park Way*

From Harmony Grove Road to Auto Park Way, the north side of the ROW is generally undeveloped (i.e., there are no facilities or other deterrents within this portion of the ROW that might hinder the construction of the pipeline), with an unpaved (dirt) access road, except for immediately south of Auto Park Way where there is an existing parking lot for the North County Kia car dealership. At this location, the pipeline would need to be constructed under the parking lot. It appears this area is within channel ROW, and the dealership may have an easement for parking. See **Figure 2-22**.

Along this segment, there is a crossing of a concrete lined branch channel to Escondido Creek. This crossing was made by open-cut with a concrete encasement for the existing 24-inch recycled water main installation and would likely be made using similar construction methods for the brine conveyance pipeline.

**Figure 2-22: Brine Conveyance Pipeline Alignment Looking South from Auto Park Way**



*Auto Park Way to Tulip Street*

From Auto Park Way to Tulip Street, the north side of the ROW is an unpaved (dirt) access road. The crossing under I-15 overpass was made using open-cut construction for the existing 24-inch recycled water pipeline, and similar construction techniques are proposed for the brine line. The crossing would comply with Caltrans permit requirements. Tulip Street would likely be crossed using trenchless installation methods. See **Figure 2-23**.

**Figure 2-23: Brine Conveyance Pipeline Alignment Looking North from Auto Park Way**



*Tulip Street to Quince Street*

The north side of the channel ROW narrows considerably for approximately 500 feet between Tulip Street and the railroad crossing (see **Figure 2-24**). The North County Transportation District (NCTD) railroad ROW would be crossed using trenchless installation methods in accordance with NCTD permitting requirements.

North of the railroad crossing, the pipeline would cross under the concrete-lined Reidy Creek channel. This crossing was made using open-cut construction with a concrete encasement for the existing 24-inch recycled water main installation and similar techniques are proposed for this project. For the proposed project, the Reidy Creek channel that feeds into the concrete-lined Escondido Creek Channel will be open cut north of Tulip Street to allow the pipeline to cross the channel (refer to **Figure 2-4** to see the location of this crossing).

Between the Reidy Creek crossing and Quince Street, the brine line would be installed within the City's existing ROW located north of the Escondido Creek Channel.. The proposed brine conveyance pipeline may also be installed on City Public Works Yard property at this location.

*Quince Street to Centre City Parkway*

From Quince Street to Centre City Parkway, the north side of the ROW is an unpaved (dirt) access road. See **Figure 2-25**.

**Figure 2-24: Brine Conveyance Pipeline Alignment Looking North from Tulip Street**



**Figure 2-25: Brine Conveyance Pipeline Alignment Looking North from Quince Street**



### *Centre City Parkway*

Where the Escondido Creek Channel crosses Centre City Parkway, the alignment for the brine line would leave the channel ROW and follow the roadway north to a utility easement through the Civic Center Plaza Shopping Center. Centre City Parkway has heavy traffic, two travel lanes in each direction, a landscaped median, and wide shoulders. Installation under Centre City Parkway would likely be by open cut installation methods, but trenchless methods would be considered during design to avoid traffic impacts. See **Figure 2-26**.

**Figure 2-26: Centre City Parkway**



### *Existing Utility Easement*

North of Centre City Parkway, the pipeline would be installed within an existing 15-foot wide public utility easement that contains sewer, gas, water, recycled water and electric utilities. The pipeline would follow the easement until it reaches Escondido Boulevard. The space to construct a new pipeline is limited and additional easement may be required (see **Figure 2-27**)Figure .

**Figure 2-27: Brine Conveyance Pipeline Alignment Existing Utility Easement**



*Escondido Boulevard*

The pipeline alignment would follow Escondido Boulevard north until it reaches Woodward Avenue. Escondido Boulevard has heavy traffic, two travel lanes in each direction, and a center turn lane. The brine conveyance pipeline would likely be installed using open cut installation under Escondido Boulevard, but trenchless installation would be considered during design to avoid traffic impacts.

*Woodward Avenue*

From Escondido Boulevard, the pipeline would turn east on Woodward Avenue until it reaches the Escondido Creek Channel, where it would continue within the same trench as the recycled water pipeline.

**2.2.5 Fiber Optic Conduit**

The City may install small diameter fiber optic conduit (less than 6-inches diameter) within the same trench as the existing brine conveyance pipeline and/or recycled water pipeline from Harmony Grove Road to Citrus Avenue. The fiber optic would be used as communication for the City's Supervisory Control and Data Acquisition (SCADA) system. The SCADA system is used to monitor and control City-owned utility facilities. The use of fiber optics would allow the City expanded capabilities in remote control and monitoring, including for the proposed pump station and storage facilities. Fiber optic facilities would include small diameter conduit (galvanized steel or plastic) and buried concrete or fiberglass reinforced plastic pullboxes located every 1,000 feet or more.

## 2.3 Operation and Maintenance Requirements

Operation and maintenance for pipelines (recycled water and brine line conveyance) would consist of exercising valves in accordance with the City’s valve maintenance program, inspection of appurtenances, and flushing pipelines when necessary for water quality or cleaning purposes. Operations and maintenance for the pre-stressed concrete tank would include periodic inspections and routine maintenance of valves and equipment. Operations and maintenance for the recycled water pump station would include daily inspection, routine pump maintenance, including changing oil and coolants every 6 months, inspection/overhaul of pumps approximately once every 5 years, replacement of pumps and other pieces of equipment approximately every 20 years, valve exercising, generator testing and exercising, and re-coating of above ground piping as necessary. Collectively, typical operations and maintenance activities would generate up to 5 daily vehicle trips (roundtrips).

## 2.4 Construction Considerations

Table 2-2 provides a proposed timeline for construction of each project component.

**Table 2-2: Anticipated Construction Schedule for  
City of Escondido Easterly Recycled Water Main Extension Project**

Project Component	Timeline
Bid Packages 1, 2, and 5 – Recycled water main, brine line, and fiber optic cables	November 2013 – February 2015
Bid Package 3 – Storage tank	May 2014 – July 2015
Bid Package 4 – Recycled water pump station	May 2014 – June 2015

### 2.4.1 Geotechnical Investigation

A geotechnical investigation would be conducted during the final design phase of the project. The investigation would include exploratory soil borings, laboratory testing of soil samples from the borings, and development of design recommendations. Borings are generally recommended at approximately 1,000-foot intervals along the pipeline alignment and at the locations of proposed trenchless installation pits, and at the location of tanks and/or pump stations. Test pit trenching and seismic refraction surveys would be conducted at the tank site to evaluate the conditions within the extent of the proposed tank foundation.

### 2.4.2 Pipeline Construction

Proposed pipelines would be installed in existing public ROWs and newly acquired easements (where necessary) and would be buried except for circumstances such as channel bridge crossings. Typical pipeline construction processes are described below:

**Staging Areas** - At various locations along the construction route, staging areas would be required to store pipe, construction equipment, and other construction-related material. Staging areas would be established along the route where space is available, such as vacant lots, roadway turnouts, and parking lots. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of convenient access and lack of sensitive receptors. As pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods of time. Potential staging areas include vacant private and public land, parking lots, and segments of closed traffic lanes. The City of Escondido Department of Public Works would need to review the Construction Staging and Traffic Management Plan and approve lane closures to street

segments and intersections. The City or its contractor would make arrangements for the use of staging areas.

**Surface Preparation** - Surface preparation involves removing structures (such as fences), pavement, and/or vegetation from the trench area. Equipment used for this activity includes jack hammers, pavement saws, bulldozers, loaders, and trucks.

**Trench Excavation/Shoring** - A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical side walls to minimize the amount of soil excavated, and the area needed for the construction easement. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off site for disposal. Disposal options include use as cover material at sanitary landfills and use as “clean fill” at other sites. In general, pipe trenches would be 3 to 6 feet wide and 4 to 10 feet deep. Deeper installations may be required under special circumstances, such as large utility or channel crossings. Where parallel pipelines are proposed, a single trench would be used for both pipes where possible. Fiber optic conduit would also be installed within the pipeline trench (brine conveyance or recycled water), where possible.

Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily “closed” at the end of each work day, by covering with steel plates or backfilled.

Trenches would be backfilled with either the excavated soil or imported material. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compactability and stability. In addition, following the installation of the pipe, the City expects that there would be a surplus of native soil material requiring off-site export. For the purposes of this MND, the City assumes that the amount of soil exported is dependent upon the pipeline volume (pipe length x pipe trench width x pipe trench depth) and the duration of construction (in days). Specific assumptions regarding the amount of soil export are included within **Appendix A**.

**Surface Restoration** - The final step in the installation process would be to restore the ground surface. When the pipe is installed in a paved roadway, repaving would occur after pipeline installation and testing. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after pipeline construction. A repaving crew would follow the pipe installation crew and prepare the road surface for repaving. Final repaving would be done after pipeline installation and testing is completed for a whole street width, lane width, or trench width.

**Trenchless Construction Methods** - If pipelines need to be installed without disturbing the ground surface tunneling methods such as jack and boring or horizontal directional drilling (HDD) would be used. These two methods are described in more detail below:

**Jack and Boring** - Jack and boring employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e. g. stream crossing or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 10 to 20 feet long for the receiving pit and up to 50 feet long for the jacking pit. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A

compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil.

Several options are available for ramming various lengths of pipe. An entire length of pipe could be installed at once or, for longer distances, one section at a time could be installed. In that case the ramming tool would be removed after each section is in place and a new section would be welded on to the end of the newly installed section. The ramming machine would be connected to the new section and ramming would continue. In certain installations, a winch could be connected to the lead end of the pipe to assist in pulling it out. This would require installation of a connection via a pilot hole.

Depending on the size of the installation, spoil from inside the pipe would be removed with an auger, compressed air, water, or a combination of techniques. A seal cap would be installed on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur, except at the pits.

**Horizontal Directional Drilling** - HDD crossings are installed by using a drill rig, with the top of the drill rig tilted up at to an angle of ten degrees from horizontal. The bore entry holes are drilled from the starting point to the destination point. In preparing the hole, a small diameter (3-inch-wide) pilot hole is first drilled in a gentle arc from the drill rig to the completion hole on the other side of the area to be crossed. This pilot hole can be guided using magnetic readings transmitted from the drill bit back to the drill rig. After the initial hole is drilled, the final bore entry pit, approximately 10 feet square by approximately 8 feet deep, is constructed and is used as the collection point for Bentonite drilling mud and drill spoil. During the directional drill procedure, drilling mud is injected into the drill and recovered from the entry hole until the drill bit surfaces at the exit pit. Once the drill bit surfaces, the drilling mud is recovered at both the entry and exit hole, pumped into tanks and transported back to the rig location for cleaning and eventual reuse.

The pipeline would be installed primarily by open cut trenching, supplemented with trenchless installation at major crossings, which are identified above. Open trench construction would comply with the City of Escondido Design Standards and Standard Drawings, including Standard Drawing G-1-E, Standard Trenches 18" and Over in Width, which requires bedding material to 12 inches over the pipe with bedding material with sand equivalent of 30 and 95% compaction. The trench zone requires 90 percent compaction, backfilled with the excavated material. Locator wire (10-gage copper) would be attached to recycled water pipelines. Project-specific modifications to the City standard trench detail would be discussed with the City during final design if necessary.

### 2.4.3 Facility Construction

Typical construction activities involved in the construction of pump station and storage sites include the following:

**Site Preparation** - This phase of construction may involve tree and brush removal, pavement removal, buried utility removal and/or relocation, and structure demolition. Survey staking would be used to define the land limits of the new facility.

**Earthwork** - After the site is cleared, grading would begin. The contractor would attempt to balance earthwork cut and fill quantities within the construction area to the extent feasible. Material excavated would be used to create screening berms and/or spread across other areas of the site to establish a preliminary grade for structures. Rock removal by blasting may be

necessary at the tank site to prepare grade for the foundation. Following rough grading, additional excavation would bring the site to final grade and allow for preparation for underground piping and structural slabs.

Additional site work would include paving, temporary and permanent security fencing, and site lighting. Additional access roads and a staging area would also be provided to accommodate construction, operation, and maintenance.

In certain construction situations, excavations could require dewatering of shallow groundwater, and potentially the development of surface and/or subsurface drainage systems. However, due to the depth of groundwater within the Study Area, such activities are not likely necessary for the Proposed Project.

**Structural Improvements** - Prior to pouring concrete, structural forms, rebar, pipes and conduits would be installed for the facility. After the concrete is poured, it would be finished and cured before the forms are removed. For the pump station, after the concrete footing and slab are poured, the masonry walls would be constructed and then roof trusses and decking would be installed. For storage facilities, after the foundation is poured the concrete tank would be erected over the foundation slab.

**Paving** - All parking areas, and access roads, would be paved. Paving would be performed incrementally throughout the site area as large construction and non-rubber tread equipment are removed from the site.

**Electrical/Instrumentation** - After the structure is erected electrical equipment (e.g., machinery control consoles, switchboards, and lighting) would be installed. Site work such as installing pull boxes, conduits, and cables would continue. After roofs on the buildings and facilities are secured, flow meters, level probes, pressure instruments, process analyzers, and other instrumentation would be installed. Additionally, water quality adjustment, sampling, and monitoring equipment would be installed.

**Startup and Testing** - This phase of construction would involve City personnel (i.e., engineers, inspectors, operators, maintenance crews, and instrumentation specialists) and the contractor working with the equipment vendors to understand how each piece of equipment would operate and function. Under City supervision, the contractor would start up and test the equipment on site to guarantee that pumps, motors, valves, monitoring and communication equipment are functional and meet design requirements and standards.

#### **2.4.4 Construction Area(s) and Footprint**

Prior to the start of pipeline construction, the City would complete easement acquisition and either acquire permits or specify requirements for the contractor to obtain permits in the contract documents (plans and specification). The contractor would conduct field surveys to locate the centerline of pipelines and/or footprint(s) of the facility improvements, which would include temporary use areas (e.g. staging areas). For the purposes of this MND, the City has applied a standard construction ROW or affected area of up to 40 feet for the linear conveyance improvements. In determining the area of effect for the staging areas, storage, and pumping facilities, and/or other temporary use areas, the City has considered the disturbance areas shown in the figures above.

#### **2.4.5 Trip Generation**

For the purposes of this MND, the City has estimated a worst-day scenario for Proposed Project-related construction impacts. As indicated within the anticipated schedule (refer to Table 2-3), construction of some of the various project components would occur simultaneously. In

order to characterize and analyze potential construction impacts, the City has identified maximum crew size, truck trips, and worker trips, based on expected excavation volumes and quantities of imported materials. To support these activities, the main pieces of equipment that may be used at any one time during construction may include:

- track-mounted excavators
- backhoes
- graders
- crane
- scrapers
- compactors
- end and bottom dump trucks
- front-end loaders
- water trucks
- paver and roller
- flat-bed delivery trucks
- forklifts
- concrete trucks
- compressors/jack hammers

During peak excavation and earthwork activities, the Proposed Project would generate trips associated with the construction crew as well as from delivery activities. In assuming an average crew size of 10 for each phase, including inspectors, construction activities could generate up to 15 round-trip trips per day per phase. In addition, during peak construction activities, the Proposed Project would require an average of 8 round-trip concrete delivery and/or soil export truck trip per day. This assumes approximately 34 cubic yards per day for soil import and 43 cubic yards per day of soil export during trenching. Since the soil transport would not be phased (import and export would be separate trips), this results in 8 round-trips per day in trucks with 10 cubic yard capacity. Other deliveries of materials like process, mechanical, and electrical equipment; filter media; rebar for concrete; structural steel, CMU block, and wood trusses for buildings; and electrical conduit would also occur throughout construction. Estimated average general materials delivery round trips per day are 3 per day. In total, up to 11 daily haul truck trips were assumed for construction.

Table 2-3 provides a summary of the projected construction trip generation for each component of the Proposed Project.

**Table 2-3: Construction Trip Generation**

Purpose	Estimated Daily Trips	Vehicle Type
Construction crew	15 round-trip trips per day	Passenger
Concrete delivery and/or soil export truck trips	8 round-trip trips per day	Haul truck
General materials delivery	3 round-trip trips per day	Haul truck
<b>Total Maximum Daily Trips</b>	<b>26 round-trip trips per day</b>	

#### 2.4.6 Construction-Related Water Use

Water would be required to support Proposed Project-related construction for soil conditioning, flushing and hydrostatic testing, construction dewatering, cleaning, and dust control. Traditional sources would include:

- Public domestic water or recycled water system (via fire hydrants), and
- Water brought in by truck or storage tanks.

Following the construction of new pipeline facilities, each segment would undergo hydrostatic testing to City standards. Recycled water from the existing distribution system would be used where possible. Potable water from the distribution system would be used if recycled water is not available. Any leaks would be repaired and the section retested until specifications are

achieved. Water utilized during hydrostatic testing or construction dewatering would be disposed of in accordance with contract documents.

If direct discharge to surface waters is required, the City would need to seek coverage under the San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2010-003 (CAG679001): Discharges Of Hydrostatic Test Water And Potable Water To Surface Waters And Storm Drains Or Other Conveyance Systems Within The San Diego Region or Order No. R9-2008-0002 (CAG919002): Groundwater Extraction And Similar Discharges To Surface Waters Within The San Diego Region Except For San Diego Bay. All hydrostatic testing water would be discharged in a manner to control the rate of discharge and to minimize erosion and turbidity to meet the standards set forth under the terms and conditions of the applicable permit.

## 2.5 Land Use Setting

The Project is located in northern San Diego County, primarily in the City of Escondido with a small portion located in unincorporated San Diego County (for the recycled water pipeline along Mountain View Drive and the tank site). The majority of the proposed recycled water pipeline and brine line occurs along the existing Escondido Creek Channel and extends through general industrial, light industrial, urban, general commercial, and planned commercial land uses. The western portion of the recycled water pipeline and pump station site are located within residential neighborhoods in the City. The storage tank site is located on an agricultural property on unincorporated County lands.

## 2.6 Responsible Agencies, Permits, and Approvals

**Table 2-4** (on the following page) summarizes the potential permits and/or approvals from other agencies that may be required prior to construction of the Proposed Project.

**Table 2-4: Responsible Agencies and Coordination**

Agency	Type of Approval
<b>FEDERAL</b>	
U.S. Fish and Wildlife Service	Federal Endangered Species Act Compliance ( <i>Potential</i> )
U. S. Army Corps of Engineers	Clean Water Act, Section 404, Nationwide Permit(s) ( <i>Potential</i> )
<b>STATE</b>	
California Department of Fish & Game (Region 3)	State Endangered Species Act Compliance ( <i>Potential</i> ) Section 1600 Streambed Alteration Agreement ( <i>Potential</i> )
San Diego Regional Water Quality Control Board (Region 9)	National Pollutant Discharge Elimination System, Construction General Permit (Order Nos. 2009-0009-DWQ and 2010-0014-DWQ) Discharges Of Hydrostatic Test Water And Potable Water To Surface Waters And Storm Drains Or Other Conveyance Systems Within The San Diego Region (Order No. R9-2010-003 (CAG679001)) ( <i>Potential</i> ) Groundwater Extraction And Similar Discharges To Surface Waters Within The San Diego Region Except For San Diego Bay (Order No. R9-2008-0002 (CAG919002)) ( <i>Potential</i> ) Clean Water Act, Section 401, Water Quality Certification ( <i>Potential</i> )
California Department of Transportation	Highway Encroachment Permit
State Historic Preservation Office	Section 106 National Historic Preservation Act Compliance ( <i>Potential</i> )
<b>LOCAL</b>	
City of Escondido	Approvals including Conditional Use Permit and Design Review ( <i>as required</i> ) Conditional Use Permit for Emergency Generator at Pump Station Roadway Encroachment Permit Construction Staging and Traffic Management Plan Construction Stormwater Pollution Prevention Plan <u>Flood Control Crossing Easement or Lease Agreement</u> <u>Flood Control Permit for Easement Acquisition</u>
County of San Diego	Minor or Major Use Permit for Storage Tank in A70 Zone Grading Exemption Approval for Storage Tank Site Roadway Encroachment Permit <del>Flood Control Crossing Easement or Lease Agreement</del> <del>Flood Control Permit for Easement Acquisition</del>
San Diego County Air Pollution Control District	Authority to Construct Authority to Operate
North County Transportation District	Roadway Encroachment Permit
Private property owner(s)	Easement, purchase, or lease agreement for tank site



## Section 3 Environmental Checklist

Using the CEQA Environmental Checklist Form as presented in Appendix G of the CEQA Guidelines (14 California Code of Regulations §15000 et seq.) as a framework, this section identifies the potential environmental impacts of the Proposed Project. Each environmental issue analyzed in this document provides brief background information and discussion of environmental setting or “affected environment” to help the reader understand the conditions present prior to the implementation of the Proposed Project. The effects of the Proposed Project are defined as changes to the environmental setting or “affected environment” attributable to individual project components or operations. The terms “effect” and “impact” are synonymous as used herein (40 Code of Federal Regulations 1508.8).

### Environmental Impact Designations

For this checklist, the following designations are used to distinguish between levels of significance of potential impacts to each resource area:

**Potentially Significant.** Adverse environmental consequences that have the potential to be significant according to the threshold criteria identified for the resource, even after mitigation strategies are applied and/or an adverse effect that could be significant and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared to meet the requirements of CEQA.

**Potentially Significant Unless Mitigation is Incorporated.** Adverse environmental consequences that have the potential to be significant, but can be reduced to less-than-significant levels through the application of identified mitigation strategies that have not already been incorporated into the Proposed Project.

**Less than Significant.** Potential adverse environmental consequences have been identified. However, they are not so adverse as to meet the significance threshold criteria for that resource. Therefore, no mitigation measures are required.

**No Impact.** No adverse environmental consequences have been identified for the resource or the consequences are negligible or undetectable. Therefore, no mitigation measures are required.

### Impact Mechanisms

Mechanisms that could cause impacts are discussed for each resource area. General categories of impact mechanisms are associated with construction activities required for the Proposed Project. If the Proposed Project is approved, site work could begin in September 2013. The environmental analysis focuses on baseline conditions at the time this draft MND was prepared (December 2012). The Proposed Project is expected to be built out over approximately 2 years.

## 3.1 Aesthetics

### Background

Hillsides and ridgelines provide a visual resource and aesthetic value to the City of Escondido that contributes to the community’s sense of identity. The City’s General Plan Resource Conservation Element identifies the steep slopes, primary and secondary ridgelines, and prominent natural landforms within the planning area (City of Escondido 2012). Much of the City’s planning area that contains steeper terrain at higher elevations has been designated for very low density residential and/or agricultural purposes to preserve viewsheds and habitats.

The proposed pipeline alignment is located within the Escondido Creek channel and roadway ROWs, none of which are identified as visual resources in the City's General Plan. The proposed tank site is located along a "skyline ridge" just below a designated "peak and high point" in the City's General Plan Resource Conservation Element, Figure VII-5. Policies in the City's General Plan Resource Conservation Element (Visual Resources 3.1-3.6) prohibit development on skyline ridges and seek preservation of unique landforms, creeks, and open space areas. Hillside development is directed to avoid potentially hazardous or environmentally sensitive areas, minimize grading, and maximize landscaping to minimize visual impacts (City of Escondido 2012).

None of the highways in the Study Area are designated as scenic highways in the California Scenic Highway Mapping System (Caltrans 2013).

### **Environmental Impacts**

- a*** ***Have a substantial adverse effect on a scenic vista?***
- b*** ***Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***
- c*** ***Substantially degrade the existing visual character or quality of the site and its surroundings?***

### ***Impacts a, b, c): Less than Significant with Mitigation Incorporated***

The Proposed Project components would not be located in or near designated State scenic highways. Thus, the Proposed Project would not have an adverse effect on scenic resources within a scenic highway.

The proposed pipelines would be located primarily along Escondido Creek channel and ROWs. Construction of the proposed pipelines would be visible from surrounding land uses and would temporarily alter the existing visual character and quality of the Study Area and vicinity, particularly where the proposed facilities are located within residential and commercial land uses. Specifically, the visual character in and around the proposed pipelines would be temporarily modified due to the presence of construction equipment and material, stockpiles of soil, and construction-related vehicles. The underground components would not be visible to the public once they have been installed. As such, the alteration of visual quality would be short term and intermittent (not permanent), and the proposed pipelines would not substantially degrade the existing visual character or quality of the sites and their surroundings.

Where above-ground facilities are proposed, the visual character would be permanently altered. Proposed above-ground structures include the pump station at approximately 16 feet high and the storage tank at approximately 36 feet high. The pump station site, visible from public roadways, would be located between the parking lot and ball fields at Mountain View Park. The pump station will be a one-story structure with a pitched roof, and would be designed to be consistent with the style, architecture, scale, and aesthetics of nearby buildings.

The location of the tank site on a hillside within unincorporated County land could potentially impact a broader scenic vista. However, because the proposed tank would be co-located with the existing Hogback Potable Reservoir (tank), the visual character of the scenic vista is already disturbed. In addition, because the proposed tank would be painted beige or brown, and would integrate visually with the existing tank in form and function, it would not change substantially the visual character of the site. With implementation of **Mitigation Measure AES-1**, the structure would be screened to further blend with the existing view and be compatible with existing aesthetics. Consistent with the County of San Diego's policies on the preservation of

ridgelines and hillsides (General Plan Goal COS-12), the tank would be positioned lower on the hillside than the ridgeline and would not be silhouetted against the sky.

Implementation of **Mitigation Measure AES-1** would ensure that the proposed facilities are screened and that they integrate visually with surrounding land uses. Thus, the construction of above-ground facilities would not substantially degrade the existing visual character or quality of the sites and their surroundings.

#### **Mitigation Measure AES-1: Vegetation Screening to Reduce Visual Impacts.**

The City shall plant vegetation around the proposed storage tank to provide screening if existing vegetation is deemed insufficient. Landscaping will include re-vegetation of disturbed areas to minimize contrasts with the existing vegetation and to screen facilities from surrounding neighborhoods. In addition, proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain.

#### ***d Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

#### ***Impact d): Less than Significant with Mitigation Incorporated***

Construction of the Proposed Project would occur primarily during the daytime hours, so there is no anticipated construction-related impact associated with light and glare.

Above-ground facilities (pump station and storage tank) constructed as part of the Proposed Project would contain lighting for security and maintenance purposes. Depending on the building materials and the orientation of the exterior lighting, a new source of light and glare may be created. Design of the proposed facilities would comply with the standards in the City of Escondido zoning code that regulate outdoor lighting. In addition, implementation of **Mitigation Measure AES-1** would ensure that the facilities are painted low-glare earth-tones that blend with the surrounding terrain. As such, light and glare impacts associated with the pump station would be less than significant with mitigation.

## **3.2 Agricultural and Forestry Resources**

### **Background**

In 1982, the State of California created the Farmland Mapping and Monitoring Program (FMMP) within the California Department of Conservation (DOC) to monitor the conversion of the state's farmland to and from agricultural use. Based on FMMP maps prepared by DOC for San Diego County, the Study Area is classified as "Urban and Built-Up Land" or as "Other," both of which are not considered Prime Farmland, Unique Farmland, Farmland of Local Importance, or Grazing Land (FMMP 2008).

The California Land Conservation Act (LCA) of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. According to maps prepared by the DOC's Division of Land Resource Protection in 2008, there are no Williamson Act contracted lands within the Study Area (DOC 2008).

The California Department of Forestry and Fire Protection (CDFFP) prepared maps in 2003 which classify land cover throughout the State into ten major forest or range-related classes, including Forest (Conifer), Woodland (Conifer), Forest (Hardwood), Woodland (Hardwood), Shrub (Desert), Woodland (Desert), Shrub, Herbaceous, Wetland, and Agricultural. The CDFFP also classifies land cover throughout the State into four non-forest and range classes including Urban, Barren/Other, Water, and Not Mapped. CDFFP mapping demonstrates the Study Area is

primarily designated as Urban, with small amounts of land classified as Agriculture, Shrub, and Herbaceous (CDFFP 2003). Urban, Agriculture, Shrub, and Herbaceous land cover types do not fall within the forestland designation; therefore, the Study Area does not contain forestland.

### **Environmental Impacts**

- a Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

#### ***Impact a): No Impact***

The San Diego County Important Farmland Map produced in 2008 by the California Department of Conservation demonstrates that the Study Area does not contain any lands mapped as “Prime Farmland,” “Unique Farmland,” “Farmland of Local Importance,” or “Grazing Land”. As such, the Proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency to non-agricultural use. No direct or indirect impacts would occur, and no mitigation is required.

- b Conflict with existing zoning for agricultural use, or a Williamson Act contract?***

#### ***Impact b): No Impact***

According to the California Department of Conservation, Division of Land Resource Protection, there are no Williamson Act Lands within the Study Area (DOC 2008). However, information from the City of Escondido’s General Plan Resource Conservation Element demonstrates that there are lands within the Study Area that are zoned for agriculture, and have a current agricultural designation (City of Escondido 2012).

Although there are lands within the Study Area zoned for agriculture, the main purpose of the Proposed Project is to extend the City of Escondido’s recycled water system to serve agricultural customers. This environmental analysis demonstrates that there will be no significant impacts throughout the Study Area, including on agricultural lands. As such, the Proposed Project would not conflict with existing zoning for agricultural use, because it would support agricultural uses through the provision of recycled water. No direct or indirect impacts would occur, and no mitigation is required.

- c Conflict with existing zoning of, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?***
- d Result in the loss of forest land or conversion of forest land to non-forest use?***
- e Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?***

#### ***Impact c, d, e): No Impact***

Mapping from CDFFP demonstrates that the Study Area does not contain forest land, and therefore does not support timber harvesting activities (CDFFP 2003). Neither the City of Escondido nor the County of San Diego, which have land use authority over the Study Area, have zoned portions of the Study Area as forest land, timberland, or timberland production. As such, the Proposed Project would not conflict with existing forest land or timberland-related zoning, and no mitigation is required.

While the Study Area contains agricultural lands, the Proposed Project would not convert Farmland to non-agricultural use or involve changes in the existing environment that would result in conversion of adjacent Farmland to non-agricultural use. Conversely, the Proposed Project would support agricultural use by providing recycled water to agricultural customers within the Study Area. Therefore, the Proposed Project would not result in the loss of forest land or agricultural land to other uses, and no mitigation is required.

### 3.3 Air Quality

#### Background

The Study Area lies within the San Diego Air Basin (SDAB), a 4,260-square-mile area that is contiguous with the political boundaries of San Diego County. The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. As a result, the westerly prevailing wind maintains clear skies for much of the year. In addition, SDAB experiences more days of sunlight than most urban areas, and the sunlight triggers production of ozone (O<sub>3</sub>), a criteria pollutant described in the following sections.

The San Diego County Air Pollution Control District (SDAPCD) is the local agency responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards for San Diego County. The SDAPCD regulates most air pollutant sources, except for motor vehicles, marine vessels, aircrafts, and construction equipment, which are regulated by the California Air Resources Board (CARB) or the U.S. Environmental Protection Agency (USEPA). State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD.

The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required USEPA to establish National Ambient Air Quality Standards (NAAQS), and CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) through the California CAA of 1988. Areas that do not meet the CAAQS for a particular pollutant are considered to be “non-attainment areas” for that pollutant. The SDAB is currently designated as an attainment area for carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), lead (Pb), and sulfur oxides (SO<sub>x</sub>), but is a non-attainment area for O<sub>3</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). However, the levels of the non-attainment pollutants have been improved in the last few years (San Diego County, 2012).

The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991 to provide control measures for the SDAB to achieve attainment status, and was most recently updated in April 2009 (SDAPCD, 2009). The SDAPCD has also developed the air basin’s input to the State Implementation Plan (SIP), which is required under the CAA for areas that are out of attainment of air quality standards.

The SDAPCD has established screening level thresholds which can be used to demonstrate that a project’s emissions would not result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project’s air quality impacts are below the CAAQS. The SDAPCD’s mass daily thresholds for criteria pollutants are presented in Table 3.3-1.

**Table 3.3-1: SDAPCD Air Quality Significance Thresholds (Mass Daily Thresholds)**

Pollutant	Construction	Operation
Volatile Organic Compound (VOC)	75 lbs/day	13.7 tons/year
Nitrogen Oxides (NO <sub>x</sub> )	55 lbs/day	40 tons/year
Sulfur Dioxide (SO <sub>2</sub> )	250 lbs/day	40 tons/year
Carbon Monoxide (CO)	550 lbs/day	100 tons/year
Particulate Matter <10 micron (PM <sub>10</sub> )	100 lbs/day	15 tons/year
Particulate Matter <2.5 micron (PM <sub>2.5</sub> )	55 lbs/day	10 tons/year

**Environmental Impacts**

The Roadway Construction Emissions Model (Version 7.1.2, 2012) and CARB Urban Emissions Model (URBEMIS) (Version 9.2.4, 2007) were used to quantify construction and operational emissions associated with proposed conveyance pipelines, storage tanks, and pump stations associated with the Proposed Project. For the purposes of this analysis, the estimated acreage that the Proposed Project facilities could cover is 20 acres. Consistent with the URBEMIS User’s Guide, it was assumed that 25% of the total acres disturbed for each construction phase would represent the maximum daily acres disturbed. For operations, it was assumed that pumping would be required, but would be run via the electrical grid. Note that the construction equipment would likely require portable equipment registrations. Although the Proposed Project includes the use of diesel equipment during the construction phase, it does not include substantial queuing or congregation of diesel-powered vehicles. As a result, the Proposed Project is not anticipated to emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

Emissions calculated for the Proposed Project were compared to SDAPCD’s mass daily thresholds for construction and operational activities for VOC, NO<sub>x</sub>, SO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> (refer to Table 3.3.-1). Table 3.3-2 provides a summary of the maximum daily air emissions that would be generated from construction and operation of the Proposed Project. **Appendix A** includes the summary output tables from the Roadway Construction Emissions Model and the CARB Urban Emissions model for the Proposed Project.

**Table 3.3-2: Maximum Daily Air Emissions Generated for Proposed Project**

<b>Maximum Daily Construction Emission (pounds/day)</b>						
<b>Proposed Project Component</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Storage Tank	2.99	26.37	14.00	0.01	3.28	1.55
Pump Station	2.60	20.90	12.08	0.00	1.57	1.04
Recycled Water Pipeline and Brine Line <sup>1</sup>	7.4	63.50	30.7	0.00	4.1	3.0
Total	12.99	110.77	56.78	0.01	8.95	5.59
SDAPCD Thresholds <sup>2</sup>	75	55	550	250	100	55
<i>Significant Construction Emissions<sup>1</sup></i>	NO	YES	NO	NO	NO	NO
<b>Annual Operation Emission (tons/year)</b>						
<b>Proposed Project Component</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Storage Tank	0.00	0.00	0.02	0.00	0.00	0.00
Pump Station	0.01	0.02	0.13	0.00	0.03	0.00
Recycled Water Pipeline and Brine Line	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.02	0.15	0.00	0.03	0.00
SDAPCD Thresholds <sup>2</sup>	13.7	40	100	40	15	10
<i>Significant Operational Emissions<sup>1</sup></i>	NO	NO	NO	NO	NO	NO

1. The Roadway Construction Emissions Model was used for estimating construction emissions from the proposed recycled water pipeline
2. Thresholds are based on SDAPCD Guidelines (SDAPCD 2007)

**a Conflict with or obstruct implementation of the applicable air quality plan?**

**Impact a): Less than Significant**

Approximately every three years, SDAPCD updates its RAQS for air quality improvement to be submitted for inclusion in the SIP. The 2009 RAQS was adopted by the SDAPCD on April 22, 2009 (SDAPCD 2009). The 2012 RAQS has not yet been adopted and thus was not considered as part of this analysis. The RAQS focuses on control measures designed to attain the CAAQS for ozone, and addresses reduction measures for volatile organic compounds and nitrogen oxides, which are precursors to ozone. The SIP also provides plans for attaining and maintaining the NAAQS standard for ozone. Together, the 2009 RAQS and the SIP are the applicable air quality plans to the SDAB, and therefore are the applicable air quality plans to the Proposed Project.

The Proposed Project would be consistent with projections introduced in the County of San Diego's General Plan Update and the City of Escondido General Plan, since it would not directly or indirectly induce population growth, but only implement recycled water infrastructure for agricultural and other recycled water users. As the air quality emissions projections and control measures provided in the RAQS are based on population projections included in local general planning documents, the Proposed Project would be consistent with emissions forecasts included in the 2009 RAQS. Project-related emissions associated with the Proposed Project are accounted for in the RAQS, and the Proposed Project would therefore not be in conflict with the 2009 RAQS.

In addition, SIPs are promulgated based on build-out projections according to local general planning documents such as the County of San Diego's General Plan Update. As the Proposed Project would not induce population growth or conflict with local planning documents, the Proposed Project would not conflict or obstruct with implementation of the SIP. Impacts are considered less than significant, and no mitigation is required.

**b Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Impact b): Less than Significant**

As shown in Table 3.3-2, construction and operation of the Proposed Project would not violate any SDAPCD thresholds pertaining to VOCs, CO, SO<sub>2</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>. Construction of the brineline and pipeline would result in 64 pounds per day of NO<sub>x</sub> emissions, which exceeds the City's threshold of 55 pounds per day. However, given the temporary nature of these emissions and the fact that the pipeline alignments would be constructed in segments, these emissions would not significantly violate the City's NO<sub>x</sub> air quality standard.

Construction and operation of the Proposed Project would not have the potential to violate relevant air quality standards or contribute substantially to an existing or projected air quality violation. Impacts are considered less than significant, and no mitigation is required.

**c Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Impact c): Less than Significant**

The SDAB is currently designated as a non-attainment area for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. NO<sub>x</sub>, an ozone precursor, has a significance threshold of 55 lbs/day for construction emissions and 40 tons/year for operational emissions (refer to Table 3.3-1). The Proposed Project would emit approximately 26 lbs/day of NO<sub>x</sub> emissions during construction of the storage tank, 21 lbs/day during construction of the pump station, and 64 lbs/day during construction of the recycled water pipeline and brineline, and approximately 0.02 tons/year NO<sub>x</sub> emissions during operation. Therefore, the Proposed Project would meet the NO<sub>x</sub> threshold established for the SDAB on an operational basis. During construction, emissions associated with the brineline and pipeline portion of the Proposed Project are anticipated to exceed the significance threshold for NO<sub>x</sub>. However, these emissions would be temporary and would not be anticipated to occur at once since construction of these facilities will take place over approximately 26 months. As such, the Proposed Project would not result in a cumulatively considerable net increase of the criteria pollutant O<sub>3</sub> for which the Study Area is in non-attainment.

Similarly, the maximum daily emission levels for particulate matter that would result from construction and operation of the Proposed Project are well below the significant thresholds established for these pollutants for the SDAB (refer to Table 3.3-2). In this context, the Proposed Project would not result in a cumulatively considerable net increase of any criteria air pollutants for which the SDAB is in non-attainment. Impacts are considered less than significant and no mitigation is required.

**d Expose sensitive receptors to substantial pollutant concentrations?**

**Impact d): Less than Significant**

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Some population groups, such as children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than others. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units.

Based on review of the alignments and facility locations, the Proposed Project is located within 0.25 miles of multiple residences, schools, and potentially other sensitive receptors. The

Proposed Project would not emit hazardous air pollutants in significant quantities other than from large, heavy-duty diesel-powered equipment exhaust, which is known to contain PM<sub>10</sub>. Construction of the proposed facilities and pipelines would be limited in duration and, therefore, no long-term chronic impact associated with PM<sub>10</sub> emissions would occur. In addition, these emissions would be distributed throughout portions of the City of Escondido and would not cause localized impacts to sensitive receptors. Over the longer term, the pumping facilities would operate year-round (24-hours a day, seven days a week), but would not emit localized emissions, because power would be supplied by electricity. Any backup generators anticipated for the Proposed Project would either be electric or operate on a short-term emergency basis, and therefore would not contribute substantial emissions.

Since the Proposed Project includes construction near residential neighborhoods and other sensitive receptors, the Proposed Project could potentially expose sensitive receptors to PM<sub>10</sub> and NO<sub>x</sub> emissions. However, as described previously, the Proposed Project would not generate long-term significant emissions of PM<sub>10</sub> or NO<sub>x</sub>. Potential impacts to sensitive receptors would be less than significant, and no mitigation is required.

**e Create objectionable odors affecting a substantial number of people?**

**Impact e): Less than Significant**

Odors can be emitted during construction activities, and sources that may emit construction-related odors generally include architectural coatings, solvents, and diesel powered on- and off-road equipment. Odors may be emitted during operational activities if diesel-powered equipment is used. Further, volatile organic compounds, while diverse in nature, are known to be odorous compounds.

Due to the nature of the construction activities and the relatively small footprint of the various construction sites for the Proposed Project, there would be few pieces of diesel-powered equipment operating simultaneously during construction of the Proposed Project. Further, operations would not be anticipated to require the use of diesel-powered equipment, except for the use of gas-powered generators during short-term emergency situations.

The Proposed Project would not require a substantial amount of diesel-powered equipment to operate simultaneously during construction or operation. Further, as demonstrated within Table 3.3-2, VOC emissions associated with operation and construction of the Proposed Project would be well below SDAPCD emissions thresholds. As a result, construction of the Proposed Project would create a less than significant impact with respect to objectionable odors, and no mitigation is required.

## **3.4 Biological Resources**

### **Background**

The majority of the Study Area is located within urbanized areas and consists of paved developed areas within the City of Escondido. The eastern end of the Study Area, including where the proposed recycled water storage tank would be located, is outside of the City of Escondido in an unincorporated portion of San Diego County consisting predominantly of landscaped areas and citrus and avocado orchards. The portions of the Study Area located in unincorporated San Diego County land, totaling 9.6 acres, fall within the Metro-Lakeside-Jamul Segment of the South County Subarea, an adopted subarea plan of the San Diego County Multiple Species Conservation Plan (MSCP). The MSCP is a comprehensive, long-term Habitat Conservation Plan developed to provide conservation for multiple species and preserve natural vegetation communities in San Diego County. The MSCP is a subregional plan under the

Natural Community Conservation Planning (NCCP) Act of 1991, and is implemented through local subarea plans. The portion of the Study Area in the City of Escondido, totaling 99.5 acres, falls within the Eastern Habitat Area of the Draft Escondido Subarea Plan, an MSCP subarea plan that describes the City of Escondido’s proposed measures to conserve natural biotic communities and sensitive plant and wildlife species if the plan is adopted. This area includes the proposed recycled water pump station and the majority of the proposed recycled water pipeline and brine line alignments. Figure 3.4-1 shows the City of Escondido limits and the South County MSCP boundaries. The majority of the Study Area is located within the City of Escondido along the maintained concrete Escondido Flood Control Channel within a developed urban setting that contains no remaining native plant communities. There are two components of the Study Area that have some degree of natural or semi-naturalized plant communities, including the area surrounding the proposed recycled water storage tank, which supports orchards and undeveloped open space, and the area surrounding the proposed recycled water pump station, which is a landscaped urban park. Table 3.4-1 summarizes the acreage of the plant communities included within the Proposed Project Study Area. Table 3.4-1 also indicates the acreage of each given plant community with relation to the MSCP South County Subarea and the MSCP Draft Escondido Subarea.

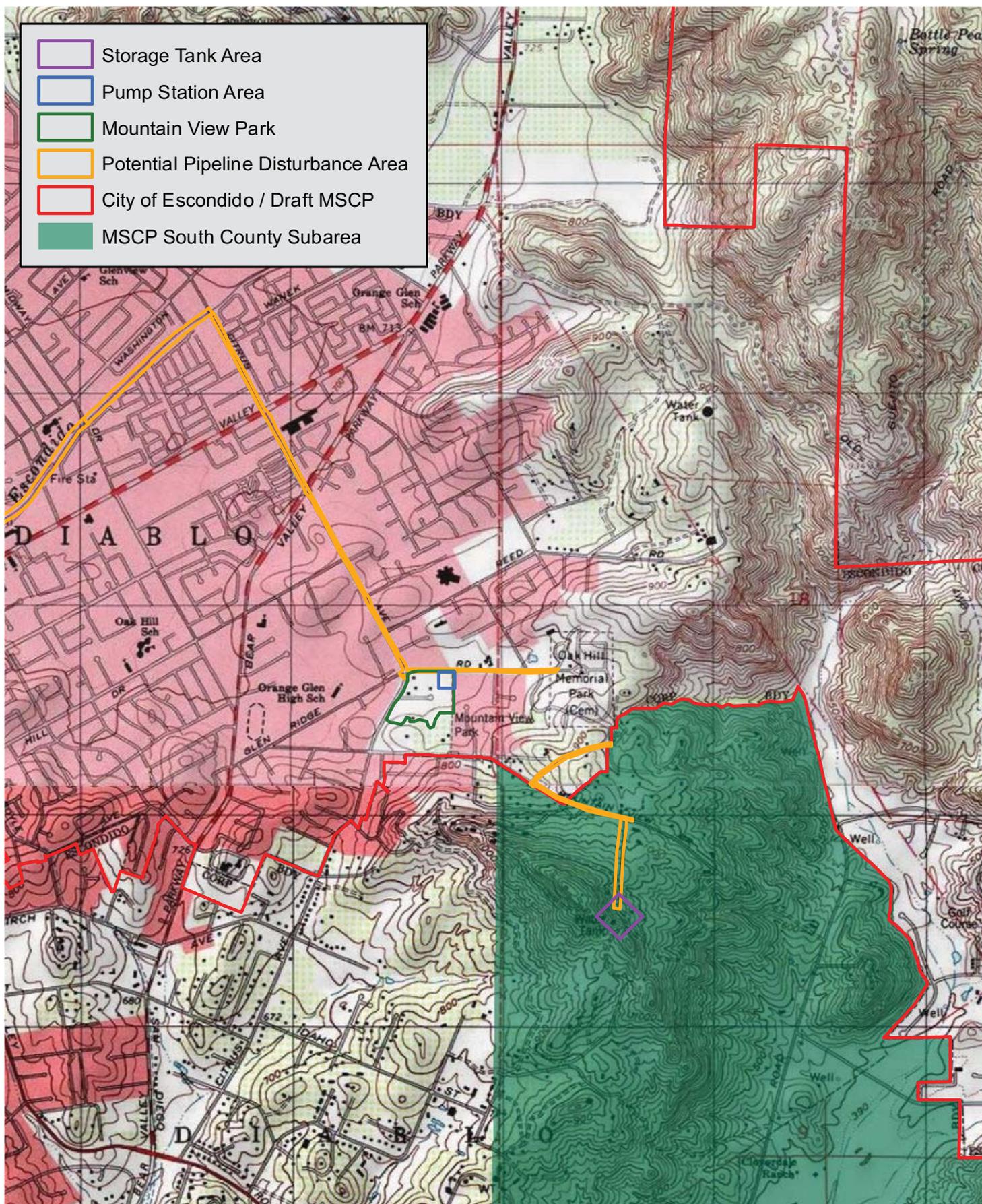
**Table 3.4-1: Plant Community Acreage within the Proposed Project Study Area**

Plant Community	Acreage in MSCP South County Subarea	Acreage in MSCP Draft Escondido Subarea	Total Acreage
Developed	1.4	84.8	86.2
Diegan Coastal Sage Scrub	0.7	0	0.7
Rock Outcrop	0.5	0	0.5
Landscaped	1.2	12.0	13.2
Disturbed/Landscaped	1.8	0	1.8
Disturbed	0.3	0	0.3
Orchards and Vineyards	3.7	0	3.7
Disturbed Orchards and Vineyards	0	2.7	2.7
<b>Total</b>	<b>9.6</b>	<b>99.5</b>	<b>109.1</b>

*Plant Species*

The plant communities found within the Study Area and summarized in Table 3.4-1 are composed of numerous plant species. General plant species observations were completed during a 2012 survey of the Study Area. Plant species that were observed within the Study Area are indicated in **Appendix B**.

**Figure 3.4-1**



**City of Escondido and MSCP Subareas Boundaries**

Source: USGS Topographic Series (Valley Center, Escondido, CA); PCR Services Corporation, 2012.

RMC Escondido

Several sensitive plant species were reported in the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) Online Inventory for the applicable quadrangles within which the Study Area is located. Plant species identified from the database searches as occurring in the vicinity of the Study Area were considered sensitive if they were listed with a CNPS California Rare Plant Rank (CRPR) of 2 or less, and/or if they were federally or state listed as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA). Three identified species unique to the MSCP South County Subarea Plan were also given consideration. All sensitive plant species meeting these criteria are listed in **Appendix B**, and were considered during the field survey to determine the presence of any potentially suitable habitat. Species unique to the Draft Escondido Subarea Plan were not considered since the portion of the Study Area within this Plan is developed. No sensitive plant species were observed during the general field survey, and no focused sensitive plant surveys were conducted.

While a tree survey was not completed for the Proposed Project, many large planted native and non-native trees were observed during the field survey. On the site of the proposed recycled water pump station in Mountain View Park several large trees were seen and at the proposed recycled water storage tank site two coast live oaks (*Quercus agrifolia*) were observed. Additionally, trees were observed within the rights-of-way in many places along the proposed recycled water pipeline and brine line alignments.

#### *Wildlife Species*

Representative wildlife species typical of urban settings and the vegetation communities listed in Table 3.4-1 that were either observed during the field survey, or whose presence was inferred by signs such as droppings or sounds, included the northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), western scrub-jay (*Aphelocoma californica*), black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and pocket gopher (*Thomomys* sp.). All wildlife species observed within the Study Area are included in **Appendix B**.

Several sensitive wildlife species were reported in the CNDDDB and United States Fish and Wildlife Service (USFWS) database for the applicable quadrangles within which the Study Area is located. Wildlife species identified from the database searches as occurring in the vicinity of the Study Area were considered sensitive if they were listed as federally or state endangered or threatened under the FESA or CESA, candidates for listing by the USFWS or California Department of Fish and Game (CDFG), and species of special concern. Eight identified species unique to the MSCP South County Subarea were also given consideration. All sensitive wildlife species meeting these criteria are listed in **Appendix B**, and were considered during the field survey to determine the presence of any potentially suitable habitat. Species unique to the Draft Escondido Subarea Plan were not considered since the portion of the Study Area within this Plan is developed.

Based on the general field survey, the portion of the Study Area located within the Eastern Habitat Area of the Draft City of Escondido Subarea Plan is entirely developed and does not support potentially suitable habitat for any sensitive wildlife species. This includes the majority of the proposed recycled water pipeline and brine line alignments and the Mountain View Memorial Park within which the proposed recycled water pump station would be located. The only intact natural habitat capable of supporting sensitive wildlife species found in the Study Area exists in the Diegan Coastal Sage Scrub habitat located in proximity to the proposed recycled water storage tank, within the MSCP South County Subarea Plan. Specifically, this area supports potentially suitable habitat for the following sensitive wildlife species: coastal California gnatcatcher, coast horned lizard, and the coastal cactus wren. With regard to the

coastal cactus wren, potentially suitable foraging habitat occurs within the Study Area, but the species is not expected to nest on-site due to the absence of cactus, the only plant in which the bird builds its nest. In addition to these species, all migratory nesting birds are afforded protection under the federal Migratory Bird Treaty Act (MBTA) and by the CDFG. The Study Area has the potential to support migratory bird species, including both raptor and songbirds, due to the presence of many trees in the developed and landscaped roads and communities.

#### *Wildlife Movement*

Wildlife movement activities usually fall into one of three categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species-specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a “local” level to many square mile home ranges of large mammals moving at a “regional” level.

Wildlife movement on a smaller or local scale likely occurs throughout the Study Area and the surrounding vicinity. The majority of the Study Area is developed and therefore provides limited habitat for wildlife adapted to urban settings in the ornamental trees planted within residential areas and parks, the citrus and avocado trees in the orchards, and along streets. Native scrub in areas surrounding the proposed recycled water storage tank site provides live-in and foraging habitat for a variety of wildlife species as does, to a limited extent, the disturbed areas found throughout the Study Area where weedy, opportunistic plant species briefly establish and provide some foraging and cover for wildlife.

From a regional perspective, the Study Area itself is not considered a wildlife corridor. The concrete-lined Escondido Flood Control Channel within the Study Area is maintained and primarily unvegetated, and does not offer the protection of cover for wildlife movement. As such, regional wildlife movement through the channel is not expected. The Study Area is primarily located within an urban, developed environment characterized by high levels of human activities that would deter wildlife from utilizing these areas for movement. Within the natural communities near the proposed recycled water storage tank site, although there is potential for wildlife to utilize these areas, regional wildlife movement would likely be limited due to the existing disturbance and development, and due to the lack of large patches of habitat within the area. Thus, the Study Area is not considered a wildlife corridor. In addition, the Study Area is not within any linkage areas identified by the MSCP South County Subarea Plan. The closest South Coast Missing Linkages as described by the South Coast Wildlands is the Santa Ana – Palomar Connection, which is approximately 10 miles north.

#### *Potentially Jurisdictional Areas*

Based on field reconnaissance and a review of aerial photography, three drainage features were observed within the Study Area that would be potentially regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFG. These features include the Escondido Flood Control Channel and two tributaries: Reidy Creek and an unnamed branch. The Escondido Flood Control Channel, which ultimately drains to the ocean, has sloping cement walls and several inches of water year-round. The channel is maintained by the City of Escondido and any vegetation, which is primarily non-native, is kept to a minimum. The proposed recycled water pipeline and brine line alignments would occur adjacent to the Escondido Flood Control Channel in existing access roads outside the banks of the channel. One overhead crossing of the channel is proposed utilizing the existing Citrus

Avenue Bridge. Reidy Creek, a flood control channel near Tulip Street, and the unnamed branch, also a flood control channel, near Auto Park Way, are both tributary branch channels entering the Escondido Flood Control Channel from the north and would be crossed by the proposed recycled water pipeline alignment. Both channels are similar to the Escondido Flood Control Channel in being concrete lined, with limited vegetation, and are maintained by the City of Escondido. Unlike the crossing at Citrus Avenue, there are no existing structures bridging these two channels that might be utilized. As such, the proposed pipeline crossings would be constructed by either trenchless or open-cut methods.

Based on the general field survey conducted for the Proposed Project, it was determined that the Study Area does not support potential federally-protected wetlands as defined by Section 404 of the Clean Water Act (CWA).

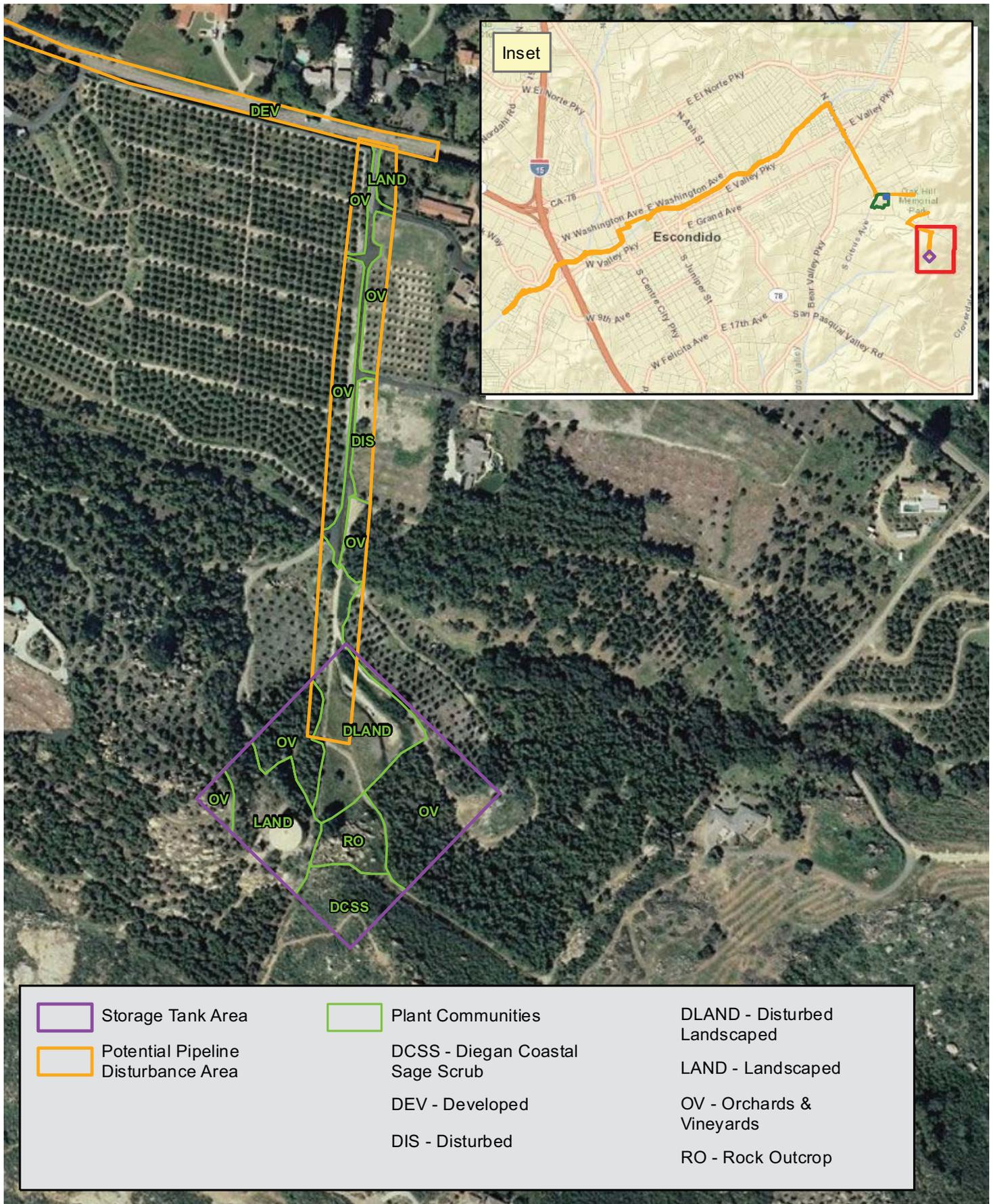
### **Environmental Impacts**

- 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?***

#### ***Impact a): No Impact***

Only one portion of the Study Area is within proximity to a natural plant community that could provide potentially suitable habitat for a sensitive species. Specifically, Diegan Coastal Sage Scrub, which provides suitable habitat for coastal California gnatcatcher, a federally-threatened bird species and a California Species of Special Concern, was mapped within proximity to the proposed recycled water storage tank area (see Figure 3.4-2). The Diegan Coastal Sage Scrub habitat mapped within this area is not located within the footprint of the proposed recycled water storage tank, and is more than 100 feet from the proposed temporary construction limits. Further, the portion of the Diegan Coastal Sage Scrub habitat closest to the proposed construction zone is low-quality with a relatively high number of non-native plants, many large rocks, and few individuals of plant species characteristic of the Diegan Coastal Sage Scrub habitat. Due to the distance between the Study Area and the mapped Diegan Coastal Sage Scrub habitat and the poor quality of the habitat, the Proposed Project would not directly impact potentially suitable habitat for coastal California gnatcatcher or any potential coastal California gnatcatcher nests.

**Figure 3.4-2**



However, due to the proximity of proposed construction limits to the Diegan Coastal Sage Scrub habitat, this analysis considered the potential for indirect impacts to occur as a result of construction noise and vibration. The Diegan Coastal Sage Scrub habitat is separated from the Study Area for the Proposed Project by both the outward curvature of the hillside and a rock outcropping located within the proposed recycled water storage tank site (refer to Figure 3.4-2). The boundary of the proposed recycled water storage tank follows a steeply inclined ridgeline on the side of a rounded hilltop, which isolates the proposed recycled water storage tank site from the Diegan Coastal Sage Scrub habitat both visually and acoustically. This topography is anticipated to provide a natural noise buffer between the proposed recycled water storage tank site and the Diegan Coastal Sage Scrub habitat, because construction sounds would be directed upwards above the height at which the birds normally nest and fly, approximately 8 feet from the ground. Additionally, the rock outcropping and the bedrock below ground are expected to dampen vibrations that might otherwise have an effect on any present coastal California gnatcatchers. Based on the noise and vibration buffers provided by the on-site topography and geology of the proposed recycled water storage tank site, no indirect impacts to coastal California gnatcatcher are anticipated. No other sensitive or listed plant or wildlife species would be directly or indirectly impacted by the Proposed Project based on the avoidance of the Diegan Coastal Sage Scrub and the absence of other suitable habitat. No impacts would occur, and no mitigation is required.

- b 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?***

***Impact b): No Impact***

Diegan Coastal Sage Scrub, a plant community targeted for protection by the MSCP South County Subarea Plan due to its potential to provide suitable habitat for a variety of sensitive species, exists within the Study Area. However, this community would not be directly impacted by the permanent or temporary construction footprint of the Proposed Project. Diegan Coastal Sage Scrub only occurs within a small portion of the Study Area, within proximity to the proposed recycled water storage tank site. This habitat is located more than 100-feet from the edge of the temporary construction limits of the proposed recycled water storage tank, and would be visually and acoustically isolated from the proposed recycled water storage tank due to the on-site topography and geology of the proposed recycled water storage tank site. As such, neither intentional nor inadvertent removal of Diegan Coastal Sage Scrub would occur during construction or operation of the Proposed Project.

The Study Area does not support any other sensitive natural communities or riparian habitat besides Diegan Coastal Sage Scrub. As the Proposed Project would not directly or indirectly impact Diegan Coastal Sage Scrub, the Proposed Project would not have an 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. No impacts would occur and no mitigation is required.

- 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?**

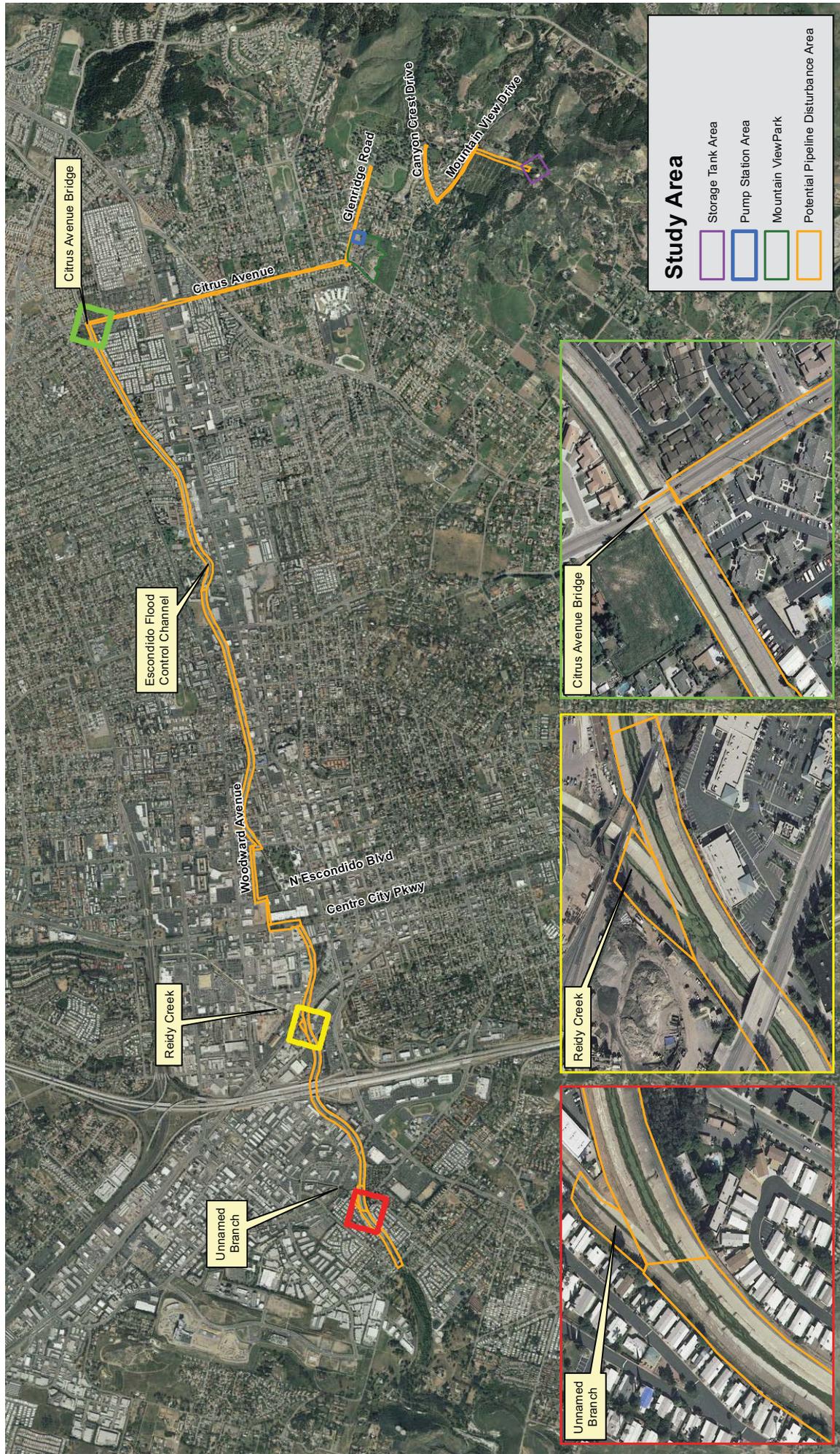
***Impact c): Less than Significant with Mitigation Incorporated***

Based on the general field survey conducted for the Proposed Project, the Study Area does not support potential federally-protected wetlands as defined by Section 404 of the CWA; therefore, no impacts to federally-protected wetlands are expected.

However, the Study Area does support three potentially jurisdictional non-wetland drainage features regulated by USACE under Section 404 of the CWA, in addition to Section 401 of the CWA regulated by the RWQCB and Section 1602 of the California Fish and Game Code regulated by CDFG. The Proposed Project would cross these drainage features at three locations, including the Escondido Flood Control Channel at North Citrus Avenue, the Reidy Creek tributary near Tulip Street, and the unnamed branch tributary near Auto Park Way (see Figure 3.4-3). If feasible, the pipeline crossing of the Escondido Flood Control Channel is proposed to be constructed overhead by attaching the pipeline to the southwest (downstream) side of an existing bridge in a manner similar to an existing 10-inch water main that is attached to the northeast (upstream) side. If the overhead crossing is implemented, no impact would be expected to the Escondido Flood Control Channel.

No existing bridges occur at the proposed Reidy Creek and unnamed branch crossings. Therefore, the proposed crossings at these locations would occur by either a trenchless method or by an open-cut method. Any impacts to these drainage features would be considered potentially significant without permitting and/or mitigation. Therefore, prior to any ground disturbing activities within any channel, a formal jurisdictional delineation of the drainage features would be required to determine the limits of jurisdictional waters within the Study Area. If a trenchless method is implemented, the proposed crossings would be outside of USACE and RWQCB jurisdiction. However, CDFG does consider trenchless crossings to be within their jurisdiction and would require a Streambed Alteration Agreement because of the slight potential for indirect impacts as a result of “frac-out” (uncontrolled release of drilling fluids into the environment). Therefore, as a contingency measure, **Mitigation Measure BIO-1** would be implemented to ensure any potential indirect impacts to jurisdictional features are minimized. With implementation of this mitigation measure, potential impacts would be reduced to less than significant levels.

Figure 3.4-3



**Study Area Drainages**

RMC Escondido  
 Source: Aerial Express, 2009; PCR Services Corporation, 2012.

0 2,000 4,000 Feet

PCR

If the open-cut method is implemented and the drainage features are determined to be jurisdictional, permits would be required from the applicable regulatory agencies, including a CWA Section 404 permit from the USACE, a CWA Section 401 permit from the RWQCB, and/or a Streambed Alteration Agreement permit under Section 1602 of the California Fish and Game Code from the CDFG. Impacts from the open-cut method would involve trenching the drainage to install the pipe below grade, and backfilling the trench once installation is complete. As such, impacts would be temporary and the drainage would be restored to pre-project conditions after construction is complete in accordance with all requirements set forth by the applicable regulatory agencies. Since the drainages currently consist of concrete features that lack habitat, no temporal loss would occur during pipe installation. Further, because the open-cut method crossings would require the City of Escondido to secure applicable regulatory permits, all activities related to the open-cut crossings would be required to include restoration of temporary impact areas to pre-project conditions and mitigation of any permanent impacts to satisfy the compensatory mitigation requirements pursuant to the applicable regulatory permitting processes, subject to approval by the agencies. Through compliance with existing regulations established by applicable regulatory agencies, impacts would be less than significant, and no additional mitigation would be required.

**Mitigation Measure BIO-1: Prepare a Frac-out Emergency Plan.**

Prior to any ground disturbing activities, CDFG shall be notified of the Proposed Project and the proposed implementation of jack-and-bore or horizontal directional drilling methods. An emergency plan for potential frac-out release shall be prepared by the contractor (or project engineer) for submittal to CDFG, and shall include measures to avoid/contain pollutants in case of a frac-out release and avoid indirect impacts to jurisdictional areas.

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

***Impact d): Less than Significant with Mitigation Incorporated***

Based on the general field survey and analysis conducted for the Proposed Project, the Study Area was determined not to function as a regional wildlife corridor for any species, and no wildlife nursery sites were identified within the Study Area. However, the ornamental trees and shrubs within the Study Area associated with the proposed recycled water pipeline and brine line support potential nesting habitat for migratory songbirds and raptors. Disturbing or destroying active nests of migratory birds is a violation of the MBTA. In addition, nests and eggs are protected under Fish and Game Code Section 3503. Nesting activities typically occur from February 15 to August 31 for songbirds, and January 15 to August 31 for raptors. To avoid impacts to nesting migratory birds, construction activities should be conducted outside of the nesting season, if feasible. However, if construction activities must occur during the nesting season, the removal of vegetation during the breeding season is considered a potentially significant impact without mitigation. **Mitigation Measure BIO-2** would be implemented to ensure impacts to nesting songbirds and raptors are avoided. With the implementation of this mitigation measure, potential impacts would be reduced to a less-than-significant level.

**Mitigation Measure BIO-2: Avoid Migratory Bird Nesting Season or Complete Surveys Before Construction Activities.**

Removal of suitable vegetation for migratory birds shall occur outside the nesting season (i.e., September 1 through January 14) to avoid potential impacts to nesting birds, if feasible. If vegetation removal is required during the nesting season, a qualified biologist shall survey all suitable habitats for the presence of nesting birds before commencement

of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) around the nest shall be delineated, flagged, and avoided until the nesting cycle is complete, or as determined appropriate by the biologist. Biological monitoring shall also occur until the nesting cycle is complete.

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

***Impact e): Less than Significant***

The City of Escondido General Plan “recognizes oak trees and other mature trees as significantly aesthetic and ecological resources”, and requires permits when certain trees are to be removed within the City’s boundaries (City of Escondido 2012). Covered trees are described in the City’s Municipal Code. Based on the general field survey conducted for the Proposed Project, the Study Area supports many trees that may be covered by the City’s Municipal Code, including those located along the proposed recycled water pipeline and brine alignments adjacent to the Escondido Flood Control Channel, and those within proximity to the proposed recycled water pump station located within Mountain View Park. The removal of some trees within the Study Area may be unavoidable during construction of the proposed recycled water pipeline and brine line located along streets and adjacent to the Escondido Flood Control Channel or the proposed recycled water pump station located within Mountain View Park. It should be noted at the outset that a provision in the ordinance [Escondido Municipal Code Section 33-1068.B. (b) (6)] addressing restrictions on the removal of trees indicates that when a project is part of the City of Escondido Capital Improvement Program (CIP), within which the Proposed Project is included, the City may determine whether applicable Municipal Code provisions apply. Based on the Proposed Project’s status as a CIP Project, provisions relating to tree removal may not apply. If the City of Escondido requires the Proposed Project to comply with the permit process based on the Municipal Code, the following discussion would apply.

The City’s Vegetation Protection and Replacement Standards Ordinances define certain sensitive tree types and describe mitigation measures to be employed should their removal be unavoidable. A mature tree is defined as any tree, either native or non-native, with a trunk diameter of 8 inches or greater at breast height, generally measured 4.5 feet above the ground. A mature oak is defined as any oak (genus *Quercus*) specimen with a diameter at breast height (DBH) of 4 inches or greater. A protected tree is any oak tree with a DBH of 10 inches or greater or any tree listed on the local historic register, or determined to contribute substantially to the historic character of a property or structure listed on the local historic register.

Applications for tree removal permits are described in Escondido Municipal Code Section 33-1068.C, and require submittal of information including a site plan, photographs, statements of justification for the actions, and a tree survey. The tree survey should describe the trees, whether the trees would be removed or relocated, with the plans for methods of relocation and subsequent maintenance. Provisions in the Municipal Code also require an erosion control plan and a biological report addressing sensitive species and habitat. However, these would not likely be required for the Proposed Project based on the lack of gradient or sensitive biological resources in the Study Area within City limits. If approved, the permit is valid for a period of six months from the date of issuance. Requests for extensions must be submitted prior to the expiration of the current period, and may be granted for periods not exceeding six months. If a grading or any other permit is issued, then a tree removal permit would not be required.

Several trees are located within portions of the Study Area that are located within the County of San Diego’s jurisdiction, and are therefore located within the MSCP South County Subarea Plan. Most notably, two coast live oak trees in the County of San Diego’s jurisdiction may be disturbed during construction of the proposed recycled water storage tank. The MSCP South

County Subarea Plan does not protect individual coast live oak trees as the City ordinances do, rather it addresses plant communities, such as oak woodland, or collections of larger numbers of trees that are associated with a variety of understory plants and other characteristics not found at the proposed recycled water storage tank site. Nevertheless, an effort would be made to avoid removing on-site coast live oak trees if feasible. Any trees removed as part of this Proposed Project would be required to be replaced (where feasible), including street trees.

No other local ordinances or policies protecting biological resources exist. Therefore, through compliance with the City of Escondido tree ordinance, if required, impacts to local ordinances or policies would be considered less than significant and no mitigation is required.

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

**Impact f): No Impact**

The Proposed Project is located within two MSCP Subareas: the adopted MSCP South County Subarea Plan and the Draft Escondido Subarea Plan. No sensitive species or habitats occur within the portion of the Study Area in the Draft Escondido Subarea Plan, and the sensitive natural community within the MSCP South County Subarea Plan portion of the Study Area would be avoided. In addition, the Proposed Project would be required to comply with existing regulations and permitting requirements, such as those pertaining to jurisdictional drainages. As such, the Proposed Project does not conflict with any provisions of the MSCP plans. No impacts would occur and no mitigation is required.

## 3.5 Cultural Resources

### Background

A cultural resources investigation of the Study Area was conducted to determine the potential impacts to archaeological, historical, and paleontological resources for the purpose of complying with CEQA and the local cultural resource regulations (PCR Services Corporation 2013). The investigation included a cultural resources records search through the California Historical Resources Information System-South Coastal Information Center (CHRIS-SCIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation, property history research, a paleontological resources records search through the San Diego Natural History Museum (SDNHM), a pedestrian survey, and an evaluation of eligibility for the resources identified within the Study Area. An overview of this investigation as it pertains to historical resources, archaeological resources, and paleontological resources is provided below. **Appendix C** to this document includes the complete cultural resources investigation completed for the Proposed Project.

#### *Historical Resources*

The cultural resources records search results from the CHRIS-SCIC revealed that one historical resource pursuant to CEQA (P-37-018732) is located immediately adjacent to the Study Area where the proposed recycled water pump station and recycled water pipeline would be constructed. P-37-018721 is a Victorian-style, one-story farmhouse, and is described as being constructed circa 1900 and having a U-shaped floor plan. The resource was assigned a California Historical Resource Status Code of 3D, "appears eligible for the National Register as a contributor to a National Register-eligible district through survey evaluation." The resource is also recognized by the City of Escondido as individually significant and listed on the local register. P-37-018721 is located in close proximity to the proposed recycled water pipeline

alignment and the proposed recycled water pump station in Mountain View Park. The construction of the proposed recycled water pump station would occur in the paved parking lot located in the far north east corner of Mountain View Park, while P-37-018732 is located in the north west corner of Mountain View Park.

The Citrus Avenue Bridge is located within the Study Area and runs along Citrus Avenue (Bridge Number 57C0456). This bridge was constructed in 1971 and was evaluated by the California Department of Transportation (Caltrans) in 2012, at which time it was determined to be ineligible for National Register listing (Caltrans 2012). Because the bridge was constructed in 1971, it does not meet the 45-year age guideline of the California Register or the 50-year age requirement of the National Register.

The concrete Escondido Creek Flood Control Channel (Escondido Creek channel) was constructed between 1967 and 1972, and therefore does not meet the 45-year age guideline of the California Register or the 50-year age requirement of the National Register (City of Escondido 1972). The channel is a common concrete flood channel of a type found throughout southern California and it is not architecturally outstanding or distinctive, nor is it important or innovative as an example of engineering.

Review of historic topographic maps and aerials indicates the groves and orchards near the Study Area (e.g., the proposed recycled water storage tank) did not exist during the historic period and are less than 45 years in age. Therefore, the groves/orchards are not historic agricultural resources and are not considered a historical resource pursuant to CEQA.

In addition to the aforementioned structures and features, three-hundred and ninety-nine (399) built-environment resources have been recorded within one-half mile of the Study Area. These properties are primarily single-family residential and commercial properties. There is one historic district, Old Escondido Neighborhood Historic District, which has been recorded within one-half mile of the Study Area.

No other built environment resources or resources considered historical resources pursuant to CEQA would be impacted by the Proposed Project.

#### *Archaeological Resources*

No known archaeological resources from the CHRIS-SCIC records were recorded within the Study Area, and no resources were identified during the pedestrian survey within the Study Area. The negative results of the survey may be a direct result of the poor ground surface visibility within the majority of the Study Area that may have obstructed the identification of resources on the surface. These findings, however, do not preclude the existence of undiscovered archaeological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the Proposed Project. It is possible to encounter buried archaeological resources given the proven prehistoric and historic occupation of the region, the identification of multiple surface and subsurface archaeological resource within the vicinity of the Study Area (32 prehistoric and five historic/prehistoric archaeological resources have been recorded within a half-mile of the Study Area), and the favorable natural conditions such as Escondido Creek and nearby vegetation communities that would have attracted prehistoric and historic inhabitants to the area. Therefore, despite the heavy urbanization of the Study Area, which may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth within alluvial sediments across the Study Area.

### *Paleontological Resources*

Results of the paleontological resources records search through the SDNHM indicate that no vertebrate fossil localities from the SDNHM records have been previously recorded within the Study Area or within a one-mile radius of the Study Area. No paleontological resources were identified during the pedestrian survey, but this may be a direct result of the poor ground surface visibility within the majority of the Study Area. According to the SDNHM, it is possible to encounter buried paleontological resources in the portions of the Study Area that contain fossiliferous older Quaternary alluvium sediments, but that it is not possible to encounter buried paleontological resources in portions of the Study Area that contain igneous rocks. Igneous rocks are not conducive to retaining paleontological resources and are currently mapped as underlying the eastern and southeastern portions of the Study Area. However, the areas along and near Escondido Creek contain deposits of fossiliferous older alluvial flood plain deposits, and therefore could contain buried paleontological resources.

### **Environmental Impacts**

- a Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?***

#### ***Impact a): No Impact***

As discussed previously, one historic resource (P-37-018732) is located immediately adjacent to the Study Area, and is considered a historical resource pursuant to CEQA. Construction of the proposed recycled water pump station would occur in the paved parking lot located in the far north east corner of Mountain View Park, and would therefore not directly impact P-37-018732, which is located in the northwest corner of Mountain View Park. Construction of the proposed recycled water pipeline would also not directly impact the resource due to its distance from the resource and location underground. Developed in 1985, Mountain View Park is a recreational facility including playing fields and tennis courts. The historic setting of P-37-018732 has been altered by development of the park as well as the surrounding residential development. The surrounding setting of P-37-018732 has been altered by the construction of park amenities, including lighted soccer fields, tennis courts, picnic areas, restrooms, open turf area, and asphalt surface parking lots. The three tennis courts and parking lot presently located in the northeast corner of the park are obscured from view from P-37-018732 by a row of trees along the eastern edge of the domestic yard associated with P-37-018732. The distant views of the proposed recycled water pump station from P-37-018732 would similarly be obscured by the row of trees; therefore, the Proposed Project would have no indirect impact on P-37-018732, and no mitigation measures are required.

The Proposed Project would not impact the 399 built environment resources, the one historic district (Old Escondido Historic District), or Oak Hill Memorial Park (considered a historical resource pursuant to CEQA), all of which have been recorded within a one-half mile of the Study Area. These resources are located far enough away from the Study Area that they would not be impacted by the Proposed Project.

As such, the Proposed Project would not result in a substantial adverse change in the significance of a historical resource as defined in §15064.5. No impacts would occur and no mitigation is required.

- b Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?***
- c Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***
- d Disturb any human remains, including those interred outside of formal cemeteries?***

***Impacts b, c, d): Less than Significant with Mitigation Incorporated***

As discussed earlier in this report, no known archaeological resources or human remains have been identified from the CHRIS-SCIC records or during the pedestrian survey within the boundaries of the Study Area. Similarly, results of the paleontological resources records search through the SDNHM indicate that no vertebrate fossil localities from the SDNHM records have been previously recorded within the Study Area or within a one-mile radius of the Study Area. These findings, however, do not preclude the existence of undiscovered archaeological resources, human remains, or paleontological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the Proposed Project. It is possible to encounter buried archaeological resources or human remains given the proven prehistoric and historic occupation of the region, the identification of multiple surface and subsurface archaeological resources within the vicinity of the Study Area (32 prehistoric and five historic/prehistoric archaeological resources have been recorded within a half-mile of the Study Area), and the favorable natural conditions (e.g., Escondido Creek, vegetation communities) that would have attracted prehistoric and historic inhabitants to the area. Similarly, it is possible to encounter buried paleontological resources given that portions of the Study Area contain fossiliferous older Quaternary alluvium sediments, which, according to the SDNHM, could contain buried paleontological resources.

Despite the heavy urbanization of the Study Area that may have displaced archaeological resources, human remains, or paleontological resources on the surface, it is possible that intact resources exist at depth. Therefore, construction of the Proposed Project, including excavation and digging, could potentially impact currently unknown archaeological resources, human remains, or paleontological resources. Implementation of **Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4** would include monitoring, reporting, and construction restrictions to reduce impacts associated with discovery of archaeological resources, human remains, or paleontological resources to a less-than-significant level. Impacts are considered less than significant after mitigation.

**Mitigation Measure CUL-1: Conduct Archaeological and Paleontological Sensitivity Training for Construction Personnel.**

The City shall retain a qualified archaeologist and paleontologist who shall conduct Archaeological Sensitivity Training and Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session(s) shall be carried out by a cultural resources professional(s) with expertise in archaeology and paleontology, and will focus on how to identify archaeological and paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session(s) will include a presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural, geologic, and archaeological history of the area and the City cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of archaeological and paleontological monitors; notification and other procedures to follow

upon discovery of resources; and, the general steps that would be followed to conduct a salvage investigation if one is necessary.

**Mitigation Measure CUL-2: Monitor Construction Excavations for Archeological Resources in Younger Alluvial Sediments.**

The City shall retain a qualified archaeological monitor who shall be present during construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill younger alluvial sediments. Younger alluvial sediments are present in the bike path of the Escondido Creek channel and immediate vicinity. Portions of the Study Area where younger alluvial sediments are not present (which include the remaining areas of the Study Area) shall not be monitored because these areas consist of igneous rocks (e.g., granitic bedrock) that are not conducive to retaining buried archaeological resources or older alluvial sediments which are less likely to retain archaeological resources than younger alluvial soils. Furthermore, areas where artificial fill soils exist shall not be monitored given the limited potential to encounter resources in these soils. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor.

In the event that archaeological resources are unearthed during ground-disturbing activities, the construction manager shall halt or divert ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by Proposed Project-related construction activities shall be evaluated by a qualified archaeologist. The City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The City and/or landowner, in consultation with the archaeologist, shall designate repositories in the event that archaeological material is recovered.

The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted to the District and the South Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the Proposed Project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register and CEQA, and treatment of the resources.

**Mitigation Measure CUL-3: Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered.**

If human remains are unearthed during implementation of the Proposed Project, the City shall comply with State Health and Safety Code Section 7050.5. The City shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the landowner, inspect the site of the discovery of the Native American remains and may recommend to the landowner means for treating or disposing, with appropriate dignity, the human remains and any

associated funerary objects. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and cultural items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. MLDs in the region typically recommend reburial of the remains as close to the original burial location as feasible accompanied by a ceremony. The MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the CHRIS-SCIC.

If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance. A record of the reburial shall be filed with the NAHC and the CHRIS-SCIC.

**Mitigation Measure CUL-4: Cease Ground-Disturbing Activities and Retain Paleontologist to Implement Treatment Plan if Paleontological Resources Are Encountered.**

If a paleontological resource is accidentally encountered during implementation of the Proposed Project, the construction manager shall halt or divert grading and other excavation activities in the area of the exposed fossil to facilitate evaluation of the resource. The City shall coordinate with a qualified paleontologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource or preservation it in place. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of taxonomic identification and catalogued and donated to a suitable museum or other repository with a research interest in the materials, such as the San Diego Natural History Museum. Accompanying notes, maps, and photographs shall also be filed at the repository. In coordination with the City, the paleontologist shall determine the need for construction monitoring services in the area of the find thereafter.

Upon completion of the above activities, the paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to the City, the San Diego Natural History Museum, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the Proposed Project and required mitigation measures.

## 3.6 Geology and Soils

### Background

The Study Area lies within the Peninsular Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is known to be seismically-active, containing a series of sub-parallel earthquake faults and fault zones that generally trend in a northwest direction (Ninyo & Moore 2010). There are five faults and fault systems in proximity to the Study Area, which are considered to be active (Ninyo & Moore 2010). These faults include the Whittier-Elsinore (20 miles northeast), San Jacinto (40 miles northeast), Rose Canyon (15 miles southwest), Agua Blanca-Coronado Bank (25 miles southwest), and San Clemente (60 miles southwest) faults. Due to the distance of the aforementioned active fault zones to the Study Area, only the Whittier-Elsinore, San Jacinto, and Rose Canyon faults have the potential to cause seismic ground shaking within the Study Area (City of Escondido 2012). Further, the City of Escondido contains several inferred faults in the southwestern portion of the City; these faults are not considered active (City of Escondido 2012).

A review of the State of California's Seismic Hazard Zones Map shows that the Study Area is not located within a quadrangle that contains an Earthquake Fault Zone delineated by the California Geological Survey (CGS) (CGS 2010).

Several areas in the Study Area have been identified as vulnerable to earthquake-induced liquefaction and landslides. Potential liquefaction hazard areas generally occur along natural waterways including Escondido Creek channel and within the vicinity of Lake Wohlford (City of Escondido 2012). Potential landslide hazard areas generally occur on areas where slopes exceed a 25 percent grade; such areas are generally located on the peripheral edges of the City of Escondido (City of Escondido 2012).

The City of Escondido's General Plan Environmental Impact Report notes that there are four types of soil within the Study Area that are considered expansive, including: Las Posas stony fine sandy loam, Las Posas fine sandy loam, Auld Clay, and Huerhuero loam (City of Escondido 2012). The General Plan further indicates that none of these soil types are located within the Study Area (City of Escondido 2012).

### Environmental Impacts

- a Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
  - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**
  - ii) Strong seismic ground shaking?**
  - iii) Seismic-related ground failure, including liquefaction?**
- d Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

### **Impacts a(i)(ii)(iii), d): Less than Significant**

Because the Study Area is not located within a quadrangle that contains an Earthquake Fault Zone delineated by CGS, and because none of the fault zones identified above cross the Study Area, the probability of damage occurring from surface fault rupture on any of these faults is considered low (Ninyo & Moore 2010). Despite this fact, given the Proposed Project's location within the seismically-active Peninsular Ranges Geomorphic Province, strong seismic ground

shaking from seismic events along the Whittier-Elisnore, San Jacinto, Rose Canyon, or other nearby fault zones is possible.

The proposed recycled water pipeline and proposed brine line associated with the Proposed Project would be located along the Escondido Creek channel, and therefore could be impacted by seismically-induced settlement due to liquefaction.

While expansive soils may not be present at the surface of the Study Area, they could potentially be exposed during excavation and grading.

Design of all structures and facilities associated with the Proposed Project would conform to building standards specified by the California Building Code (CBC) and the International Building Code (IBC), which includes the former Uniform Building Code (UBC) and the Greenbook Standard Specifications for Public Works Construction (Greenbook). The aforementioned design standards include considerations for the design of structures in conjunction with the Maximum Considered Earthquake that could occur within nearby fault zones. Given the Study Area's low probability for surface rupture, in conjunction with standard seismic-related design standards that would be implemented as part of the Proposed Project, implementation of the Proposed Project would not expose people or structures to potential substantial adverse effects relating to rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure. Structures located on expansive soils would be designed such that they do not create substantial risks to life or property. Impacts are considered less than significant and no mitigation is required.

**a iv) Landslides**

***Impact a)(iv): Less than Significant***

The City of Escondido General Plan Landslide Hazard Areas Map shows that the Study Area does not contain soils that are subject to potential landslides (City of Escondido 2012). Further, the map shows that the Study Area does not contain slopes that are greater than 25% in grade; which could also be potentially susceptible to landslides (City of Escondido 2012). That said, the proposed recycled water storage tank site is located on a slope that would require significant grading (including potential blasting) to create a buildable pad. Grading activities on the storage tank site could create steep slopes around the tank periphery. Implementation of applicable design standards contained within the CBC, UBC, IBC, and Greenbook would ensure that site grading would prevent potential landslide hazards. With implementation of applicable design standards, construction and operation of the Proposed Project would not expose people or structures to potential substantial adverse effects relating to landslides. Impacts are considered less than significant and no mitigation is required.

**b Result in substantial soil erosion or the loss of topsoil?**

***Impact b): Less than Significant***

Construction activities associated with the Proposed Project would disturb at least 1.0 acre of soil. As such, construction of the Proposed Project would be required to comply with the Construction General Permit (Order No. 2009-0009-DWQ), which is issued by the SWRCB. The Construction General Permit requires development of a Storm Water Pollution Prevention Plan (SWPPP), which outlines best management practices (BMPs) the City of Escondido would use to reduce erosion and topsoil loss from storm water runoff associated with the Proposed Project. Compliance with the Construction General Permit would ensure that construction of all facilities associated with the Proposed Project follows mandated BMPs, and therefore would not result in substantial soil erosion or the loss of topsoil. Impacts are considered less than significant and no mitigation is required.

- c *Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?***

**Impact c): *Less than Significant***

As described above, while the Study Area does not currently contain soils or slopes that are subject to potential landslides, construction activities related to the proposed recycled water storage tank could potentially create steep slopes. However, potential impacts would be reduced to less than significant levels through implementation of applicable design standards contained within the CBC, UBC, IBC, and Greenbook. Additionally, neither lateral spreading nor subsidence is likely to occur within the County of San Diego, including within the Study Area (City of Escondido 2012). Because the majority of the County is underlain by granitic soils, there is very low potential for subsidence to occur. However, as stated above, liquefaction and related seismically-induced settlement could occur within the Study Area, particularly within the alluvial floodplain associated with the Escondido Creek channel.

Due to the grade of the recycled water storage tank site (2% in some places), site grading would be required. Construction would include cut and fill, during which trenches would be backfilled to grade; although some backfill could result in steeper slopes than are currently present on the storage tank site. If this occurs, the City will obtain a grading exemption from the County of San Diego in accordance with the County of San Diego's Grading Ordinance.

Implementation of applicable design standards contained within the CBC, UBC, IBC, and Greenbook would ensure that buildings and facilities constructed as part of the Proposed Project would adhere to seismic guidelines, which include considerations for seismically-induced settlement due to liquefaction and considerations for potential collapse. With implementation of seismic-related design standards, construction and operation of the Proposed Project would not result in impacts associated with collapsible or unstable soils. Impacts are considered less than significant and no mitigation is required.

- e *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

**Impact e): *No Impact***

The Proposed Project would include construction of facilities to facilitate the delivery of recycled water to customers located in the Study Area, and would not necessitate use of septic tanks or alternative wastewater disposal systems. In this context, no impacts would occur and no mitigation is required.

## **3.7 Greenhouse Gas Emissions**

### **Background**

Climate change and greenhouse gas (GHG) emissions have been addressed through a series of state legislation and executive orders, including the following:

- California Global Warming Solutions Act (AB 32) – Requires that the state reduce emissions of GHG to 1990 levels by 2020.
- Executive Order S-3-05 – Sets emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

- Executive Order S-01-07 – Mandates a statewide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020.
- Title 24 – Established standards to allow consideration and possible incorporation of new energy efficiency technologies and methods.
- AB 1493 – Requires CARB to develop and adopt regulations that reduce GHG emitted by passenger vehicles and light duty trucks.
- The Western Regional Climate Action Initiative – Signed by five states, including California, to collaborate to identify, evaluate, and implement ways to reduced GHG emissions in the states collectively and to achieve related co-benefits.

The City of Escondido completed the *Draft Climate Change Action Plan* in 2012 (City of Escondido 2012). This document includes a greenhouse gas inventory for the City, as well as an evaluation of emissions sources within the City. The City of Escondido's GHG emissions reduction goal is equivalent to that established in AB 32, to reduce GHG emissions to 1990 levels by the year 2020 (City of Escondido 2012). To reach this goal, the City of Escondido must reduce emissions to 788,176 metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e) (MTCO<sub>2</sub>e) by the year 2020 (City of Escondido 2012). This plan outlines strategies that can be taken to reduce GHG emissions, and includes the use of recycled water as a water-related conservation measure that can be used to reduce the City's overall GHG emissions (City of Escondido 2012).

To provide GHG emission guidance to local jurisdictions within the SDAB, SDAPCD has organized a Working Group to develop GHG emission analysis guidance and thresholds. SDAPCD released a draft guidance document regarding interim CEQA GHG significance thresholds in May 2010 (SDAPCD 2010). The County identified a screening level of 900 metric tons of CO<sub>2</sub>e emissions per year.

The California Air Resources Board (CARB) published *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act* (CARB 2008). This interim guidance set forth a proposal for industrial projects that included a significance threshold of 7,000 metric tons of CO<sub>2</sub>e per year (MTCO<sub>2</sub>e/yr) from non-transportation related GHG sources. For purposes of this analysis, this threshold established by CARB for CEQA purposes was used to assess GHG-related impacts associated with the Proposed Project.

### **Environmental Impacts**

Quantification of GHG for the Proposed Project was based on the carbon dioxide (CO<sub>2</sub>) outputs generated during operations using the Roadway Construction Emissions Model, the URBEMIS 2007 model, and new electrical loads required for the operation of the proposed pumping facilities. Assuming pumping facilities would operate 24-hours a day, seven days a week annually; operational GHG emissions for the Proposed Project are estimated to be 1,770 MTCO<sub>2</sub>e/yr. The total GHG emissions for construction of the proposed recycled water pipeline, brine line, recycled water tank, and recycled water pump station are estimated to be 194.90 MTCO<sub>2</sub>e/yr.

- a Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

#### ***Impact a): Less than Significant***

Using the assumptions described above, operational GHG emissions for the Proposed Project are estimated to be 1,770 MTCO<sub>2</sub>e/yr. This estimate is overly conservative because it assumes peak operation of the pumping facilities, 24-hours a day, seven days a week all year long, which is not expected to occur under normal operating conditions. Construction-related emissions are

anticipated to be 194.90 MTCO<sub>2</sub>e/yr during construction of the Proposed Project. Despite the conservative nature of this analysis, estimated GHG emissions associated with the Proposed Project do not exceed the threshold of 7,000 MTCO<sub>2</sub>e/yr established by CARB. The aforementioned CARB threshold was established in accordance with AB 32, which aims to reduce GHG emissions to a level that would avoid impacting the environment. Because it would produce GHG emissions that are well below the established CARB threshold, the Proposed Project would be considered to have a less than significant impact associated with the generation of GHG emissions, and no mitigation is required.

**b Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**Impact b): Less than Significant**

Applicable adopted plans, policies, and regulations associated with reducing the emissions of greenhouse gases include CARB's *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*, the SDAPCD's *Interim Approach to Addressing Climate Change in CEQA Documents*, and the City of Escondido's *Draft Climate Change Action Plan*. As indicated above, the total GHG emissions for construction of the proposed recycled water pipeline, brine line, recycled water tank, and recycled water pump station are estimated to be 194.90 MTCO<sub>2</sub>e/yr, which is below the interim threshold of 900 MTCO<sub>2</sub>e/yr set by SDAPCD (SDAPCD 2010). Using the assumptions described above, annual GHG emissions for operating the Proposed Project are estimated to be 1,770 MTCO<sub>2</sub>e/yr. Despite the conservative nature of this analysis, the total GHG emissions that would occur as a result of the Proposed Project would not exceed the threshold of 7,000 MTCO<sub>2</sub>e/yr established by CARB. Given that the CARB threshold is established based upon implementation of AB 32, the Proposed Project would also meet GHG reductions goals established in the City of Escondido's *Draft Climate Change Action Plan*, as City of Escondido's GHG emissions reduction goal is equivalent to that established in AB 32.

However, operational emissions associated with the Proposed Project would exceed the 900 MTCO<sub>2</sub>e/yr threshold established by SDAPCD. As noted previously, the proposed recycled water facilities would be implemented to meet recycled water demands and to offset potable water that is currently used in the Study Area. Day-to-day operational activities such as pumping recycled water throughout the Study Area would be similar to those associated with current potable water operational activities, as the Proposed Project would provide a direct offset to existing potable water facilities. As such, GHG emissions produced due to day-to-day operational activities associated with the Proposed Project would be similar to GHG emissions associated with existing conditions. Further, the City of Escondido's *Draft Climate Action Plan* states that due to the use of imported water within the City for potable water purposes, recycled water use will reduce GHG emissions, as recycled water production and delivery requires less energy than potable water due to the long distances required to transport and deliver imported water to the City (City of Escondido 2012). On a long-term operational basis, the Proposed Project would reduce greenhouse gas emissions within the Study Area, and would therefore not violate SDAPCD or any other plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts are considered less than significant, and no mitigation is required.

## 3.8 Hazards and Hazardous Materials

### Background

#### *Hazardous Materials*

Portions of the Study Area within the City of Escondido are designated for general industrial, light industrial, urban, general commercial, planned commercial, and Specific Plan Area (Downtown Specific Plan) land use categories (City of Escondido 2012). Portions of the Study Area within the County of San Diego are designated as semi-rural residential (County of San Diego 2011). Hazardous materials presently used in the Study Area in association with the aforementioned land uses may include household hazardous materials common to residential areas, as well as other regulated hazardous materials common in urbanized industrial areas. Further, according to the City of Escondido General Plan Update, there are three land uses within the City that have the potential to result in current contamination due to the use of hazardous materials. These land uses include transfer stations, agricultural activities, and petroleum storage sites (City of Escondido 2012). Of these three land uses, only agricultural land uses are found within the Study Area.

A limited regulatory agency records search was performed for the Study Area. The records search included the SWRCB GeoTracker database and the California Department of Toxic Substances Control (DTSC) EnviroStor database. These lists are a compilation of information from various sources listing potential and confirmed hazardous waste and hazardous substances sites in California. There are no properties within the Study Area on the “Cortese List” – which lists hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code. No properties of potential environmental concern were detected upon review of the DTSC EnviroStor database. However, several properties of potential concern within or adjacent to the Study Area were listed on the SWRCB GeoTracker database as leaking underground storage tanks (LUSTs). These facilities are primarily located on or adjacent to Washington Boulevard, which is parallel to the proposed recycled water and brine line alignments. The SWRCB-listed LUSTs within or in proximity to the Study Area include: North County Packing, Dunn-Edwards Corporation, 7 Day Market, Prestige/ARCO, John Herrod Chevron #2, Golden State Gasoline, E Z Gas, and Union 76/Tosco. A summary report of the database search is available as **Appendix D**.

#### *Health Hazards*

Pursuant to Water Code section 13521, the California Department of Public Health (CDPH) has established uniform statewide recycling criteria for each type of use of recycled water. CDPH guidelines for producing and using recycled water are codified in California Code of Regulations, Title 22, Division 4, Chapter 3 entitled “Water Recycling Criteria” (Title 22). The Title 22 Requirements are designed to protect public health from pathogens. As noted in the Project Description, HARRF produces tertiary-treated recycled water compliant with CDPH Title 22 standards for disinfected tertiary recycled water. Recycled water produced by HARRF may be used for irrigation, impoundments, industrial, and other uses approved under Title 22 Water Recycling Criteria for disinfected tertiary recycled water. With an appropriate level of treatment and proper operational safeguards, use of recycled water for irrigation has been demonstrated to be safe.

## Environmental Impacts

- a Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

### **Impact a): Less than Significant**

Construction of the Proposed Project would temporarily increase the routine transport and use of hazardous materials commonly used in construction activities. Limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similar materials, would be brought into the Study Area, used, and stored during construction of the Proposed Project. Operation of the Proposed Project would entail the routine transportation, use, storage, and/or disposal of minor amounts of hazardous materials. Limited quantities of diesel fuel and hydraulic fluids may be used for operation of a pump station standby generator.

Once constructed, the Proposed Project would supply disinfected, tertiary-treated recycled water from HARRF to recycled water users. CDPH finds the use of recycled water in accordance with Title 22 poses a less than significant impact on public health and safety.

The Proposed Project would be required to comply with applicable standards that regulate the transport, use, storage, or disposal of hazardous materials as well as public health requirements that regulate tertiary-treated recycled water. Adherence to such regulations would ensure that the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts are considered less than significant and no mitigation is required.

- b Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

### **Impact b): Less than Significant with Mitigation Incorporated**

Construction of the Proposed Project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials used in construction, which include diesel fuel and minor amounts of paints, fuels, solvents and glues. The potential exists for accidents to occur during construction activities and routine operations and maintenance, which could result in the release of hazardous materials into the environment. **Mitigation Measure HAZ-1** requires development of a Hazardous Materials Management Spill Prevention and Control Plan that includes project-specific contingencies to reduce the significance of potential hazardous materials-related accidents to a less-than-significant level.

Database searches indicated there are no sites listed as active or open and undergoing remediation for hazardous materials within the vicinity of the Proposed Project (refer to **Appendix D**). However, there are LUSTs within the vicinity of the proposed recycled water and proposed brine line alignments. Due to the presence of these known LUSTs, construction of the Proposed Project could result in the exposure of construction workers and residents to potentially contaminated soils or groundwater if there were to be improper removal of existing contaminated soils on site and/or leakage from existing sites in the area. **Mitigation Measure HAZ-2** ensures proper assessment and action would be taken to address the potential for contaminated soil or groundwater during construction of the Proposed Project. With the incorporation of this mitigation measure, the Proposed Project would not create a significant hazard to the public or the environment.

With the incorporation of **Mitigation Measures HAZ-1** and **HAZ-2**, the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Impacts are considered less than significant after mitigation.

**Mitigation Measure HAZ-1: Hazardous Materials Management and Spill Prevention and Control Plan.**

Before construction begins, the City of Escondido shall require its construction contractor to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project-specific contingency plan for hazardous materials and waste operations. The Plan shall be applicable to construction activities, and shall establish policies and procedures according to applicable codes and regulations, including but not limited to the California Building and Fire Codes, and federal and California Occupational Safety and Health Administration (OSHA) regulations. Elements of the Plan shall include, but not be limited to the following:

- A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
- Notification and documentation of procedures; and
- Spill control and countermeasures, including employee spill prevention/response training.

**Mitigation Measure HAZ-2: Conduct Environmental Site Assessment in Vicinity of Known Leaking Underground Storage Tanks.**

Before beginning construction, the City of Escondido shall complete a Phase I Environmental Site Assessment (ESA) for soil and groundwater contamination in areas where proposed recycled water pipeline and proposed brine line alignment are located in the vicinity of known Leaking Underground Storage Tanks with open cleanup statuses as documented by the State Water Resources Control Board. The recommendations set forth in the Phase I ESA shall be implemented to the satisfaction of applicable agencies before construction begins. If the Phase I ESA indicates the potential for contamination within the construction zone of the proposed pipeline alignments, Phase II studies shall be completed and recommendations implemented before construction begins. Phase II studies shall include soil and groundwater sampling and analysis for anticipated contaminants. The Phase II sampling is intended to identify how to dispose of potentially harmful material from excavations, and to determine if construction workers need specialized personal protective equipment while constructing the pipeline through the area. The recommendations of the Phase II analysis shall be implemented prior to or during construction to ensure health hazards are reduced to levels deemed acceptable by the applicable regulators

- c *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

***Impact c): Less than Significant with Mitigation Incorporated***

Construction and operation of the Proposed Project would occur within one-quarter mile (1,320 feet) of the following schools:

- Escondido Charter High School, which is located adjacent to and south of the proposed recycled water pipeline alignment along East Valley Parkway between Rose Street and Midway Drive.

- Learning Services, which is located along Citrus Avenue, and would be located adjacent to the proposed recycled water pipeline that would be located along Citrus Avenue.
- Palomar College, which is located on East Valley Parkway, west of Midway Drive and approximately 900 feet south of the proposed recycled water pipeline alignment.
- Orange Glen High School, which is located along Glenridge Road, approximately 500 feet southwest of the proposed recycled water pipeline that would be located along Citrus Avenue.
- Hidden Valley Middle School, which is located on Reed Road approximately 1,200 feet east of the proposed recycled water pipeline that would be located along Citrus Avenue.

Although the Proposed Project would comply with applicable standards that regulate the transport, use, storage, or disposal of hazardous materials, as well as public health requirements that regulate tertiary-treated recycled water, it is possible construction or operation of the Proposed Project could emit or handle hazardous materials within one-quarter mile of the aforementioned schools through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Construction activities, involving use of diesel fuel and minor amounts of paints, solvents and glues would occur with ¼ mile of the schools listed above. **Mitigation Measure HAZ-1** requires development of a Hazardous Materials Management Spill Prevention and Control Plan and Contingency Plan to reduce the significance of potential hazardous materials-related accidents to a less-than-significant level. With the incorporation of **Mitigation Measure HAZ-1**, impacts are considered less than significant.

- d Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

***Impact d): No Impact***

Database searches indicated there are no sites included on a list of hazardous materials sites compiled pursuant to Government Code §6592.5 within the vicinity of the Proposed Project. Therefore, construction and operation associated with the Proposed Project would not create a significant hazard to the public or the environment through the release of existing materials related to a listed hazardous materials site. No impacts would occur and no mitigation is required.

- e For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?***
- f For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?***

***Impact e, f): No Impact***

There are two public airports within vicinity of the Proposed Project: the McClellan-Palomar Airport and the Ramona Airport. The McClellan-Palomar Airport, which is located approximately ten miles west of the Study Area, has an Airport Influence Area that reaches its easternmost point in the northwestern portion of the City of Escondido (City of Escondido 2012). The Study Area is not within the McClellan-Palomar Airport Influence Area. The Ramona Airport, which is located approximately ten miles southeast of the Study Area, does not have an adopted airport land use plan.

There are two private airstrips within the vicinity of the Proposed Project: the Lake Wohlford Airstrip and the Palomar Medical Center (City of Escondido 2012). The Lake Wohlford Airstrip is located northwest of Lake Wohlford, approximately five miles northeast of the Study Area. Due to the distance between the Study Area and the Lake Wohlford Airstrip, and the fact that the Proposed Project would not affect airport operations in terms of flight patterns, safety, light, navigation, or communications, the Proposed Project would not result in a safety hazard for people residing or working in the Study Area.

The Palomar Medical Center, which has a helicopter landing facility, is located within the Study Area, approximately 1,000 feet south of the Escondido Creek channel where the channel intersects with Fig Street. Although construction and operation activities for the Proposed Project would occur within the vicinity of the Palomar Medical Center, the Proposed Project would not be anticipated to interfere with aviation activities. The proposed recycled water pipeline and brine line would be the facilities located within proximity to the Palomar Medical Center, and would be placed underground. In this context, the Proposed Project would have no impact on people residing or working in the Study Area, because it would not adversely affect heliport operations in terms of flight patterns, safety, light, navigation, or communications. No impacts would occur and no mitigation is required.

***g Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

***Impact g): Less than Significant with Mitigation Incorporated***

Construction of the Proposed Project would involve installation of recycled water pipelines within roadway right-of-ways, which would temporarily block access to some roadways and driveways currently used by emergency vehicles. Construction and operation would potentially block access or roadways within proximity or adjacent to Washington Avenue, Centre City Parkway, Escondido Boulevard, Broadway Avenue, and San Pasqual Valley Road, all of which are designated evacuation routes according to the the City of Escondido's General Plan Mobility and Infrastructure Element (City of Escondido 2012). Due to the proximity of the proposed recycled water pipeline to established evacuation routes, it is possible that construction of the Proposed Project could interfere with existing emergency response routes, which would then interfere with implementation of adopted emergency response or emergency evacuation plans established in the City of Escondido General Plan. **Mitigation Measure HAZ-3** would ensure emergency service providers are notified of potential construction activities, and would therefore be prepared to take alternative routes as necessary to avoid impacts to emergency response protocols. With the incorporation of **Mitigation Measure HAZ-3**, potential impacts associated with interference with emergency response or emergency evacuation plans would be reduced to a less-than-significant level.

**Mitigation Measure HAZ-3: Develop and Maintain Emergency Access Strategies.**

In conjunction with **Mitigation Measure TRA-1** (refer to *Section 3.16 Traffic and Transportation*), comprehensive strategies for maintaining emergency access shall be developed. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. Also, police, fire, and other emergency service providers shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures.

***h Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?***

***Impact h): Less than Significant with Mitigation Incorporated***

According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zone (FHSZ) maps, the Proposed Project along the Escondido Creek channel and Citrus Avenue is located within a moderate FHSZ (City of Escondido 2012). The Proposed Project portions that are located south and east of Citrus Avenue, along Glenridge Road, Canyon Crest Drive, and Mountain View Drive, are located within High and Very High FHSZs (City of Escondido 2012).

Use of spark-producing construction machinery within or adjacent to areas of High or Very High Fire Hazard could potentially create hazardous fire conditions and expose people to wildfire risks. As such, the Proposed Project has the potential to generate wildland fire-related hazards due to the location of project components in FHSZs. **Mitigation Measure HAZ-4** ensures that fire safety construction measures are employed during construction of the Proposed Project components that are within proximity to areas within or adjacent to High and Very High FHSZs. With the incorporation of this mitigation measure, the Proposed Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Impacts are considered less than significant after mitigation.

**Mitigation Measure HAZ-4: Prevention of Fire Hazards**

During construction of the proposed recycled water pump station, proposed recycled water storage tank, and pipelines and conduits associated with facilities that are within or adjacent to High or Very High Fire Hazard Severity Zones, the City of Escondido shall require staging areas, welding areas, or areas slated for construction shall be cleared of dried vegetation or other material that could ignite. Construction equipment that includes a spark arrestor shall be equipped in good working order. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, such as accidental sparks. Other construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction zones. The City of Escondido shall require the creation and maintenance of approved fire access to work areas, in accordance with local fire regulations. During construction of the Proposed Project, contractors shall require vehicles and crews working at the project site to have access to functional fire extinguishers.

## 3.9 Hydrology and Water Quality

### Background

The City of Escondido's planning area is located within three major hydrologic units (HUs): Carlsbad, San Dieguito River, and San Luis Rey River. The Study Area is located in the Carlsbad Hydrologic Unit (HU #4.00). As shown in Figure 3.9-1, the Proposed Project is located within the Escondido Creek watershed or Hydrologic Area (HA #4.60). Within the HA, the Proposed Project is further located within the Escondido Creek Hydrologic Subarea (HSA #4.62) and overlays the Escondido Valley Groundwater Basin. Groundwater basins in this area are relatively small in area and usually shallow.

The City's General Plan Resource Conservation Element describes how the use of low impact development (LID) design principles can protect surface and groundwater quality. Policies in the City's General Plan Resource Conservation Element (Water Resources and Quality 6.1-6.16) require protection of water bodies in their natural state wherever possible, as well as implementation of LID and compliance with the City's National Pollution Discharge Elimination System (NPDES) permit. Policies in the City's General Plan Mobility and Infrastructure Element (Storm Drainage 14.1-14.13) require construction and maintenance of an adequate storm drainage system consistent with the City's NPDES permit (City of Escondido 2012).

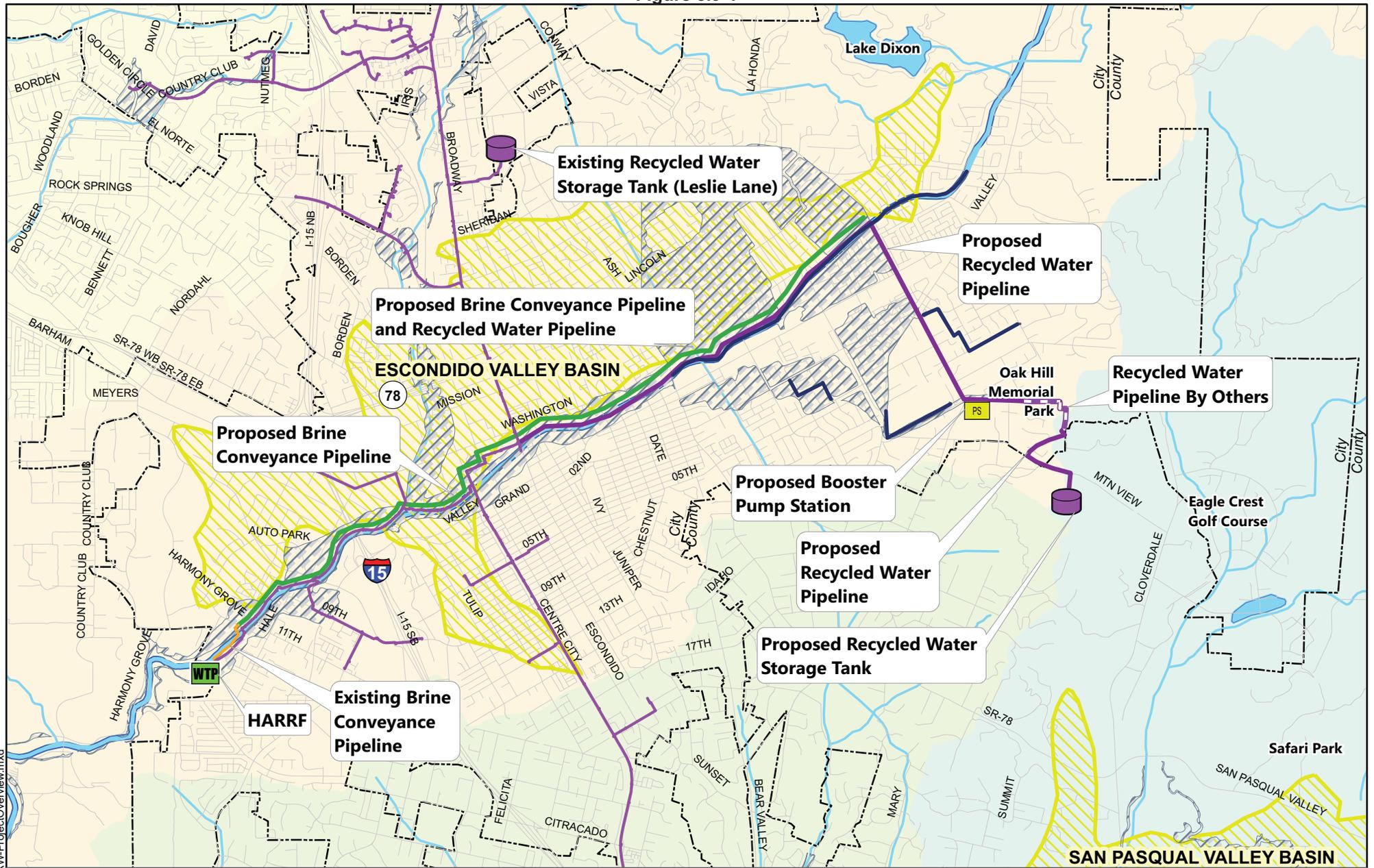
Flood hazards related to storm events are typically expressed as a "100-year flood," which describes the largest flood event that may be expected within a 100-year period. Federal Emergency Management Agency (FEMA) maps indicate that limited areas along the Escondido Creek channel in the eastern portion of the City are subject to flooding by the 100-year flood event and large areas adjacent to both Escondido Creek channel and Reidy Creek are subject to flooding by the 500-year flood event (see Figure 3.9-1). The City participates in the National Flood Insurance Program (NFIP), which provides coverage for properties affected by the 100-year flood. Policies in the City's General Plan Community Protection Element (Flood Protection 6.1-6.10) require new and substantial improvements to existing development to comply with NFIP regulations to minimize flood damage (City of Escondido 2012).

Lakes Wohlford and Dixon are located in Escondido's northeastern planning area totaling approximately 266 surface acres of water. The City's General Plan Community Protection Element, Figure VI-8, shows that a catastrophic dam failure at either of these facilities would likely result in extensive downstream flooding along the Escondido Creek channel. The areas below the dams are zoned for flood hazard on the FEMA maps (City of Escondido 2012).

The Water Quality Control Plan for the San Diego Region (Basin Plan), prepared by the RWQCB, lists beneficial uses for each relevant surface water body in the Study Area. The Basin Plan identifies beneficial uses for inland surface waters and groundwater basins, including Escondido Creek, as shown in Table 3.9-1. The Basin Plan establishes water quality objectives (WQOs) for surface waters based on the beneficial uses for each water body.

The RWQCB has also included Escondido Creek on the State's 303(d) list of impaired water bodies for DDT, enterococcus, fecal coliform, phosphate, selenium, sulfates, total nitrogen (as N), and toxicity (San Diego RWQCB 2010).

Figure 3.9-1



	Storage Tank		Existing RW Pipeline		FEMA Flood Zones		Watersheds
	HARRF		Proposed RW Pipeline		100-Year		Escondido Creek
	Booster Pump Station		Existing Brine Line		500-Year		Hodges
			Proposed Brine Line		Ground Water Basins		San Marcos
					Surface Water Bodies		San Pasqual

**City of Escondido Recycled Water Easterly Main Extension**

**Water Features**

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**Table 3.9-1: Beneficial Uses in the Study Area**

Beneficial Uses <sup>1</sup>	Surface Water	Groundwater
	Escondido Creek HSA (#4.62)	Escondido Creek HSA (#4.62)
Agricultural Supply (AGR)	E	E
Municipal and Domestic Supply (MUN)	E	E
Industrial Service Supply (IND)	P	E
Cold Freshwater Habitat (COLD)	E	--
Warm Freshwater Habitat (WARM)	E	--
Wildlife Habitat (WILD)	E	--
Water Contact Recreation (REC-1)	E	--
Non-contact Water Recreation (REC-2)	E	--

Source: California Regional Water Quality Control Board San Diego Region, 2011.

Notes: <sup>1</sup> Beneficial use designations apply to all tributaries to the indicated water body, if not listed separately; E: Existing beneficial use; P: Potential beneficial use

**Environmental Impacts**

***a Violate any water quality standards or waste discharge requirements?***

***Impact a): Less than Significant***

Excavation, grading, and construction activities associated with Proposed Project-related construction could violate water quality standards by exposing and disturbing soils, potentially resulting in increased erosion and siltation in and downstream of the Study Area. In addition, hazardous materials associated with construction equipment could adversely affect surface and groundwater quality if spilled or stored improperly. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of surface water quality.

Construction activities would utilize standard methods as required by the RWQCB and the State of California’s Construction General Permit (Order No. 2009-0009-DWQ). Compliance with the Construction General Permit would require development and implementation of a SWPPP which specifies Best Management Practices (BMPs) to prevent construction pollutants from contacting storm water and to keep products of erosion from moving off site into receiving waters. Compliance with the Construction General Permit for activities along the pipeline alignment and at the pump station and tank sites would reduce potential water quality impacts to less than significant through development and implementation of a SWPPP.

The Proposed Project proposes to expand provision of recycled water to customers for irrigation purposes. The Statewide General Permit for Landscaped Irrigation Uses of Recycled Water (Order No. 2009-0006-DWQ) establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water (SWRCB 2009). Compliance with the Statewide General Permit would require that the City must implement, and ensure users implement, the following treatment and control measures necessary to avoid pollution or nuisance and maintain the highest water quality (SWRCB 2009):

- Employ treatment and use standards necessary to produce disinfected tertiary recycled water and implement the applicable Title 22 Requirements;
- Apply recycled water at agronomic rates;

- Identify and implement best management practices;
- Develop, maintain, and implement an Operation & Maintenance Plan; and
- Use trained personnel (e.g., recycled water supervisor).

Compliance with the Statewide General Permit would ensure the protection of surface and groundwater quality. Thus, potential irrigation-related impacts to water quality would be less than significant. The Proposed Project would not exceed wastewater treatment requirements of the SWRCB and therefore the RWQCB.

Long-term Proposed Project-related operations generally would be limited to routine inspection and maintenance of proposed facilities, and would not involve activities or materials that could result in significant water quality impacts. No mitigation is required.

- b Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?***

***Impact b): Less than Significant***

Implementation of the Proposed Project would not result in direct impacts to groundwater quality. While shallow groundwater is generally not expected to be encountered during construction of the Proposed Project, perched aquifers could potentially be present and require extraction/disposal (dewatering) to facilitate proposed construction operations. If construction-related dewatering is necessary, the Proposed Project would be required to conform to applicable requirements of the NPDES General Groundwater Extraction Waste Discharge Permit (RWQCB Order No. R9-2008-0002). These requirements are generally applicable to all groundwater discharge regardless of volume, with certain exceptions as noted in the permit text. Conformance with applicable requirements under the Groundwater Permit would ensure that associated regulatory standards are met, and would reduce potential construction-related water quality impacts from groundwater extraction/disposal (if required) below a level of significance.

The Proposed Project would not result in any increased use or extraction of local groundwater, with no associated impacts to groundwater supplies, aquifer volumes, or groundwater tables. In the unlikely event that shallow groundwater is encountered during construction of the Proposed Project, temporary dewatering efforts would be implemented in conformance with applicable NPDES requirements as described above. Based on the temporary nature of such potential dewatering activities, no associated significant impacts from the drawdown or depletion of local groundwater resources would be anticipated.

- c Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site?***
- d Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***
- e Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?***

***Impacts c, d, e): Less than Significant***

Installation of recycled water and brine pipelines would not involve activities that could potentially result in significant effects to local drainage patterns such as substantial grading, topographic alteration, or impacts to drainages or storm drain facilities. Accordingly, no associated significant impacts related to the alteration of existing drainage patterns or directions are anticipated.

The recycled water pipelines in the Proposed Project would generally be located within existing roadway ROWs. Construction of the pipelines, pump station, and storage tank would disturb existing developed lands or vacant lands. Due to the relatively small footprint of the proposed facilities and their locations (pipelines would be buried underground and above ground structures would be located away water courses), it is reasonable to conclude the facilities would not substantially alter site drainage or the course of a stream or river (Escondido Creek channel and/or Reidy Creek), in a manner which would result in substantial erosion or siltation on or off site. Construction would also be conducted in compliance with the State's Construction General Permit (Order No. 2009-0009-DWQ) as described above. Preparation of the SWPPP in accordance with the Construction General Permit would require erosion-control BMPs at the project site, which would reduce potential water quality impacts to less-than-significant levels.

Construction of the above-ground structures would include relatively minor new impervious surfaces, including a 2,500-square-foot building pad and concrete housing associated with the pump station and 15-foot wide access road around the storage tank. Runoff associated with these impervious surfaces would be directed through on-site drainage facilities to adjacent lands. Because of the incremental nature of this additional impervious area, associated runoff generation would be negligible and expected to seep into the surrounding ground. Thus, facilities installation would not result in significant impacts related to runoff rates or amounts, storm drain system capacity, or related flooding. This impact is considered less than significant.

***f Otherwise substantially degrade water quality?***

***Impact f): Less than Significant***

Operation of the Proposed Project would carry the potential for release of treated recycled water as a result of various factors related to design, construction methods and materials, age of the system, population growth, and system operation and maintenance. The City would ensure incidental runoff of recycled water associated with the Proposed Project conforms to the SWRCB's memo entitled "Incidental Runoff of Recycled Water" (SWRCB 2004). This memo stipulates water quality laws should be interpreted in a manner consistent with the intent of the Legislature to promote recycled water use. Compliance with the SWRCB's Recycled Water General Permit (Order No. 2009-0006-DWQ) would ensure occasional runoff of recycled water does not negatively impact water quality. Compliance with the Recycled Water General Permit would ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisances. For this reason, long-term impacts to water quality would be less than significant.

***g Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?***

***h Place within a 100-year flood hazard area structures which would impede or redirect flood flows?***

***i Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?***

***Impacts g, h, i): Less than Significant***

As shown in Figure 3.9-1, the Study Area is within areas mapped in both the 100-year (limited area along Escondido Creek and adjacent drainages) and 500-year (broad low-lying areas along Escondido Creek and Reidy Creek) floodplains. The proposed facilities are predominantly subsurface pipelines and do not include housing or other habitable structures. However, the location of the proposed pump station adjacent to mapped 100-year and 500-year floodplains on Glenridge Road could potentially subject that facility to flood inundation. Nonetheless, the pump station is a small, non-habitable structure and there are no anticipated impacts related to the placement of housing or structures within 100-year floodplains that could impede or redirect flood waters.

Much of the pipeline alignment is located along the Escondido Creek channel inundation zone associated with Lakes Wohlford and Dixon (City of Escondido 2012). However, because the proposed pipelines do not include housing or other habitable structures, the potential impact associated with the exposure of people or structures to a significant risk of loss, injury, or death involving flooding is less than significant.

***j Inundation of seiche, tsunami, or mudflow?***

***Impact j): Less than Significant***

Tsunamis (commonly referred to as tidal waves) are seismic sea waves that can generate impacts related to inundation in coastal zones. Because the Study Area is located approximately 11 miles inland, no impacts related to inundation by tsunami are anticipated from Proposed Project implementation.

Seiches are defined as wave-like oscillatory movements in enclosed or semi-enclosed bodies of water such as lakes or reservoirs, and are most typically associated with seismic activity. Seiches can result in flooding damage and related effects (e.g., erosion) in surrounding areas from spilling or sloshing water, as well as increasing pressure on containment structures. The closest large water bodies to the project site include Lake Dixon, approximately 1.0 miles to the north, and Lake Wohlford, approximately 2.8 miles to the northeast. Based on the noted distances and the fact that proposed facilities are predominantly subsurface, no seiche-related impacts would result from implementation of the Proposed Project.

Proposed Project facilities are not considered susceptible to significant impacts from inundation by mudflow, due to the topography of the Study Area and underground location of the proposed pipelines.

## **3.10 Land Use and Planning**

### **Background**

#### *Land Uses*

According to the City of Escondido General Plan (2012), single and multi-family residential uses make up approximately 71 percent of the General Plan categories. Commercial / office and industrial uses make up approximately 3 percent each of the General Plan categories. The proposed recycled water and brine pipeline alignments are located in and around areas designated general industrial, light industrial, urban, general commercial, planned commercial and Specific Plan Area (Downtown Specific Plan) according to the General Plan Land Uses. The proposed facilities within the San Diego County limits are designated as semi-rural residential according to the San Diego County General Plan map and GIS (2011).

Zoning designations within the City of Escondido include residential (R2-12, R1-10, RT, R-3-18, PD-R.3.3), commercial (CG, S-P, PD-C), and open space (OS-P) (City of Escondido, ND). The zoning designation for the parcels within San Diego County (where the tank and pipeline would be located) is Agriculture (A70) (San Diego County, ND).

The recycled water pipeline, which would start at the intersection of Woodward Avenue and Broadway, occurs adjacent to primarily residential and commercial uses. A bike path is located on the north side of the Escondido Creek channel (between Broadway and Date Street) for approximately 4,000 feet along the proposed recycled water pipeline alignment. A bike path also traverses the south side of the Escondido Creek channel (opposite side of the proposed pipeline alignment) from Fig Street to Citrus Avenue. Parks along the proposed recycled water pipeline route include Washington Park (located north of and adjacent to the proposed pipeline alignment/Escondido Creek channel, west of N. Rose Street) and Mountain View Park (located north of and adjacent to the alignment along Glenridge Road). Grape Day Park is located south of the Escondido Creek channel along North Broadway. Several schools are located in the vicinity of the pipeline alignment, although only one school is located adjacent to the proposed alignment:

- Escondido Charter High School is located adjacent to and south of the proposed pipeline alignment, approximately 750 feet west of North Midway Drive.
- Palomar College is located on East Valley Parkway, approximately 900 feet south of the proposed pipeline alignment, west of North Midway Drive.
- Orange Glen High School is located approximately 500 feet west of North Citrus Avenue, along Glenridge Road.
- Hidden Valley Middle School is located on Reed Road, approximately 1,600 feet east of North Citrus Avenue and over 1,000 feet north of Glenridge Road.

Learning Services, a campus-based living environment for individuals who require intensive neuro-rehabilitation (due to brain injuries), is located along South Citrus Avenue (south of Bear Valley Parkway) adjacent to the pipeline alignment. Palomar Medical Center is located approximately 700 feet south of the Escondido Creek channel at North Hickory Street. Redwood Town Court, a senior living community, is located south of the Escondido Creek channel, adjacent to the proposed pipeline alignment. Oak Hill Memorial Park is a cemetery located at the end of Glenridge Road. Land uses along Glenridge Road to the tank site consist of residential and agricultural uses.

Existing land uses located in the western portion of the brine line include residential uses south and west of Auto Park Way, with a car dealership between Auto Park Way and the Escondido Creek channel. Commercial uses and some industrial uses occur along the remainder of the brine line between Auto Park Way and Broadway. An existing bike path runs along the south side of the Escondido Creek channel from Harmony Grove Road to North Quince Road (approximately 8,000 feet), and provides access to the Escondido Transit Center (a bus and train station). The Inland Rail Trail is located on the north side of the Escondido Creek channel, from east of Reidy Creek to approximately 500 feet west of N. Quince St., where the trail crosses the channel via an existing bridge and connects to the Escondido Transit Center and the existing bike path on the south side of the channel. Classical Academy High School is located north of and adjacent to the proposed alignment between North Escondido Boulevard and North Broadway. Grape Day Park, Washington Park, Escondido Charter High School, Redwood Town Court are also located adjacent or near the proposed brine pipeline alignment, as described for the recycled water pipeline above.

Sensitive receptors in the Study Area include residential uses along the both pipeline alignments, and specific land uses immediately adjacent to the pipeline alignments including adjacent bike paths, Inland Rail Trail, two schools (Classical Academy High School and Escondido Charter High School), adjacent parks, Redwood Town Court, and Learning Services.

#### *Plans, Programs, and Policies*

The City of Escondido General Plan, adopted in 2012, is a statement of long-range public policy to guide the use of private and public lands within the City boundaries. The City recognizes and values the need for infrastructure and improvements to existing infrastructure to meet the needs of its residents. As described in the Escondido General Plan, one of the ongoing functions of the City to maintain “efficient and effective infrastructure providing water, sewer, streets, storm drains, gas and electricity, telecommunications systems, and refuse and recycling operations (2012).” By so doing, the City would “effectively implement General Plan policies by maintaining a high quality of life for residents and ensuring the community’s health and safety.”

Goals 2 and 3 of the City’s General Plan Mobility and Infrastructure Element addresses the need for adequate and sustainable infrastructure and water supply and wastewater infrastructure to serve residents, businesses and property. Policy 13.2 sets a minimum standard of 250 gallons of wastewater per day for each residence for operation of HARRF and supporting infrastructure. The City of Escondido prepared the Escondido Creek Trail Master Plan Report as a resource and guideline for future development of the Escondido Creek trail (City of Escondido, 2012b). It identifies potential trail improvements focused on a five mile segment through the heart of the city and provides specific design criteria for future improvements. In addition to potential trail connections, signalized crosswalks, undercrossings, walkways, and new signage, there are opportunities for inclusion of public art, site furnishings (e.g., trash and recycling receptacles, waste bag dispensers, bike racks and benches), fitness equipment to create a fitness loop, mileage markers, and plantings. The Master Plan does not specify a schedule for implementation of these improvements. It states that as funding becomes available, the recommendations can be incrementally implemented.

Escondido is one of seven cities in northwestern San Diego County involved in the sub-regional Multiple Habitat Conservation Program (MHCP)<sup>1</sup>. The MHCP is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in northwestern San Diego County through the creation, management, and monitoring of an ecosystem preserve (SANDAG, 2003). The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity while accommodating continued economic development. As the majority of the Proposed Project is located within the City of Escondido, recycled water facilities would be covered by the MHCP.

The City of Escondido prepared a public review draft of Subarea Plan that represents the City’s contribution to the MHCP and to State of California’s Natural Community Conservation Planning (NCCP) conservation goals (City of Escondido, 2001). Approval and adoption of the Subarea Plan in conjunction with the drafting and approval of an implementing agreement and an adaptive management and monitoring plan will result in federal and state authorization for incidental take of sensitive species caused by implementation of public and private projects within the City. According to the Subarea Plan, the Proposed Project would be located within areas designated as urban/developed (City of Escondido, 2001). The subarea plan has not yet been adopted.

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<sup>1</sup> The MHCP does not include unincorporated San Diego County.

The San Diego County General Plan, adopted in 2011, presents a framework for the future growth and development of the unincorporated areas of the County. There are no goals and policies relevant to the Proposed Project.

### **Environmental Impacts**

#### ***a Physically divide an established community?***

##### ***Impact a): Less than Significant with Mitigation Incorporated***

The proposed recycled water pipeline and brine line would be located primarily along the existing Escondido Creek channel, along City streets, and along a private access drive within San Diego County (for which the City has an existing easement as described in the Project Description). Construction of the proposed pipelines would temporarily affect adjacent land uses (through increased dust, noise, and traffic), but impacts would cease upon completion of construction and would not permanently affect the existing or surrounding land uses or neighborhoods. In the long-term, the pipelines would be buried, and therefore would not serve as barriers within the community.

The above-ground structures, including the proposed pump station and storage tank would be located on or near a parking lot (outside of any recreational facilities) at Mountain View Park, and on vacant land in the vicinity of an existing tank and adjacent to agricultural uses, respectively. Their construction would result in temporary land use disturbance similar to that identified for the proposed pipeline, and operation would result in new above-ground structures. However, the above-ground facilities would not create barriers that would separate the existing, surrounding neighborhood or community. These communities would remain intact and would be connected by existing roads, bike paths, and trails. Therefore, the Proposed Project would not physically divide an established neighborhood or community because it would not include construction of above-ground facilities that would permanently obstruct or separate the neighborhood or community.

In addition, construction and operation of the Proposed Project would not permanently interfere with the pedestrian, bicycle, or vehicle circulation of the neighborhood or community. During construction of the proposed pipelines, the bike path and Inland Rail Trail adjacent to the channel would temporarily close (please refer to *Section 3.15, Recreation*, for discussions of this impact), thus requiring pedestrians or bicyclists to use alternative routes on surface streets. As the bike path and Inland Rail Trail would be reconstructed upon completion of the Proposed Project, no long term impacts would occur. Mitigation measures presented in *Section 3.15, Recreation*, would reduce temporary impacts associated with closures of these facilities.

#### ***b Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

##### ***Impact b): Less than Significant with Mitigation Incorporated***

The proposed pipelines would be located underground and would not result in any significant, long-term, land use and planning impacts.

The proposed pump station would be located within the existing Mt. View Park, which is zoned as OS-P by the City of Escondido (City of Escondido, ND). According to Section 33-41, Principal Land Uses of the Escondido Municipal Code (Chapter 33, Article 3. Open Space (OS) Zone), public utility and easements are permitted in the OS zone (City of Escondido, ND). Thus, construction and operation of a proposed pump station, which is a public utility, would not conflict with the zoning designation.

The proposed tank would be located in an area that is currently zoned by the County of San Diego as A70 (San Diego County, ND). According to the San Diego County Municipal Code, minor impact utilities and major impact services utilities are subject to a minor use permit and a major use permit within an A70 zoned area, respectively (San Diego County 2012). With acquisition of the relevant permit, construction and operation of the proposed tank would not conflict with the zoning designation. Should the City acquire the tank property, appropriate City zoning and uses shall be established.

Because the proposed infrastructure for the Proposed Project would be largely constructed underground along the existing Escondido Creek channel and on street ROWs, and consistent with goals, policies and zoning of the City of Escondido and San Diego County, the Proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project adopted for the purpose of avoiding or mitigating an environmental effect.

When evaluating potential land use impacts within the City, several topics (e.g., air quality, traffic, noise, aesthetics, and recreation) are considered in combination with the existing land uses to determine Proposed Project-related impacts. Potential short-term, construction-related impacts associated with the Proposed Project as they relate to the aforementioned issues, particularly on sensitive receptors (e.g., residences, schools, medical centers, etc.), can be found in *Sections 3.3, Air Quality, 3.16, Traffic and Transportation, 3.12, Noise, and 3.15, Recreation* of this document. Land use impacts include construction activities that are of limited duration, intermittent, and which would cease at the end of each day and stop entirely upon completion of the Proposed Project. As described in the Project Description, trenches would be open at any one location for two to three days on average, and thus each land use would be affected for short durations when trenching activities pass by individual receptors. Where trenchless methods are used, the duration of activities may be longer at any given location (i.e., at individual pits), thus resulting in slightly longer disturbance for surrounding land uses. Short-term land use impacts (including air quality, traffic, noise, and recreation) and necessary mitigation are addressed in other sections of this MND. In addition, due to the sensitivity of residents living at Learning Services, a facility for people rehabilitating from brain injuries, **Mitigation Measure LU-1** would be needed to ensure that construction activities would not disrupt their recuperation. Implementation of **Mitigation Measure LU-1** would ensure that short-term, construction-related land use impacts would be reduced to less-than -significant levels.

#### **Mitigation Measure LU-1: Notification of Upcoming Work Activities**

To reduce land use impacts to the residents of Learning Services, the City shall notify its management of upcoming work activities. If necessary, the City shall work with Learning Services' management to determine a construction schedule within normal working hours that would minimize disturbance to its residents (e.g., avoid loud construction activities during designated quiet times at the Learning Center).

#### **c Conflict with any applicable HCP or NCCP?**

##### **Impact c): Less than Significant**

The Proposed Project would be located primarily within urban/developed lands and would not affect any habitat or species identified in the MHCP. *Section 3.4, Biological Resources* explains that the tank site, which is located outside the MHCP boundary but within the MSCP boundary, contains Diegan Coastal Sage Scrub, which provides suitable habitat for coastal California gnatcatcher, a federally threatened bird species and a California Species of Special Concern, which are included in the South County Subarea Plan. Diegan Coastal Sage Scrub is not located within the footprint of the water storage tank, and is more than 100 feet from the

temporary construction limits. Based on this, no direct or indirect impacts to coastal California gnatcatcher are anticipated as a result of noise or vibration. No other sensitive or listed plant or wildlife species would be impacted by the Proposed Project based on the avoidance of the Diegan Coastal Sage Scrub and the absence of suitable habitat. Because no direct impacts to the Diegan Coastal Sage Scrub habitat or to the gnatcatcher would occur, implementation of the Proposed Project would not conflict with the MSCP or the South County Subarea Plan. Thus, impacts would be less than significant and no mitigation is required.

### 3.11 Mineral Resources

#### Background

According to the City of Escondido's General Plan Environmental Impact Report (City of Escondido 2012) and the San Diego County General Plan Update (County of San Diego 2011), there are four major Mineral Resources Zones (MRZs) that could exist within the Study Area. The City of Escondido General Plan states that the only area within the City designated as MRZ-2 (Mineral resources are present) is located on the eastern edge of the City along Rockwood Road; this area is not located within the Study Area (City of Escondido 2012). A General Mineral Land Classification Map produced by the City of San Diego shows that select portions of the City of Escondido are classified as MRZ-4 (Inconclusive); however the majority of the City of Escondido, including the southern portion of the City of Escondido is designated as MRZ-3 (Mineral resources are potentially present) (City of San Diego 2007). The San Diego County General Plan Update map for San Diego County Mineral Resource Zones shows that there are no areas mapped MRZ-2 or MRZ-3 within the San Diego County portions of the Study Area (County of San Diego 2011).

The City of Escondido General Plan indicates that the Study Area has not previously been used for mineral resource recovery, and is not delineated as a mineral resource recovery site on any applicable land use plans (City of Escondido 2012).

#### Environmental Impacts

- a** *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

#### **Impact a): No Impact**

Components of the Proposed Project are not located in an area identified as containing mineral resources classified as MRZ-2 by the State geologist that would be of value to the region and the residents of the state. As a result, the Proposed Project would not result in the loss of availability of known mineral resources; therefore, no direct or indirect impacts are expected and no mitigation is required.

- b** *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

#### **Impact b): Less than Significant**

The City of Escondido General Plan (City of Escondido 2012) and the San Diego County General Plan Update (County of San Diego 2011) identify locally important mineral resources within the vicinity of the Proposed Project. These resources consist of granite and stone quarries located in the County of San Diego but outside of the Study Area (City of Escondido 2012). According to the City of Escondido's General Plan Environmental Impact Report, portions of the City of Escondido within proximity to the Study Area are designated MRZ-3; however, no active mining is currently occurring. Given that any below-ground facilities associated with the

Proposed Project that would potentially require soil extraction (the proposed recycled water pipeline and brine line alignments) generally follow existing roadway ROWs as opposed to open space areas, the implementation of the Proposed Project would not adversely affect the availability of mineral resources within the Study Area. For these reasons, the Proposed Project would not result in the loss of a locally-important mineral resource recovery site and the direct and indirect impacts are considered less than significant. No mitigation is required.

## 3.12 Noise

### Background

Noise is unwanted sound that impacts quality of life by interfering with living, working, and enjoying daily life. Community noise sources include the roadway network, dominated by Interstate 15 and State Highway 78, the North County Transit District (NCTD) rail line, two firing ranges, commercial and industrial land uses, and McClellan-Palomar Airport located approximately 12 miles west of Escondido.

For construction noise, the potential for an impact is determined by the proximity of sensitive receptors to construction activities, estimated noise levels associated with construction equipment, the potential for construction noise to interfere with daytime and nighttime activities, and whether construction noise at nearby receptors would exceed local noise ordinance standards. Typical construction activities (e.g. jackhammering and use of earthmoving equipment) generate maximum noise levels (without noise controls) ranging from 75 to 90 dBA L<sub>max</sub> at 50 feet from the source, with slightly higher levels of about 81 to 96 dBA L<sub>max</sub> at 50 feet for pile-driving activities. The rate of attenuation (i.e., reduction) is about 6 dBA for every doubling of distance from a point source. Similarly, vibration impacts are a function of the associated activity and equipment and the distance to the nearest receptor.

Ground vibration consists of rapidly fluctuating motions or waves, which are also measured in decibels. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. For this analysis, a peak particle velocity (PPV) descriptor is used to evaluate construction-generated vibration for building damage and human complaints. PPV is the vibratory ground motion in inches per second adjusted for distance. The threshold for cosmetic or structural damage of buildings is approximately 0.2 in/sec PPV, while activities causing annoyance (pertains to nighttime construction only) are approximately 0.012 in/sec PPV.

Policies in the City's General Plan Community Protection Element (Noise 5.1-5.17) require development to meet acceptable exterior noise level standards and to implement noise attenuation where projected noise levels exceed those standards (City of Escondido 2012). The City's Municipal Code (Chapter 17, Article 12: Noise Abatement and Control) regulates noise generated from construction equipment. Municipal Code Sections 17-234 and 17-238 limit construction activities, including grading, to 7 a.m. to 6 p.m. Monday through Friday and 10 a.m. to 5 p.m. on Saturdays; restricts construction equipment that causes noise in excess of a one-hour average sound level limit of 75 dB at any time unless a variance has been obtained from the city manager; and requires signs to be posted at construction sites indicating hours of work as prescribed by the Municipal Code and the applicable noise level limits. Municipal Code Section 17-249 allows for granting of a retroactive variance for emergencies.

Land uses are located throughout the City in areas where the impact of noise could affect their operation or activity. Locations of certain noise-sensitive receptors and noise generators are identified in the City's General Plan Community Protection Element, Figure VI-10. As described in *Section 3.10 Land Use and Planning*, there are several parks, schools, medical facilities, and

senior living communities located near the Proposed Project. Due to the geographic extent of the pipeline system, construction and operation of the Proposed Project may occur within 50 feet of multiple sensitive receptors. Educational facilities located within one-quarter of a mile (1,320 feet) from proposed pipeline alignments are identified in *Section 3.8, Hazards and Hazardous Materials*.

### **Environmental Impacts**

- a*** ***Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***
- d*** ***A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?***

#### ***Impact a, d): Less than Significant with Mitigation Incorporated***

Construction of the Proposed Project may potentially create elevated short-term construction noise impacts, particularly from trenching and excavation activities. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Certain types of construction activities, such as roadway trenching, generate impulsive noise, which can be perceived as a nuisance. Construction noise created by excavation and use of heavy equipment would temporarily increase noise levels in the vicinity of the Proposed Project. The maximum instantaneous noise (L<sub>max</sub>) resulting from Proposed Project-related construction activities would range from 75 to 96 dBA L<sub>max</sub> at 50 feet from the source. The maximum instantaneous noise levels would be highest associated with blasting and/or piledriving activities at the storage tank site.

Construction activities, however, would be temporary and generally limited to daytime hours in accordance with the City's General Plan Community Protection Element (City of Escondido 2012) and the City's Municipal Code (Chapter 17, Article 12: Noise Abatement and Control). Noise generated by construction activities is not expected to be in excess of the one-hour average sound level limit of 75 dB due to the intermittent nature of grading activities; however, mitigation is recommended at the pump station and storage tank sites to ensure this limit is not exceeded. Pipeline construction would proceed at a rate of approximately 100 feet per day, thus minimizing the duration that active pipeline construction would be adjacent to any single household.

Compliance with the City's Municipal Code (limiting construction hours, restricting noise to 75dB for one-hour average, and posting signage) along with incorporation of **Mitigation Measure NOI-1** would assure that the Proposed Project does not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance. Impacts are considered less than significant after mitigation.

**Mitigation Measure NOI-1: Implement Noise Control Measures to Reduce Construction Noise.** To further reduce noise impacts, the City shall require its contractors to implement the following noise control measures:

- **Locate Staging Areas away from Sensitive Receptors.** The City shall require the contractor to select staging areas as far as feasibly possible from sensitive receptors.
- **Idling Prohibition and Enforcement.** The City shall require the contractor to prohibit unnecessary idling of internal combustion engines. In practice, this would mean turning off equipment if it would not be used for five or more minutes.
- **Equipment Location, Mufflers, and Shielding.** The City shall require its contractors to locate stationary noise-generating construction equipment such as air

compressors and generators as far as possible from homes and businesses. Mufflers and/or temporary noise barriers shall be used as necessary to meet the City’s one-hour average sound level limit of 75 dB at any time (unless a variance has been obtained in advance from the city manager). Temporary walls, stockpiles of excavated materials, or moveable sound barrier curtains would be appropriate and can provide a 10 to 15 dBA reduction in noise levels.

**b Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Impact b): Less than Significant with Mitigation Incorporated**

Construction activities such as excavation, spoil transport, pile driving, and shoring of trenches would generate vibration. Buildings that could be affected by construction activities are located adjacent to the new and rehabilitated pipelines. Based on anticipated equipment proposed for use and the vibration level data provided in Table 3.12-1, vibration levels generated by the majority of proposed equipment would be equal to or below the 0.2 in/sec PPV criterion applied to assess the potential for cosmetic or structural damage. Typical vibratory pile-driving vibration levels would also be below the 0.2 in/sec PPV criterion but may at times exceed the 0.2 in/sec PPV criterion when levels reach the uppermost range of measured vibration levels (0.734 in/sec PPV).

**Table 3.12-1: Vibration Source Levels for Construction Equipment**

Equipment		PPV at 25 feet (in/sec)
Pile Driver (Vibratory)	upper range	0.734
	typical	0.170
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

In general, cosmetic or threshold damage to residential buildings can occur at vibrations greater than 0.5 in/sec PPV. Continuous vibration caused by vibratory pile drivers and large vibratory rollers/compactors could cause structural damage if the continuous vibration is greater than 0.2 in/sec PPV. Because groundborne vibration levels could exceed the established thresholds for short periods of time, impacts would be considered potentially significant. **Mitigation Measure NOI-1** (above) would reduce the level of annoyance from construction-related vibration because noise controls and shielding have an associated effect on vibration (e.g., staging areas away from sensitive receptors will reduce the vibrations experienced by those receptors from staging area activities). With the incorporation of **Mitigation Measure NOI-1**, construction of the Proposed Project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Construction-related impacts are considered less than significant after mitigation.

**c A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?**

**Impact c): Less than Significant**

Noise-generating operations for the Proposed Project mainly include the use of electric pumps at the pump station, and vehicle trips and equipment used for routine maintenance of facility components. The pump station would be an enclosed building housing four 250 hp electric motors and a 700-kW permanent backup diesel-powered generator. The pump station would be enclosed and sound attenuated (silencer) to produce less than the one-hour average sound level limit of 75 dB under full load in accordance with the City's Municipal Code. Because routine maintenance and the use of the portable emergency backup generator are anticipated to be sporadic and short-term in nature, it is anticipated maintenance activities would result in a less than significant noise impact.

**e For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?**

**f For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?**

**Impact e, f): No Impact**

The Proposed Project consists of buried pipelines, pump stations, and storage tanks and would not contain habitable structures that would result in people being exposed to noise from the McClellan-Palomar Airport. No associated impacts would occur.

### 3.13 Population and Housing

#### Background

In 2000, the City's population was 133,559 (City of Escondido, 2011). In 2010, the population increased to 143,911 (City of Escondido, 2011; U.S. Census Bureau, 2012), resulting in an overall increase during that period of 7.8 percent. The population estimate for 2011 was 146,032 (U.S. Census, 2012). Instead of basing the General Plan Update on a target population, the General Plan focuses on a build out vision of the City by establishing a 2035 planning horizon year and the San Diego Association of Government's (SANDAG's) vision for the city (Escondido's Future, 2012)<sup>2</sup>. As forecasted by SANDAG's 2050 Regional Growth Forecast, population in the City will increase to over 168,779 people by 2035, which is the buildout date for the proposed General Plan Update; a 17 percent growth rate when compared to 2010 conditions (City of Escondido, 2012). The City's Urban Water Management Plan (UWMP) also identified population for the years 2010 and 2030. The population would increase from 132,255 in 2010 to 151,335 in 2030 (City of Escondido, 2011).

According to the UWMP, the projected volume of wastewater collected and treated that would meet non-potable recycled water standards is anticipated to increase from 4,300 afy in 2010 to

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<sup>2</sup> On May 23, 2012, the Escondido City Council approved a comprehensive general plan update. Portions of that comprehensive general plan update require approval by the voters pursuant to Proposition S (Proposition S, adopted by voters in 1988, changed the Escondido General Plan to require that amendments to certain portions of the City's

13,250 afy in 2030 (includes volumes that meet both non-potable and potable recycled water standards). The actual recycled water use in 2010 was 3,692 afy, compared to the 10,076 afy that was projected for 2010 in 2005. The difference in the actual use compared to projected use partly reflects the impact of a down economy on the infrastructure additions that had been planned. The projected recycled water future use by five year increments is shown below.

**Table 3.13-1: Recycled Water Potential Future Use (afy)**

	2015	2020	2025	2030
Recycled Water Potential Future Use	4,800	7,750	9,750	13,250

*Source: City of Escondido, 2011*

**Environmental Impacts**

- a Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

***Impact a): No Impact***

The Proposed Project is a recycled water system expansion project, and is intended to provide recycled water to meet current irrigation demands for existing customers including agricultural users, Oak Hill Memorial Park, Eagle Crest Golf Course, and San Diego Zoo Safari Park. Provision of recycled water would not directly induce population growth as the Proposed Project would not involve the construction of new homes and businesses.

Environmental impacts associated with population growth also include secondary, or indirect, physical effects such as increased traffic, degradation of air and/or water quality, loss of sensitive biological resources and habitats, increased demand on public services and infrastructure, and changes in land use. Projects are considered to have growth-inducing implications when economic, housing, or population growth would be stimulated, either directly or indirectly. Local land use plans (e.g., general plans and specific plans) provide for development patterns and growth policies that allow for the planned and orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce unplanned growth (i.e., conflict with local land use plans) could indirectly cause adverse environmental impacts not previously envisioned. Thus, to assess whether a project has the potential to induce growth and result in adverse secondary effects beyond what is anticipated by local jurisdictions, it is important to assess the degree to which the growth associated with a project would or would not be consistent with applicable land use plans.

Growth inducement may constitute an adverse impact if the growth is inconsistent with the land use and growth management policies for the affected area. Because the Proposed Project would provide recycled water to meet existing demands, it would not increase the capacity of or otherwise expand the recycled water system in direct support of new population or economic expansion. Further, given that the volume of recycled water provided by the Proposed Project is within the 2030 projections of the UWMP (the Proposed Project would deliver approximately 7,605 afy of recycled water, compared to the 2030 projections of 13,250 afy), and the population estimates for the UWMP are less than identified in the General Plan, implementation of the Proposed Project would be consistent with the General Plan and would not indirectly induce population growth.

- b Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?***
- c Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?***

***Impact b, c): No Impact***

The Proposed Project would not displace any existing housing or people, and thus would not necessitate the construction of replacement housing anywhere. No impacts would occur.

### **3.14 Public Services**

#### **Background**

Escondido Police Department and the San Diego County Sheriff's Department provide law enforcement services, and the California Highway Patrol provides traffic enforcement services within the Study Area. Escondido Fire Department and San Diego County Fire Authority provide fire protection services in the Study Area.

Schools, both public and private institutions, at the elementary, middle, high school, and college levels are located in and around the Study Area, as described in *Section 3.10, Land Use and Planning*.

Escondido Recreation Division owns and maintains public parks in the City. *Section 3.15, Recreation* identifies the bike paths/trails and parks located adjacent to the proposed pipeline alignments.

#### **Environmental Impacts**

- a Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: fire protection, police protection, schools, parks, other public facilities?***

***Impact a): No Impact***

The Proposed Project would not change existing demand for public services (e.g., fire and police protection, schools, parks, libraries, or health clinics) because population growth would not result from construction of the Proposed Project (see *Section 3.13, Population and Housing*). In addition, the operation and maintenance of the Proposed Project would not be labor intensive, and therefore would not substantially increase the need for new staff from any of public protection services entities (e.g., police and fire). As implementation of the Proposed Project would not change the demand for any of the public services, it would not require additional equipment or resources for those public service providers. The Proposed Project would have no impact, and no mitigation is required.

### **3.15 Recreation**

#### **Background**

Recreational facilities are located in and around the Study Area. As described in *Section 3.10, Land Use and Planning*, an approximate 4,000-foot segment of bike path is located on the north side of the Escondido Creek channel between Broadway and Date Street and along the

proposed recycled water pipeline alignment. This alignment has five access points that intersect with the following roads: Broadway, North Juniper Street, North Hickory Street, North Fig Street, and North Date Street. Between Date Street and Citrus Avenue, the bike path shifts to the south side, and extends approximately 9,000 feet on the opposite side of the proposed pipeline alignment. Another segment of a bike path occurs along the south side of the Escondido Creek channel (opposite side of the proposed pipeline alignment) from Fig Street to Date Street. Portions of Glenridge Road and Mt. View Drive are considered a Primary Rural Local Trail (City of Escondido, 2012).

Within the proposed Brine Pipeline, the Inland Rail Trail is located on the north side of the channel (approximately 1,000 feet), from east of Reidy Creek to approximately 500 feet west of North Quince St., where the trail crosses the channel via an existing bridge to either connect to the Escondido Transit Center (a bus and train station) or connect to the existing bike path on the south side of the channel to North Quince Street. The existing bike path runs along the south side of the Escondido Creek channel from Harmony Grove Road to North Quince Road (approximately 8,000 feet), and also provides access to the Transit Center.

Grape Day Park is located south of the Escondido Creek channel along North Broadway. It consists of an interactive art project, picnic tables, horseshoe pits, children's tile art wall, a swimming pool, restrooms, and a walking trail (City of Escondido, ND). Only a corner of the proposed pipeline alignments would be adjacent to this park. Washington Park is located north of the proposed recycled water pipeline alignment, west of N. Rose Street. It consists of a pool, a ball field, tennis courts, basketball courts, recreation building, a play area/playground, picnic areas with tables and restrooms (City of Escondido, ND). A parking lot and ball field abut the existing bike path and creek, which is separated by a chain-link fence. Mountain View Park is located adjacent to the proposed recycled water pipeline alignment along Glenridge Road, at the location of the proposed pump station. It consists of Little League fields, a soccer field, tennis courts, picnic tables, tot lot / playground, restrooms, and open turf area (City of Escondido, ND). All three public parks are open from sunrise to sunset, except for the lighted ball fields that close at or before 10:00 p.m. at Washington Park and 10:30 p.m. at Mountain View Park. The Escondido National Little Leagues play games in the Mountain View Park ball fields during the spring season. Based on a 2012 schedule, games typically occur on Tuesdays, Wednesdays and Thursdays at 4:30 and 6 p.m., and Saturdays throughout the day (Escondido National Little Leagues, 2012). Based on a 2012 schedule, the Escondido American Little Leagues also play at Mt. View Park in the fall on Fridays from 5 p.m. to 9 p.m. (Escondido American Little Leagues, 2012).

### **Environmental Impacts**

- a*** ***Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***
- b*** ***Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?***

### ***Impact a, b): No Impact***

The Proposed Project would involve the construction of an expanded recycled water pipeline and associated facilities. Provision of recycled water for irrigation purposes would not increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Similarly, the Proposed Project would

not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Thus, no impacts would occur.

**c Would the Project affect recreational facilities?**

***Impact c): Less than Significant with Mitigation Incorporated***

The Proposed Project would involve the temporary closure of recreational facilities during construction activities and reconstruction of these facilities after construction has been completed. Specifically, the approximate 4,000-foot segment of the bike path between Broadway and Date Street, and the approximate 1,000-foot Inland Rail Trail between the Reidy Creek and west of North Quince Street would be closed during construction of the proposed recycled water pipeline and brine pipeline, respectively. These trails would be closed during the construction period, reconstructed after the pipeline has been installed, and thereafter reopened for public use.

Although the precise duration of construction activities along these segments has not yet been determined, assuming the rate of open-cut construction is approximately 200 feet per day, it would take approximately 20 days (4,000 feet divided by 200 feet/day) to complete construction of the recycled water pipeline along the entire bike path segment and approximately 5 days (1,000 feet divided by 200 feet/day) to construct the brine pipeline along the Inland Rail Trail segment. Additional time would be needed to reconstruct the trails after the open-cut construction activities have been completed. As a precise construction schedule has not yet been developed identifying how construction of these segments would be sequenced, it is assumed that the entire bike path along the proposed recycled water pipeline between Broadway and Date Street would be closed at the same time, and that the entire Inland Rail Trail along the proposed brine pipeline between Reidy Creek and the connection to the Transit Center would be closed at the same time. The bike path provides bicyclist and pedestrians a generally traffic-free (except at the intersections), recreational route through the City along the existing channel. The Inland Rail Trail, which includes segments within City streets, provides access to the Escondido Transit Center from north and west of the existing flood control channels. Closure of the bike path, in particular, would require bicyclists and pedestrians to take alternative routes along City streets, thus affecting the overall recreational experience. This impact would be temporary, lasting the duration of construction of the pipeline and reconstruction of the trail. However, because the impact would involve direct closure for more than 25 days, it is considered significant. To reduce recreation impacts associated with closure of the bike path and Inland Rail Trail to a less-than-significant level, **Mitigation Measure REC-1** would be implemented.

Construction of the proposed pipelines would also occur near the other bike paths (i.e., those on the opposite sides of the Escondido Creek channel where construction would occur), along the Primary Local Rural Trail, and adjacent to Washington Park and within Mt. View Park. During construction activities, these facilities would remain open for use by the public. However, land use impacts (e.g., dust and noise) would occur. Because construction of the pipeline would progress continuously along the pipeline route and would not remain at any one location for a long duration of time (pipeline trenches would be open for two to three days on average), and due to the temporary nature of overall construction, such indirect impacts would be considered less than significant.

Construction of the pump station would occur within the parking lot or south of the parking lot at Mt. View Park. During construction, a large portion of the parking lot would be used for installation of facilities and staging. Mt. View Park is used by the public for various activities, including tennis and baseball/softball/t-ball. The Escondido National Little Leagues play most of their games in the Mountain View Park ball fields during the spring season and the American

Little League plays some games at this park in the fall season. The closure of the parking lot would not result in any direct impacts to the Little League games or other recreational activities since the ball fields and other facilities would remain open during construction of the Proposed Project. Indirect impacts that could affect the recreational experience are associated with the increase dust and noise as described above for the proposed pipeline. The reduction in parking would not directly affect the recreational experience and thus is not considered an impact to recreation.

However, in accordance with the City of Escondido's Parks and Recreation Policy 2.8, the Proposed Project must not result in a net loss to parkland or associated facilities. Given that the pump station would be located within Mt. View Park or its adjacent parking lot, it would permanently impact approximately 3,000 square feet of park facilities. **Mitigation Measure REC-2** would be implemented to ensure compliance with Parks and Recreation Policy 2.8, which would reduce potential recreation impacts to a less-than-significant level.

Construction of the proposed tank on private land would not have any effect on recreation.

#### **Mitigation Measure REC-1: Bike Path Closure**

To reduce impacts to users of recreational facilities – the existing bike path (between Broadway and Date Streets), the Inland Rail Trail (between Reidy Creek and east of North Quince Street), Washington Park, and Mt. View Park – the City shall do the following:

- Provide a phone line for the public to call and hear updates of the construction schedules and activities for the affected recreational facilities.
- Minimize the closure of the bike path by closing and reconstructing the bike path two reaches at the time. This would reduce the closure of any one segment to approximately 10 days (assuming the segments are 700 to 1,000 feet in length and it takes 200 feet/day for installation of the pipeline) and several more days for reconstruction activities. Limiting closure by block would allow pedestrians and bicyclists to continue to maximize use of these resources.
- Post signs in the affected areas and on nearby roadways in advance of construction activities specifying the closure period and detour routes.
- Restore the bike path, Inland Rail Trail, and affected areas of the Mt. View Park to pre-construction conditions.

#### **Mitigation Measure REC-2: Parkland Mitigation**

If the proposed pump station is located on parkland or park facilities associated with Mt. View Park, the City shall mitigate this impact by purchasing comparable parkland or park facilities within its jurisdiction and/or dedicate vacant or underutilized city lands for park purposes. The mitigation purchase or dedication shall occur at a minimum 1:1 ratio where the City replaces an equal amount of parkland or parkland facilities for the amount that is directly impacted by the Proposed Project.

## **3.16 Traffic and Transportation**

### **Background**

The City of Escondido's General Plan Mobility and Infrastructure Element includes information regarding circulation and transportation planning for the City of Escondido. The General Plan also includes information regarding the levels of service (LOS) for different segments of

roadways throughout the City. According to the City of Escondido General Plan, the various LOS designations are defined as follows (City of Escondido, 2012):

- LOS A: Generally free-flowing operations.
- LOS C: Stable operation with some limits on maneuverability that affects speeds.
- LOS D: Maneuverability and flows reduced by longer queues and slower speeds.
- LOS F: Extremely slow 'stop and go' speeds with congestion and lengthy queues.

Within or in proximity to the Study Area, there are several roadway segments that currently operate at a LOS D, LOS E, or LOS F (City of Escondido, 2012):

- Escondido Boulevard from Mission Avenue to Washington Avenue (LOS D)
- Metcalf Street from Mission Avenue to Washington Avenue (LOS D)
- Centre City Parkway from Washington Avenue to Valley Parkway (LOS D)
- Washington Avenue from Juniper Street to Fig Street (LOS F)
- Fig Street from Washington Avenue to Valley Parkway (LOS E)
- Midway Drive from Washington Avenue to Valley Parkway (LOS F)
- Valley Parkway from Hickory Street to Fig Street (LOS F)
- Washington Avenue from Fig Street to Ash Street (LOS E)

- a Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**
- b Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

***Impact a, b): Less than Significant with Mitigation Incorporated***

Due to the proposed locations of the recycled water storage tank and recycled water pump station, these facilities are not anticipated to impact traffic and transportation during construction. However, construction of the proposed recycled water pipeline and brine line could potentially impact traffic and transportation patterns.

The proposed brine line would be located from the existing brine line terminus in Hamony Grove Road at the Escondido Creek channel and would follow the Escondido Creek channel to Citrus Avenue. Along the Escondido Creek channel, the brine line would need to cross several road and transit crossings, which could potentially incur traffic impacts. Specifically, the brine line would require crossings along the following roadways or transit right of ways: Auto Park Way, Interstate-15 (I-15), Tulip Street, a NCTD railroad right-of-way, Quince Street, and Centre City Parkway. To reduce traffic impacts, trenchless installation methods (jack and bore) would be implemented along Auto Park Way and the NCTD railroad right-of-way. Crossing of I-15 would likely occur in the same manner as was previously implemented for construction of the existing recycled water pipeline, which involved crossing under the I-15 overpass. Crossing under the I-15 overpass would occur solely within the existing bridge on the Escondido Creek channel, and would cause no impacts to traffic along I-15.

Trenchless methods may be implemented along Tulip Street, Quince Street, and Centre City Parkway; although open cut installation methods may also be employed. If trenchless methods are not implemented along Tulip Street, Quince Street, or Centre City Parkway, lanes within these roads would need to be temporarily closed to accommodate construction activities.

The brine line would also be located along Centre City Parkway and Escondido Boulevard, which are both four-lane major roads (City of Escondido 2012). Due to the heavily traveled nature of these roads, trenchless methods would likely be implemented to avoid traffic impacts. From Escondido Boulevard, the brine line would be located along Woodward Avenue, which is a two-lane local collector road (City of Escondido 2012). If trenchless methods are not implemented along Woodward Avenue, one lane along this road would need to be temporarily closed to accommodate construction activities.

Potential traffic impacts associated with the proposed brine line would be equivalent to the recycled water pipeline (described below) from Broadway Avenue to Citrus Avenue.

The proposed recycled water pipeline and brine line would be located along the Escondido Creek channel right-of-way from North Broadway to Citrus Avenue. From Broadway and along the Escondido Creek channel, the recycled water pipeline and brine line would be located within the channel right-of-way, and would only need to cross Ash Street. Due to the heavily traveled nature of Ash Street, trenchless methods (jack and bore) may be implemented to avoid traffic impacts and meet requirements of a Caltrans permit that would be required to encroach upon this street.

As described in the Project Description, a bike path is located on the north side of the Escondido Creek channel (between Broadway and Date Street) for approximately 4,000 feet along the proposed recycled water pipeline and brine line alignment. A bike path also traverses the south side of the Escondido Creek channel (opposite side of the proposed pipeline alignment) from Fig Street to Citrus Avenue. These bike paths would need to be closed during construction of the Proposed Project, but would be reconstructed after the pipelines are installed.

The proposed recycled water pipeline would cross the Escondido Creek channel at Citrus Avenue; it is likely that this will be done by attaching the pipeline to an existing bridge at this location. If attaching the proposed recycled water pipeline to the existing bridge is not feasible, the channel crossing would occur via trenchless or open cut methods. Either attaching the pipeline to the bridge or completing a channel crossing via trenchless methods would not impact traffic along Citrus Avenue; however, if this crossing is completed via open cut methods, impacts to traffic along Citrus Avenue are possible. The proposed recycled pipeline would also cross Valley Boulevard and Bear Valley Parkway along Citrus Avenue. It is likely that these crossings would be completed via trenchless installation methods to avoid traffic impacts; however, open cut methods are possible and could potentially impact traffic.

The proposed recycled water pipeline would be located along Glenridge Road from Citrus Avenue to the Mountain View Park, along Canyon Crest Drive from Oak Hill Memorial Park to Mountain View Road, and along Mountain View Drive to an access road at 2601 Mountain View Drive. Construction of these portions of the recycled water pipeline would require temporary closure of at least one lane along Glenridge Road, Canyon Crest Drive, and Mountain View Drive, all of which are two-lane local collector roads (City of Escondido 2012).

As described above, certain intersections within the City of Escondido are currently operating at LOS D through F during AM and PM peak periods (including eight intersections within or in proximity to the Study Area). Construction traffic, coupled with lane closures, could result in further deterioration of LOS at intersections along these streets at peak periods. Thus, the

Proposed Project has the potential to affect, albeit temporarily, the transportation system by reducing LOS at intersections. To ensure appropriate traffic controls are implemented during construction, preparation and approval of a Construction Staging and Traffic Management Plan by the City of Escondido would be necessary. The Construction Staging and Traffic Management Plan would require the City of Escondido and its contractor to address and mitigate impacts associated with the closure of traffic lanes, parking lanes, parkways, bike lanes, or other public ROWs. Implementation of **Mitigation Measure TRA-1** would ensure construction-related traffic impacts associated with the Proposed Project are reduced to a less-than-significant level.

In the long-term, operation of the Proposed Project would generate up to five daily vehicle trips (roundtrips). These trips would be scattered throughout the Study Area during the work day period, and would unlikely change substantially the traffic conditions of existing roadways. As such, impacts associated with operation of the Proposed Project would be considered less than significant.

**Mitigation Measure TRA-1: Prepare and Implement a Construction Staging and Traffic Management Plan.**

Prior to construction or the issuance of applicable permits, the City of Escondido or its contractor shall submit a Construction Staging and Traffic Management Plan for review and approval. This plan shall show the impact of various construction stages on the public right-of-way including work in public right-of-way including lane closures, detours, staging areas, and routes of construction vehicles entering and exiting the construction site.

**c Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**Impact c): No Impact**

The Proposed Project is not located within the Airport Influence Area of the McClellan-Palomar Airport, and is located approximately ten miles northwest of the Ramona Airport, which does not have an adopted airport land use plan. The Proposed Project does not include any aviation components or structures at heights that would potentially pose an aviation concern, is not located within the McClellan-Palomar Airport Influence Area, and is located a considerable distance from the Ramona Airport. As such, implementation of the Proposed Project would not result in changed air traffic patterns such as increased traffic levels or safety risks. No impacts would occur and no mitigation is required.

**d Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Impact d): Less than Significant with Mitigation Incorporated**

The Proposed Project involves construction and operation of pipelines and other facilities to provide recycled water infrastructure, and would be located almost entirely underground. As such, once implemented, the Proposed Project components would not have design features that increase safety hazards for the public.

During construction activities, the Proposed Project may temporarily change the configuration of intersections and roadways within the Study Area. Specifically, lane and/or road closures would be required where pipelines would be installed on streets ROWs. Construction equipment and material would be staged temporarily either within the construction zone on roads or vacant parcels near the construction area. Construction along roadways would occur at a rate of approximately 100 feet per day, thereby limiting lane closures to the affected segment during construction. Because lane closures could increase conflicts between vehicles, bicyclists, and

pedestrians, potential impacts are considered potentially significant and would require mitigation. With the implementation of **Mitigation Measure TRA-1** requiring a Construction Staging and Traffic Management Plan, such hazards caused by the changed configurations would be reduced to a less-than-significant level.

**e Result in inadequate emergency access?**

**Impact e): Less than Significant with Mitigation Incorporated**

As described above, construction activities for the Proposed Project would have temporary effects on traffic flow and lane configurations at specific intersections and roadways, which could similarly affect emergency vehicles in the Study Area. This could be considered a potentially significant impact and warrant mitigation. To ensure access for emergency vehicles are maintained open, **Mitigation Measure TRA-1** requires preparation and approval of a Construction Staging and Traffic Management Plan by the City of Escondido. The Construction Staging and Traffic Management Plan would require the City of Escondido and its construction contractor to address and mitigate impacts associated with the closure of traffic lanes, parking lanes, parkways, or other public ROWs. Further, **Mitigation Measure HAZ-3** (refer to *Section 3.8, Hazards and Hazardous Materials*) ensures that a set of comprehensive strategies are developed to ensure that emergency access is maintained during construction and operation of the Proposed Project. With incorporation of **Mitigation Measure TRA-1** and **Mitigation Measure HAZ-3**, potential emergency access-related impacts would be considered less than significant.

**f Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

**Impact f): No Impact**

The Proposed Project involves construction and operation of pipelines and other facilities to provide recycled water infrastructure, and would be located almost entirely underground. As such, once implemented, the Proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. There is no impact and no mitigation is required.

## 3.17 Utilities and Service Systems

### Background

Water supply service within the Study Area is provided by the City of Escondido's Water and Wastewater Division (EWWD). Water sources are primarily imported (from SDCWA<sup>3</sup>), with small amounts from local surface water sources (City of Escondido, 2012). EWWD is the primary agency responsible for collecting, treating, and disposing of wastewater and producing recycled water in the City of Escondido. All wastewater produced in the EWWD service area is treated at HARRF, which is owned and operated by EWWD. The HARRF has a treatment capacity of 18 mgd with a land outfall maximum flow of 20.1 mgd. HARRF produces approximately 4 mgd of tertiary treated recycled water for use as irrigation on local golf courses, parks, school grounds, green belts, roadway medians, open spaces and industrial use. Within unincorporated San Diego County, water is primarily provided by private wells and wastewater disposal is provided by on-site subsurface septic systems. The City of Escondido Public Works owns and maintains

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<sup>3</sup> The City joined the SDCWA in order to acquire the right to purchase and distribute imported water throughout its service area. The SDCWA purchases water from the Metropolitan Water District of South California (MWD) and other sources for resale to its 24 member agencies.

stormwater drainage facilities within its boundaries. San Diego County Flood Control is responsible for the maintenance of existing stormwater drainage facilities within unincorporated San Diego County.

Escondido Disposal, Inc. is responsible for the collection and disposal of solid waste and recyclables from homes, businesses and industries in the proposed Study Area. Residential collection of solid waste by Escondido Disposal is transferred to the Escondido Disposal Transfer Station where it is then taken to either the Sycamore or Otay Mesa Landfill.

### **Environmental Impacts**

***a Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?***

***Impact a): No Impact***

Use of recycled water for landscape irrigation purposes would comply with SWRCB's adopted General WDRs for Landscape Irrigation Uses of Municipal Recycled Water (Recycled Water General Permit) (Order No. 2009-0006-DWQ). Compliance with WDRs set forth in the Recycled Water General Permit would ensure the reasonable protection of surface water and groundwater within the Study Area (refer to *Section 3.9, Hydrology and Water Quality*). With implementation of the required WDRs, the Proposed Project would not exceed wastewater treatment requirements of the SWRCB and therefore the RWQCB. Impacts are considered less than significant and no mitigation is required.

***b Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

***Impact b): No Impact***

The Proposed Project would not require or result in the construction of new or expanded water or wastewater treatment facilities, or expansion of existing facilities. The Proposed Project is a standalone recycled water system expansion project. There would be no impact and no mitigation is required.

***c Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

***Impact c): No Impact***

During construction, the City of Escondido would implement requirements set forth within the Construction General Permit (refer to *Section 3.9, Hydrology and Water Quality*) to reduce stormwater runoff. With implementation of the Construction General Permit, construction of the Proposed Project is not anticipated to generate surface runoff in quantities that would require construction of new off-site storm drains or expansion of existing off-site storm drains.

The majority of the Study Area consists of either paved or unpaved ground surfaces that would be restored to its pre-construction conditions after construction is complete. In these areas, no new on- or off-site storm drains or expansion of existing on- or off-site storm drains would be required.

Two above-ground structures would be constructed on ground surfaces that are currently unpaved. New impermeable surfaces would result from construction of the pump station and the associated pad-mounted electrical transformer if it is located south of the parking lot area near the ball fields, as that area is currently unpaved. In addition, new impermeable surfaces would

be needed at the tank site to accommodate the proposed tank, buried vaults, and the asphalt tank access road. New impermeable surfaces would result in additional runoff that previously would have seeped into the ground. Construction of the above ground facilities would require inclusion of localized storm drainage features at the site to direct flows away from structures. However, new or expansion of existing off-site storm drains would not be required as operations of the new facilities are not anticipated to generate surface runoff in quantities that would require such construction. As such, although localized drainage facilities would be needed at the pump station and tank sites as part of the Proposed Project, implementation of the Proposed Project would not result in the need for additional off-site storm water drainage facilities or expansion of existing facilities that would cause significant environmental effects. This impact is considered less than significant and no mitigation is required.

***d Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?***

***Impact d): No Impact***

The Proposed Project is a recycled water system expansion project. No potable water supplies would be delivered to customers as part of the Proposed Project. The provision of recycled water would offset existing potable water usage. As such, the Proposed Project would not require new or expanded entitlements. No impact would occur.

***e Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?***

***Impact e): No Impact***

The Proposed Project would provide recycled water to the customers identified in Table 1 of the Project Description. The City would have sufficient capacity to serve the Proposed Project's projected demand in addition to its existing commitments. Thus, no impacts would occur.

***f Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?***

***Impact f): No Impact***

Construction and implementation of the Proposed Project is not anticipated to generate a significant amount of solid waste. To the extent possible, excavated soil would be reused on site. The construction contractor(s) would be required to dispose of excavated soil and solid wastes in accordance with local solid waste disposal requirements. Waste material may be hauled to two landfills that currently serve the Study Area: Otay and Sycamore landfills are located owned and operated by a private company, Allied Waste Industries. The Otay landfill is located in the City of Chula Vista, and Sycamore landfill is located in the City of Santee. The current remaining capacities of Otay and Sycamore landfills are 31,665,198 and 44,832,302 cubic yards, respectively (City of Escondido, 2012). Assuming 27,000 cubic yards of soils would be generated from the Proposed Project (see *Section 3.3, Air Quality*) and all the material would be disposed off site to one of these landfills, the off-hauled material would constitute only 0.085 and 0.060 percent of the remaining capacities for Otay and Sycamore landfills, respectively. Because these numbers are so low, the landfills would have sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs. Once constructed, operation and maintenance activities would generate minimal solid waste. For this reason, implementation of the Proposed Project would not exceed permitted capacity at local landfills. The impact would be less than significant and no mitigation is required.

**g Comply with federal, state, and local statutes and regulations related to solid waste?**

**Impact g): No Impact**

Solid waste generation would be limited to construction-related activities, and would not affect available solid waste disposal capacity in the region. No long-term solid waste generation would be associated with the Proposed Project. Therefore, no impacts are anticipated.

### **3.18 Mandatory Findings of Significance**

#### **Environmental Impacts**

- a Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory?**

**Impact a): Less than Significant with Mitigation Incorporated**

As described in *Section 3.4 Biological Resources* and *Section 3.5 Cultural Resources*, the Proposed Project could potentially impact bird and wildlife species and/or historical and cultural resources within the Study Area; however, proposed mitigation measures within this document would reduce the potential impacts to less-than-significant levels.

- b Have impacts that would be individually limited, but cumulatively considerable?**

**Impact b): Less than Significant with Mitigation Incorporated**

As discussed in Sections 3.1-3.18 above, implementation of the Proposed Project could potentially result in significant environmental impacts; however, those impacts would be reduced to less-than-significant levels with implementation of mitigation measures recommended for aesthetics, biological resources, cultural resources, hazards and hazardous materials, land use and planning, noise, recreation, and traffic and transportation. Due to the short-term nature of construction impacts associated with recycled water systems, implementation of the Proposed Project in combination with other current or reasonably foreseeable projects within the Study Area are not expected to be cumulatively considerable. None of the environmental impacts identified in this MND are so substantial that they cannot be mitigated, and the Proposed Project would not cause any incremental impacts to become substantial. Therefore, with incorporation of mitigation measures included within this analysis, the Proposed Project would not result in cumulatively considerable impacts.

- c Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

**Impact c): Less than Significant with Mitigation Incorporated**

As discussed in Sections 3.1-3.18 above, implementation of the Proposed Project could potentially result in significant environmental impacts. These potentially significant impacts could potentially affect human beings both directly and indirectly; however, all potential impacts would be reduced to less-than-significant levels with implementation of mitigation measures recommended for aesthetics, biological resources, cultural resources, hazards and hazardous materials, land use and planning, noise, recreation, and traffic and transportation. Therefore, with incorporation of mitigation measures included within this analysis, the Proposed Project would not result in substantial adverse effects on human beings, either directly or indirectly.

## **Section 4 Responses to Comments**

The City of Escondido received four letters commenting on the Initial Study/Mitigated Negative Declaration (IS/MND). Comments were received from the following public agencies:

- State of California Native American Heritage Commission – Letter A
- State of California Department of Transportation (Caltrans) – Letter B
- State Water Resources Control Board – Letter C
- County of San Diego Planning & Development Services – Letter D

No comments were received from private individuals or non-governmental organizations.

Responses to each comment are provided below. None of the comments resulted in a change in the conclusions of the environmental document, and no changes in the project are necessary as a result of comments received.

A

STATE OF CALIFORNIA  
Edmund G. Brown, Jr., Governor  
NATIVE AMERICAN HERITAGE COMMISSION  
1550 Harbor Boulevard  
West Sacramento, CA 95691  
(916) 373-3715  
(916) 373-5471 – FAX  
e-mail: ds\_nahc@pacbell.net

September 17, 2013

Mr. Jay Paul, Associate Planner  
City of Escondido Planning Division  
201 North Broadway  
Escondido, CA 92025



RE: SCH#2013081076 CEQA Notice of Completion; proposed Negative Declaration for the **"ENV-13, (Recycled Water Easterly Main Extension Project – approximately 7.4 miles of pipeline);"** located in the City of Escondido and on a portion of unincorporated property; San Diego County, California

Dear Mr. Paul:

The Native American Heritage Commission (NAHC) has reviewed the CEQA Notice regarding the above referenced project. In the 1985 Appellate Court decision (170 Cal App 3<sup>rd</sup> 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

The California Environmental Quality Act (CEQA) states that any project which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b)). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

Contact the appropriate Information Center for a record search to determine if a part or all of the area of project effect (APE) has been previously surveyed for cultural places(s). The NAHC recommends that known traditional cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report (DEIR).

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to

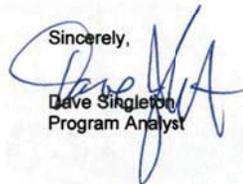
A-1 As noted on page 3-21 of the IS/MND, a cultural resources records search was conducted through the California Historical Resources Information System-South Coastal Information Center (CHRIS-SCIC). Results of that search are reported in Appendix C and are summarized on page 3-21 of the IS/MND. The records search results indicated that the only historical resource in the project area is a Victorian-style farmhouse adjacent to the proposed recycled water pump station and pipeline. No traditional cultural resources were identified in the project area.

A-2 Appendix C of the IS/MND contains the report prepared for the project by the professional archaeology staff at PCR Services Corporation. The report contains findings and recommendations of the records search and the results of the field survey that was conducted for the project. The work was coordinated with the Native American Heritage Association (NAHC). As noted on page 3-21 of the IS/MND, a Sacred Lands File search was conducted through NAHC. It was not necessary to prepare any site forms, because no new sites were discovered during the field survey.

A-2 cont'd | the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure pursuant to California Government Code Section 6254.10.

A-3 | A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

A-4 | Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Health & Safety Code Section 7050.5 and California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Also, California Public Resources Code Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5(a)(b)(f). Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans. Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,  
  
Dave Singleton  
Program Analyst

CC: State Clearinghouse

Attachment: Native American Contacts list

A-3 As noted on page 3-21 of the IS/MND, Native American Consultation was conducted as part of the cultural resources report prepared for the project. Detailed information about the Native American Consultation is included in Table 1 on page 31 of Appendix C to the IS/MND. Letters were sent on October 29, 2012 to all of the Native American Tribal groups identified in the comment letter.

A-4 Mitigation measures for cultural resources are presented on page 3-25 through 3-26 of the IS/MND, and are consistent with the recommendations provided in the comment letter. The measures include provisions for identification and evaluation of accidental discoveries. Mitigation Measure CUL-2 requires monitoring of excavations in areas determined to have the potential to contain cultural resources. The measure includes a requirement that "The City and/or landowner, in consultation with the archaeologist, shall designate repositories in the event that archaeological material is recovered". Mitigation Measure CUL-3 specifies provisions in the event of the discovery of Native American human remains.

x **Native American Tribal Government Consultation**  
San Diego County  
September 17, 2013

Pala Band of Mission Indians  
Historic Preservation Office/Shasta Gaughen  
35008 Pala Temecula Road, PMB 50 Luiseno  
Pala , CA 92059 Cupeno  
PMB 50  
(760) 891-3515  
sgaughen@palatribe.com

La Jolla Band of Mission Indians  
Lavonne Peck, Chairwoman  
22000 Highway 76 Luiseno  
Pauma Valley , CA 92061  
rob.roy@lajolla-nsn.gov  
(760) 742-3796

Pauma & Yuima Reservation  
Randall Majel, Chairperson  
P.O. Box 369 Luiseno  
Pauma Valley , CA 92061  
paumareservation@aol.com  
(760) 742-1289

Rincon Band of Mission Indians  
Bo Mazzetti, Chairperson  
1 West Tribal Road Luiseno  
Valley Center , CA 92082  
bomazzetti@aol.com  
(760) 749-1051

San Luis Rey Band of Mission Indians  
Tribal Council  
1889 Sunset Drive Luiseno  
Vista , CA 92081  
760-724-8505

Pechanga Band of Mission Indians  
Mark Macarro, Chairperson  
P.O. Box 1477 Luiseno  
Temecula , CA 92593  
(951) 770-6100  
hlaibach@pechanga-nsn.gov

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Section 65352.3, and 65362.4 et seq.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN, Jr., Governor

DEPARTMENT OF TRANSPORTATION  
DISTRICT 11, DIVISION OF PLANNING  
4050 TAYLOR ST., M.S. 240  
SAN DIEGO, CA 92110  
PHONE (619) 688-6960  
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TTY 711  
www.dot.ca.gov



September 26, 2013  
Escondido Recycled Water  
MND SCH 2013081076

City of Escondido  
Planning Division  
Jay Paul  
201 N Broadway  
Escondido, CA 92025

Dear Mr. Paul:

The California Department of Transportation (Caltrans) received a copy of the Mitigated Negative Declaration (MND) for the proposed Escondido Recycled Water Easterly Main Extension Project located near Interstate 15 (I-15). Caltrans has the following comments:

**Caltrans Encroachment Permit**

B-1 Any work performed within Caltrans right-of-way (R/W) will require approval by Caltrans and an encroachment permit will be required for any work within the Caltrans' R/W prior to construction.

As part of the encroachment permit process, the applicant must provide an approved final environmental document including the California Environmental Quality Act (CEQA) determination addressing any environmental impacts within the Caltrans' R/W, and any corresponding technical studies.

B-2 If these materials are not included with the encroachment permit application, the applicant will be required to acquire and provide these to Caltrans before the permit application will be accepted. Identification of avoidance and/or mitigation measures will be a condition of the encroachment permit approval as well as procurement of any necessary regulatory and resource agency permits. Encroachment permit submittals that are incomplete can result in significant delays in permit approval.

If you have any questions on the comments Caltrans has provided, please contact Marisa Hampton of the Caltrans Development Review Branch at (619) 688-6954.

Sincerely,

JACOB M. ARMSTRONG, Chief  
Development Review Branch

*"Caltrans improves mobility across California"*

- B-1 Table 2-4 on page 2-35 of the IS/MND notes that an encroachment permit from Caltrans would be required for work with Caltrans right-of-way. The City of Escondido will include the certified CEQA document in its application for an encroachment permit. Impacts within Caltrans right-of-way are identified in the IS/MND. Effects on project area roadways are discussed in the IS/MND on pages 3-57 through 3-61.
- B-2 The IS/MND includes avoidance and mitigation measures, and the City is aware that other regulatory and resource agency permits must be obtained.



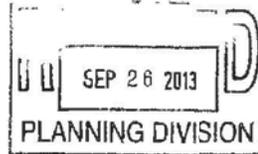
State Water Resources Control Board

SEP 20 2013

Jay Paul, Associate Planner  
City of Escondido  
201 North Broadway  
Escondido, CA 92025

Dear Mr. Paul:

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (IS/MND) FOR CITY OF ESCONDIDO (CITY); RECYCLED WATER EASTERLY MAIN EXTENSION PROJECT ENV 13-0007 (PROJECT); SAN DIEGO COUNTY; STATE CLEARINGHOUSE NO. 2013081078



C

C-1 The City of Escondido is not currently planning to pursue Clean Water State Revolving Fund financing for this project. The "CEQA-Plus" environmental documentation requirements described in the remainder of Comment C-1 are thus not applicable. Attachments providing additional information about the CEQA-Plus process have therefore not been included with this comment.

We understand that the City may be pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project. As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information and comments for the environmental document prepared for the Project.

Please provide us with the following documents applicable to the proposed Project if seeking CWSRF or other State Water Board funding: (1) one copy of the draft and final IS/MND, (2) the resolution adopting the IS/MND and a Mitigation Monitoring and Reporting Program (MMRP) making California Environmental Quality Act (CEQA) findings, (3) all comments received during the review period and the City's response to those comments, (4) the adopted MMRP, and (5) the Notice of Determination filed with the San Diego County Clerk and the Governor's Office of Planning and Research, State Clearinghouse. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board.

C-1

The CWSRF Program is partially funded by the United States Environmental Protection Agency and requires additional "CEQA-Plus" environmental documentation and review. Four enclosures are included that further explain the CWSRF Program environmental review process and the additional federal requirements. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF financing commitment for the proposed Project. For further information on the CWSRF Program, please contact Mr. Ahmad Kashkoli, at (916) 341-5855.

It is important to note that prior to a CWSRF financing commitment, projects are subject to provisions of the Federal Endangered Species Act (ESA), and must obtain Section 7 clearance from the United States Department of the Interior, Fish and Wildlife Service (USFWS), and/or United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) for any potential effects to special status species.

FELICIA MARROCO, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, Ca 95812-0100 | www.waterboards.ca.gov



C-1  
cont'd

Please be advised that the State Water Board will consult with USFWS, and/or NMFS regarding all federal special-status species that the Project has the potential to impact if the Project is to be funded under the CWSRF Program. The City will need to identify whether the Project will involve any direct effects from construction activities, or indirect effects such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur on-site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act (Section 106). The State Water Board has responsibility for ensuring compliance with Section 106 and the State Water Board must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant. The City must retain a consultant that meets the Secretary of the Interior's Professional Qualifications Standards ([www.cr.nps.gov/local-law/arch\\_stnds\\_9.htm](http://www.cr.nps.gov/local-law/arch_stnds_9.htm)) to prepare a Section 106 compliance report.

Note that the City will need to identify the Area of Potential Effects (APE), including construction and staging areas, and the depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Other federal requirements pertinent to the Project under the CWSRF Program include the following:

- A. Compliance with the Federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) If emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.
- B. Compliance with the Coastal Zone Management Act: Identify whether the Project is within a coastal zone and the status of any coordination with the California Coastal Commission.
- C. Protection of Wetlands: Identify any portion of the proposed Project area that should be evaluated for wetlands or United States waters delineation by the United States Army Corps of Engineers (USACE), or requires a permit from the USACE, and identify the status of coordination with the USACE.
- D. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

C-1  
cont'd

- E. Compliance with the Migratory Bird Treaty Act: List any birds protected under this act that may be impacted by the Project and identify conservation measures to minimize impacts.
- F. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and include a copy of the Federal Emergency Management Agency flood zone maps for the area.
- G. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

Following are specific comments on the City's draft IS/MND:

C-2

1. Air Quality – pg. 3-7 – 3-8: Construction of the brineline and pipeline would result in a maximum daily emission of 64 pounds per day of NO<sub>x</sub>, which exceeds the City's threshold of significance by nine pounds per day. This impact was considered less than significant due to the short term nature of the Project. No construction best management practices (BMPs) or standard control measures were cited in the discussion of this impact. Please include a discussion of the measures that will be taken to minimize construction-related emissions.

C-3

2. Biological Resources – pg. 3-16: Degan Coastal Sage Scrub, which provides habitat for the California gnatcatcher, was mapped within the Project area. No direct impacts to either species are anticipated. The potential for indirect noise and vibration impacts to the California gnatcatcher were determined to be less than significant on the grounds that a rounded hilltop on a steeply inclined ridgeline would isolate the habitat area acoustically and visually. No evidence or supporting studies were provided to defend this assertion. Please include and discuss evidence that construction noise will be properly dampened in the California gnatcatcher habitat area.

Thank you for the opportunity to review the City's draft IS/MND. If you have any questions or concerns, please feel free to contact me at (916) 341-5855, or by email at [AKashkoli@waterboards.ca.gov](mailto:AKashkoli@waterboards.ca.gov), or contact Christopher Bruni at (916) 341-5879, or by email at [CBruni@waterboards.ca.gov](mailto:CBruni@waterboards.ca.gov).

Sincerely,



Ahmad Kashkoli  
Senior Environmental Scientist

Enclosures (4)

1. SRF & CEQA-Plus
2. Quick Reference Guide to CEQA Requirements for State Revolving Fund Loans
3. Instructions and Guidance for "Environmental Compliance Information"
4. Basic Criteria for Cultural Resources Reports



C-2 The City's 55 lbs per day threshold for NO<sub>x</sub> is based on the South Coast Air Quality District (SCAQMD) threshold for fixed (operational) and generally is not used for construction impacts. Construction impacts are temporary and the project would not exceed SCAQMD Air Quality Significance Threshold of 100 lbs per day (construction) for NO<sub>x</sub> or the San Diego Air Pollution Control District (APCD) threshold of significance of 250 lbs per day for NO<sub>x</sub>, which also is the screening level threshold (SLT) criteria used by the County of San Diego and City of San Diego. For CEQA purposes, the APCD criteria may be used to demonstrate that a project's total emissions would not result in a significant impact to air quality. Therefore, since the project does not have the potential to approach or exceed the APCD significant level threshold for NO<sub>x</sub>, the project's impact would be considered less than significant.

Specifications for the project would include the City of Escondido's standard best management practices to minimize air quality impacts during construction, which include a requirement to comply with APCD rules and regulations to minimize air pollution. The contractor would be required to implement dust control measures, including application of water for dust control. The contractor must comply with APCD requirements for registration of equipment and would have to comply with state-mandated limitations on equipment idling times. California airborne toxics control measure CCR Title 13 Section 2485 requires that equipment idling be limited to a maximum of 5 minutes; this limitation on idling has been incorporated in Mitigation Measure NOI-1 (see page 3-50 of the IS/MND).

C-3 As noted on page 3-14 of the IS/MND, the proposed tank site is more than 100 feet from the nearest edge of Diegan Coastal Sage Scrub habitat. Site characteristics that would provide a natural buffer are described on page 3-16 of the IS/MND. The tank site is not visible from the scrub habitat, and this provides both a visual and acoustic buffer. Noise levels at the edge of the scrub habitat would be attenuated both by distance and by topography. Because construction noise would be buffered by the sound shadow created by the rocky ridge, noise levels in the scrub habitat are not expected to approach 70 dBA.

cc: State Clearinghouse  
(Re: SCH# 2013081076)  
P.O. Box 3044  
Sacramento, CA 95812-3044

The coastal California gnatcatcher is known to tolerate high noise levels. In one study, loud construction noise appeared have minimal effect on the birds' behavior and one study showed successful nesting efforts occurred within 100 meters of a pile driver (Chambers Group 1995). In another study, the authors (Awbrey, et al 1995) found breeding sites near the incoming flight path of a major commercial airport, Lindberg field, where background sound levels exceeded 70 dBA. In the same study, the authors found successful nests within 36 meters of Interstate 15 where a sound level of 69.1 dBA was measured. The authors found no evidence of increased vocalization rates to compensate for higher ambient noise levels near, or avoidance of, heavily trafficked roads and concluded the availability of quality habitat as important as noise in having an effect. In another study, of 91 nests found at heavily used state parks, 13 percent were less than 3 meters from paved roads or trails and there was no evidence that such nests failed more frequently than those in less disturbed sites (Miner et al. 1998). Also, as noted on page 3-14 of the IS/MND, the quality of the scrub habitat near the tank site is low. For these reasons, no impacts to coastal California gnatcatcher are expected.



**County of San Diego**  
**PLANNING & DEVELOPMENT SERVICES**

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**MARK WARDLAW**  
*Director*  
**DARREN GRETLER**  
*Assistant Director*

D

September 20, 2013

Jay Paul  
City of Escondido  
Planning Division  
201 North Broadway  
Escondido, CA 92025-2798  
via email to [jpaul@ci.escondido.ca.us](mailto:jpaul@ci.escondido.ca.us)

**COMMENTS ON THE MITIGATED NEGATIVE DECLARATION FOR CITY OF ESCONDIDO RECYCLED WATER EASTERLY MAIN EXTENSION PROJECT; CASE NO. ENV 13-007**

Dear Mr. Paul:

The County of San Diego has received and reviewed the Mitigated Negative Declaration (MND) for the City of Escondido Recycled Water Easterly Main Extension Project dated August 23 and appreciates this opportunity to comment.

**GENERAL COMMENTS**

- D-1 1. The County of San Diego, Land Use and Environment Group has developed Guidelines for Determining Significance that are used to determine the significance of environmental impacts and mitigation options for addressing potentially significant impacts in the unincorporated portions of the County of San Diego. Project impacts that could have potentially significant adverse effects to the unincorporated County or County facilities should be evaluated using the County's Guidelines for Determining Significance. These guidelines are available online at: <http://www.sdcounty.ca.gov/dplu/procguid.html#guide>.
- D-2 2. The project would include the construction of a partially buried recycled water tank with up to a 2 million gallon storage capacity. An asphalt access road would be constructed around the perimeter of the tank and onsite grading would be required. The City should submit grading plans to the County of San Diego Planning & Development Services for any work within the unincorporated area to determine compliance with the grading ordinance. For additional information about grading plan submittal requirements, please contact Ed Sinsay at [Edwin.Sinsay@sdcounty.ca.gov](mailto:Edwin.Sinsay@sdcounty.ca.gov) or (619) 694-2486.

D-1 The City of Escondido as Lead Agency has used CEQA significance thresholds for the proposed Project, consistent with CEQA Appendix G and City Guidelines. The City has considered applicable County policies and ordinances in evaluation of impacts associated with the proposed recycled water tank that would be located within unincorporated County. As referenced on page 3-2 of the IS/MND, the tank has been sited to be consistent with the County's policies on the preservation of ridgelines and hillsides. The evaluation of impacts on biological resources addresses the San Diego County Multiple Species Conservation Plan (see page 3-21 of the IS/MND). The San Diego County General Plan land use and zoning designations are described on pages 3-43 and 3-44 of the IS/MND. As noted on page 3-46 of the IS/MND, there are no other County goals or policies relevant to the proposed project. The Project is consistent with County policies and ordinances and has been adequately analyzed under CEQA.

D-2 As listed in Table 2-4 on page 2-35 of the IS/MND, the City intends to request that the County approve a grading exemption for the storage tank site. The City will submit grading plans to the County as requested in the comment.

Mr. Paul  
September 20, 2013

Page 2

**FLOOD CONTROL**

- D-3 3. Table 2-4 of the MND titled, "Responsible Agencies and Coordination" identifies several permits that would be required from the County of San Diego, including a Flood Control Crossing Easement or Lease Agreement and a Flood Control Permit for Easement Acquisition. The MND is unclear which flood control crossings would require permits from the County of San Diego. Early coordination with the County of San Diego, Department of Public Works Flood Control Division is encouraged. For additional information, please contact Sara Agahi at [sara.agahi@sdcounty.ca.gov](mailto:sara.agahi@sdcounty.ca.gov) or 858 694-2665.

**TRAFFIC AND TRANSPORTATION**

- D-4 4. Mountain View Drive is a County-maintained public roadway. The MND should note that the County will require encroachment and/or traffic control permits for the work performed within the County's Right-of-Way. For additional details and submittal requirements for a County Right-of-Way permit, please contact Shelley Williams (County Permit Process Coordinator) at [Shelley.Williams@sdcounty.ca.gov](mailto:Shelley.Williams@sdcounty.ca.gov) or 858-694-3280.

The County of San Diego appreciates the opportunity to continue to participate in the environmental review process for this project. We look forward to receiving future environmental documents related to this project or providing additional assistance at your request. If you have any questions regarding these comments, please contact Jennifer Domeier, Land Use Environmental Planner at (858) 495-5204 or email [jennifer.domeier@sdcounty.ca.gov](mailto:jennifer.domeier@sdcounty.ca.gov).

Sincerely,

  
TODD SNYDER, Chief  
Planning & Development Services

e-mail cc:

Sachiko Kohatsu, Policy Advisor, Board of Supervisors, District 3  
Megan Jones, Group Program Manager, LUEG  
Richard Chin, Associate Transportation Specialist, Department of Public Works  
Sara Agahi, Senior Civil Engineer, Department of Public Works  
Julia Quinn, Environmental Planning Manager, Department of Public Works  
LeAnn Carmichael, Group Program Manager, Department of Public Works  
Jennifer Domeier, Land Use Environmental Planner, Planning & Development Services

D-3 Crossings of flood control channels are described in the project description in Chapter 2 of the IS/MND. Project facilities would only cross City flood control channels. No flood control crossings would require permits from the County. The two flood control permits listed in Table 2-4 (Flood Control Crossing Easement or Lease Agreement and Flood Control Permit for Easement Acquisition) were incorrectly included as County permits, and should be listed as approvals from the City of Escondido.

D-4 Table 2-4 on page 2-35 of the IS/MND lists the requirements for a County roadway encroachment permit. The City's contractor will obtain appropriate permits from the County of San Diego for work in County right-of-way.



## Section 5 References

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### Section 3, Environmental Checklist

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# APPENDICES

## City of Escondido Recycled Water Easterly Main Extension Project Mitigated Negative Declaration *FINAL*

*Lead Agency:*

City of Escondido  
Planning Division  
201 North Broadway  
Escondido, CA 92025-2798

*Prepared By:*



*In Collaboration With:*

PCR Services Corporation

**October 2013**



## Appendix A: Air Quality Emissions Model Results

### Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> Escondido RW				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	6.5	24.5	47.4	3.5	2.5	1.0	2.4	2.2	0.2	4,096.8
Grading/Excavation	7.4	30.7	63.5	4.1	3.1	1.0	3.0	2.8	0.2	6,364.4
Drainage/Utilities/Sub-Grade	6.4	24.9	45.8	3.6	2.6	1.0	2.6	2.4	0.2	4,231.4
Paving	4.2	18.6	21.6	1.5	1.5	-	1.3	1.3	-	2,573.2
<b>Maximum (pounds/day)</b>	<b>7.4</b>	<b>30.7</b>	<b>63.5</b>	<b>4.1</b>	<b>3.1</b>	<b>1.0</b>	<b>3.0</b>	<b>2.8</b>	<b>0.2</b>	<b>6,364.4</b>
<b>Total (tons/construction project)</b>	<b>1.4</b>	<b>5.9</b>	<b>11.2</b>	<b>0.8</b>	<b>0.6</b>	<b>0.2</b>	<b>0.6</b>	<b>0.5</b>	<b>0.0</b>	<b>1,096.4</b>
Notes: Project Start Year -> 2012										
Project Length (months) -> 20										
Total Project Area (acres) -> 18										
Maximum Area Disturbed/Day (acres) -> 0										
Total Soil Imported/Exported (yd <sup>3</sup> /day)-> 114										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										
Emission Estimates for -> Escondido RW				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	3.0	11.1	21.5	1.6	1.1	0.5	1.1	1.0	0.1	1,862.2
Grading/Excavation	3.3	14.0	28.9	1.9	1.4	0.5	1.4	1.3	0.1	2,892.9
Drainage/Utilities/Sub-Grade	2.9	11.3	20.8	1.6	1.2	0.5	1.2	1.1	0.1	1,923.4
Paving	1.9	8.5	9.8	0.7	0.7	-	0.6	0.6	-	1,169.6
<b>Maximum (kilograms/day)</b>	<b>3.3</b>	<b>14.0</b>	<b>28.9</b>	<b>1.9</b>	<b>1.4</b>	<b>0.5</b>	<b>1.4</b>	<b>1.3</b>	<b>0.1</b>	<b>2,892.9</b>
<b>Total (megagrams/construction project)</b>	<b>1.3</b>	<b>5.3</b>	<b>10.1</b>	<b>0.7</b>	<b>0.5</b>	<b>0.2</b>	<b>0.5</b>	<b>0.5</b>	<b>0.0</b>	<b>994.4</b>
Notes: Project Start Year -> 2012										
Project Length (months) -> 20										
Total Project Area (hectares) -> 7										
Maximum Area Disturbed/Day (hectares) -> 0										
Total Soil Imported/Exported (meters <sup>3</sup> /day)-> 87										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										

# Appendix A: Air Quality Emissions Model Results

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1/3/2013 10:42:06 AM

Urbemis 2007 Version 9.2.4

## Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Urbemis\Esccondido RW Pump Station.urb924

Project Name: Escondido RW Tank

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

### CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (tons/year unmitigated)	0.08	0.50	0.38	0.00	0.01	0.04	0.04	0.00	0.03	0.04	57.97
2013 TOTALS (tons/year mitigated)	0.08	0.50	0.38	0.00	0.00	0.04	0.04	0.00	0.03	0.04	57.97
Percent Reduction	0.00	0.00	0.00	0.00	40.43	0.00	5.06	38.50	0.00	1.27	0.00

### AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)							

### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.00	0.00	0.02	0.00	0.00	0.00	2.58

# Appendix A: Air Quality Emissions Model Results

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.00	0.00	0.02	0.00	0.00	0.00	2.58

# Appendix A: Air Quality Emissions Model Results

Page: 1

1/3/2013 10:41:52 AM

Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Urbemis\Escondido RW Pump Station.urb924

Project Name: Escondido RW Tank

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (lbs/day unmitigated)	2.60	20.90	12.08	0.00	1.01	1.00	2.01	0.21	0.92	1.13	2,406.75
2013 TOTALS (lbs/day mitigated)	2.60	20.90	12.08	0.00	0.57	1.00	1.57	0.12	0.92	1.04	2,406.75

## AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)							

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.01	0.02	0.13	0.00	0.03	0.00	12.83

# Appendix A: Air Quality Emissions Model Results

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.01	0.02	0.13	0.00	0.03	0.00	12.83

# Appendix A: Air Quality Emissions Model Results

Page: 1

1/3/2013 10:31:39 AM

Urbemis 2007 Version 9.2.4

## Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Urbemis\Esccondido RW Tank.urb924

Project Name: Escondido RW Tank

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

### CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (tons/year unmitigated)	0.09	0.67	0.47	0.00	0.04	0.04	0.08	0.01	0.04	0.05	81.32
2013 TOTALS (tons/year mitigated)	0.09	0.67	0.47	0.00	0.02	0.04	0.07	0.00	0.04	0.05	81.32
Percent Reduction	0.00	0.00	0.00	0.00	42.50	0.00	19.19	41.90	0.00	6.68	0.00

### AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)							

### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.00	0.00	0.02	0.00	0.00	0.00	2.58

# Appendix A: Air Quality Emissions Model Results

Page: 2

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.00	0.00	0.02	0.00	0.00	0.00	2.58

# Appendix A: Air Quality Emissions Model Results

Page: 1

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Urbemis 2007 Version 9.2.4

## Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Urbemis\Esccondido RW Tank.urb924

Project Name: Escondido RW Tank

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

### CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (lbs/day unmitigated)	2.99	26.37	14.00	0.01	3.64	1.20	4.85	0.77	1.11	1.87	3,470.02
2013 TOTALS (lbs/day mitigated)	2.99	26.37	14.00	0.01	2.08	1.20	3.28	0.44	1.11	1.55	3,470.02

### AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)							

### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.01	0.02	0.13	0.00	0.03	0.00	12.84

# Appendix A: Air Quality Emissions Model Results

Page: 2

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.01	0.02	0.13	0.00	0.03	0.00	12.84



# Appendix B: Biological Resources Technical Report



January 4, 2013

Ms. Rosalyn Prickett  
**RMC WATER AND ENVIRONMENT**  
4225 Executive Square, Suite 750  
San Diego, CA 92037

**Re: RESULTS OF A BIOLOGICAL RESOURCES ASSESSMENT CONDUCTED FOR THE RECYCLED WATER EASTERLY MAIN EXTENSION PROJECT, CITY OF ESCONDIDO AND UNINCORPORATED PORTIONS OF SAN DIEGO COUNTY, CALIFORNIA**

Dear Ms. Prickett:

This letter report presents the findings of a technical biological resources assessment conducted by **PCR Services Corporation (PCR)** for the approximately 7.4-mile Recycled Water Easterly Main Extension Project located in the City of Escondido and unincorporated San Diego County, California (the “study area”) (**Figure 1**, *Regional Map*, attached.)

The 109.31-acre study area assessed for this analysis is comprised of three components for the Recycled Water Easterly Main Extension Project (Project): (1) 7.4 miles of linear aligned pipeline(s)<sup>1</sup> for recycled and brine water beneath city streets and along Escondido Flood Control Channel, a cement walled flood control structure, (2) recycled water pump station located in an urban park, and (3) a 2 million gallon recycled water storage tank located on a hill top. The majority of the study area consists of a standard construction right-of-way (ROW) or affected area up to 40 feet wide for the linear conveyance improvements.

## **1.0 STUDY AREA LOCATION**

The study area is generally located east of Interstate 15 (I-15) and north of State Route 78 (SR-78). The study area is located within an unsectioned portion of T. 1 N., R. 12 and 13 W. of the U.S. Geological Survey (USGS) 7.5-minute Escondido and Valley Center topographic quadrangle maps, as shown in **Figure 2**, *Vicinity Map*, attached.

The majority of the study area, including the pump station area, is located within the developed City limits of Escondido in northern San Diego County. The eastern end of the study area, including the water storage tank area, is located outside of the city limits and is in an unincorporated portion of San Diego County consisting predominately of landscaped areas and citrus and avocado orchards. The portions of the study area located in unincorporated San Diego

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<sup>1</sup> The 7.4 miles of pipeline corridor would accommodate 5.1 miles of 24-inch recycled water pipeline, 4.9 miles of 12-inch brine conveyance pipeline, and 7.4 miles of small diameter (less than 6-inch) fiber optic conduit, all of which would be installed in the same pipeline trench.

# Appendix B: Biological Resources Technical Report

Ms. Rosalyn Prickett  
**RMC WATER AND ENVIRONMENT**  
January 4, 2013 - Page 2



County land, totaling 9.519 acres, fall within the Metro-Lakeside-Jamul Segment of the South County Subarea, an adopted subarea plan of the San Diego County Multiple Species Conservation Plan (MSCP). This area includes the water storage tank area and a private, mostly dirt road through an orchard that connects to Mountain View Drive. The MSCP is a comprehensive, long-term Habitat Conservation Plan developed to provide conservation for multiple species and provide preservation of natural vegetation communities in San Diego County. The MSCP is a subregional plan under the Natural Community Conservation Planning (NCCP) Act of 1991, and is implemented through local subarea plans. The portion of the study area in the Escondido City limits, totaling 99.791 acres, falls within the Eastern Habitat Area of the Draft Escondido Subarea Plan, an MSCP subarea plan which describes the City of Escondido's proposed measures to conserve natural biotic communities and sensitive plant and wildlife species if the plan is adopted. This area includes the pump station and the majority of the pipeline alignment. A map showing City of Escondido limits and the South County MSCP boundaries is provided as **Figure 3, City of Escondido and MSCP Subareas Boundaries**, attached.

## 2.0 SCOPE OF STUDY

The scope of this assessment encompasses the comprehensive documentation of existing biological resources within the study area, and an analysis of any potential impacts to these resources. An extensive literature review initialized the study. The results of the literature review provided information on species occurrences within the vicinity, laws and regulations, and additional background information such as soils, topography, and local land uses.

A general biological field survey was conducted following the literature review, which included mapping the plant communities and conducting sensitive species habitat assessments. No focused surveys for sensitive species or plant communities were conducted.

Impacts were analyzed on a project-specific level for the study area, and recommendations are provided regarding measures to reduce any resulting significant adverse impacts. This document addresses potential impacts pursuant to the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), the MSCP South County Subarea Plan, and the Draft Escondido Subarea Plan under currently accepted scientific, technical, and professional standards. While general biological resources are discussed in a comprehensive manner, the focus of this assessment is on those resources considered to be sensitive.

## 3.0 METHODOLOGY

### 3.1 Literature Review

The assessment began with a review of relevant literature on the biological resources of the study area and the surrounding vicinity. Initially, available databases were queried for all pertinent

# Appendix B: Biological Resources Technical Report

Ms. Rosalyn Prickett  
**RMC WATER AND ENVIRONMENT**  
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information regarding the locations of known observations of sensitive species within the twelve-quadrangle region surrounding and including the study area (Bonsall, Pala, Boucher Hill, San Marcos, Valley Center, Rodriguez Mountain, Rancho Santa Fe, Escondido, San Pasqual, Del Mar, Poway, and San Vicente Reservoir topographic quadrangles). These databases included the California Natural Diversity Database (CNDDDB)<sup>2</sup>, which is a CDFG sensitive resources account database, the USFWS species account database, and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants.<sup>3</sup> Also considered were the locations of USFWS designated critical habitat for federal listed species and the two MSCP subarea plans, the Draft Escondido Subarea Plan and the MSCP South County Subarea Plan. The MSCPs include a list of “Identified Species” under the plans that were considered in this analysis, most of which are also recognized by CNDDDB and CNPS. Federal register listings, survey protocols, and additional species data provided by the USFWS and CDFG were reviewed in conjunction with anticipated federally- and State-listed species potentially occurring within the study area. Recent technical appendices prepared for the City of Escondido concerning a related and nearby project were also consulted.<sup>4</sup> In addition, regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats. Combined, the sources reviewed provided the baseline from which to inventory the biological resources potentially occurring within the study area.

### 3.2 Plant Community Mapping and Plant Species Inventory

A general biological field survey was conducted within the study area by PCR biologist Bob Huttar on October 25, 2012 to assess the potential for the study area to support sensitive plant and wildlife species and/or sensitive habitats. Coverage of the entire study area was ensured using color aerial photographs, with special attention given to sensitive habitats or those areas potentially supporting sensitive flora or fauna.

Much of the study area fell within developed, urban settings where plant communities pertinent to this analysis were non-existent and consequently these areas were not mapped. In areas where natural plant communities existed they were mapped with the aid of 1”=250’ and 1”=275’ scale aerial photographs. Plant community boundaries were delineated directly onto the aerial photographs while in the field and later digitized into PCR’s Geographic Information System (GIS) to calculate acreage. Plant community names and hierarchical structure follow the CDFG List of

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<sup>2</sup> California Department of Fish and Game, *Natural Diversity Database*. <https://nrmsecure.dfg.ca.gov/>. Website accessed October 22, 2012. *RareFind: Database Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities*.

<sup>3</sup> California Native Plant Society. Website accessed October 22, 2012. <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Home> Online Inventory of Rare and Endangered Plants of California. California Native Plant Society.

<sup>4</sup> Helix Environmental Planning, Inc. *Cemetery Area Water Pipeline Replacement Project, Technical Appendices, Prepared for the City of Escondido, CA. December 2011.*

## Appendix B: Biological Resources Technical Report

Ms. Rosalyn Prickett  
**RMC WATER AND ENVIRONMENT**  
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California Terrestrial Natural Communities recognized by the CNDDDB.<sup>5</sup> Plant community descriptions were based on PCR findings and descriptions contained in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California<sup>6</sup> and Oberbauer's Vegetation Communities of San Diego County<sup>7</sup>. Scientific names are employed upon initial mention of each species; common names are employed thereafter.

All plant species observed during the investigation were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Baldwin and common plant names were taken from Baldwin<sup>8</sup>, Lightner<sup>9</sup>, and Clarke<sup>10</sup>. Because common names vary significantly between references, scientific names are included upon initial mention of each species; common names are employed thereafter and are consistent throughout the report.

### 3.3 Wildlife Species Surveys

All wildlife species observed during the field survey by sight, call, tracks, nests, scat (fecal droppings), remains, or other sign were recorded in field notes. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins<sup>11</sup>, for amphibians and reptiles, the American Ornithologists' Union<sup>12</sup> for birds, and Jameson and Peeters<sup>13</sup> for mammals. As with plants, scientific names of wildlife are used during the first mention of a species; common names only are used in the remainder of the text. In addition to species actually detected, expected use of the study area by sensitive wildlife was derived from the analysis of habitats within the study area combined with known habitat preferences of regionally-occurring wildlife species.

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<sup>5</sup> State of California Resources Agency. Department of Fish and Game. September 2003. List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch. The Vegetation Classification and Mapping Program. Sacramento.

<sup>6</sup> Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California Resources Agency. Department of Fish and Game. Non-Game Heritage Program. Sacramento, California.

<sup>7</sup> Oberbauer, T. March 2008. Draft Vegetation Communities of San Diego County .Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert Holland, Ph.D., October 1986

<sup>8</sup> Baldwin, B. G., et al. 2012. The Jepson Manual: Vascular Plants of California, 2nd edition. Berkeley: University of California Press.

<sup>9</sup> Lightner, J. 2011. San Diego County Native Plants, 3<sup>rd</sup> edition: San Diego Flora Publishing.

<sup>10</sup> Clarke, O. 2007. Flora of the Santa Ana River and Environs with References to World Botany. Berkeley, CA: Heyday Books.

<sup>11</sup> Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians, third edition. Boston: Houghton-Mifflin.

<sup>12</sup> American Ornithologists' Union. 1998. The American Ornithologists' Union Checklist of North American Birds. 7th Edition. American Ornithologists' Union, Washington, D.C.

<sup>13</sup> Jameson, Jr., E. W., and H. J. Peeters. 1988. California Mammals. Berkeley: University of California Press.

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## 3.4 Wildlife Movement

The analysis of wildlife movement is based on information compiled from literature, previous documentation from studies conducted within the region,<sup>14</sup> analysis of aerial photographs and topographic maps, and direct observations made in the field. The relationship of the study area to large open space areas in the immediate vicinity was evaluated in terms of connectivity and habitat linkages. The focus of this study is to determine if the alteration of current land use within the study area will have significant impacts on the regional movement of wildlife. This study did not include the use of track plates, camera stations, or scent stations. Instead, notation was made during the field visit of locations of animal sign, potential travel routes and linkage areas, and resource maps and aerial photographs for the vicinity were also studied. These conclusions are based on the knowledge of desired topography and resource requirements for wildlife potentially utilizing the study area and vicinity.

## 3.5 Preliminary Jurisdictional Assessment

A preliminary jurisdictional assessment was conducted by PCR during the field assessment conducted on October 25, 2012 to assess the presence of potentially jurisdictional drainages or wetlands regulated by the ACOEUSACE, RWQCB, and/or CDFG. Features observed within the study area that would be potentially regulated were noted and mapped on an aerial photograph. A formal jurisdictional delineation was not conducted.

## 3.6 Sensitive Biological Resources

The presence of protected, regulated, or otherwise sensitive plant and wildlife species occurring or potentially occurring within the study area is based on an evaluation of the habitat present and the known locations of sensitive resources within the vicinity of the study area. Protected sensitive species are classified by either federal or State resource management agencies, or both, as threatened or endangered, under the provisions of the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). The sensitive species discussed herein have been afforded special recognition by federal, State, or local resource conservation agencies and organizations, principally due to the species' declining or limited population sizes usually resulting from habitat loss.

## 4.0 EXISTING CONDITIONS

The elevation within the study area ranges from approximately 600 feet above mean sea level (MSL) in the west to 1,225 feet MSL in the east. The major portion of the study area lies within the basin in which the City of Escondido is found and through which flows the now channelized Escondido Creek. To the west of the study area are sparsely populated low hills, and the Elfin Forest Recreational Reserve is located approximately 2.5 miles southwest of the western terminus of the Project. The eastern end of the study area is within the foothills of northern San Diego County, which

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<sup>14</sup> *South Coast Wildlands Project. 2000. Missing Linkages: Restoring Connectivity to the California Landscape.*

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are underlain primarily by granodiorite, a type of granite, and characterized by occasional outcroppings of rounded, weathered boulders. East of the study area, the topography slopes down to the east into a valley formed by a fork of San Dieguito Creek and beyond into the San Pascual Valley which is surrounded by undeveloped rolling hills. San Diego Zoo Safari Park is located approximately two miles to the southeast of the eastern terminus of the Project. North and south of the eastern portion of the study area is a patchwork of sparse rural homes, new residential communities, avocado orchards, and undeveloped space.

The majority of the study area is the linear portion of the Project through the City of Escondido. The alignment follows the existing Escondido Flood Control Channel and roadways surrounded by a variety of residential, commercial, industrial developments, and urban parks. The location of the proposed pump station is on the grounds of the City of Escondido's Mountain View Park in a residential neighborhood. The linear component of the eastern end of the study area is surrounded by residential neighborhoods and fruit orchards. The proposed water storage tank would be located on unincorporated County land on a hilltop near an existing water tank surrounded by avocado orchards. The tank would be placed on a northeast facing slope formerly planted with ornamental groundcover. Natural areas are found on the southern slope of the hill.

### 4.1 Plant Communities

The majority of the study area is the linear portion of the Project following city streets and the maintained concrete Escondido Flood Control Channel within a developed urban setting with no remaining native plant communities. As such, vegetation maps of those areas were not prepared. Two components of the study area that had some degree of natural or semi-naturalized plant communities were mapped, including the area surrounding the proposed water storage tank, which supports orchards and undeveloped open space, and the area surrounding the proposed water pump station, which is a landscaped urban park (see **Figure 4A**, *Plant Communities of Proposed Water Storage Tank Site*, and **Figure 4B**, *Plant Communities of Mountain View Park*, attached). Acreages were calculated based on the Project boundary (i.e., GIS shapefiles) provided by RMC Water and Environment (**Table 1**, *Plant Communities*). Descriptions of plant communities are detailed below.

#### **Diegan Coastal Sage Scrub 32500<sup>15</sup>**

Diegan Coastal Sage Scrub is the local expression of the more widespread Coastal Sage Scrub of California. This community is characterized by low to moderately sized shrubs adapted to a Mediterranean regime of summer drought and winter rains by being active during the rainy season. The plants employ strategies for conserving water during the dry season with adaptations such as dropping their leaves or becoming dormant. In spring showy annual wildflowers (plants that germinate, grow and flower once before producing seeds and dying) can dominate the ground cover.

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<sup>15</sup> Oberbauer, T. March 2008. *Draft Vegetation Communities of San Diego County*.

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**Table 1**  
**Plant Communities**

<b>Plant Community</b>	<b>Total Acreage</b>	<b>Acreage in MSCP South County Subarea</b>	<b>Acreage in MSCP Draft Escondido Subarea</b>
Developed	86.218	1.404	84.814
Diegan Coastal Sage Scrub	0.655	0.655	0.0
Rock Outcrop	0.507	0.507	0.0
Landscaped	13.192	1.155	12.037
Disturbed/Landscaped	1.766	1.766	0.0
Disturbed	0.289	0.289	0.0
Orchards and Vineyards	3.743	3.743	0.0
Disturbed Orchards and Vineyards	2.661	0.0	2.661
<b>Total</b>	<b>109.31</b>	<b>9.519</b>	<b>99.791</b>

*Source: PCR Services Corporation, 2012.*

This community was found in the southern part of the proposed water storage tank area on a south facing slope and was observed to be in relatively intact condition with few non-native plants (see **Figure 4A**). The dominant shrub was laurel sumac (*Malosma laurina*) with California buckwheat (*Eriogonum fasciculatum*) as a sub-dominant shrub component. Other species included California sagebrush (*Artemisia californica*), California brickelbush (*Brickellia californica*), and bicolor everlasting (*Pseudognaphalium bioletti*). This community accounted for 0.655 acre within the study area, all of which was within the MSCP South County Subarea Plan.

## **Rock Outcrop**

Close to the center of the site where the proposed water storage tank would be located there is a west facing slope with an outcropping of the native granodiorite bedrock, which has been weathered into large rounded boulders (see **Figure 4A**). A variety of plants typical of Diegan Coastal Sage Scrub was found between the rocks such as chalk dudleya (*Dudleya pulverulenta*), common phacelia (*Phacelia cicutarium*), bicolor everlasting, California brome (*Bromus carinatus*), and stinging lupine (*Lupinus hirsutissimus*). These native plants were are intermixed with non-native species such as shortpod mustard (*Hirschfeldia incana*), and ripgut brome (*Bromus diandrus*). To the south, the boulders decrease in size and woody shrubs such as laurel sumac and California buckwheat become more dominant in the spaces between the rocks. This community accounted for 0.507 acre within the study area, all of which was within the MSCP South County Subarea Plan.

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## **Landscaped**

Landscaped areas can be planted with wide variety of cultivated trees, shrubs, lawns, and groundcover plants, most of which are not native to California. The majority of the study area is located within urban and suburban developments along streets or the banks of a flood control channel and bordered by the landscapes found on residences, commercial, light industrial areas and parks. This community accounted for 13.192 acres within the study area, of which 1.155 acre was within the MSCP South County Subarea Plan and the remaining 12.037 acres within the Draft Escondido Subarea Plan.

## **Disturbed Landscape**

On the proposed site of the water storage tank, a northeast facing slope had been planted in the past with groundcovers of non-native freeway iceplant (*Carpobrotus edulis*) and African daisy (*Gazania krebsiana*), and more recently many weedy species have become established including ripgut brome, tumbleweed (*Salsola* sp.), and tocalote (*Centaurea melitensis*) (see **Figure 4A**). This community accounted for 1.766 acre within the study area, all of which was within the MSCP South County Subarea Plan.

## **Disturbed 11300**

Disturbed areas have been physically disturbed and consist of dirt roads and unvegetated areas with compacted bare ground with evidence of recent human activities limiting natural processes from occurring. This community was limited to the water storage tank area and accounted for 0.289 acre within the study area, all of which was within the MSCP South County Subarea Plan (see **Figure 4A**).

## **Developed 12000**

Developed areas include areas such as roads, buildings, cement channels, and their supporting infrastructure. This community accounted for 86.22 acres within the study area, of which 1.404 acre was within the MSCP South County Subarea Plan and the remaining 84.814 acres within the Draft Escondido Subarea Plan.

## **Orchards and Vineyards 18100**

Orchards and vineyards include areas supporting fruit trees and vines under cultivation as well as minor dirt roads giving direct access to the trees and vines. This type of vegetation was found at the eastern end of the study area in the unincorporated County land associated with the storage tank site where avocado and limes were being grown (see **Figure 4A**). This community accounted for 3.743 acres within the study area, all of which was within the MSCP South County Subarea Plan.

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## Disturbed Orchards and Vineyards

Disturbed orchards and vineyards include areas formerly supporting, but now abandoned, cultivated fruit trees and vines as well as supporting infrastructure such as dirt access roads. This community occupies 2.67 acres adjacent to Mountain View Park where the proposed pump station would be located (see **Figure 4B**). The area includes a property, evidently formerly a citrus orchard with several trees still living but in poor health, and a deserted house. The lot is bordered on the east and south by Mountain View Park, on the north by Glenridge Road, and west by Citrus Avenue. Invasive weeds, including brome grasses, have opportunistically established themselves between and under the trees. This community accounted for 2.661 acres within the study area, all of which was within the Draft Escondido Subarea Plan.

## 4.2 Plant Species

The plant communities discussed above are composed of numerous plant species. General plant species observations were completed during the 2012 survey of the study area. Plant species actually observed within the study area are indicated in **Appendix A: Floral and Faunal Compendium**, attached. Sensitive plant species occurring or potentially occurring within the study area are discussed in Section 4.52, Sensitive Plant Species, of this report.

While a tree survey was not done, many large planted native and non-native trees were observed. On the site of the proposed pump station in Mountain View Park several large trees were seen and at the proposed water storage tank site two coast live oaks (*Quercus agrifolia*) were noted. Additionally, trees were observed within the rights-of-way in many places along the linear components of the project.

## 4.3 Wildlife Species

Representative wildlife species typical of urban settings and the vegetation communities listed above that were either observed, or their presence was inferred by signs such as droppings or sounds, included the northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), western scrub-jay (*Aphelocoma californica*), black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and pocket gopher (*Thomomys* sp.). All wildlife species observed within the study area are included in **Appendix A: Floral and Faunal Compendium**, attached. Sensitive wildlife species occurring or potentially occurring within the study area are discussed in Section 4.53, Sensitive Wildlife Species, of this report.

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## 4.4 Wildlife Movement

### 4.4.1 Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because such conditions preclude the infusion of new individuals and genetic information into isolated populations.<sup>16</sup>

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

Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.<sup>17</sup>

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or

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<sup>16</sup> MacArthur, R. M. and E. O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton University Press: Princeton, New Jersey. Soule, M. E. 1987. *Viable Populations for Conservation*. Sinaur Associates Inc., Publishers, Sunderland, MA. Harris, L. D. and P. B. Gallagher. 1989. *New initiatives for wildlife conservation: the need for movement corridors*. Pages 11-34 in G. Mackintosh, ed. *Preserving communities and corridors. Defenders of Wildlife*. Washington D.C. 96 pp. Bennett, A. F. 1990. *Habitat corridors and the conservation of small mammals in a fragmented forest environment*. *Landscape Ecol.* 4:109-122.

<sup>17</sup> Noss, R. F. 1983. *A regional landscape approach to maintain diversity*. *BioScience*. 33:700-706. Fahrig, L. and G. Merriam. 1985. *Habitat Patch Connectivity and Population Survival*. *Ecology*. 66:1762-1768. Simberloff, D. and J. Cox. 1987. *Consequences and costs of conservation corridors*. *Conserv.Biol.* 1:63-71. Harris, L. D. and P. B. Gallagher. 1989. *New initiatives for wildlife conservation: the need for movement corridors*. Pages 11-34 in G. Mackintosh, ed. *Preserving communities and corridors. Defenders of Wildlife*. Washington D.C. 96 pp.

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water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as “travel route,” “wildlife corridor,” and “wildlife crossing” to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

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

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

**Wildlife crossing:** A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

### 4.4.2 Wildlife Movement within the Study Area

From a regional perspective, the study area’s eastern limit is located in the foothills of the Peninsular Range from which the linear portion of the Project descends to the west southwest for approximately 4.3 miles into the basin occupied by greater Escondido. Through the basin the study area aligns with the channelized Escondido Flood Control Channel to its western terminus where the creek resumes its natural condition. To the east is the mostly undeveloped San Dieguito Creek Valley, with open space continuing into the interior hills. San Diego Zoo Safari Park is approximately 2.5 miles to the southeast of the eastern end of the study area, and the Elfin Forest Recreational Reserve is slightly more than one mile to the southwest of its western end (see **Figure 5, Regional Wildlife Areas**, attached.)

As previously described, wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement are species specific, large open spaces will

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generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a local level to many square mile home ranges of large mammals moving at a regional level.

Wildlife movement on a smaller or local scale likely occurs throughout the study area and the surrounding vicinity. The majority of the study area is developed and therefore provides limited habitat for wildlife adapted to urban settings in the ornamental trees planted within residential areas and parks, the citrus and avocado trees in the orchards, and along streets. Native scrub in areas surrounding the water storage tank site provides live-in and foraging habitat for a variety of wildlife species as does, to a limited extent, the disturbed areas found throughout the study area where weedy, opportunistic plant species briefly establish and provide some foraging and cover for wildlife.

From a regional perspective, the study area itself is not considered a wildlife corridor. The concrete lined Escondido Flood Control Channel within the study area is maintained and primarily unvegetated, and does not offer the protection of cover for wildlife movement. As such, regional wildlife movement through the channel is not expected. The study area is primarily located within an urban, developed environment characterized by high levels of human activities that would deter wildlife from utilizing these areas for movement. Within the natural communities near the storage tank site area, although there is potential for wildlife to utilize these areas, regional wildlife movement would likely be limited due to the existing disturbance and development within the study area and immediate vicinity, and due to the lack of large patches of habitat within the area. Thus, the study area is not considered a wildlife corridor. In addition, the study area is not within any linkage areas identified by the MSCP South County Subarea Plan. The closest South Coast Missing Linkages as described by the South Coast Wildlands is the Santa Ana – Palomar Connection, which is approximately 10 miles north.

### 4.5 Potentially Jurisdictional Areas

Based on field reconnaissance, a review of aerial photography, and under the current plan design, three drainage features were observed within the study area that would be potentially regulated by the USACE, RWQCB, and/or CDFG (see **Figure 6**, *Study Area Drainages* attached.) These features include the Escondido Flood Control Channel and two tributaries, Reidy Creek and an unnamed branch. The Escondido Flood Control Channel, which ultimately drains to the ocean, has sloping cement walls and several inches of water year round. The channel is maintained by the City and any vegetation, which is primarily non-native, is kept to a minimum. Under the current design plan, the pipeline alignment occurs adjacent to the Escondido Flood Control Channel in existing access roads outside the banks of the channel. One overhead crossing of the channel is proposed utilizing the existing Citrus Avenue Bridge. Reidy Creek, a flood control channel near Tulip Street, and the unnamed branch, also a flood control channel, near Auto Park Way, are both tributary branch channels entering the Escondido Flood Control Channel from the north and would

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be crossed by the proposed pipeline alignment. Both channels are similar to Escondido Flood Control Channel in being concrete lined, with limited vegetation, and are maintained by the City. Unlike the crossing at Citrus Avenue there are no existing structures bridging these two channels in the vicinity which might be utilized. As such, the proposed pipeline crossings would consist of either trenchless (e.g., Horizontal Directional Drilling/HDD) or open cut methods. No potential wetlands were identified within the study area.

## 4.6 Sensitive Biological Resources

### 4.6.1 Sensitive Plant Communities/Habitats

One natural community was mapped within the study area and is limited to the proposed water storage tank area, specifically Diegan Coastal Sage Scrub (see **Figure 4A**). Diegan Coastal Sage Scrub is not considered high inventory priority by the CNDDDB, but does require mitigation for any impacts pursuant to the MSCP South County Subarea Plan in which it is mapped. The MSCP places the community in the Tier II mitigation category.

### 4.6.2 Sensitive Plant Species

Plant species identified from the database searches as occurring in the vicinity of the study area were considered sensitive if they were listed with a CNPS California Rare Plant Rank (CRPR) of 2 or less, and/or if they were federally or state listed as threatened or endangered under FESA or CESA, respectively. Three identified species unique to the MSCP South County Subarea Plan were also given consideration. All sensitive plant species meeting these criteria are listed in **Appendix B, Sensitive Species Considered**, and were considered during the field survey to determine the presence of any potentially suitable habitat. Species unique to the Draft Escondido Subarea Plan were not considered since the portion of the study area within this Plan is developed, as described below.

Based on the general field survey, the portion of the study area located within the Eastern Habitat Area of the Draft City of Escondido Subarea Plan is entirely developed and does not support potentially suitable habitat for any sensitive plant species. This includes the majority of the pipeline alignment and the Mountain View Memorial Park with the pump station area. Species unique to the Draft Escondido Subarea Plan were not considered since the portion of the study area within this Plan is developed. The only intact natural habitat capable of supporting sensitive plant species found in the study area exists in the Diegan Coastal Sage Scrub located in the water storage tank area, within the MSCP South County Subarea Plan. Specifically, this area supports potentially suitable habitat for the following sensitive plant species listed in **Appendix B: San Diego thorn-mint (*Acanthomintha ilicifolia*)** [Federal Threatened (FT), State Endangered (SE), CRPR<sup>18</sup> 1B.1, MSCP],

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<sup>18</sup> CNPS has developed five categories rarity in the California Rare Plant Rank (CRPR): List 1A - Presumed extinct in California; List 1B - Plants Rare, Threatened, or Endangered in California and elsewhere; List 2 - Plants Rare, Threatened, or Endangered in California, but more common elsewhere; List 3 - Plants about which we need more information – a review list; and List 4 - Plants of limited distribution – a watch list. The CNPS recently added

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California adolphia (*Adolphia californica*) (CRPR 2.1), San Diego ambrosia (*Ambrosia pumila*) [Federal Endangered (FE), CRPR 1B.1], aphanisma (*Aphanisma blitoides*) (CRPR 1B.2, MSCP), San Diego milk-vetch (*Astragalus oocarpus*) (CRPR 1B.2), Coulter's saltbush (*Artiplex coulteri*) (CRPR 1B.2), Nevin's barberry (*Berberis nevinii*) (FE, SE, CRPR 1B.1), golden-spined cereus (*Bergerocactus emoryi*) (CRPR 2.2), San Diego goldenstar (*Bloomeria clevelandii*) (CRPR 1B.1, MSCP), thread-leaved brodiaea (*Brodiaea filifolia*) (FT, SE, CRPR 1B.1), Orcutt's brodiaea (*Brodiaea orcuttii*) (CRPR 1B.1, MSCP), dense reed grass (*Calamagrostis koeleroides*) (MSCP), slender-pod jewelflower (*Caulanthus heterophyllus*) (MSCP), Orcutt's spineflower (*Chorizanthe orcuttiana*) (FE, SE, CRPR 1B.1), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) (CRPR 1B.2), San Miguel savory (*Clinopodium chandleri*) (CRPR 1B.2, MSCP), San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*) (CRPR 1B.1), Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*) (CRPR 1B.1), snake cholla (*Cylindropuntia californica* var. *californica*) (CRPR 1B.1), variegated dudleya (*Dudleya variegata*) (CRPR 1B.2), sticky dudleya (*Dudleya viscida*) (CRPR 1B.2), Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*) (CRPR 1B.1, MSCP), cliff spurge (*Euphorbia misera*) (CRPR 2.2), San Diego barrel cactus (*Ferocactus viridescens*) (CRPR 2.1, MSCP), Orcutt's hazardia (*Hazardia orcuttii*) ([Federal Candidate (FC), ST, CRPR 1B.1), beach goldenstar (*Heterotheca sessiliflora* ssp. *sessiliflora*) (CRPR 1B.1), mesa horkelia (*Horkelia cuneata* var. *puberula*) (CRPR 1B.1), decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) (CRPR 1B.2), Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) (CRPR 1B.2), willowy monardella (*Monardella viminea*) (FE, SE, CRPR 1B.1, MSCP), chaparral nolina (*Nolina cismontana*) (CRPR 1B.2, MSCP), California Orcutt grass (*Orcuttia californica*) (FE, SE, CRPR 1B.1), Torrey pine (*Pinus torreyana* ssp. *Torreyana*) (CRPR 1B.2), Nuttall's scrub oak (*Quercus dumosa*) (CRPR 1B.1), chaparral ragwort (*Senecio aphanactis*) (CRPR 1B.2), bottle liverwort (*Sphaerocarpos drewei*) (CRPR 1B.1), and Parry's tetracoccus (*Tetracoccus dioicus*) (CRPR 1B.2).

No sensitive plant species were observed during the general field survey, and no focused sensitive plant surveys were conducted.

### 4.6.3 Sensitive Wildlife Species

Wildlife species identified from the database searches as occurring in the vicinity of the study area were considered sensitive if they were listed as federally or state endangered or threatened under the FESA or CESA, candidates for listing by the USFWS or CDFG, and species of special concern. Eight identified species unique to the MSCP South County Subarea were also given consideration. All sensitive wildlife species meeting these criteria are listed in **Appendix B**, and were considered during the field survey to determine the presence of any potentially suitable

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"threat ranks" which parallel the ranks used by the CNDDDB. These ranks are added as a decimal code after the CRPR (e.g., List 1B.1). The threat codes are as follows: .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); .2 – Fairly endangered in California (20-80% occurrences threatened); and .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

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habitat. Species unique to the Draft Escondido Subarea Plan were not considered since the portion of the study area within this Plan is developed, as described below.

Based on the general field survey, the portion of the study area located within the Eastern Habitat Area of the Draft City of Escondido Subarea Plan is entirely developed and does not support potentially suitable habitat for any sensitive wildlife species. This includes the majority of the pipeline alignment and the Mountain View Memorial Park with the pump station area. The only intact natural habitat capable of supporting sensitive wildlife species found in the study area exists in the Diegan Coastal Sage Scrub located in the water storage tank area, within the MSCP South County Subarea Plan. Specifically, this area supports potentially suitable habitat for the following sensitive plant species listed in **Appendix B**: coastal California gnatcatcher [FT, SSC], coast horned lizard (SSC), and the coastal cactus wren (SSC). With regard to the coastal cactus wren, potentially suitable foraging habitat occurs but the species is not expected to nest on site due to the absence of cactus, the only plant in which the bird builds its nest. Further discussion on the coastal California gnatcatcher is provided below due to its FT status. In addition to these species, all migratory nesting birds are afforded protection under the federal Migratory Bird Treaty Act (MBTA) and by the CDFG. The study area has the potential to support migratory bird species, including both raptor and songbirds, due to the presence of many trees in the developed and landscaped roads and communities.

## **Coastal California Gnatcatcher**

Within the study area, potentially suitable habitat for the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*) occurs only in the Diegan Coastal Sage Scrub found on the water storage tank site. The plant community is found approximately 100 feet from the southern boundary of the Project's temporary construction limits, and is separated topographically by the outward curvature of a hillside which is dominated by a rock outcropping of large boulders.

## **5.0 PROJECT IMPACT ANALYSIS**

### **5.1 Approach**

The following discussion examines the potential impacts to biological resources that may occur as a result of the proposed project. The determination of impacts in this analysis is based on both the features of the proposed project and the biological values of the habitat and/or sensitivity of plant and wildlife species potentially affected.

Impacts to biological resources are assessed using impact significance threshold criteria, which mirror the policy statement contained in the CEQA, Section 21001(c) of the California Public Resources Code. The questions below model those included in the checklist of questions listed in Appendix G of the CEQA guidelines and that are considered during the Initial Study leading to the

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preparation of the appropriate environmental documentation for a project (i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report).

## 5.2 Project Description

The Project would consist of buried pipelines, a large water storage tank, and a water pump station, as summarized below. It would deliver recycled water to customers located in the northeast area of the City of Escondido and the adjacent County area in the vicinity of Mountain View Drive. Project facilities include:

- Approximately 7.4 miles of buried pipeline(s) under flood control channel access roads, streets and private roads to accommodate the following facilities, all of which would be installed in the same trench:
  - Approximately 5.1 miles of 24-inch recycled water pipeline
  - Approximately 4.9 miles of 12-inch brine conveyance pipeline
  - Approximately 7.4 miles of small diameter (less than 6-inch) fiber optic conduit(s) installed in the pipeline trench
- Pipeline crossings of one primary and two branch cement flood control channels;
- A recycled water storage tank with a capacity of up to 2 million gallons; and
- A recycled water pump station.

The alignment consists of two distinct reaches. Reach 1 lies almost entirely within the right-of-way of Escondido Creek Channel and is wholly within the City of Escondido. Reach 2 lies within city streets and is also wholly within the city limits. A description of the project components is provided below.

### Reach 1 - Escondido Creek Channel and Streets

Using an open cut trenching method the proposed pipeline(s) would be installed within the dirt access road on the embankment above City-owned and maintained Escondido Creek channel between Citrus Avenue on the east and Harmony Grove Road on the west. In the area of the Civic Center Shopping Plaza, it would depart from the channel, follow Centre City Parkway north, east on Woodward, north on Escondido Boulevard, east on Woodward Avenue, cross Broadway and enter the northwest side of the Escondido Creek Channel right-of-way. The affected area for the pipeline construction throughout the length of the study area may be as much as 40 feet with a limit on the access road on the flood control channels to not encroach on the slope of the channel walls.

### Reach 2 – City Streets

The pipeline would be installed via open cut trenching while closing half the street to traffic from the intersection of Escondido Creek Channel and Citrus Avenue, follow Citrus Avenue in a

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southeasterly direction, then east on Glenridge Road to Oak Hill Memorial Park. The pipeline would resume where Canyon Crest Drive meets the southern boundary of Oak Hill Memorial Park. The alignment continues west on Canyon Crest Drive to Mountain View Drive, then turns east along Mountain View Drive to the private road entrance onto the Grangetto property where the storage tank would be located.

### **Escondido Creek Channel Crossing**

The pipeline would cross the Escondido Creek Channel at Citrus Avenue. This would likely be done by attaching the pipeline to the southwest (downstream) side of the bridge in a fashion similar to an existing 10-inch water main crossing on the northeast side the bridge. The ability of the bridge to structurally accommodate the pipeline would be evaluated during design. If the pipe cannot be attached to the bridge, the channel crossing would be made using trenchless jack-and-bore or open cut methods based on the design evaluation and subject to approval and permitting pursuant to the USACE, CDFG and RWQCB, as well as safety and cost considerations.

### **Branch Channels Crossings**

The pipeline would cross concrete lined branch channels to Escondido Creek Channel in two places. The feasibility of trenchless or open-cut installation methods to cross each of these channels would be evaluated independently during final design and subject to approval and permitting pursuant to the USACE, CDFG and RWQCB, as well as safety, and cost considerations. Channel crossings are:

- Unnamed branch channel approximately 0.3 mile west (downstream) of Auto Park Way South; and
- Reidy Creek Channel – crossed north (upstream) of the railroad crossing near Tulip Avenue.

### **Recycled Water Pump Station**

The potential area where the pump station would be located is in the northeast corner of the City of Escondido Mountain View Park on Glenridge Road. Elevation at the site ranges from approximately 735 to 740 feet above MSL. The building would be up to 50-feet by 50-feet and 24-feet tall, and would be located in the northeast corner of the park occupying an existing parking lot and landscaped areas. The location within the park was selected by balancing considerations of park infrastructure, noise generation in proximity of residences, access to electrical power and pipeline, maintenance access, and proximity of a construction staging area. An open cut method would be used to install pipelines from Glenridge Road connecting the pump station with the main pipeline. At buildout, up to three electric motor pumps could operate continuously for 24-hours a day. The station would also include a permanent backup diesel-powered generator that would be enclosed and, in accordance with the City's noise ordinance, sound attenuated (hospital grade silencer) to produce less than 45 dB under full load.

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### **Recycled Water Storage Tank**

The proposed recycled water storage tank site would be located on a hilltop on private land east of the city limits in unincorporated San Diego County south of Mountain View Drive. The hilltop is currently occupied by avocado orchards, agricultural infrastructure, undeveloped open space, and the City's Hogback Potable Reservoir storage tank, similar in size to the one proposed. The site where the proposed water tank would be placed is on a northeast facing slope with elevations ranging from 1,060 feet to 1,120 feet above MSL. The recycled water tank would be circular, up to 120 feet in diameter and up to 36 feet tall. The final dimensions would be determined during final design based on the site geotechnical conditions and grading. The tank would include an emergency overflow that would release recycled water to grade level adjacent to the tank in event of a major system failure.

**Staging Areas** - At various locations along the construction route, staging areas would be required to store pipe, construction equipment, and other construction-related material. Staging areas would be established along the route where space is available, such as vacant lots, roadway turnouts, and parking lots. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of convenient access and lack of sensitive receptors. As pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods of time. Potential staging areas include vacant private and public land, parking lots, and segments of closed traffic lanes.

**Surface Preparation** - Surface preparation involves removing structures (such as fences), pavement, and/or vegetation from the trench area. Equipment used for this activity includes jack hammers, pavement saws, bulldozers, loaders, and trucks.

**Trench Excavation/Shoring** - A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical side walls to minimize the amount of soil excavated, and the area needed for the construction easement. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off site for disposal.

Disposal options include use as cover material at sanitary landfills and use as "clean fill" at other sites. In general, pipe trenches would be 3- to 6-feet wide and 4- to 10-feet deep. Where parallel pipelines are proposed, if possible a single trench would be used for both pipes. Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily "closed" at the end of each work day, by covering with steel plates or backfilled.

Trenches would be backfilled with either the excavated soil or imported material. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compactability and stability. In

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addition, following the installation of the pipe, the City expects that there would be a surplus of native soil material requiring off-site export. For the purposes of this MND, the City assumes that the amount of soil exported is dependent on pipe length, pipe trench width, and pipe trench depth.

**Facility Construction** - The construction of pump station and storage sites would include the following:

Site Preparation - Tree and brush removal, pavement removal, buried utility removal and/or relocation, and structure demolition. Survey staking would be used to define the land limits of the new facility.

Earthwork - After the site is cleared, grading would begin. The contractor would attempt to balance earthwork cut and fill quantities within the construction area to the extent feasible. Material excavated would be used to create screening berms and/or spread across other areas of the site to establish a preliminary grade for structures. Following rough grading, additional excavation would bring the site to final grade and allow for preparation for underground piping and structural slabs. Additional site work would include paving, temporary and permanent security fencing, and site lighting. Additional access roads and a staging area would also be provided to accommodate construction, operation, and maintenance. Significant groundwater is not expected, but should it present a problem dewatering would be required and surface and/or subsurface drainage systems may be necessary.

### 5.3 Impact Analysis

Impacts were analyzed as both permanent (e.g., the footprints of any permanent structures and maintained ROWs) and temporary (e.g., staging areas and construction zones outside the permanent footprints). Both direct and indirect impacts were also analyzed. Direct impacts refer to effects such as the removal of sensitive habitat or take of listed species, and indirect impacts refer to effects such as noise on sensitive species.

**a) Will the proposed project 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. Fish and Wildlife Service?**

*No Impact.*

Only one portion of the study area supports a natural plant community that provides potentially suitable habitat for a sensitive species. Specifically, Diegan Coastal Sage Scrub, which provides suitable habitat for coastal California gnatcatcher, a federally threatened bird species and a California Species of Special Concern, was mapped within the water storage tank area located in the MSCP South County Subarea Plan. The Diegan Coastal Sage Scrub is not located within the footprint of the water storage tank, and is more than 100 feet from the temporary construction limits.

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The portion of the community closest to the construction zone is low quality with a relatively high number of non-native plants, many large rocks and few individuals of plant species characteristic of this community. Based on the proposed Project design, no direct impacts would occur to potentially suitable habitat for coastal California gnatcatcher or any potential nests. However, due to the proximity of proposed construction limits to the Diegan Coastal Sage Scrub, the potential for indirect impacts as a result of construction noise and vibration to any birds present was considered. The Diegan Coastal Sage Scrub is separated from the Project by both the outward curvature of the hillside and a rock outcropping. The Project boundary follows a steeply inclined ridgeline on the side of the rounded hilltop which isolates the natural community both visually and acoustically. This topography is anticipated to provide a natural noise shadow because construction sounds would be directed upwards above the height at which the birds normally nest and fly, approximately 8 feet from the ground. Additionally, the rock outcropping and the bedrock below ground is expected to dampen vibrations which might otherwise have an effect on the bird. Based on this, no indirect impacts to coastal California gnatcatcher are anticipated as a result of noise or vibration. No other sensitive or listed plant or wildlife species would be impacted by the Project based on the avoidance of the Diegan Coastal Sage Scrub and the absence of suitable habitat. Based on the above, the Project would not impact any sensitive or listed plant species.

**b) Will the proposed project 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?**

*No impact.*

Diegan Coastal Sage Scrub, a plant community targeted for protection by the MSCP South County Subarea Plan and potential habitat for a variety of sensitive species, exists within the study area. However, this community would not be directly impacted by the permanent or temporary construction footprint of the Project. The Diegan Coastal Sage Scrub is more than 100-feet from the edge of the temporary construction limits and is visually isolated by the outward curve of a slope covered with large boulders. As such, inadvertent removal of this vegetation community during construction is not anticipated.

The study area does not support any other sensitive natural communities or riparian habitat. Therefore, the Project would not impact any sensitive natural community.

**c) Will the proposed project 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 or Compliance with Existing Regulations.*

Based on the general field survey, the study area does not support potential federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA); therefore, no impacts

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are expected. However, the study area does support three potentially jurisdictional non-wetland drainage features regulated by USACE under Section 404 of the CWA, in addition to Section 401 of the CWA regulated by the San Diego RWQCB and Section 1602 of the California Fish and Game Code regulated by CDFG. The Project proposes crossing these drainage features at three locations, including the Escondido Flood Control Channel at North Citrus Avenue, the Reidy Creek tributary near Tulip Street, and the unnamed branch tributary near Auto Park Way. If feasible, the pipeline crossing of the Escondido Flood Control Channel is proposed to be constructed overhead by attaching the pipeline to the southwest (downstream) side of an existing bridge in a manner similar to an existing 10-inch water main attached to the northeast (upstream) side. If the overhead crossing is implemented, no impact would be expected to the Escondido Flood Control Channel.

No existing bridges occur at the proposed Reidy Creek and unnamed branch crossing. Therefore, the proposed crossings at these locations would occur by either a trenchless method (jack-and-bore or Horizontal Directional Drilling/HDD), or by an open cut method. Any impacts to these drainage features would be considered potentially significant without permitting and/or mitigation. Therefore, prior to any ground disturbing activities, a formal jurisdictional delineation of the drainage features would be required to determine the limits of jurisdictional waters within the study area. If the trenchless method is implemented, jack-and-bore or HDD would occur outside of USACE/RWQCB/CDFG jurisdiction, thereby avoiding direct impacts to jurisdictional waters. Although no direct impacts to jurisdictional waters are anticipated, there is a slight potential for indirect impacts as a result of “frac-out” (uncontrolled release of drilling fluids into the environment). Thus, as a contingency measure, **Mitigation Measure BIO-1** should be implemented to ensure any potential indirect impacts to jurisdictional features are minimized. With implementation of this mitigation measure, potential impacts would be reduced to less than significant levels.

If the open cut method is implemented, permits would be required from the regulatory agencies if the drainage features are determined jurisdictional, including a CWA Section 404 permit from the USACE, a CWA Section 401 permit from the RWQCB, and/or a Streambed Alteration Agreement permit under Section 1602 of the California Fish and Game Code from the CDFG. Impacts from the open cut method would involve trenching the drainage to install the pipe below grade, and backfilling the trench once installation is complete. As such, impacts would be temporary and the drainage would be restored to pre-project conditions. Since the drainages are improved, concrete features that lack habitat, no temporal loss would occur during pipe installation. Therefore, restoring the temporary impact areas to pre-project conditions would be expected to satisfy the compensatory mitigation requirements pursuant to the regulatory permitting processes, subject to approval by the agencies. Any permanent impacts to the drainage features would likely require on- and/or off-site replacement (e.g., at an agency-approved mitigation bank) at a ratio of no less than 1:1. Through compliance with these existing regulations, impacts would be less than significant.

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### **Mitigation Measure BIO-1: Prepare a Frac-out Emergency Plan.**

Prior to any ground disturbing activities, the USACE, RWQCB, and CDFG shall be notified of the Project and the proposed implementation of jack-and-bore or horizontal directional drilling methods. An emergency plan for potential frac-out release shall be prepared by the contractor (or project engineer) for submittal to USACE, RWQCB, and CDFG, and shall include measures to avoid/contain pollutants in case of a frac-out release and avoid indirect impacts to jurisdictional areas.

### **d) Will the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife corridors, or impede the use of native wildlife nursery sites?**

*Less than Significant with Mitigation.*

The study area was determined not to function as a regional wildlife corridor for any species, and no wildlife nursery sites were identified within the study area. However, the ornamental trees and shrubs within the study area associated with the linear portion of the Project supports potential nesting habitat for migratory songbirds and raptors. Disturbing or destroying active nests of migratory birds is a violation of the MBTA. In addition, nests and eggs are protected under Fish and Game Code Section 3503. Nesting activity typically occurs from February 15 to August 31 for songbirds, and January 15 to August 31 for raptors. To avoid impacts to nesting migratory birds, construction activities should be conducted outside of the nesting season, if feasible. However, if construction activities must occur during the nesting season, the removal of vegetation during the breeding season is considered a potentially significant impact without mitigation. **Mitigation Measure BIO-2** should be implemented to ensure impacts to nesting songbirds and raptors are avoided. With the implementation of this mitigation measure, potential impacts would be reduced to less than significant levels.

### **Mitigation Measure BIO-2: Avoid Migratory Bird Nesting Season or Complete Surveys Before Construction Activities.**

Removal of suitable vegetation for migratory birds shall occur outside the nesting season (i.e., September 1 through January 14) to avoid potential impacts to nesting birds, if feasible. If vegetation removal is required during the nesting season, a qualified biologist shall survey all suitable habitats for the presence of nesting birds before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) around the nest shall be delineated, flagged, and avoided until the nesting cycle is complete, or as determined appropriate by the biologist. Biological monitoring shall also occur until the nesting cycle is complete.

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**e) Will the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

*Less than Significant based on Compliance with Existing Regulations.*

The City of Escondido General Plan<sup>19</sup> “recognizes oak trees and other mature trees as significantly aesthetic and ecological resources”, and requires permits when certain trees are to be removed within the City’s boundaries. Covered trees are described in the City’s Municipal Codes. Based on the general field survey, the study area supports many trees that may be covered by the City’s Municipal Code, including the linear portion of the Project along streets and adjacent to the Escondido Flood Control Channel, and within Mountain View Park. The removal of some trees within the study area may be unavoidable during construction and the location of staging facilities along the linear portion of the Project, and placement of the pump station within Mountain View Park. It should be noted at the outset that a provision in the ordinance [Escondido Municipal Code Section 33-1068.B. (b) (6)] addressing restrictions on the removal of trees indicates that when a project is part of a city capital improvement program, which this Project appears to be, the director may determine whether the provisions apply. If the City of Escondido requires the Project to comply with the permit process based on the Municipal Code, the following discussion would apply.

The City’s Vegetation Protection and Replacement Standards Ordinances define certain sensitive tree types and describe mitigation measures to be employed should their removal be unavoidable. A mature tree is defined as any tree, either native or non-native, with a trunk diameter of 8 inches or greater at breast height, generally measured 4.5 feet above the ground (DBH). A mature oak is defined as any oak (genus *Quercus*) specimen with a DBH of 4 inches or greater. A protected tree is any oak tree with a DBH of 10 inches or greater or any tree listed on the local historic register, or determined to contribute substantially to the historic character of a property or structure listed on the local historic register.

Applications for tree removal permits are described in Escondido Municipal Code Section 33-1068.C, and require submittal of information including a site plan, photographs, statements of justification for the actions, and a tree survey. The tree survey should describe the trees, whether the trees would be removed or relocated, with the plans for methods of relocation and subsequent maintenance. Provisions in the Municipal Code also require an erosion control plan and a biological report addressing sensitive species and habitat. However, these would not likely be required for the Project based on the lack of gradient or sensitive biological resources in the study area within City limits. If approved, the permit is valid for a period of six months from the date of issuance. Requests for extensions must be submitted prior to the expiration of the current period, and may be granted for periods not exceeding six months.

Several trees were seen in the study area where it fell within the unincorporated county land and thus the MSCP South County Subarea Plan, most notably two coast live oaks in the zone that may be disturbed during construction of the water storage tank. The MSCP South County Subarea

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<sup>19</sup> General Plan of the City of Escondido. Adopted May 2012 by the Escondido City Council.

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Plan does not protect individual coast live oak trees as the City ordinances do, rather it addresses plant communities, such as oak woodland, or collections of larger numbers of trees that are associated with a variety of understory plants and other characteristics not found at the site. Nevertheless, an effort would be made to avoid removing the trees if feasible.

No other local ordinances or policies protecting biological resources exist. Therefore, through compliance with the City of Escondido tree ordinance, if required, impacts to local ordinances or policies would be less than significant.

**f) Will the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?**

*No Impact.*

The Project is located within two MSCP Subareas: the adopted MSCP South County Subarea Plan and the Draft Escondido Subarea Plan. No sensitive species or habitats occur within the portion of the study area in the Draft Escondido Subarea Plan, and the sensitive natural community within the MSCP South County Subarea Plan portion of the study area would be avoided. In addition, the Project would be required to comply with existing regulations and permitting requirements, such as those pertaining to jurisdictional drainages. As such, the Project does not conflict with any provisions of the MSCP plans.

### **6.0 IMPACTS AFTER MITIGATION**

The inclusion of all of the above mitigation measures and compliance with existing regulations and ordinances would reduce all potentially significant impacts to a less than significant level.

If you have any questions regarding the methodology or findings of this assessment please feel free to contact Bob Huttar (b.huttar@pcrnet.com) at (949) 753-7001.

Sincerely,  
**PCR SERVICES CORPORATION**

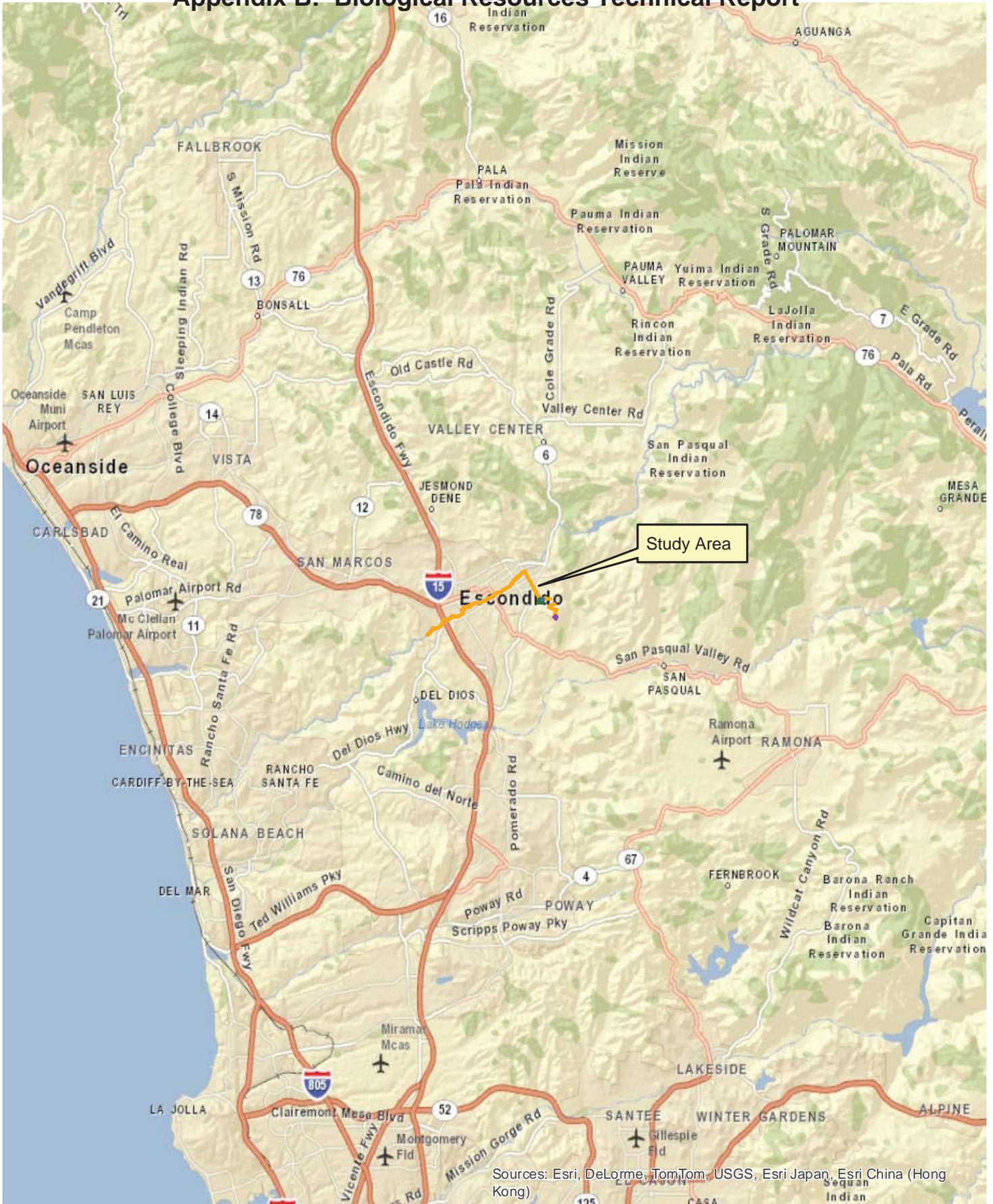
A handwritten signature in black ink that reads "B. Huttar".

Bob Huttar  
Biologist

A handwritten signature in black ink that reads "Ceri Williams-Dodd".

Ceri Williams-Dodd, Ph.D.  
Senior Biologist II

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Sources: Esri, DeLorme, TomTom, USGS, Esri Japan, Esri China (Hong Kong)



## Regional Map

FIGURE

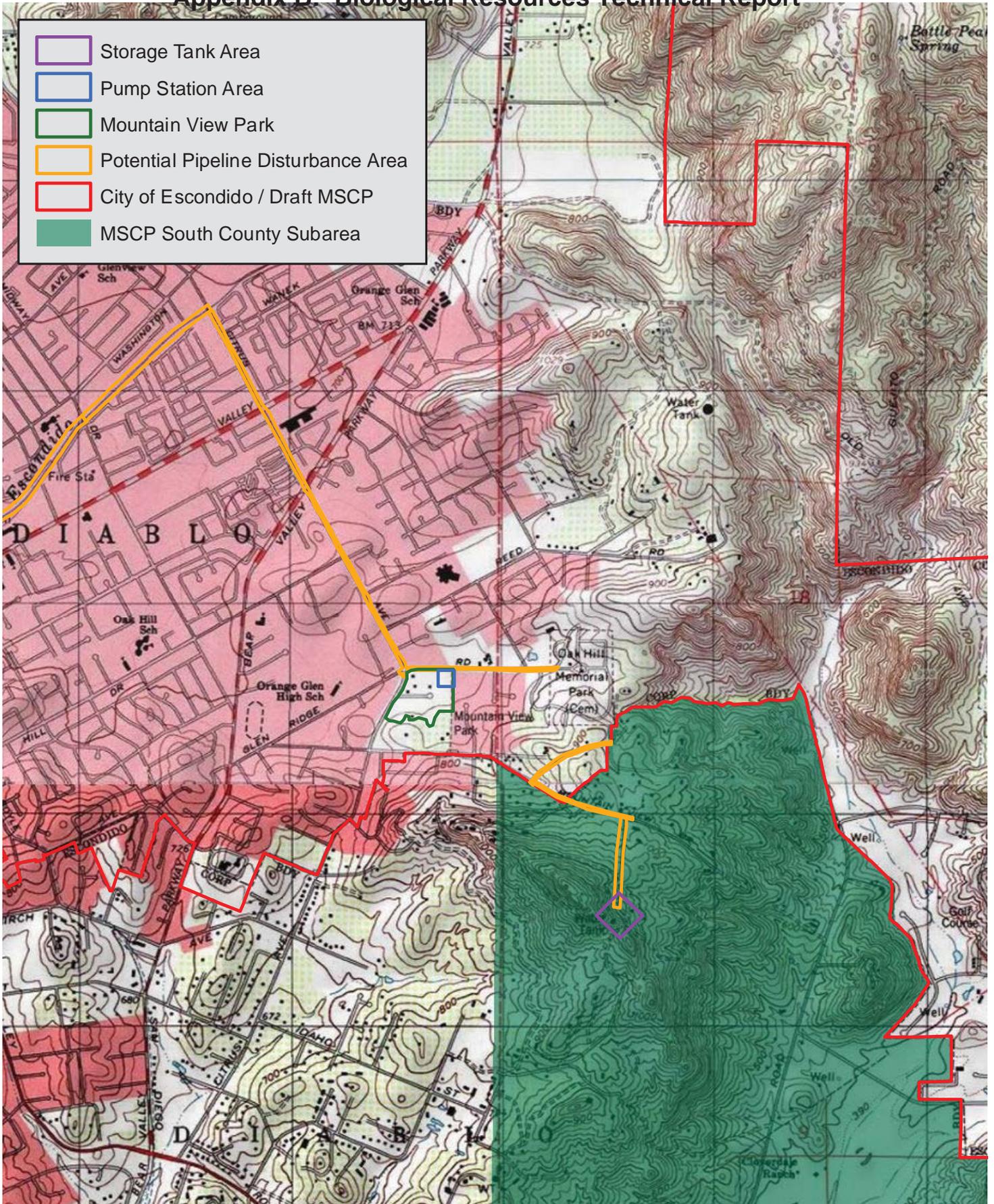
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RMC Escondido

Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.



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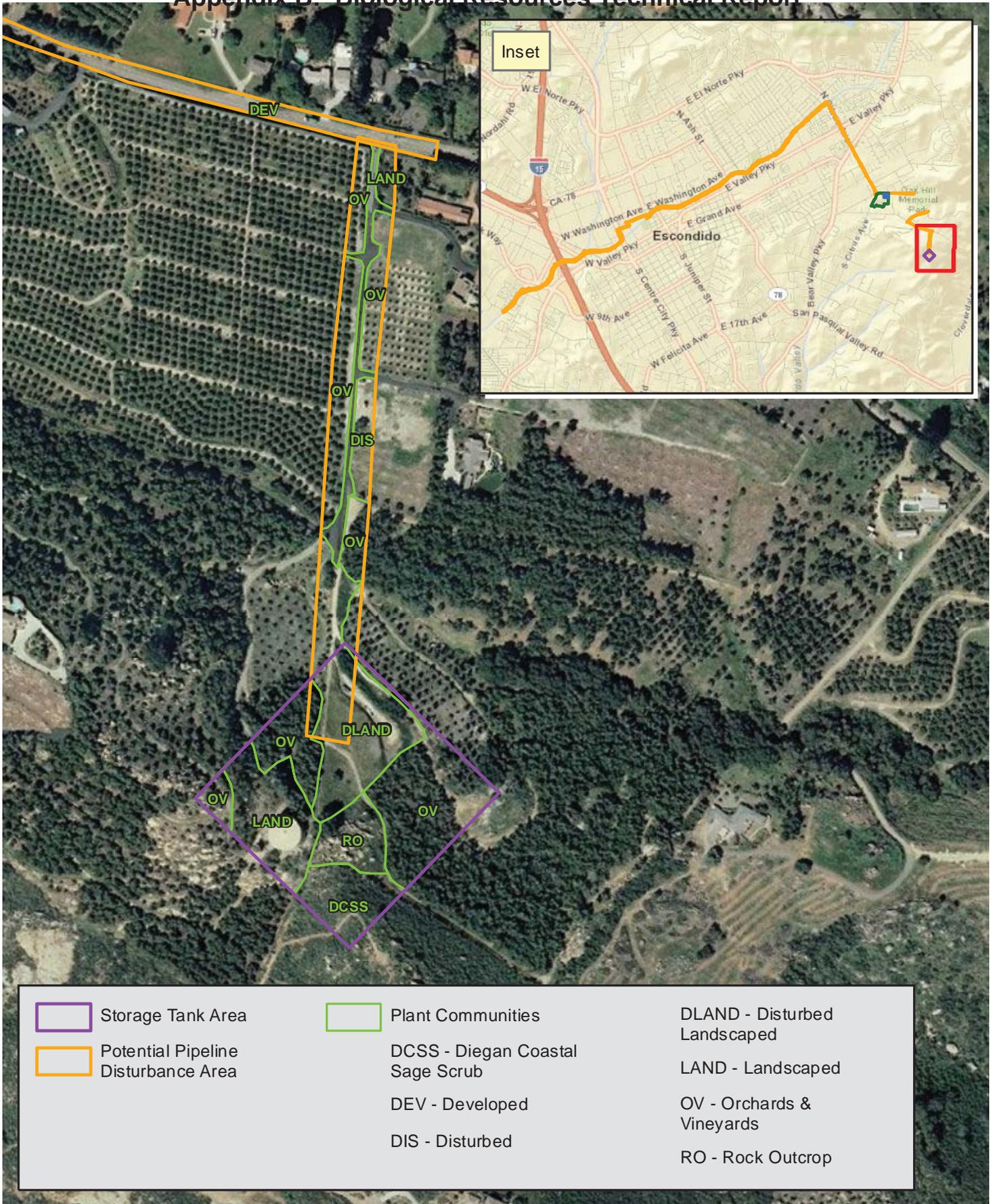
**City of Escondido and MSCP Subareas Boundaries**

RMC Escondido  
 Source: USGS Topographic Series (Valley Center, Escondido, CA); PCR Services Corporation, 2012.

FIGURE

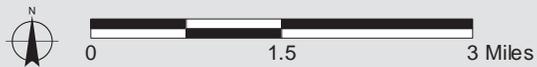
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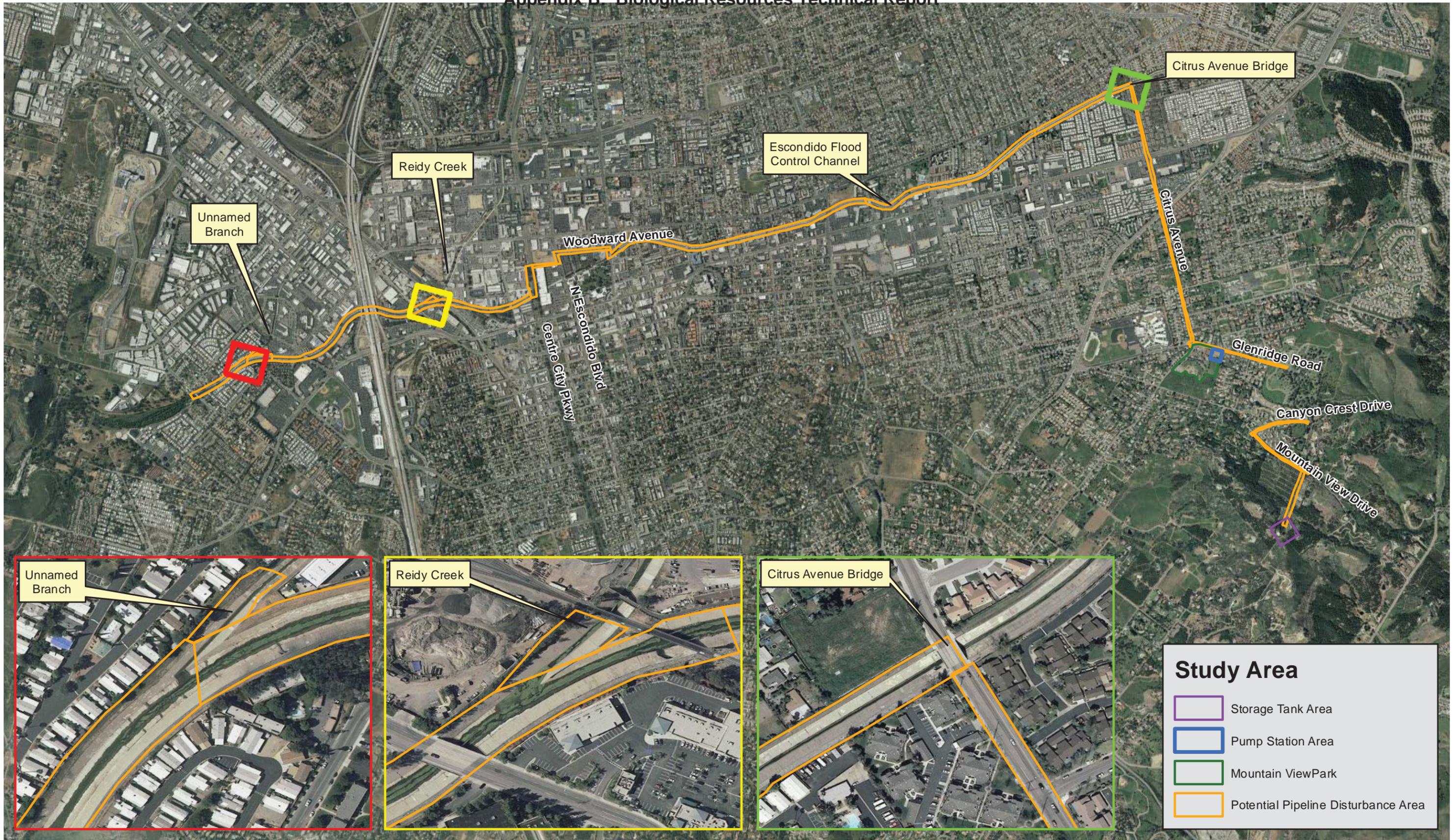
## Regional Wildlife Areas

FIGURE

5

RMC Escondido

Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.



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## APPENDIX A FLORAL AND FAUNAL COMPENDIUM

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### BIRDS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>Cathartidae</b> <i>Cathartes aura</i>	<b>New World Vultures</b> turkey vulture
<b>Accipitridae</b> <i>Buteo jamaicensis</i> <i>Buteo lineatus</i>	<b>Hawks</b> red-tailed hawk red-shouldered hawk
<b>Falconidae</b> <i>Falco sparverius</i>	<b>Falcons</b> American kestrel
<b>Colymbidae</b> <i>Zenaida macroura</i>	<b>Pigeons and Doves</b> mourning dove
<b>Tyrannidae</b> <i>Sayornis nigricans</i> <i>Tyrannus vociferans</i>	<b>Tyrant Flycatchers</b> black phoebe Cassin's kingbird
<b>Corvidae</b> <i>Aphelocoma californica</i> <i>Corvus brachyrhynchos</i> <i>Corvus corax</i>	<b>Jays and Crows</b> western scrub-jay American crow common raven
<b>Aegithalidae</b> <i>Psaltriparus minimus</i>	<b>Bushtits</b> bushtit
<b>Turdidae</b> <i>Sialia mexicana</i>	<b>Thrushes</b> western bluebird
<b>Mimidae</b> <i>Mimus polyglottos</i>	<b>Thrashers</b> nothern mockingbird

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Appendix A: Floral and Faunal Compendium

## MAMMALS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>Canidae</b> <i>Canis latrans</i>	<b>Canines</b> coyote
<b>Geomyidae</b> <i>Thomomys</i> spp.	<b>Pocket Gophers</b> gopher
<b>Sciuridae</b> <i>Spermophilus beecheyi</i>	<b>Squirrels and Chipmunks</b> California ground squirrel

## PLANTS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>Aizoaceae</b> * <i>Carpobrotus edulis</i>	<b>Fig-Marigold Family</b> hottentot fig
<b>Anacardiaceae</b> <i>Malosma laurina</i> * <i>Schinus molle</i>	<b>Sumac Family</b> laurel sumac Peruvian peppertree
<b>Asteraceae</b> <i>Artemisia californica</i> <i>Brickellia californica</i> * <i>Centaurea melitensis</i> <i>Gazania linearis</i> <i>Heterotheca grandiflora</i> <i>Pseudognaphalium biolettii</i>	<b>Aster Family</b> California sagebrush California brickelbush tocalote gazania telegraphweed two-color rabbit-tobacco
<b>Boraginaceae</b> <i>Phacelia cicutaria</i>	<b>Borage Family</b> caterpillar phacelia
<b>Brassicaceae</b> * <i>Hirschfeldia incana</i>	<b>Mustard Family</b> shortpod mustard
<b>Chenopodiaceae</b> * <i>Salsola</i> sp.	<b>Goosefoot Family</b> thistle
<b>Fabaceae</b> * <i>Acacia</i> sp. <i>Acmispon glaber</i> <i>Lupinus hirsutissimus</i>	<b>Pea Family</b> acacia deerweed stinging annual lupine
<b>Lauraceae</b> * <i>Persea americana</i>	<b>Laurel Family</b> avocado

# Appendix B: Biological Resources Technical Report

Appendix A: Floral and Faunal Compendium

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## Myrtaceae

\* *Eucalyptus calophylla*

## Pinaceae

*Pinus pinea*

## Poaceae

*Bromus carinatus*

\* *Bromus diandrus*

*Melinis repens*

*Muhlenbergia rigens*

\* *Pennisetum setaceum*

\* *Schismus barbatus*

## Polygonaceae

*Eriogonum fasciculatum*

## Myrtle Family

redgum

## Pine Family

Italian stone pine

## Grass Family

California brome

ripgut grass

natal grass

deergass

fountain grass

common Mediterranean grass

## Buckwheat Family

California buckwheat

## **Appendix B: Biological Resources Technical Report**

# Appendix B: Biological Resources Technical Report

## APPENDIX B SENSITIVE SPECIES CONSIDERED

### PLANTS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint
<i>Adolphia californica</i>	California adolphia
<i>Agave shawii</i> var. <i>shawii</i>	Shaw's agave
<i>Ambrosia pumila</i>	San Diego ambrosia
<i>Aphanisma blitoides</i>	aphanisma
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita
<i>Astragalus oocarpus</i>	San Diego milk-vetch
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch
<i>Artiplex coulteri</i>	Coulter's saltbush
<i>Atriplex pacifica</i>	south coast saltscale
<i>Atriplex parishii</i>	Parish's brittlescale
<i>Baccharis vanessae</i>	Encinitas baccharis
<i>Berberis nevinii</i>	Nevin's barberry
<i>Bergerocactus emoryi</i>	golden-spined cereus
<i>Bloomeria clevelandii</i>	San Diego goldenstar
<i>Brodiaea filifolia</i>	thread-leaved brodiaea
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea
<i>California macrophylla</i>	round-leaved filaree
<i>Calochortus dunnii</i>	Dunn's mariposa lily
<i>Ceanothus cyaneus</i>	Lakeside ceanothus
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower
<i>Clarkia delicata</i>	delicate clarkia
<i>Clinopodium chandleri</i>	San Miguel savory
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	Cuyamaca larkspur
<i>Dudleya brevifolia</i>	short-leaved dudleya
<i>Dudleya variegata</i>	variegated dudleya
<i>Dudleya viscida</i>	sticky dudleya
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button celery
<i>Erysimum ammophilum</i>	sand-loving wallflower
<i>Euphorbia misera</i>	cliff spurge
<i>Ferocactus viridescens</i>	San Diego barrel cactus
<i>Geothallus tuberosus</i>	Campbell's liverwort
<i>Githopsis diffusus</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup
<i>Hazardia orcuttii</i>	Orcutt's hazienda
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenstar
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia
<i>Horkelia truncata</i>	Ramona horkelia

## PLANTS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<i>Hulsea californica</i>	San Diego sunflower
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush
<i>Iva hayesiana</i>	San Diego marsh-elder
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's peppergrass
<i>Leptosyne maritima</i>	sea dahlia
<i>Lilium parryi</i>	lemon lily
<i>Linanthus orcuttii</i>	Orcutt's linanthus
<i>Lotus nuttallii</i>	Nuttall's lotus
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	San Felipe monardella
<i>Monardella viminea</i>	willow monardella
<i>Navarretia fossalis</i>	spreading navarretia
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast wooly-heads
<i>Nolina cismontana</i>	chaparral nolina
<i>Orcuttia californica</i>	California Orcutt grass
<i>Packera ganderi</i>	Gander's ragwort
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine
<i>Pogogyne abramsii</i>	San Diego mesa mint
<i>Pogogyne nudiuscula</i>	Otay Mesa mint
<i>Quercus dumosa</i>	Nuttall's scrub oak
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap
<i>Senecio aphanactis</i>	chaparral ragwort
<i>Sphaerocarpos drewei</i>	bottle liverwort
<i>Stemodia durantifolia</i>	purple stemodia
<i>Suaeda esteroa</i>	estuary seablite
<i>Symphotrichum defoliatum</i>	San Bernardino aster
<i>Tetracoccus dioicus</i>	Parry's Tetracoccus
<i>Texosporium sancti-jacobi</i>	woven-spored lichen
<i>Triquetrella californica</i>	coastal triquetrella
<i>Viola purpurea</i> ssp. <i>aurea</i>	golden violet

### SPECIES LISTED ONLY IN MSCP SOUTH COUNTY SUBAREA PLAN

<i>Calamagrostis koeleroides</i>	dense reed grass
<i>Caulanthus heterophyllus</i>	slender-pod jewelflower
<i>Solanum tenuilobatum</i> <sup>a</sup>	narrow-leaved nightshade

<sup>a</sup> This species is not recognized by most authorities, including the California Natural Diversity Database and Baldwin, as a distinct species but instead consider it as purple nightshade (*Solanum xanti*), a plant known for its many variations.

## WILDLIFE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<i>Anaxyrus californicus</i>	arroyo toad
<i>Anniella pulchra pulchra</i>	silvery legless lizard
<i>Antrozous pallidus</i>	pallid bat

**WILDLIFE**

<b>SCIENTIFIC NAME</b>	<b>COMMON NAME</b>
<i>Athene cunicularia</i>	burrowing owl
<i>Catostomus santaanae</i>	Santa Ana sucker
<i>Coccyzus americanus occidentalis</i>	western yellow-bellied cuckoo
<i>Cypseloides niger</i>	black swift
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher
<i>Emys marmorata</i>	western pond turtle
<i>Eumops perotis californicus</i>	western mastiff bat
<i>Falco peregrinus anatum</i>	American peregrine falcon
<i>Gila orcuttii</i>	arroyo chub
<i>Icteria virens</i>	yellow-breasted chat
<i>Lasiurus xanthinus</i>	western yellow bat
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
<i>Microtus californicus stephensi</i>	south coast marsh vole
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat
<i>Nyctinomops macrotis</i>	big free-tailed bat
<i>Onychomys torridus ramona</i>	southern grasshopper mouse
<i>Phrynosoma blainvillii</i>	coast horned lizard
<i>Poliopitila californica californica</i>	coastal California gnatcatcher
<i>Rana muscosa</i>	Sierra Madre yellow-legged frog
<i>Rhinichthys osculus ssp. 3</i>	Santa Ana speckled dace
<i>Taricha torosa</i>	Coast Range newt
<i>Taxidea taxus</i>	American badger
<i>Thamnophis hammondi</i>	two-striped garter snake
<i>Vireo bellii pusillus</i>	least Bell's vireo

**SPECIES LISTED ONLY IN MSCP SOUTH COUNTY SUBAREA PLAN**

<i>Haliaeetus leucocephalus</i>	bald eagle
<i>Circus cyaneus</i>	northern harrier
<i>Buteo regalis</i>	ferruginous hawk
<i>Campylorhynchus brunneicapillus</i>	coastal cactus wren
<i>Sialia mexicana</i>	western bluebird
<i>Aimophila ruficeps</i>	California rufous-crowned sparrow
<i>Felis concolor</i>	mountain lion
<i>Odocoileus hemionus fuliginatus</i>	southern mule deer

## **Appendix B: Biological Resources Technical Report**

# Appendix C: Cultural Resources Technical Report

**CULTURAL RESOURCES ASSESSMENT  
FOR THE PROPOSED ESCONDIDO RECYCLED WATER EASTERLY MAIN EXTENSION PROJECT,  
CITY OF ESCONDIDO, COUNTY OF SAN DIEGO, CALIFORNIA**

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Escondido and Valley Center, CA United States Geological Survey 7.5' Quadrangle, unsectioned areas  
Resources: P-37-018732, Citrus Avenue Bridge

December 2012

## Appendix C: Cultural Resources Technical Report

# Appendix C: Cultural Resources Technical Report

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## Appendix C: Cultural Resources Technical Report

# Appendix C: Cultural Resources Technical Report

## EXECUTIVE SUMMARY

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The City of Escondido (the “City”) is preparing environmental documentation for the proposed Recycled Water Easterly Main Extension project. The project would include the construction of conveyance pipelines, a water storage tank, and a pump station throughout the City. For purpose of this report, all project components will collectively be referred to as the “Study Area”, unless otherwise noted.

**PCR Services Corporation (PCR)** conducted a cultural resources assessment of the Study Area to determine the potential impacts to archaeological, historical, and paleontological resources for the purpose of complying with the California Environmental Quality Act (CEQA) and the local cultural resource regulations. The scope of work for this assessment included a cultural resources records search through the California Historical Resources Information System-South Coastal Information Center (CHRIS-SCIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation, property history research, a paleontological resources records search through the San Diego Natural History Museum (SDNHM), a pedestrian survey, evaluation of eligibility for the resources identified within the Study Area, impact analyses, and the recommendation of mitigation measures.

## ARCHAEOLOGICAL RESOURCES

No known archaeological resources from the CHRIS-SCIC records were recorded within the Study Area and no resources were identified during the pedestrian survey within the Study Area. The negative results of the survey may be a direct result of the poor ground surface visibility within the majority of the Study Area that may have obstructed the identification of resources on the surface. These findings, however, do not preclude the existence of undiscovered archaeological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the proposed project. It is possible to encounter buried archaeological resources given the proven prehistoric and historic occupation of the region, the identification of multiple surface and subsurface archaeological resource within the vicinity of the Study Area (32 prehistoric and five historic/prehistoric archaeological resources have been recorded within a half-mile of the Study Area), and the favorable natural conditions (e.g., Escondido Creek, vegetation communities) that would have attracted prehistoric and historic inhabitants to the area. Therefore, despite the heavy urbanization of the Study Area, which may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth within younger alluvial sediments across the Study Area. As a result, recommended mitigation measures are provided in Chapter 9 of this report to reduce potentially significant impacts to previously undiscovered archaeological resources that are accidentally encountered during project implementation to a less than significant level.

Ms. Rose Duro of the Rincon Band of Mission Indians recommends the presence of a Native American monitor “to be included in project activities” including archaeological survey assessments and during construction phases.

## HISTORICAL RESOURCES

The cultural resources records search results from the CHRIS-SCIC revealed that one historical resource pursuant to CEQA (P-37-018732) is located immediately adjacent to the Study Area where the proposed pump station and pipeline would be constructed. P-37-018732 is a residence located at 1118 South Citrus

Avenue and was recorded in June 1983. The construction of the proposed pump station would occur in the paved parking lot located in the far north east corner of Mountain View Park and would therefore not directly impact P-37-018732, which is located in the north west corner of Mountain View Park. The construction of proposed pipeline would also not directly impact the resource. Developed in 1985, Mountain View Park is a recreational facility including playing fields and tennis courts. The historic setting of P-37-018732 has been altered by development of the park as well as the surrounding residential development. In particular, the surrounding setting of P-37-018732 has been altered by the construction of park amenities, including lighted soccer fields, tennis courts, picnic areas, restrooms, open turf area, and asphalt surface parking lots. The three tennis courts and parking lot presently located in the northeast corner of the park are obscured from view from the resource by a row of trees along the eastern edge of the domestic yard associated with the residence. The distant views of the proposed pump station from P-37-018732 would similarly be obscured by the row of trees; therefore, the Proposed Project would have no indirect impact on P-37-018732 and no mitigation measures are warranted.

No other built environment resources or resources considered historical resources pursuant to CEQA would be impacted by the Proposed Project. Therefore, the Proposed Project would result in no substantial adverse change in the significance of a historical resource as defined in §15064.5.

## **PALEONTOLOGICAL RESOURCES**

Results of the paleontological resources records search through the SDNHM indicate that no vertebrate fossil localities from the SDNHM records have been previously recorded within the Study Area or within a one-mile radius. No paleontological resources were identified by PCR during the pedestrian survey, but this may be a direct result of the poor ground surface visibility within the majority of the Study Area that may have obstructed the identification of resources on the surface. These findings, however, do not preclude the existence of undiscovered paleontological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the Proposed Project. According to the SDNHM, it is possible to encounter buried paleontological resources in the portions of the Study Area that contain fossiliferous older Quaternary alluvium sediments while it is not possible to encounter buried paleontological resources in portions of the Study Area that contain igneous rocks. Igneous rocks are not conducive to retaining paleontological resources and are currently mapped as underlying the eastern and southeastern portions of the Study Area. However, the areas along and near Escondido Creek contain deposits of fossiliferous older alluvial flood plain deposits and therefore excavations associated with the Proposed Project have the potential to impact buried paleontological resources in these and other areas where older alluvial soils are present. As a result, recommended mitigation measures are provided in Chapter 9 of this report to reduce potentially significant impacts to previously undiscovered paleontological resources that are accidentally encountered during project implementation to a less than significant level.

# Appendix C: Cultural Resources Technical Report

## 1.0 INTRODUCTION

---

### 1.1 PROPOSED PROJECT AND LOCATION

The City of Escondido is preparing environmental documentation for the proposed Recycled Water Easterly Main Extension project (the “Proposed Project”). The project would extend the City’s existing recycled water system to deliver recycled water to agricultural customers in the northeast portion of the City and adjacent county areas. The Proposed Project would include the construction of conveyance pipelines and facilities (e.g., a water storage tank and a pump station) throughout the City. For purpose of this report, all project components will collectively be referred to as the “Study Area”, unless otherwise noted.

The Study Area is located in northern San Diego County, primarily in the City of Escondido, with a small portion located in unincorporated San Diego County (**Figure 1, Regional Map**). It is generally located east of Interstate 15 (I-15) and north of State Route 78 (SR-78). The Study Area is illustrated in an unsectioned area of Township 12 South, Range 3 West of the Escondido, CA United States Geological Survey (USGS) 7.5’ topographic quadrangle map and an unsectioned area of Township 12 South, Range 1 West of the Valley Center, CA USGS 7.5’ topographic quadrangle map (**Figure 2, Vicinity Map**). It is surrounded by open space, parks, Escondido Creek, and dense urban and semi-rural development (**Figure 3, Aerial Photograph**).

### 1.2 PROJECT DESCRIPTION

As displayed on Figures 1 through 3, the Proposed Project would include the construction of the following components:

- Approximately 7.4 miles of buried pipeline(s) under flood control channel access roads, streets and private roads; these 7.4 miles of trench would accommodate the following facilities, all of which would be installed in the same trench:
  - Approximately 5.1 miles of 24-inch recycled water pipeline
  - Approximately 4.9 miles of 12-inch brine conveyance pipeline
  - Approximately 7.4 miles of small diameter (less than 6-inch) fiber optic conduit(s) installed in the pipeline trench
- A recycled water storage tank with a storage capacity up to 2 million gallons (MG)
- A 6,000-gallon per minute (gpm) recycled water pump station

### 1.3 CONSTRUCTION IMPACTS

#### 1.3.1 Pipeline Construction

New conveyance pipelines would be installed in existing and, possibly, newly acquired ROWs or easements and would be completely buried. Typical pipeline construction processes are described below:

**Staging Areas.** At various locations along the construction route(s), staging areas would be required to store pipe, construction equipment, and other construction-related material. Staging areas would be

established along the route where space is available, such as vacant private and public land, segments of closed traffic lanes, roadway turnouts, and parking lots. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of short access and lack of sensitive receptors. In other cases, as pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods of time.

**Surface Preparation.** Surface preparation involves removing any structures (such as fences), pavement, and/or vegetation from the trench area. Equipment used for this activity includes jack hammers, pavement saws, graders, bulldozers, loaders, and trucks.

**Trench Excavation/Shoring.** A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical side walls to minimize the amount of soil excavated, and the area needed for the construction easement. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off-site for disposal. Disposal options include use as cover material at sanitary landfills and use as “clean fill” at other sites. In general, pipe trenches would be 3- to 6-foot wide and 4- to 10-foot deep.

**Surface Restoration.** The final step in the installation process would be to restore the ground surface. When the pipe is installed in a paved roadway, repaving would occur after construction. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after pipeline construction. A repaving crew would follow the pipe installation crew and prepare the road surface for repaving. Final repaving would be done after pipe installation was completed for a whole street, width, lane width, or trench width.

**Trenchless Construction Methods.** Under certain circumstances, conveyance pipelines would need to be installed without disturbing the ground surface. In these circumstances, a tunneling method(s) referred to has horizontal directional drilling (HDD) or jack and boring methods would be employed. These two methods are described in more detail below:

- **Jack and Boring.** Jack and boring employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e. g. stream crossing, rail crossing or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 50 feet long. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil. Depending on the size of the installation, spoil from inside the pipe would be removed with an auger, compressed air, water, or a combination of techniques. A seal cap would be installed on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur.

# Appendix C: Cultural Resources Technical Report

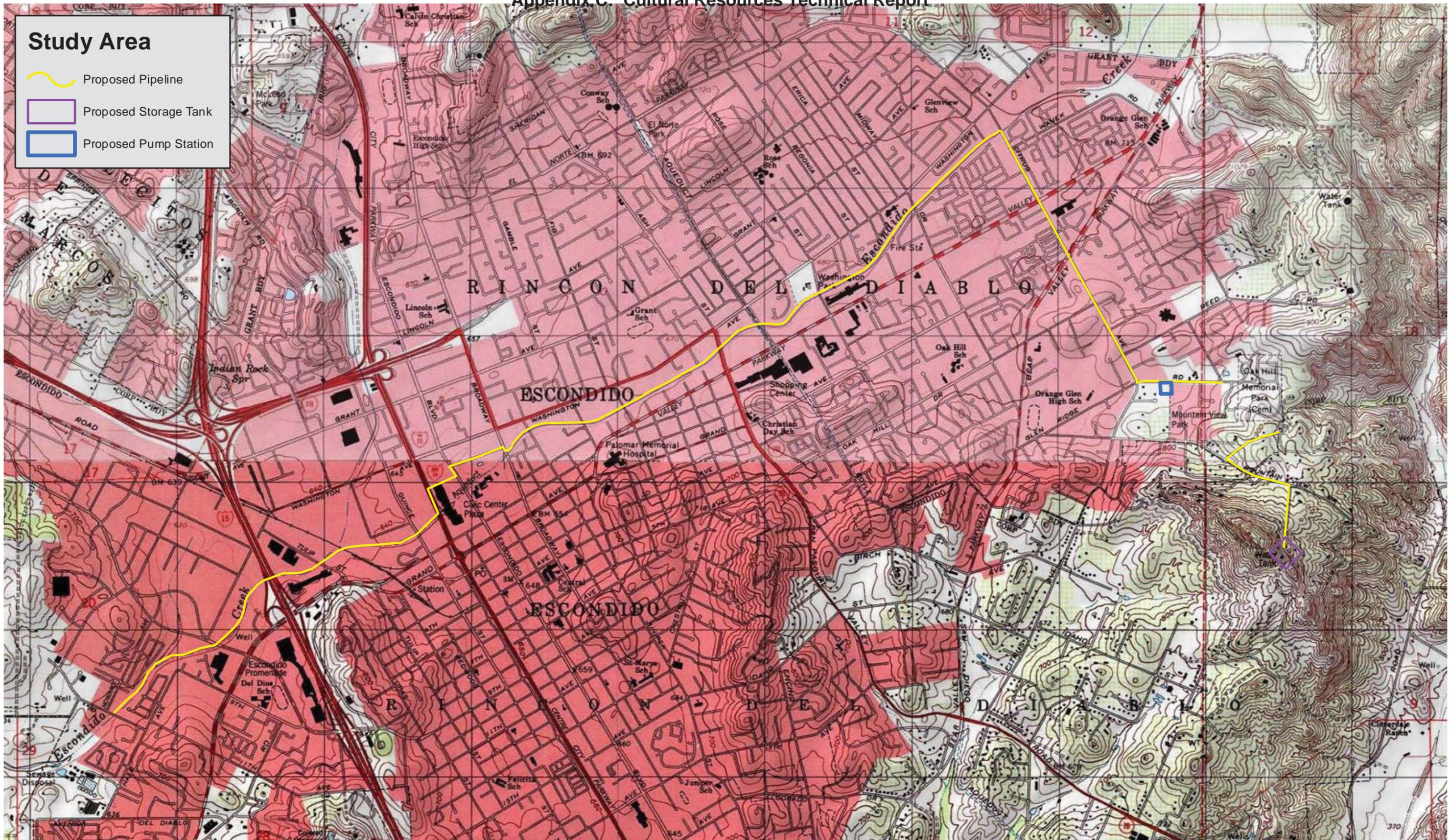


## Regional Map

Escondido Recycled Water Easterly Main Extension Project  
 Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.

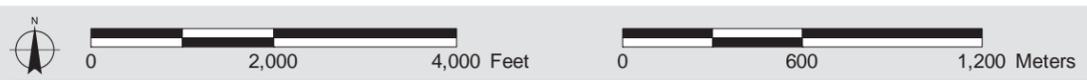
FIGURE

1



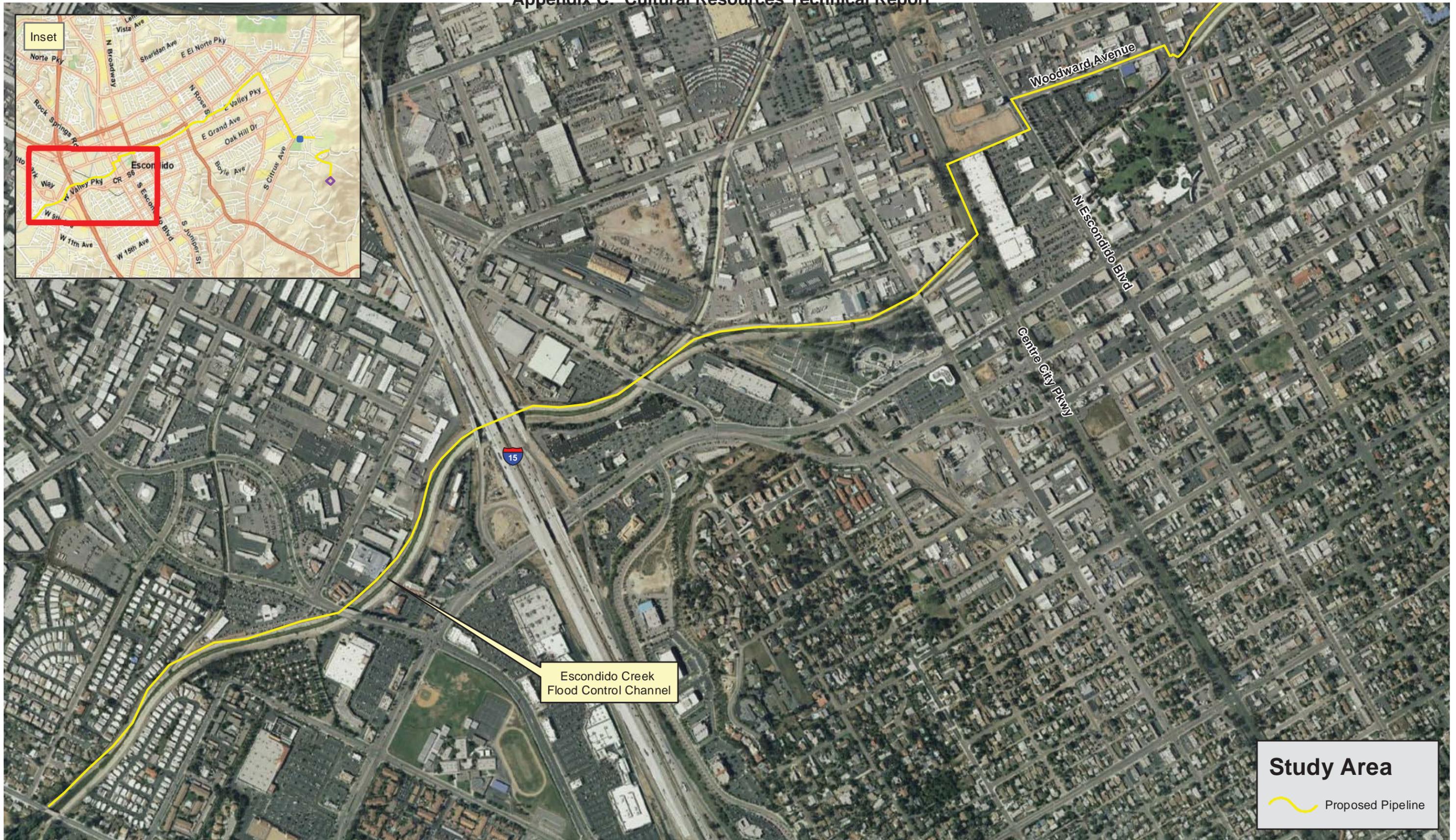
**Study Area**

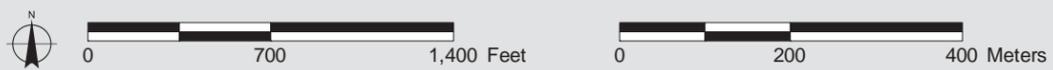
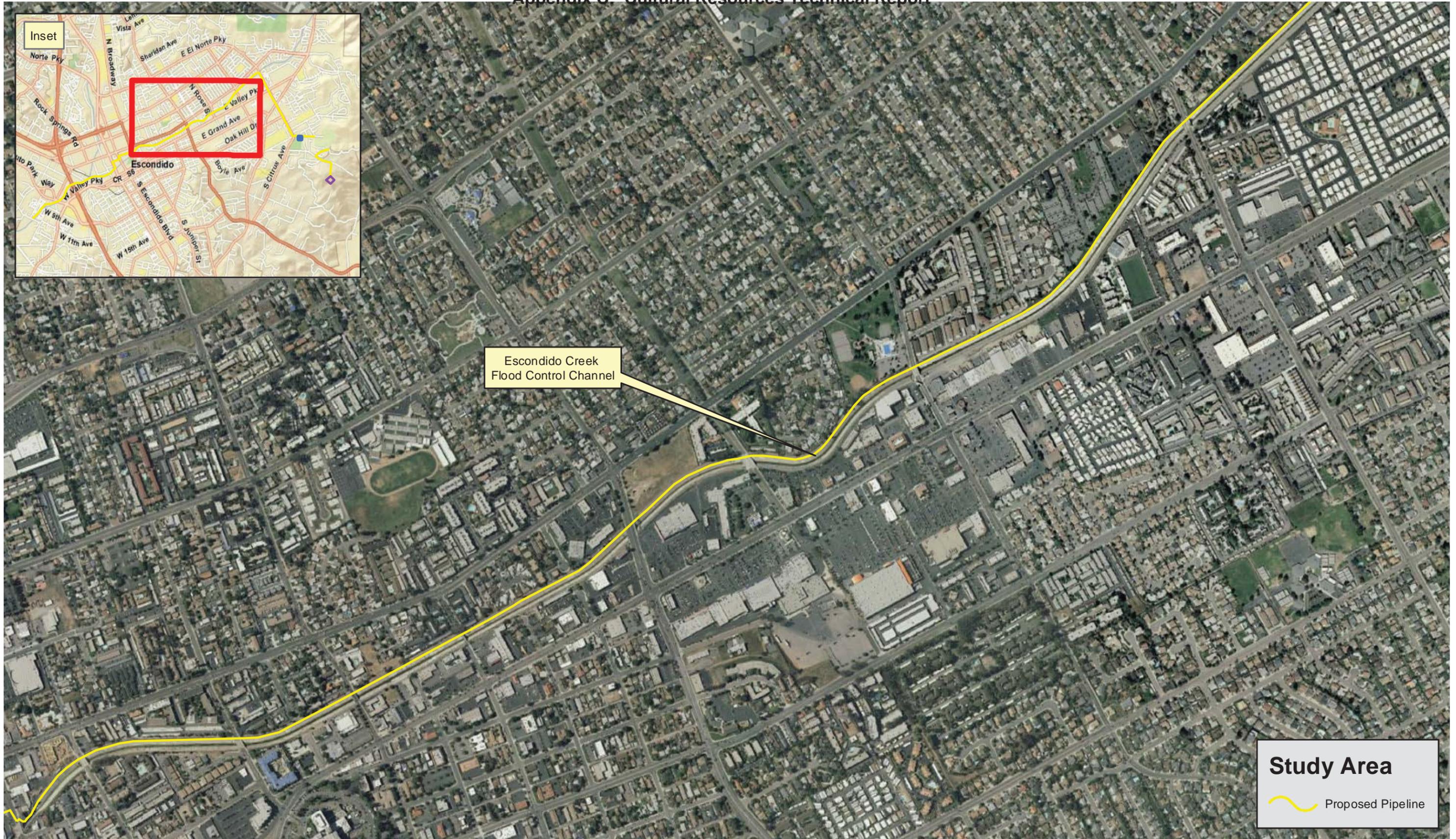
-  Proposed Pipeline
-  Proposed Storage Tank
-  Proposed Pump Station



Vicinity Map

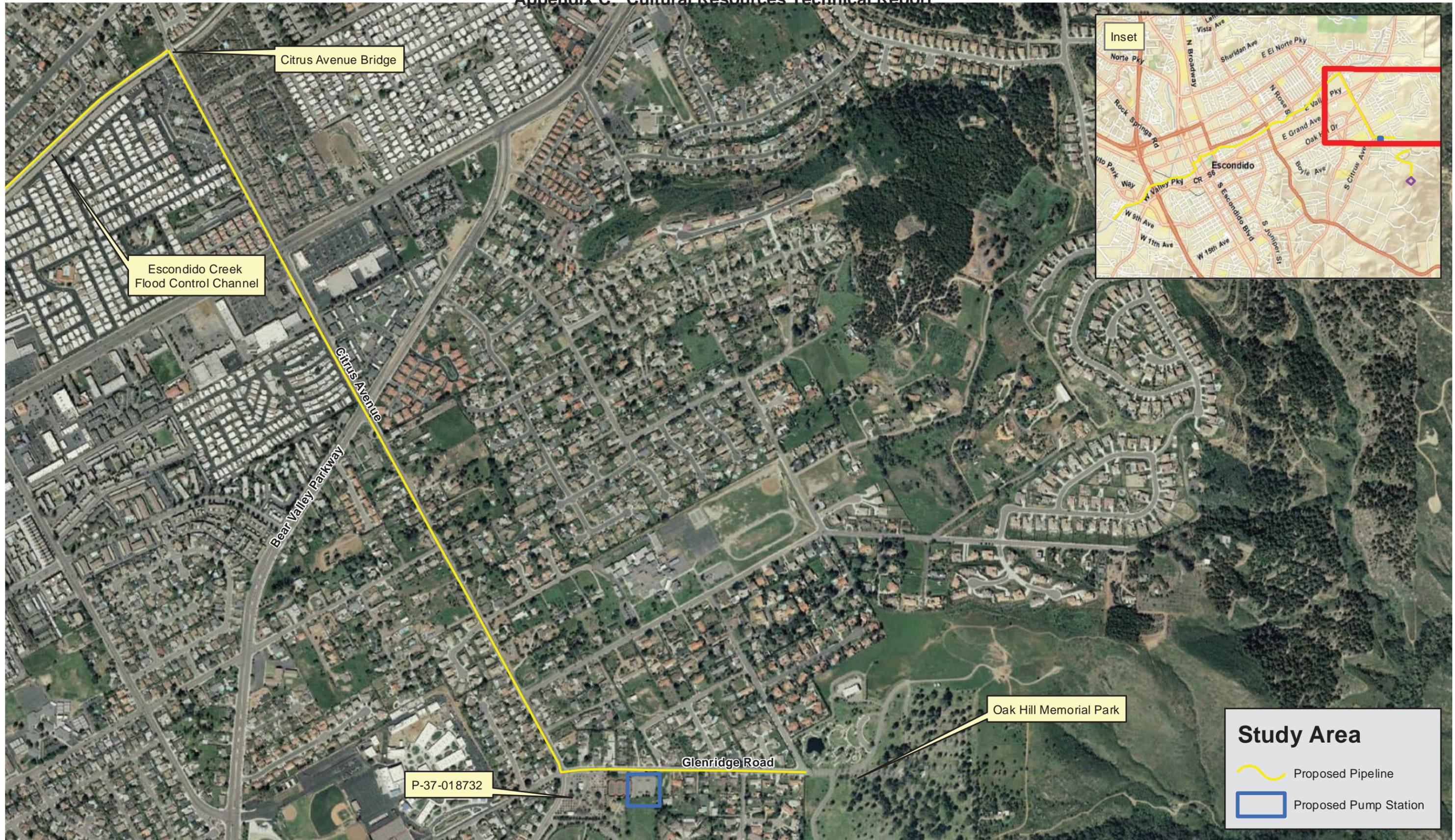
Escondido Recycled Water Easterly Main Extension Project  
 Source: USGS Topographic Series (Valley Center, Escondido, CA); PCR Services Corporation, 2012.



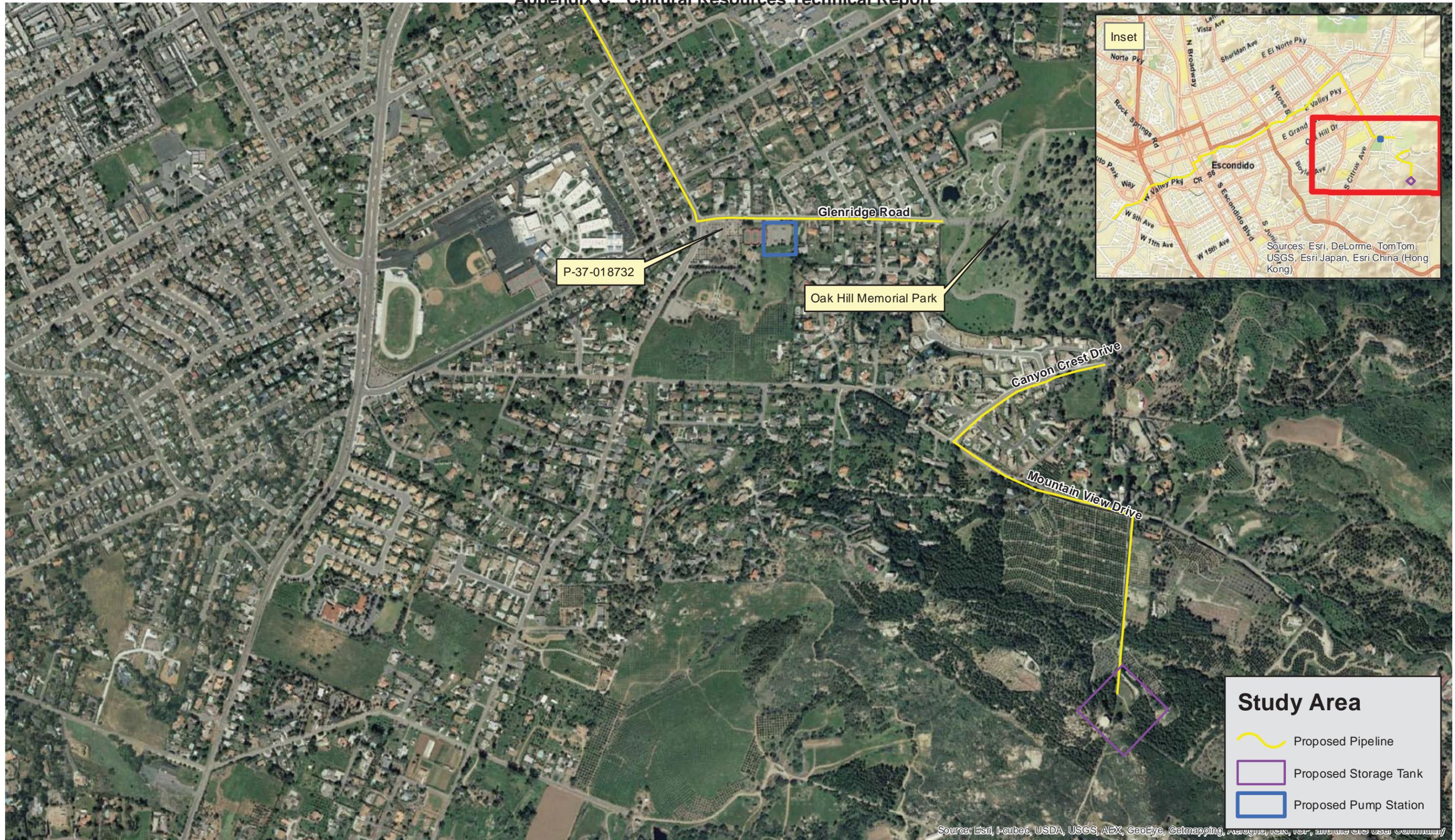


Aerial Photograph

Escondido Recycled Water Easterly Main Extension Project  
Source: Aerial Express, 2009; PCR Services Corporation, 2012.



Appendix C: Cultural Resources Technical Report



Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community



**Study Area**

-  Proposed Pipeline
-  Proposed Storage Tank
-  Proposed Pump Station

**Aerial Photograph**

Escondido Recycled Water Easterly Main Extension Project  
 Source: Aerial Express, 2009; PCR Services Corporation, 2012.

FIGURE  
**3D**

- **Horizontal Directional Drilling (HDD).** HDD crossings are installed by using a drill rig laid on its side, with the top of the drill rig tilted up at an angle of ten degrees from horizontal. The bore entry holes are drilled from the starting point to the destination point. In preparing the hole, a small diameter (3" wide) pilot hole is first drilled in a gentle arc from the drill rig to the completion hole on the other side of the area to be crossed. This pilot hole can be guided using magnetic readings transmitted from the drill bit back to the drill rig. After the initial hole is drilled, the final bore entry pit, approximately 10 feet square by approximately 8 feet deep, is constructed and is used as the collection point for Bentonite drilling mud and drill spoil. During the directional drill procedure, drilling mud is injected into the drill and recovered from the entry hole until the drill bit surfaces at the exit pit. Once the drill bit surfaces, the drilling mud is recovered at both the entry and exit hole, pumped into tanks and transported back to the rig location for cleaning and eventual reuse.

### 1.3.2 Facility Construction

Typical construction activities involved in the construction of pump station and storage tank include the following:

**Site Preparation.** This phase of construction would involve tree and brush removal and structural demolition, if necessary. Conventional survey techniques would be used to define the land limits of the new facility.

**Earthwork.** After the site is cleared of underbrush and trees, grading would begin. It is expected that the contractor would attempt to balance cut and fill quantities within the construction area to the extent feasible. Material excavated would be used to create screening berms and/or spread across other areas of the site to establish a preliminary grade for forming concrete slabs. Most excavated materials would be used on site. Following rough grading, additional excavation would bring the site to final grade and allow for preparation for underground piping and structural slabs. Additional site work would include paving, temporary and permanent security fencing, and site lighting. Additional access roads and a staging area would also be provided to accommodate construction, operation, and maintenance. In certain instances, excavations would require dewatering of shallow groundwater, and potentially the development of surface and/or subsurface drainage systems.

**Structural Improvements.** Prior to pouring concrete, structural forms, rebar, and conduits would be installed for the facility. After the concrete is poured, it would be finished and cured before the forms are removed. For pump station structures, after the concrete footing, slab, and walls are poured, the overhead structural steel and roof decking would be erected. For storage facilities, after the foundation is poured, the steel tank is erected over the foundation slab.

**Paving.** All parking areas, roads, and designated locations would be paved. Paving would be performed incrementally throughout the site area as large construction and non-rubber tread equipment are removed from the site.

**Electrical/Instrumentation.** After the structure is erected, electrical equipment (e.g., machinery control consoles, switchboards, lighting,) would be installed. Site work such as installing pull boxes, conduits, and cables would continue. After roofs on the buildings and facilities are secured, flow meters, level probes,

pressure meters, process analyzers, and other instrumentation would be installed. Additionally, water quality adjustment, sampling, and monitoring equipment would be installed.

**Startup and Testing.** This phase of construction would involve City personnel (i.e., engineers, inspectors, operators, maintenance crews, and instrumentation specialists) working with the equipment vendors to understand how each piece of equipment would operate and function. Under City supervision, the construction contractor would start up and test the equipment on site to guarantee that pumps, motors, monitoring and communication equipment are functional and able to meet design standards.

### **1.3.2.1 Recycled Water Storage Tank**

The proposed recycled water storage tank would be circular, constructed of pre-stressed concrete, partially buried, with up to 2 million gallons in storage capacity. The tank dimensions would be up to 120 feet in diameter and up to 36 feet tall. The final dimensions would be determined during final design based on the site geotechnical conditions and grading. As shown in Figure 3D, the tank location is on a north-south slope with elevation ranging from 1060 feet to 1120 feet above mean seal level.

Additional facilities to be constructed on the tank site would include:

- Exterior site lighting, which would be on only when maintenance personnel are on the site.
- An asphalt tank access road, which would wrap around a portion or the entire tank. The access road would be up to approximately 15' wide.
- Buried concrete vaults (up to two), up to 12' x 12' square and 10' deep.
- Yard piping, which would include storm drainage pipes and buried concrete structures such as drainage inlets, recycled water piping to and from the tank.
- Electrical and controls facilities, including electrical and control panels, conduit and cables.
- Restoration (re-planting) of all contractor storage and lay-down areas.

### **1.3.2.2 Recycled Water Pump Station**

The proposed recycled water pump station would be located within the parking lot of the City's Mountain View Park as displayed on Figure 3D. The building architectural treatment would blend with other buildings on the park site, which are basic textured concrete masonry unit (CMU) construction with a wood roof. Ventilation in the building would be provided using intake louver(s) and an exhaust fan(s). Sensitive electrical equipment such as variable frequency drives (VFDs) would be specified to perform at elevated temperatures or provided with integral cooling. Skylights would be provided on the roof for pump removal.

Additional facilities at the pump station site would include:

- Site lighting, which would only be on when personnel are working at the site.
- A horizontal pressure surge tank up to 10,000-gallons in capacity, (up to 10' diameter and 20' long) located outdoors and mounted on a concrete pad.
- Miscellaneous buried and above grade site piping and appurtenances, and electrical conduit.

- Buried electrical service conduit and cable would need to be installed to the pump station site from a location determined by San Diego Gas and Electric (SDG&E). SDG&E indicated that service is available from either in the Southeast corner of Mountain View Park (1,600' from the site), or near the intersection of Glenridge Road and Moody Drive (1,300' from the site).
- A pad-mounted electrical transformer, up to 10' x 10' footprint.
- Site improvements, such as sidewalks and landscaping.

#### **1.4 SCOPE OF STUDY AND PERSONNEL**

PCR conducted a cultural resources assessment of the Proposed Project from October 2012 through December 2012 to identify potential impacts to cultural (including archaeological and historical) and paleontological resources and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to resources for the purpose of complying with CEQA and local regulations. The scope of work for this assessment included a cultural resources records search through the CHRIS-SCIC, a SLF search through the NAHC and follow-up Native American consultation, property history research, a paleontological resources records search through the SDNHM, a pedestrian survey, an evaluation of eligibility for the resources identified within the Study Area, impact analyses, and the recommendation of mitigation measures.

The archaeological and paleontological resources analysis was conducted by Kyle Garcia and Matthew Gonzalez. Project management was overseen by Mr. Garcia. The pedestrian survey and record searches were conducted by Mr. Garcia and Mr. Gonzalez, respectively. The historical resources analysis was conducted by Amanda Kainer, M.S. and Margarita J. Wuellner, Ph.D. Ms. Kainer performed the architectural evaluations under the supervision of Dr. Wuellner. Qualifications of key personnel are provided in Appendix A.

This report will be utilized to support the Initial Study/Mitigated Negative Declaration that is currently being prepared by the City.

## Appendix C: Cultural Resources Technical Report

# Appendix C: Cultural Resources Technical Report

## 2.0 REGULATORY SETTING

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Numerous laws and regulations require federal, state, and local agencies to consider the effects of a Proposed Project on cultural resources. These laws and regulations establish a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, CEQA, and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024, are the primary federal and state laws governing and affecting preservation of historic resources of national, state, regional, and local significance. Other relevant regulations at the local level include the City's General Plan and Municipal Code. A description of the applicable laws and regulations is provided in the following paragraphs.

### 2.1 STATE LEVEL

#### 2.1.1 California Register of Historical Resources

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdictions.

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."<sup>1</sup> The criteria for eligibility for the California Register are based upon National Register criteria.<sup>2</sup> Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.<sup>3</sup>

To be eligible for the California Register, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria:

- a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- b. Is associated with the lives of persons important in our past;
- c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

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<sup>1</sup> California Public Resources Code § 5024.1(a).

<sup>2</sup> California Public Resources Code § 5024.1(b).

<sup>3</sup> California Public Resources Code § 5024.1(d).

- d. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility.<sup>4</sup>

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5.<sup>5</sup>
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

### 2.1.2 California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources (PRC Sections 21000 *et seq.*). As defined in Section 21083.2 of the PRC, a “unique” archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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<sup>4</sup> *Ibid.*

<sup>5</sup> *Those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register.*

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, CEQA Guidelines Section 15064.5 broadens the approach to CEQA by using the term “historical resource” instead of “unique archaeological resource.” The CEQA Guidelines recognize that certain historical resources may also have significance. The CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1 (g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of section 21084.1 of the PRC and section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, but does meet the definition of a unique archaeological resource in Section 20183.2 of the PRC, then the site is to be treated in accordance with the provisions of PRC section 21083. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. (CEQA Guidelines §15064.5(c)(4)).

## 2.2 LOCAL LEVEL

### 2.2.1 City of Escondido General Plan

The City of Escondido has put forth numerous policies within the Resource Conservation section of the General Plan. These policies were created for the preservation of important cultural and paleontological resources that contribute to the unique identity and character of Escondido (City of Escondido 2012). These policies are listed below:

**Cultural Resources Policy 5.1:** Maintain and update the Escondido Historic Sites Survey to include significant resources that meet local, state, or federal criteria.

**Cultural Resources Policy 5.2:** Preserve significant cultural and paleontological resources listed on the national, State, or local registers through: maintenance or development of appropriate ordinances that protect, enhance, and perpetuate resources; incentive programs; and/or the development review process.

**Cultural Resources Policy 5.3:** Consult with appropriate organizations and individuals (e.g., South Coastal Information Center of the California Historical Resources Information System, Native American Heritage Commission, Native American groups and individuals, and San Diego Natural History Museum) early in the development process to minimize potential impacts to cultural and paleontological resources.

**Cultural Resources Policy 5.4:** Recognize the sensitivity of locally significant cultural resources and the need for more detailed assessments through the environmental review process.

**Cultural Resources Policy 5.5:** Preserve historic buildings, landscapes, and districts with special and recognized historic or architectural value in their original locations through preservation, rehabilitation (including adaptive reuse), and restoration where the use is compatible with the surrounding area.

**Cultural Resources Policy 5.6:** Review proposed new development and/or remodels for compatibility with the surrounding historic context.

**Cultural Resources Policy 5.7:** Comply with appropriate local, State, or federal regulations governing historical resources.

**Cultural Resources Policy 5.8:** Consider providing financial incentives, and educational information on existing incentives provided by the federal government to private owners and development in order to maintain, rehabilitate, and preserve historic resources.

**Cultural Resources Policy 5.9:** Educate the public on the City's important historic resources in increase awareness for protection (City of Escondido 2012).

### 2.2.2 City of Escondido Landmark Criteria

The City of Escondido's Municipal Code, Article 40. Historic Resources Section 33-794, establishes designation criteria (Criteria 1 to 7 below) for locally significant properties, including historical resources, historical districts, signs, landscape features, and archeological resources. Prior to granting a resource local register or historical landmark status, the city council shall consider the definitions for historical resources and historical districts and shall find that the resource conforms to one (1) or more of the criteria listed in this section. A structural resource proposed for the local register shall be evaluated against criteria number one (1) through seven (7) and must meet at least two (2) of the criteria. Signs proposed for the local register shall meet at least one (1) of the criteria numbered eight (8) through ten (10). Landscape features proposed for the local register shall meet criterion number eleven (11). Archaeological resources shall meet criterion number twelve (12). Local register resources proposed for local landmark designation shall be evaluated against criterion number thirteen (13). The criteria are as follows:

- (1) Escondido historical resources that are strongly identified with a person or persons who significantly contributed to the culture, history, prehistory, or development of the City of Escondido, region, state or nation;
- (2) Escondido building or buildings that embody distinguishing characteristics of an architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered;
- (3) Escondido historical resources that are connected with a business or use that was once common but is now rare;
- (4) Escondido historical resources that are the sites of significant historic events;
- (5) Escondido historical resources that are fifty (50) years old or have achieved historical significance within the past fifty (50) years;
- (6) Escondido historical resources that are an important key focal point in the visual quality or character of a neighborhood, street, area or district;

- (7) Escondido historical building that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type;
- (8) Sign that is exemplary of technology, craftsmanship or design of the period when it was constructed, uses historical sign materials and is not significantly altered;
- (9) Sign that is integrated into the architecture of the building, such as the sign pylons on buildings constructed in the Modern style and later styles;
- (10) Sign that demonstrates extraordinary aesthetic quality, creativity, or innovation;
- (11) Escondido landscape feature that is associated with an event or person of historical significance to the community or warrants special recognition due to size, condition, uniqueness or aesthetic qualities;
- (12) Escondido archaeological site that has yielded, or may be likely to yield, information important in prehistory;
- (13) Escondido significant historical resource that has an outstanding rating of the criteria used to evaluate local register requests. (Ord. No. 2000-23, § 4, 9-13-00; Ord. No. 2008-16, § 4, 7-16-08)

### **2.2.3 City of Escondido Historic Resources Surveys**

The City of Escondido and their consultants completed surveys of approximately 1,000 pre-1940 built environment resources in 1983. The survey was updated and refined in 1990, leading to the Escondido Historical Register (including 267 listings), historic preservation program, a residential historic district, and the adoption of the Mills Act Incentive Program. The 2001 survey focused on updating the 1990 survey information, and incorporating built environment resources attaining an age of 50 years since the previous survey. This study placed particular emphasis on resources dating between 1940 and 1955. Further, the 2001 survey proposed eight potential Historic Districts for consideration as City of Escondido Historic Districts. As of April 2012, none of the potential districts have been formally designated. However, an area known as the Old Escondido Historic District has been formally established as a Historic District, and is the only designated Historic District in North County San Diego.<sup>6</sup>

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<sup>6</sup> *Atkins. Chapter 4.5 Cultural and Paleontological Resources. Escondido General Plan Update. Prepared for City of Escondido. April 23, 2012.*

## Appendix C: Cultural Resources Technical Report

### 3.0 ENVIRONMENTAL SETTING

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The majority of the Study Area is located within densely urbanized areas of the City along paved right-of ways (ROWs) and within the northern bike path of the Escondido Creek Flood Control Channel. The elevation within the Study Area ranges from approximately 600 feet above mean sea level (MSL) in the west to 1,225 feet MSL in the east. A large portion of the Study Area is along or adjacent to Escondido Creek as shown in Figures 2 and 3. These areas of the Study Area are located in less elevated areas and contain surficial deposits of older alluvial flood plain deposits derived primarily from the creek. In the more elevated eastern portions of the Study Area, the bedrock is composed of igneous or metamorphic rocks.

The location of the proposed pump station is in a residential neighborhood on the grounds of the City's Mountain View Park. The linear component of the eastern end of the Study Area is surrounded by residential neighborhoods and fruit orchards. The proposed water storage tank would be located on a hilltop near an existing water tank surrounded by an avocado orchard. The tank would be placed on a northeast facing slope formerly planted with ornamental groundcover. Natural areas are found on the southern slope of the hill.

The majority of the Study Area is a linear project following City streets and a maintained concrete flood control channel within a developed urban setting with no remaining native plant communities. Diegan Coastal Sage Scrub was found in the southern part of the Study Area on a south facing slope and was in a relatively intact condition with few non-native plants observed.

## Appendix C: Cultural Resources Technical Report

### 4.0 CULTURAL SETTING

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#### 4.1 PREHISTORIC CONTEXT

Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. Several chronologies have been proposed for inland Southern California, the most widely accepted of which is Wallace's four-part Horizon format (1955), which was later updated and revised by Claude Warren (1968). The advantages and weaknesses of Southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (1978). The following discussion is based on Warren's (1968) sequence, but the time frames have been adjusted to reflect more recent archaeological findings, interpretations, and advances in radiocarbon dating.

##### 4.1.1 Paleo-Indian Period (ca. 13,000-11,000 years before present [YBP])

Little is known of Paleo-Indian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast some time after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). Based on new research from the Pacific Rim, it has been proposed that modern humans settled islands of the eastern Pacific between 40,000 and 15,000 years ago. Evidence of coastal migration has also come from sites on islands off Alta and Baja California. As a result, these sites are contemporary with Clovis and Folsom points found in North America's interior regions. All of these new findings have made the coastal migration theory gain credibility in recent times (Erlandson et al. 2007).

The timing, manner, and location of the Bering Strait crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island located approximately 150 miles west-northwest of the Study Area. These human remains date to approximately 13,000 YBP (Johnson, et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer, et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Lifeways during the Paleo-Indian Period were characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. They likely used some plant foods, but the Paleo-Indian toolkit recovered archaeologically does not include many tools that can be identified as designed specifically for plant processing.

The megafauna that appear to have been the focus of Paleo-Indian life went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural change. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. This constellation of characteristics has been given the name "Archaic" and it was the most enduring of cultural adaptations to the North American environment.

### **4.1.2 Archaic Period (ca. 11,000-3,500 YBP)**

The earliest Archaic Period life in inland southern California has been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied (Warren 1968). Characteristic artifacts include stemmed projectile points, crescents and leaf-shaped knives, which suggest a continued subsistence, focus on large game, although not megafauna of the earlier Paleo-Indian period. Milling equipment appears in the archaeological record at approximately 7,500 years ago (Moratto 1984:158). Artifact assemblages with this equipment include basin milling stones and unshaped manos, projectile points, flexed burials under cairns, and cogged stones, and have been given the name La Jolla Complex (7,500–3,000 YBP). The transition from San Dieguito life to La Jolla life appears to have been an adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing milling stone technology with them. Groups in the coastal regions focused on mollusks, while inland groups relied on wild-seed gathering and acorn collecting.

### **4.1.3 Late Prehistoric Period (ca. 3,500 YBP-A.D. 1769)**

Cultural responses to environmental changes around 4,000–3,000 YBP included a shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering. Meighan (1954) identified the period after A.D. 1400 as the San Luis Rey complex. San Luis Rey I (A.D. 1400–1750) is associated with bedrock mortars and milling stones, cremations, small triangular projectile points with concave bases and Olivella beads. The San Luis Rey II (A.D. 1750–1850) period is marked by the addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6). Work at Cole Canyon and other sites in southern California suggests that this complex, and the ethnographically described life of the native people of the region, were well established by at least 1,000 YBP (Keller and McCarthy 1989:80).

### **4.1.4 Ethnographic Context – Luiseño and Kumeyaay**

Information presented in the California volume of the Handbook of North American Indians (Heizer 1978:575) shows the Study Area in the Luiseño territory and neighboring portions of the Kumeyaay (formerly known as the Tipai-Ipai and Diegueño). It is believed that the Luiseño and Kumeyaay interacted with one another through marriage, trade, war and ritual. They exhibited similar lifeways in regard to material cultural, philosophy, settlement patterns, and religion.

The term Luiseño derives from the mission named San Luis Rey and has been used in the region to refer to those Takic-speaking people associated with Mission San Luis Rey (Bean and Shippek 1978:550). The Luiseño shared boundaries with the Cahuilla, Cupeño, Gabrielino, and Kummeyaay groups on the east, north, and south, respectively. These different bands shared cultural and language traditions with the Luiseño. The Luiseño territory comprised from the coast to Agua Hedionda Creek on the south to near Aliso Creek on the northwest. The boundary extended inland to Santiago Peak, then across to the eastern side of Elsinore Fault Valley, then southward to the east of Palomar Mountain, then around the southern slope above the valley of San Jose (*ibid.*:550). Their habitat covered every ecological zone from the ocean, sandy beaches, shallow inlets, coastal chaparral, grassy valleys oak groves, among various other niches. The primary food source consisted of game animals such as deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, and various species of birds. Next to game animals, acorns were the most single important staple, and six different species were utilized (*ibid.*:552). The Luiseño social structure is unclear; however, each village was

a clan-triblet—a group of people patrilineally related who owned an area in common and who were politically and economically autonomous from neighboring groups. The Luiseño were not organized into exogamous moieties such as were their neighbors, Cahuilla, Cupeño, and Serrano (Strong 1929:291). The hereditary village chief held an administrative position that combined and controlled religious, economic, and warfare powers (Boscana 1933:43). Marriage was arranged by the parents of children and important lineages were allied through marriage. Reciprocally useful alliances were arranged between groups in different ecological niches, and became springboards of territorial expansion, especially following warfare and truces (White 1963:130).

The Luiseño and Kumeyaay developed a varied material culture that included an array of tools that were made from stone, wood, bone, and shell, and which served to procure and process the region's resources. Needs for shelter and clothing were minimal in the region's forgiving climate, but considerable attention was devoted to personal decoration in ornaments, painting, and tattooing. The local pottery was well made, although it was not elaborately decorated (Laylander and Pham 2012).

#### 4.1.5 European Contact

European contact with the Native American groups that likely inhabited the Study Area and surrounding region began in 1542 when Spanish explorer, Juan Rodriguez Cabrillo, arrived by sea during his navigation of the California coast. Sebastian Vizcaino arrived in 1602 during his expedition to explore and map the western coast that Cabrillo visited 60 years earlier. In 1769, another Spanish explorer, Gaspar de Portola, passed through Luiseño/Kumeyaay territory and interacted with the local indigenous groups. In 1798, Mission San Luis Rey was established by the Spanish approximately 13 miles west of the Study Area and it likely integrated the Native Americans from the surrounding region. Multiple epidemics took a great toll on Native American populations between approximately 1800 and the early 1860s (Porretta 1983), along with the cultural and political upheavals that came with European, Mexican, and American settlement (Goldberg 2001:50-52). It is likely that Spanish soldiers and missionaries continued to travel through the Study Area on their way to visit various missions and outposts in the vicinity. In the beginning of the nineteenth century, some Spaniards who had worked at the missions began to set up what would later be known as the "Ranchos." The Rancho era in California history was a period when the entire state was divided into large parcels of land equaling thousands of acres apiece. These large estates were ruled over in a semi-feudal manner by men who had been deeded the land by first the Spanish crown, and later the Mexican government. In 1821 Mexico won independence from Spain and began to dismantle the mission system in California. As the missions began to secularize, they were transformed into small towns and most Native Americans would later be marginalized into reservations or into American society. It was during this time that "Americans" began to enter California. Many of the American Californians married into the Rancho families, a development that would transform land ownership in Mexican California. By the time the United States annexed California after the Mexican-American War in 1850, much of the Rancho lands were already in the hands of Americans.

## 4.2 HISTORIC CONTEXT

The location of Escondido became part of the Rancho El Rincon del Diablo (the "Devil's Corner") land grant bestowed to Juan Bautista Alvarado in 1843 by Mexican Governor Manuel Micheltoeren. During the early 1830s, before he was granted the rancho, Juan Bautista Alvarado was active in Los Angeles politics and became a *regidor* (councilman) of Los Angeles, and later he was a San Diego *regidor* between 1835-1836, *commissario de policia* (police commissioner) in 1836, and a member of the *disputacion* (State Assembly) in

1839.<sup>7</sup> Historians suggest Juan Bautista Alvarado constructed an adobe house on a hillside overlooking Escondido where he raised cattle. Juan Bautista Alvarado and his wife both died in approximately 1850. On October 15, 1855, Juan Bautista Alvarado's fourth child, Maria Antonia, and third child, Guadalupe, signed a deed conveying their share of the rights in El Rincon del Diablo to O.S. Witherby for \$666.66, who would later acquire the remaining acres of the El Rincon del Diablo.<sup>8</sup>

By 1857, Oliver S. Witherby, a judge and collector of customs in San Diego, became the second owner of the El Rincon del Diablo. During his ownership he farmed the ranch and increased the size of his cattle and sheep heard. In the early 1860s, he began mining gold on his property and constructed a mill named the "Rincon del Diablo and Escondido Mining Company," the first recorded use of Escondido.<sup>9</sup>

By 1868, Oliver S. Witherby could no longer afford the Rancho, so he sold his land to John, Matthew, and Josiah Wolfskill and Edward McGearey for \$8,000. The new owners purchased the property to raise sheep and for many years parts of Escondido were known as the "Wolfskill Plains." During their fifteen years of ownership, the size of the rancho increased to 12,813.87 acres.<sup>10</sup>

The property changed ownership in 1883 and the rancho was sold to a group of men known as the "Stockton Company" for \$128,138.70. A year the Stockton Company transferred their land interest to the Escondido Company. The primary use of the land changed to the cultivation of Muscat grapes, a variety that required little irrigation.<sup>11</sup>

The Escondido Company's ownership of the valley did not last long. On March 1, 1886 they deeded the area to the Escondido Land & Town Company for \$104,042. Organizers of this company were Jacob Gruendyke (the first president of the company), five Thomas brothers from Kansas (A. Richard, William W., John R., George V., and Charles E.), and seven other business associates. The Escondido Land & Town Company subdivided the land and planted more vineyards and citrus groves.<sup>12</sup>

In 1886, the town site was platted and included Grant Avenue on the north, 17<sup>th</sup> Avenue on the south, Ash Street to the east, and Upas Street on the west. The city was incorporated two years later on October 8, 1888. The City of Escondido retained the same boundaries until 1951, when the first annexation of 8.71 acres east of Ash Street was approved by voters.<sup>13</sup>

Construction of a rail line from Oceanside to Escondido was started in March 1887 and the Santa Fe Depot was built at the west end of Grand Avenue. The first freight to leave Escondido in January 1888 was a load of wheat. The Depot served passengers until 1945. After the depot was no longer needed for freight storage, it

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<sup>7</sup> Alan B. McGrew, *Hidden Valley Heritage (Escondido, CA: Blue-Ribbon Centennial History Committee, 1988): 11.*

<sup>8</sup> Alan B. McGrew: 12.

<sup>9</sup> Alan B. McGrew: 12-13.

<sup>10</sup> Alan B. McGrew: 13-14.

<sup>11</sup> Alan B. McGrew: 14-15.

<sup>12</sup> Alan B. McGrew: 15.

<sup>13</sup> Alan B. McGrew: 16.

was moved to its current site in Grape Day Park in 1984. A freight train continues to make the trip to Escondido from Oceanside several times a week. The Sprinter reestablished passenger service in 2007.<sup>14</sup>

In 1886, the Land & Town Company drilled several wells to provide irrigation water for the groves of planted trees. The following year the Escondido Irrigation District was formed to build a reservoir. The incorporation of the City of Escondido made it possible to pass a bond issue for \$450,000. With the bond measure, the City was able to construct a ditch line and dam to convey water from the San Luis Rey River into the Bear Valley water shed above present day Lake Wohlford.<sup>15</sup>

During the early twentieth century, one of the major sources of industry in the City of Escondido was agriculture, primarily the cultivation of avocado and citrus orchards. A representative example of farmsteads located outside of the commercial core from this period is 1118 South Citrus Avenue, an income-producing avocado and orange grove farmstead developed circa 1900. The property is now located within Mountain View Park.

The City of Escondido saw little change until the Post World War II era. In 1950, a major transportation infrastructure project was completed, Highway 395, which linked Escondido to San Diego. Two years later, the first signal light was installed at the principal intersection of Broadway and Grand.<sup>16</sup> The county had many defense contracts in the 1950s, due to both the Cold War and Korean War. As more people moved into the area, more housing was demanded, so subdivisions were constructed. Many of the vineyards on the east end of town, as well as citrus groves, became home sites during the building boom of the 1950s. Citrus production declined and some of the citrus groves were converted to avocado groves, but overall agricultural industry declined as business and commercial ventures gained importance.<sup>17</sup> As a result of the increased development, additional infrastructure projects were completed to support the burgeoning population.

As the population increased, North County was suburbanized and infrastructure projects were constructed. Between 1967 and 1971, the City of Escondido improved Escondido Creek with the construction of a concrete flood channel and a series of bridges. The Escondido Creek Bridge, located within the Study Area, runs along Citrus Avenue (Bridge Number 57C0456) and was constructed in 1971.

During the 1980s, the eastern portion of the City started to develop. Mountain View Park, located at the intersection of Citrus Avenue and Glenridge Road, was purchased by the City in May 1985 to provide a recreational area for the growing community in the eastern area of the City.<sup>18</sup> The eleven-acre Mountain View Park was developed with lighted soccer fields, tennis courts, picnic areas, restrooms, open turf area, and asphalt surface parking lots.

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<sup>14</sup> "A Brief History of Escondido." <http://www.escondidohistory.org/brief%20escondido%20history.pdf>, accessed November 12, 2012.

<sup>15</sup> Alan B. McGrew: 31-35.

<sup>16</sup> Alan B. McGrew: 137.

<sup>17</sup> "A Brief History of Escondido." <http://www.escondidohistory.org/brief%20escondido%20history.pdf>, accessed November 12, 2012.

<sup>18</sup> Mountain View Park. City of Escondido. <http://www.escondido.org/mountain-view-park.aspx>, accessed November 26, 2012.

## Appendix C: Cultural Resources Technical Report

## 5.0 METHODS

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### 5.1 CULTURAL RESOURCES RECORDS SEARCH

On October 10, 2012, Mr. Gonzalez commissioned a records search of the Study Area at the CHRIS-SCIC. The records searches included a review of all recorded archaeological and historical resources within a one half-mile radius of the Study Area as well as a review of cultural resource reports and historic topographic maps on file. In addition, PCR reviewed the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register, the National Register, and the California State Historic Resources Inventory (HRI) listings. The purpose of the record search is to determine whether or not there are previously recorded archaeological or historical resources within the Study Area that require evaluation and treatment. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried cultural resources.

### 5.2 SACRED LANDS FILE SEARCH AND NATIVE AMERICAN CONSULTATION

On October 10, 2012, Mr. Gonzalez commissioned a SLF records search of the Study Area through the NAHC and conducted follow-up consultation with the nine Native American groups and/or individuals identified by the NAHC as having affiliation with the Study Area vicinity. Each Native American group and/or individual listed was sent a project notification letter and map and was asked to convey any knowledge regarding prehistoric or Native American resources (archaeological sites, sacred lands, or artifacts) located within the Study Area or surrounding vicinity. The letter included information such as Study Area location and a brief description of the Proposed Project. Results of the search and follow-up consultation provided information as to the nature and location of additional prehistoric or Native American resources to be incorporated in the assessment whose records may not be available at the CHRIS-SCIC.

### 5.3 HISTORIC PROPERTY RESEARCH

PCR's architectural historians reviewed the CHRIS-SCIC archival records search and conducted follow-up research for information on previously surveyed resources in the Study Area vicinity. Site-specific research on the Study Area and vicinity was conducted for the preparation of the historic context as required to support the property evaluations and included review of historic tract maps, historic aerials, and published histories.

### 5.4 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

On October 12, 2012, Mr. Gonzalez commissioned a paleontological resources records search through the Department of Paleontology at the SDNHM in San Diego, California. This institution maintains files of regional paleontological site records as well as supporting maps and documents. This record search entailed an examination of current geologic maps and known fossil localities inside and within the general vicinity of the Study Area. The objective of the record search was to determine the geological formations underlying the Study Area, whether any paleontological localities have previously been identified within the Study Area or in the same or similar formations near the Study Area, and the potential for excavations associated with the Study Area to encounter paleontological resources. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried paleontological resources.

## **5.5 PEDESTRIAN SURVEY**

On October 25, 2012, Mr. Garcia conducted a pedestrian survey of the Study Area to identify visible archaeological, historical, and paleontological resources. Where access and ground surface visibility permitted, the ground surfaces in these areas were examined for the presence of archaeological, historical, and paleontological resources as well as historic structures. Open areas, including the areas within the undeveloped portions, were surveyed using parallel pedestrian transects spaced not more than 10 to 15 meters (m) apart. PCR did not do a full coverage survey of the northern bike path of the flood control channel or the City streets since these specific areas were paved over or exhibited dense vegetation cover which obstructed the view of the native ground surface. In these specific areas of the Study Area, PCR stopped along various points of the proposed alignment and noted the existing conditions of the area. PCR conducted a survey of approximately 50 percent of the Study Area. A Trimble® GeoXT™ sub-meter Global Positioning System (GPS) unit was used for navigation and documenting distribution of Study Area conditions. Detailed notes and digital photographs were also taken of the Study Area and surrounding vicinity.

# Appendix C: Cultural Resources Technical Report

## 6.0 RESULTS

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### 6.1 CULTURAL RESOURCES RECORDS SEARCH

Results of the cultural resources records revealed that more than 65 cultural resource studies have been conducted within a one-half mile radius of the Study Area. These studies were conducted from 1974 to 2010 and encompass approximately 75 percent of the one-half mile search radius around the Study Area.

#### 6.1.1 Archaeological Resources

No archaeological resources from the CHRIS-SCIC records have been recorded within the Study Area. However, 32 prehistoric archaeological resources and five multi-component resources (i.e., resource with both prehistoric and historic material) have been recorded within one-half mile of the Study Area. The archaeological resources include lithic scatters, pottery scatters, ground stone artifacts, petroglyphs, pictographs, bedrock milling stations, midden, faunal remains, fire-affected rock, hearth features, rock alignments, and historic period metals, glass, and ceramics. Although these resources are located far enough away from the Study Area as to not be impacted by the Proposed Project, their identification confirms prehistoric and historic occupation of the Study Area and surrounding vicinity.

#### 6.1.2 Historical Resources

One historical resource, P-37-018732, has been previously recorded immediately adjacent to the Study Area, in the area where the proposed pump station would be located (see Figure 3D). P-37-018732 is a residence located at 1118 South Citrus Avenue. It was recorded in June 1983 and was assigned a California Historical Resource Status Code of 3D, “appears eligible for National Register as a contributor to a National Register eligible district through survey evaluation.” The property was described as 2.57 acres with a Victorian-style one-story house. Constructed circa 1900, the resource was found significant for its association with architecture and exploration/settlement: “a fine example of an unusual floor plan and roofline, this small farmhouse is still surrounded by orange groves.” P-37-018732 is also recognized in the City of Escondido as individually significant and listed on the local register.

The Citrus Avenue Bridge is located within the Study Area and runs along Citrus Avenue (Bridge Number 57C0456) as displayed in Figure 3C and Figure 5. It was constructed in 1971 and was evaluated by Caltrans in 2012 and found ineligible for National Register listing.<sup>19</sup> Additionally, the concrete Escondido Creek Flood Control Channel was constructed between 1967 and 1971 and is located immediately adjacent to the Study Area (see Figures 3A through 3C and Figure 6).<sup>20</sup> Both the Citrus Avenue Bridge, constructed in 1971, and the channel, constructed between 1967 and 1971, do not meet the 45-year age guideline of the California Register or the 50-year age requirement of the National Register.

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<sup>19</sup> California Department of Transportation. *Historical Significance – Local Agency Bridges*. September 2012. <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>, accessed November 26, 2012.

<sup>20</sup> City of Escondido. *Escondido Creek Watershed Project, Plans for the Construction of Upper Escondido Creek Channel Improvement, Unit 3B-2*. October 19, 1972.

Oak Hill Memorial Park has been recommended eligible for listing in the California Register by Robbins-Wade (2011); however, it is located immediately outside of the Study Area and therefore no impact would occur (see Figure 3D).

Three-hundred and ninety-nine (399) built-environment resources have been recorded within one-half mile of the Study Area. The properties are primarily single-family residential and commercial properties. There is one historic district, Old Escondido Neighborhood Historic District, that has been recorded within one-half mile of the Study Area. None of these resources would be impacted by the Proposed Project since they are located far enough away from the Study Area.

## **6.2 SACRED LANDS FILE SEARCH AND NATIVE AMERICAN CONSULTATION**

The NAHC SLF records search results (received October 16, 2012) revealed that there are known “Native American cultural resource sites” in the SLF database within one-half mile of the Study Area. As per NAHC suggested procedure, follow-up letters were sent via certified mail on October 29, 2012 to the nine Native American individuals and organizations identified by the NAHC as being affiliated with the vicinity of the Study Area to request any additional information they may have about Native American cultural resources that may be affected by the Proposed Project. PCR has return receipts on file from all nine of the Native American contacts. As of December 19, 2012, PCR has received two letter responses from the Native American community. Dr. Shasta Gaughen of the Pala Band of Mission Indians states that the Study Area is not within the Traditional Use Area of the Pala Band and that the Band defers all comments to the tribes located in closer proximity to the Study Area. Ms. Rose Duro of the Rincon Band of Mission Indians recommends the presence of a Native American monitor “to be included in project activities” including archaeological survey assessments and during construction phases. The results of the Native American consultation effort are summarized in **Table 1**, *Summary of Native American Consultation*. PCR will keep the City apprised with the progress of this on-going Native American consultation. The NAHC SLF records search results, the Native American contact list, and response letters are provided in Appendix B of this report.

## **6.3 HISTORIC PROPERTY RESEARCH**

The results of the site-specific research of the Study Area and vicinity (that included review of historical photographs, historic tract maps, and historic maps, and other published sources) informed preparation of the Historic Context provided in Chapter 4.2 and supported the evaluation of historic resources identified (see Chapter 7) in the Study Area and surrounding vicinity.

## **6.4 PALEONTOLOGICAL RESOURCES RECORDS SEARCH**

Results of the paleontological resources records search through the SDNHM indicate that no known vertebrate fossil localities from the SDNHM database have been previously identified within the Study Area or within a one-mile radius. According to Kennedy and Tan (2007), igneous rocks (e.g., granitic bedrock) underlie the eastern and southeastern portions of the Study Area while fossiliferous older alluvial flood plain deposits underlie areas along and near Escondido Creek. The igneous rock sediments are not conducive to retaining paleontological resources while the older alluvial sediments are conducive to retaining paleontological resources. The paleontological resources records search results letter from the SDNHM is provided in Appendix C of this report.

Table 1

## Summary of Native American Consultation

Name, Title/Affiliation	Phone/Letter	Comments
Shasta Gaughen, Historic Preservation Office <i>Pala Band of Mission Indians</i>	Letter sent 10-29-2012	In a letter dated 11-21-2012, Dr. Gaughen states that the project site is not within the Traditional Use Area of the Pala Band and that the Band defers all comments to the tribes located in close proximity to the project.
Bennae Calac, Tribal Council Member <i>Pauma Valley Band of Luiseño Indians</i>	Letter sent 10-29-2012	No response to date.
Randall Mejei, Chairperson <i>Pauma and Yuima Reservation</i>	Letter sent 10-29-2012	No response to date.
Bo Mazzetti, Chairperson <i>Rincon Band of Mission Indians</i>	Letter sent 10-29-2012	No response to date.
Paul Macarro, Cultural Resources Manager <i>Pechanga Band of Mission Indians</i>	Letter sent 10-29-2012	No response to date.
Kristie Orosco, Environmental Coordinator <i>San Pascual Band of Indians</i>	Letter sent 10-29-2012	No response to date.
Vincent Whipple, Tribal Historic Preationv. Officer <i>Rincon Band of Mission Indians</i>	Letter sent 10-29-2012	In a letter dated 12-05-2012, Ms. Rose Duro recommends the presence of a Native American monitor “to be included in project activities” including archaeological survey assessments and during construction phases. She also recommends to be kept apprised with project updates.
Cultural Department <i>San Luis Rey Band of Mission Indians</i>	Letter sent 10-29-2012	No response to date.
Lavonne Peck, Chairwoman <i>La Jolla Band of Mission Indians</i>	Letter sent 10-29-2012	No response to date.

Source: PCR Services Corporation (As of December 20, 2012)

## 6.5 PEDESTRIAN SURVEY

No archaeological or paleontological resources were identified during PCR’s pedestrian survey within the Study Area. The negative survey results are a direct result of the poor ground surface visibility within the majority of the Study Area, which may have obstructed the identification of resources on the surface. Ground surface visibility varies throughout the Study Area and ranges from zero to 100 percent. The only area of the Study Area that exhibits 100 percent ground visibility is the area where the storage tank is proposed. The remaining areas of the Study Area exhibit zero percent visibility due to asphalt-paved bike paths and City

streets or dense vegetation cover. The original construction of the paved bike paths and streets has also likely disturbed the top layers of soil in these areas. These disturbances (and other Study Area conditions) are depicted in the digital photographs displayed on **Figure 4** through **Figure 6**, *Study Area Photographs*.

PCR also revisited the Citrus Avenue Bridge and the channel. PCR identified avocado orchards and groves in the vicinity of the proposed storage tank. No additional historical resources were identified within the Study Area during the survey.

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## Appendix C: Cultural Resources Technical Report



Photograph 1: Overview of Study Area where the proposed storage tank will be located, view southeast.



Photograph 2: Overview of Study Area along Mountain View Drive, view west.



Photograph 3: Overview of Study Area along Canyon Crest Drive, view west.



Photograph 4: Overview of Study Area where the proposed pump station will be located (Mountain View Park), view northeast.



### Study Area Photographs

Escondido Recycled Water Easterly Main Extension Project  
Source: PCR Services Corporation, 2012.

FIGURE

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## Appendix C: Cultural Resources Technical Report



Photograph 5: Overview of Study Area along S. Citrus Avenue, view northwest.



Photograph 6: Overview of Study Area along Citrus Avenue at intersection with Bear Valley Pkwy., view northwest.



Photograph 7: Overview of Citrus Avenue Bridge, view east.



Photograph 8: Overview of Citrus Avenue Bridge, view south.



### Study Area Photographs

Escondido Recycled Water Easterly Main Extension Project  
Source: PCR Services Corporation, 2012.

FIGURE

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## Appendix C: Cultural Resources Technical Report



Photograph 9: Overview of Study Area along bike path within the Escondido Creek Flood Control Channel, view southwest.



Photograph 10: Overview of Study Area along bike path within channel, southwest.



Photograph 11: Overview of Study Area along bike path within channel, northeast.



Photograph 12: Overview of Study Area along bike path within channel showing vegetation cover, view southwest.



### Study Area Photographs

Escondido Recycled Water Easterly Main Extension Project  
Source: PCR Services Corporation, 2012.

FIGURE

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# Appendix C: Cultural Resources Technical Report

## 7.0 EVALUATION

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Evaluation of cultural resources is determined by conducting an “evaluation” of a resource’s eligibility for listing in the California Register; determining whether it qualifies as a “unique archaeological resource”; and determining whether the resource retains integrity. This is achieved by applying the California Register criteria (including criteria for a “unique archaeological resource”) and the City’s Historic Landmark criteria to the resources as defined in Chapter 2 of this report. If a resource is determined eligible for listing in the California Register or qualifies as a “unique archaeological resource” or meets the City’s Historic Landmark criteria and retains integrity, then the resource is considered an archaeological resource and/or a historical resource pursuant to CEQA §15064.5 and any substantial adverse change to the resource is considered a significant impact on the environment. The CEQA guidelines do not provide criteria to evaluate paleontological resources.

### 7.1 ARCHAEOLOGICAL RESOURCES

As discussed in the previous Chapter, no known archaeological resources from the SCIC records were recorded within the Study Area and no resources were identified during the pedestrian survey; therefore, no evaluation of archaeological resources is necessary.

### 7.2 HISTORICAL RESOURCES

#### P-37-018732

As discussed earlier, there is one known historical resource (P-37-018732) located immediately adjacent to the Study Area. P-37-018721 is a Victorian-style one-story farmhouse and is described as being constructed circa 1900 and having a U-shaped floor plan. It is located in close proximity to the proposed pipeline alignment and the proposed pump station in Mountain View Park. The resource was assigned a California Historical Resource Status Code of 3D, “appears eligible for the National Register as a contributor to a National Register-eligible district through survey evaluation.” The resource is also recognized by the City as individually significant and listed on the local register. The property was determined eligible for local listing by the City for its association with architecture and exploration/settlement: “a fine example of an unusual floor plan and roofline, this small farmhouse is still surrounded by orange groves.” As a result of the local listing, P-37-018732 is considered an historical resource pursuant to CEQA.

#### Citrus Avenue Bridge

The Citrus Avenue Bridge is located within the Study Area and runs along Citrus Avenue (Bridge Number 57C0456). It was constructed in 1971 and was evaluated previously by Caltrans in 2012 and found ineligible for National Register listing.<sup>21</sup> Because the bridge was constructed in 1971, it therefore does not meet the 45-year age guideline of the California Register or the 50-year age requirement of the National Register.

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<sup>21</sup> California Department of Transportation. *Historical Significance – Local Agency Bridges*. September 2012. <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>, accessed November 26, 2012.

### **Escondido Creek Flood Control Channel**

The concrete Escondido Creek Flood Control Channel was constructed between 1967 and 1972<sup>22</sup> and therefore does not meet the 45-year age guideline of the California Register or the 50-year age requirement of the National Register. The channel is a common concrete flood channel of a type found throughout southern California and it is not architecturally outstanding or distinctive nor is it important or innovative as an example of engineering.

### **Avocado Orchards/Groves**

Review of historic topographic maps and aerials indicates the groves and orchards near the Study Area (e.g., the proposed storage tank) did not exist during the historic period and are less than 45 years in age. Therefore, the groves/orchards are not historic agricultural resources and are not considered a historical resource pursuant to CEQA.

### **Conclusion**

In summary, there is one historical resource pursuant to CEQA, P-37-018732, that has the potential to be impacted by the Proposed Project. These potential impacts are analyzed and described in the following Chapter.

## **7.3 PALEONTOLOGICAL RESOURCES**

As discussed in the previous Chapter, no known paleontological resources from the SDNHM records were recorded within the Study Area and no resources were identified during the pedestrian survey; therefore, no evaluation of paleontological resources is necessary.

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<sup>22</sup> City of Escondido. *Escondido Creek Watershed Project, Plans for the Construction of Upper Escondido Creek Channel Improvement, Unit 3B-2. October 19, 1972.*

## 8.0 IMPACTS/EFFECTS ANALYSIS

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The purpose of this Chapter is to discuss the potential impacts to archaeological resources, historical resources, paleontological resources, and human remains associated with implementing the Proposed Project.

### 8.1 CEQA SIGNIFICANCE THRESHOLDS

#### 8.1.1 Archaeological Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.***

According to the CEQA Guidelines, an archaeological resource is further defined as a resource that qualifies as a “historical resource”<sup>23</sup> pursuant to CEQA Guidelines Section 15064.5 or a “unique archaeological resource” pursuant to Section 21083.2 of the Public Resources Code. These terms are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a “substantial adverse change” in the significance of a historical resource or “damage” to a unique archaeological resource.

A “substantial adverse change” (as defined in the CEQA Guidelines) is caused when one or more of the following occurs:

- Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- The significance of a historical resource is materially impaired when a project:
  - a. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
  - b. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
  - c. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

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<sup>23</sup> A historical resource can be an archaeological object, site or district that is listed in or determined eligible for the CRHR.

The CEQA Guidelines do not define “damage” when it comes to unique archaeological resources, but it can be reasonably interpreted as having a meaning similar to that of “substantial adverse change” (as defined above).

### 8.1.2 Historical Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.***

According to the CEQA Guidelines, a historical resource is further defined as a resource that qualifies for listing in the California Register or another federal or local register. The criteria for listing are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a “substantial adverse change” in the significance of a historical resource. The definition of “substantial adverse change” is provided in the previous section, 8.1.1.

The *Secretary of the Interior’s Standards for Rehabilitation* (Standards) are codified at 36 Code of Federal Regulations (CFR) Section 67.7. In most circumstances, the Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the CEQA Guidelines states in part that “. . . a project that follows the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the *Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historic resource,” and therefore may be considered categorically exempt.

### 8.1.3 Paleontological Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.***

The CEQA Guidelines do not define “directly or indirectly destroy,” but it can be reasonably interpreted as the physical damage, alteration, disturbance, or destruction of a paleontological resource.

### 8.1.4 Human Remains

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will disturb any human remains, including those interred outside of formal cemeteries.***

The CEQA Guidelines do not define “disturb” but it can be reasonably interpreted as the physical damage, alteration, disturbance, or destruction of any human remains.

## 8.2 POTENTIAL IMPACTS

### 8.2.1 Project Description

As discussed earlier, the Proposed Project would include the construction of the following components: approximately 5.1 miles of 24-inch recycled water pipeline; a recycled water storage tank with a storage

capacity up to 2 million gallons; a 6,000-gallon per minute recycled water pump station; approximately 4.9 miles of 12-inch brine conveyance pipeline; and approximately 7.4 miles of small diameter (less than 6-inch) fiber optic conduit(s) installed in the pipeline trench. A more detailed description of the construction methods associated with implementation of the Proposed Project is provided in Chapter 1.3 of this report.

## 8.2.2 Archaeological Resources

As discussed earlier in this report, no known archaeological resources have been identified from the CHRIS-SCIC records or during the pedestrian survey within the boundaries of the Study Area. These findings, however, do not preclude the existence of undiscovered archaeological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the proposed project. It is possible to encounter buried archaeological resources given the proven prehistoric and historic occupation of the region, the identification of multiple surface and subsurface archaeological resource within the vicinity of the Study Area (32 prehistoric and five historic/prehistoric archaeological resources have been recorded within a half-mile of the Study Area), and the favorable natural conditions (e.g., Escondido Creek, vegetation communities) that would have attracted prehistoric and historic inhabitants to the area. Therefore, despite the heavy urbanization of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in the following chapter to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

## 8.2.3 Historical Resources

### P-37-018732

As discussed earlier, P-37-018732 is considered a historical resource pursuant to CEQA. However, the Proposed Project would result in no impact to the resource. The construction of the proposed pump station would occur in the paved parking lot located in the far north east corner of Mountain View Park and would therefore not directly impact P-37-018732, which is located in the north west corner of Mountain View Park. The construction of proposed pipeline would also not directly impact the resource. Developed in 1985, Mountain View Park is a recreational facility including playing fields and tennis courts. The historic setting of P-37-018732 has been altered by development of the park as well as the surrounding residential development. The surrounding setting of P-37-018732 has been altered by the construction of park amenities, including lighted soccer fields, tennis courts, picnic areas, restrooms, open turf area, and asphalt surface parking lots. The three tennis courts and parking lot presently located in the northeast corner of the park are obscured from view from the resource by a row of trees along the eastern edge of the domestic yard associated with the residence. The distant views of the proposed pump station from P-37-018732 would similarly be obscured by the row of trees; therefore, the Proposed Project would have no indirect impact on P-37-018732 and no mitigation measures are warranted.

### Other Resources

The Proposed Project would not impact the 399 built environment resources, the one historic district (i.e., the Old Escondido Historic District), Oak Hill Memorial Park (considered a historical resource pursuant to CEQA) that have been recorded within a one-half mile of the Study Area. These resources are located far enough away from the Study Area and therefore would not be impacted by the Proposed Project.

In summary, the Proposed Project would result in no substantial adverse change in the significance of a historical resource as defined in §15064.5.

### **8.2.4 Paleontological Resources**

Results of the paleontological resources records search through the SDNHM indicate that no vertebrate fossil localities from the SDNHM records have been previously recorded within the Study Area or within a one-mile radius. No paleontological resources were identified by PCR during the pedestrian survey, but this may be a direct result of the poor ground surface visibility within the majority of the Study Area, which may have obstructed the identification of resources on the surface. These findings, however, do not preclude the existence of undiscovered paleontological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the Proposed Project. According to the SDNHM, it is possible to encounter buried paleontological resources in the portions of the Study Area that contain fossiliferous older Quaternary alluvium sediments while it is not possible to encounter buried paleontological resources in portions of the Study Area that contain igneous rocks. Igneous rocks are not conducive to retaining paleontological resources and are currently mapped as underlying the eastern and southeastern portions of the Study Area (see Kennedy and Tan 2007). However, the areas along and near the Escondido Creek contain deposits of fossiliferous older alluvial flood plain deposits and therefore excavations associated with the Proposed Project have the potential to impact buried paleontological resources in these and other areas. As a result, recommended mitigation measures are provided in the following chapter to reduce potentially significant impacts to previously undiscovered paleontological resources that may be accidentally encountered during project implementation to a less than significant level.

### **8.2.5 Human Remains**

No known human remains have been identified from the CHRIS-SCIC records within the Study Area or within a half-mile radius. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the Proposed Project. Similar to the discussion regarding archaeological resources above, it is also possible to encounter buried human remains during construction given the proven prehistoric and historic occupation of the region, the identification of multiple surface and subsurface archaeological resources within a half-mile of the Study Area, and the favorable natural conditions that would have attracted prehistoric and historic inhabitants to the area. As a result, recommended mitigation measures are provided in the following chapter that would reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during project implementation to a less than significant level.

### 9.0 RECOMMENDED MITIGATION MEASURES

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#### 9.1 ARCHAEOLOGICAL RESOURCES

The following mitigation measures have been recommended to reduce potentially significant impacts to archaeological resources that are accidentally discovered during implementation of the Proposed Project to a less than significant level:

**Mitigation Measure CULT-1: Conduct Archaeological Sensitivity Training for Construction Personnel.** The City shall retain a qualified archaeologist who shall conduct an Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session, shall be carried out by a cultural resources professional with expertise in archaeology, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and archaeological history of the area and the City cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of archaeological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps that would be followed to conduct a salvage investigation if one is necessary.

**Mitigation Measure CULT-2: Monitor Construction Excavations for Archeological Resources in Younger Alluvial Sediments.** The City shall retain a qualified archaeological monitor who shall be present during construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill younger alluvial sediments. Younger alluvial sediments are present in the bike path of the Escondido Creek Flood Control Channel and immediate vicinity. Portions of the Study Area where younger alluvial sediments are not present (which include the reaming areas of the Study Area) shall not be monitored because these areas consist of igneous rocks (e.g., granitic bedrock) that are not conducive to retaining buried archaeological resources or older alluvial sediments which are less likely to retain archaeological resources than younger alluvial soils. Furthermore, areas where artificial fill soils exist shall not be monitored given the limited potential to encounter resources in these soils. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor.

In the event that archaeological resources are unearthed during ground-disturbing activities ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by project construction activities shall be evaluated by a qualified archaeologist. The City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The City and/or landowner, in consultation with the archaeologist, shall designate repositories in the event that archaeological material is recovered.

The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted to the District and the South Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion

of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register and CEQA, and treatment of the resources.

## 9.2 HISTORICAL RESOURCES

The Proposed Project would not impact historical resources therefore no mitigation measures are recommended.

## 9.3 PALEONTOLOGICAL RESOURCES

The following mitigation measures have been recommended to reduce potentially significant impacts to paleontological resources that are accidentally discovered during implementation of the Proposed Project to a less than significant level:

**Mitigation Measure CULT-3: Conduct Paleontological Sensitivity Training for Construction Personnel.** The City shall retain a qualified paleontologist who shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session, shall be carried out by a cultural resources professional with expertise in paleontology, will focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and geologic history of the area and the City cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps that would be followed to conduct a salvage investigation if one is necessary.

**Mitigation Measure CULT-4: Cease Ground-Disturbing Activities and Retain Paleontologist to Implement Treatment Plan if Paleontological Resources Are Encountered.** If a paleontological resource is accidentally encountered during implementation of the Proposed Project, grading and other excavation activities in the area of the exposed fossil shall be halted or diverted to facilitate evaluation of the resource. The City shall coordinate with a qualified paleontologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource or preservation it in place. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of taxonomic identification and catalogued and donated to a suitable museum or other repository with a research interest in the materials, such as the San Diego Natural History Museum. Accompanying notes, maps, and photographs shall also be filed at the repository. In coordination with the City, the paleontologist shall determine the need for construction monitoring services in the area of the find thereafter.

Upon completion of the above activities, the paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to the City, the San Diego Natural History Museum, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

## 9.4 HUMAN REMAINS

Components of the Proposed Project that require excavation activities, the following mitigation measure is recommended to reduce potentially significant impacts to previously unknown human remains that are unexpectedly discovered during excavations to a less than significant level:

**Mitigation Measure CULT-5: Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered.** If human remains are unearthed during implementation of the Proposed Project, the City shall comply with State Health and Safety Code Section 7050.5. The City shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the landowner, inspect the site of the discovery of the Native American remains and may recommend to the landowner means for treating or disposing, with appropriate dignity, the human remains and any associated funerary objects. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and cultural items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. MLDs in the region typically recommend reburial of the remains as close to the original burial location as feasible accompanied by a ceremony. The MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the CHRIS-SCIC.

If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance. A record of the reburial shall be filed with the NAHC and the CHRIS-SCIC.

## Appendix C: Cultural Resources Technical Report

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## Appendix C: Cultural Resources Technical Report

**APPENDIX A – Personnel Qualifications**

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## Appendix C: Cultural Resources Technical Report

# Appendix C: Cultural Resources Technical Report

Kyle Garcia, SENIOR ARCHAEOLOGIST

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## Education

- B.A., Physical Anthropology, University of California, Santa Barbara, California, 2004

## Registrations/Certifications

- Riverside County Registered Archaeologist #202
- 40-Hour HAZWOPER Training, 2011

## Continuing Education

- Cultural Resources Orientation & Pro-Seminar, County of Riverside, 2011
- Introduction to Professional Practice under Section 106 of the National Historic Preservation Act (NHPA), 2009
- Cultural Resources Protection Under CEQA and Other Legislative Mandates, UCLA Extension, 2008
- Riverside County Archaeology and Cultural Sensitivity Training Program, 2007

## Professional Affiliations

- Society for American Archaeology
- Society for California Archaeology
- Pacific Coast Archaeological Society
- Orange County Natural History Museum

## Summary

Kyle Garcia has over nine years of professional experience in the archaeology and prehistory of California. Mr. Garcia is knowledgeable about archaeological resources in coastal, interior, and island settings. He specializes in faunal analysis and has worked in faunal laboratories at UCSB and the Santa Barbara Museum of Natural History.

Mr. Garcia has evaluated historic and prehistoric archaeological resources for listing in the National Register of Historic Places and the California Register of Historical Resources, conducted agency and Native American consultation, conducted and supervised all aspects of archaeological fieldwork and laboratory processing, conducted numerous record searches at the regional Information Centers across the State, and prepared many technical documents and sections in support of Environmental Impact Reports/Statements and Initial Studies/Environmental Assessments.

## Experience

Mr. Garcia has contributed his services and archaeological expertise to over 300 projects at PCR subject to requirements of the California Environmental Quality Act (CEQA), Section 106 of the NHPA, the National Environmental Policy Act (NEPA), and other federal, State, and local regulations. These projects included energy, infrastructure, utility, residential, commercial, mixed-use, schools, parks, trail systems, and urban redevelopment serving a variety of public and private sector clients throughout California and Arizona. In addition to his archaeological work, Mr. Garcia has been cross-trained in paleontological mitigation monitoring and assisted in the excavations of a Miocene whale fossil near Irvine, California.

*Peer Reviews:* Mr. Garcia is often sought after to conduct Peer Review services of controversial projects across southern California. These reviews include environmental documentation for the Needles Highway Safety Realignment Project for the County of San Bernardino Department of Public Works and various infrastructure projects for Caltrans/San Bernardino Associated Governments.

*General Project Experience:* Mr. Garcia has extensive experience in dealing with projects with a large number of archaeological resources. His large-scale surveys include a pedestrian survey and site recordation of more than 200 historic and prehistoric archaeological resources as part of a Class III Inventory on an approximately 11,000-acre portion of the La Osa Ranch Project site in Pinal County, Arizona; and he directed the 1,400-acre field survey and the successful site recordation of over 150 prehistoric and historic archaeological resources per the Section 106 Process for a confidential project in Riverside County. He also served as Deputy Project Manager for the approximately 240-acre Archaeological Treatment & Restoration Plan for The Cove project that was subject to Section 106, where he performed the field survey, Native American consultation, prepared the final report, and supervised the thorough recordation and documentation of over 350 significant artifacts which included artifact photography and illustrations.

*Energy Projects:* He is well-versed in the potential effects of energy production projects on California Archaeology through his service as an on-call consultant to Southern California Edison (SCE) where he has served as the Project Director and Manager for over 100 SCE projects and managed SCE purchase order contracts in excess of \$1.5M. These projects were subject to requirements of CEQA, Section 106 of the NHPA, and other local ordinances. These projects included deteriorated pole replacements, conduit and vault installations, distribution circuit installations, and emergency on-call archaeological survey and monitoring services for SCE property during recent southern California wildfires. Mr. Garcia not only managed the budgets and supervised the work but he also conducted most of the record searches, surveys, report writing, site recordation, and client/agency coordination for these projects. These projects also entailed rapid response services including close-interval surveys, construction monitoring, and sensitivity assessments for SCE property in areas damaged by the wildfires.

*Presentations:* Mr. Garcia presented a paper at the 72nd Annual Meeting for the Society of American Archaeology Conference in Austin, Texas in 2007. The paper focused on prehistoric 'yoni' features encountered on a project site proposed to be developed in western Riverside County, California.

*Geographic Information Systems (GIS):* Mr. Garcia has also gained valuable experience with recording historic and prehistoric archaeological sites with Garmin, Magellan, and sub-meter Trimble GeoXT Global Positioning System (GPS) units. He has worked with GIS software such as ArcPad, ArcGIS, and ArcView, and developed methods for using these products to accurately and efficiently record archaeological sites.



# Appendix C: Cultural Resources Technical Report

Matthew Gonzalez, ASSOCIATE ARCHAEOLOGIST/PALEONTOLOGIST

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## Education

- B.A., Classical Archaeology, University of California, Santa Barbara, California, 2005

## Continuing Education

- 40-Hour HAZWOPER Training (Update), 2010
- Cultural Resources Protection Under CEQA and Other Legislative Mandates, UCLA Extension, 2008
- Riverside County Archaeology and Cultural Sensitivity Training Program, 2007

## Professional Affiliations

- Society for American Archaeology

## Summary

Matthew Gonzalez has eight years of experience in archaeological and paleontological investigations including identification of historic and pre-historic archaeological resources. Cross-trained as an archaeologist and paleontologist, Mr. Gonzalez has performed archaeological and paleontological surveys on a number of projects throughout Southern California and Arizona. His dual specialization enables him to perform surveys and monitoring for both disciplines, thereby providing time- and cost-efficient services to his clients. Mr. Gonzalez has led field crews on site investigations and participated in surveying, mapping, excavating, wet/dry screening, site recording, laboratory experience, and soil analysis. Mr. Gonzalez has considerable experience in both surface reconnaissance and subsurface investigations, marine fossil identification, as well as artifact analysis and classifications, specifically faunal and lithic analysis.

## Experience

*Archaeology:* Mr. Gonzalez prepares letter, Phase I, Section 106, and CEQA-Plus reports; Initial Study and Environmental Impact Report (EIR) sections; and Native American letters. He is also skilled in client coordination, SB 18 Consultation, and Phase I and II data recovery. Mr. Gonzalez is also skilled in the application of Geographic Information Systems (GIS)/Global Positioning Systems (GPS) to facilitate field investigations and record searches, using ArcView and Google Earth to develop field maps useful to plot artifacts and survey sites.

He assisted in the archaeological surveys, site recording, and excavation for two large-scale projects including the 3,000-acre Heritage Fields [Orange County] Great Park in Irvine, California and for approximately 10,000 acres of the 19,000-acre La Osa Ranch in Pinal County, Arizona. He conducted archaeological surveys, recording, excavations, artifact processing, and construction monitoring to achieve mitigation compliance for a controversial KB Home residential development in Riverside County, California. He also conducted archaeological surveys for the 136-acre Trabuco Canyon 119 site in Orange County; Rosamond recycled water pipeline project in Kern County; various projects for the San Bernardino Associated Governments; LAX Master Plan; Cesar Chavez Roundabout Improvement Project in Los Angeles; the 175-acre Oasis Date Garden project in Riverside County; the Lytle Creek and Nuevo Road developments in San Bernardino and Riverside counties, respectively; and the 1,200-acre Skyline Ranch Project in Santa Clarita Valley; and over 75 Southern California Edison (SCE) projects including the Tea and Station Fires emergency response projects

Mr. Gonzalez has also conducted mitigation and construction monitoring for several projects. He provided archaeological monitoring for the Heritage Fields Great Park in addition to his survey work, for Building 319 of the Second Harvest Food Bank on the former El Toro Marine Corps Air Station; a John Laing Homes Newland Street development in Huntington Beach; the 16-acre Rossmore development in Redlands; and a number of SCE projects.

*Paleontology:* Mr. Gonzalez is experienced in all facets of paleontological resources consulting – surveying, fossil salvaging and analysis, sediment sampling, laboratory analysis, monitoring, and report writing. Mr. Gonzalez has performed any combination of these services on over 40 projects subject to State, federal, or local jurisdiction over the last five years.

Mr. Gonzalez surveyed, salvaged fossils, took sediment samples, performed laboratory analysis and construction monitoring, and assisted with report preparation associated with the 3,000-acre Heritage Fields [Orange County] Great Park. During the project, Mr. Gonzalez and the PCR team discovered a Miocene whale skeleton in the project study area. Mr. Gonzalez also performed the full spectrum of paleontological services for the Del Mar Hilton Gardens Inn in San Diego County. He has performed lab analysis, including processing, cleaning, sorting, cataloging archiving/preserving, and fossil analysis, for the Steven S. Wise Temple and Diamond Bar Site D project in Los Angeles County, and the 2nd Harvest Food Bank and Newland Street project for John Laing Homes in Orange County. He has performed surveys and/or prepared reports for projects throughout Southern California including the LAX Master Plan monitoring; SCE's Presidential Substation in Simi Valley; two recycled water projects; the 1,200-acre Skyline ranch development in Santa Clarita Valley; and the 3,000-acre Lytle Creek Specific Plan in San Bernardino County. In addition to his field work, Mr. Gonzalez has prepared sections for 20 CEQA documents for projects throughout California.



# Appendix C: Cultural Resources Technical Report

## Amanda Y. Kainer, M.S., ARCHITECTURAL HISTORIAN

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### Education

- M.S., Historic Preservation (Emphasis: Conservation), Columbia University, New York, New York, 2008
- B.S., Design, (Emphasis: Interior Architecture), University of California, Davis, California, 2002
- B.A., Art History, University of California, Davis, California, 2002

### Professional Experience

- Intern, Historic Resources Group, Los Angeles California, Summer 2007

### Awards

- Joel Polsky Academic Achievement Award, American Society of Interior Designers, 2008

### Professional Affiliations

- California Preservation Foundation
- Los Angeles Conservancy
- Santa Monica Conservancy
- Association of Preservation Technology Western Chapter

### Training

- CEQA and Historic Resources: Thresholds, Mitigation & Case Studies, California Preservation Foundation Workshop, March 2011

### Summary

Ms. Kainer has over seven years of professional and academic experience in the practice of historic preservation and architectural history in New York and California. Her undergraduate work in Art History and Interior Architecture at UC Davis led to a master's degree in Historic Preservation (emphasis Conservation Science) from Columbia University. At Columbia, Ms. Kainer studied under esteemed conservation science professors Dr. George Wheeler, Norman Weiss, and Dr. Theodore Prudon (thesis advisor). During graduate school, she interned at the Historic Resources Group under Peyton Hall, managing principal, working on character-defining features tables for All Saints Church and Polytechnic Elementary School. She has training and substantial experience in the evaluation and conservation of art and architecture and passion for interior design.

### Experience

Ms. Kainer has conducted extensive archival research, field observation, recordation, and prepared survey documentation for numerous PCR historic resources projects. She has served as project architectural historian and conducted survey work, provided archival, historical, architectural and property research, and assisted in database management. She completed and co-authored a wide range of architectural investigations such as historic resources assessment reports for compliance with CEQA, character-defining features reports, investment tax credit applications, Section 106 significance evaluations, and HABS documentations for PCR projects in the Los Angeles metropolitan area. Recent projects included California Register nomination for the UCLA Faculty Center, a historic resources assessment for late nineteenth century associated with California's early mining history, and a CEQA Impacts Analysis and Evaluation Report for a pipeline in Escondido.

*Survey Experience:* She was a contributing author for three major Community Redevelopment Agency of the City of Los Angeles (CRA/LA) – Adelante Eastside, Wilshire Center/Koreatown, and Normandie 5 Redevelopment Areas. Ms. Kainer also served as PCR Survey Team Leader and co-author for the comprehensive survey of over 4,000 objects of fine and decorative arts aboard the RMS Queen Mary in Long Beach. Currently, Ms. Kainer is assisting with the district-wide survey and evaluation of the Long Beach Unified School District.

*Southern California Beach Cities:* Ms. Kainer has contributed to Historic Resource Assessments for several private coastal residential and commercial properties in Laguna Beach, Redondo Beach, and Hermosa Beach. She has also conducted extensive research and survey work and prepared numerous landmark and preliminary assessment reports for the City of Santa Monica. For example, Ms. Kainer has worked on landmark and preliminary assessment reports for a Streamline Moderne style hotel, 1920s municipal bus garage, Renaissance Revival style apartment hotel, and pier sign. Recently she helped to prepare a CEQA Plan Review and Certificate of Appropriateness Report for the Bijou Building in Hermosa Beach.



# Appendix C: Cultural Resources Technical Report

Margarita J. Wuellner, Ph.D., DIRECTOR OF HISTORIC RESOURCES

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## Education

- Ph.D., Art History, University of California, Los Angeles, 2005
- M.A., Architectural History, and Certificate of Historic Preservation University of Virginia, Charlottesville, Virginia, 1991
- B.A., Art History, Oberlin College, Oberlin, Ohio, 1983

## Professional Affiliations

- Santa Monica Conservancy
- Los Angeles Conservancy
- California Preservation Foundation
- Society of Architectural Historians, Life Member
- National Trust for Historic Preservation
- American Institute of Architects (AIA), National Allied Member
- American Architectural Foundation
- Association for Preservation Technology

## Summary

Margarita J. Wuellner, Ph.D., has extensive academic and professional experience in art history, historical archaeology, architectural history, and historic preservation. Her qualifications and experience meet and exceed the Secretary of the Interior's Professional Qualification Standards in History, Archaeology, and Architectural History.

Dr. Wuellner has over 23 years of professional experience in the practice of historic preservation and cultural resources management in California and the United States. She has over 17 years of experience as a principal investigator, project manager, and technical lead for international, national and regional firms, including PCR Services Corporation, Inc., (2006-present); EDAW, Inc. (AECOM) (2004-2006); and Parsons Engineering Science, Inc. (Parsons) (1995-2004). Her early experience in historic preservation was with John Milner Associates, Inc., Alexandria, Virginia, (1991-1995); and Land and Community Associates in Charlottesville, Virginia, (1989-1992).

Dr. Wuellner has a substantial background in the study of European and American art and architecture and is a specialist in visual culture, Modernism, urbanism, and cultural landscape. She is a recipient of the Samuel H. Kress Foundation Fellowship in Art History; American Council of Learned Societies Fellowship in East European Studies; Edward A. Dickson Graduate Fellowship in Art History, UCLA; and the Thomas Jefferson, Dupont and Governor's State Graduate Fellowships in Architectural History, School of Architecture, University of Virginia.

## Experience

Over the past six years Dr. Wuellner has strengthened and expanded the services and range of PCR's historic preservation practice. She has managed and conducted hundreds of historic resources investigations throughout California, in Texas and Canada, assisting clients with due diligence, planning and design, review and approval, mitigation and preservation treatment. Redevelopment, urban design and master planning projects are of primary interest to Dr. Wuellner. Author of hundreds of technical reports for incorporation into CEQA/NEPA environmental review documents (EIRs/EAs/EISs) she is highly experienced in addressing and reducing impacts to historic resources in support of project goals. With a broad national resume, Dr. Wuellner has extensive experience in the evaluation, management and treatment of historic properties for compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA), National Environmental Protection Act (NEPA), Section 4(f) of the Department of Transportation Act, the California Environmental Quality Act (CEQA), and local codes and ordinances. Highly experienced in the assessment of projects for conformance with the Secretary of the Interior's Standards, she frequently assists both government and private clients with adaptive reuse and rehabilitation projects by providing technical consultation services, agency coordination and legally defensible documentation.

As manager of PCR's on-call preservation services contract with the City of Santa Monica (2002-present), Dr. Wuellner manages and directs PCR staff and is responsible for maintaining and ensuring the high quality of PCR deliverables. She presently also manages additional on-call preservation consulting contracts with the County of San Bernardino Department of Public Works, City of Hermosa Beach, and Los Angeles Unified School District, and she has previously managed preservation consulting services contracts under master agreements with the Los Angeles Redevelopment Agency, and the City of Long Beach.

Dr. Wuellner has managed hundreds of projects throughout Southern California for public agencies and private clients including three large historic resources surveys for the Community Redevelopment Agency of the City of Los Angeles (CRA/LA) for the Wilshire Center/Koreatown Recovery Redevelopment Project Area (2009), Adelante Eastside (2008), and the Normandie 5 Redevelopment Project Area (2010). Education related project experience includes a district-wide survey for the Santa Monica Unified School District (SMMUSD), a California Register nomination for the UCLA Faculty Center, historic resources analyses for the USC Master Plan Project, and a HABS report for the former Schoenburg Institute, USC. Conservation experience includes exterior preservation of the San Bernardino Santa Fe Depot, preservation services for the Santa Monica City Hall Seismic and Jail Retrofit Project, Rehabilitation of the Dunbar Hotel, and a Conservation Management Plan for the RMS Queen Mary for the City of Long Beach. Cultural landscape projects include the Palisades Park Landmark Nomination, the Santa Monica City Hall Landscape Analysis, and historic resources documentation and analysis for the Huntington Education and Visitor Center Project EIR, San Marino, California.



**APPENDIX B – Native American Consultation Documentation**

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## Appendix C: Cultural Resources Technical Report

**Appendix C: Cultural Resources Technical Report**

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
ds\_nahc@pacbell.net



October 16, 2012

Mr. Matthew Gonzalez, Associate Archaeologist/Paleontologist

**PCR SERVICES CORPORATION**

One Venture, Suite 150  
Irvine, CA 92618

Sent by FAX to: 949-753-7002  
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the proposed Sacred Lands File Search and Native American Contacts list for the proposed "**RMC Escondido Project**," located in the Escondido area; North Metro; San Diego County, California

Dear Mr. Gonzales:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands search based on the data provided and **Native American cultural resource sites were not identified in the Escondido USGS Quad, BUT were identified in the Valley Center USGS Quad** within one-half mile of the project site, the 'area of potential effect' (e.g. APE); you specified. Also the absence of archaeological fixtures and other cultural resource items does not preclude their existence at the subsurface level. In addition, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess

## Appendix C: Cultural Resources Technical Report

whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider *avoidance* as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 and (k) of the federal NHPA (16 U.S.C. 470 *et seq*), Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 774); 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

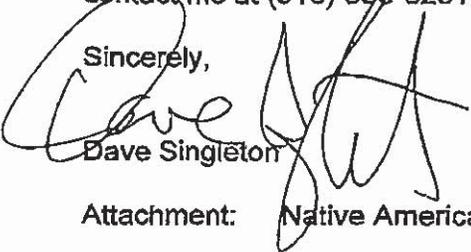
## Appendix C: Cultural Resources Technical Report

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 657-6251.

Sincerely,

  
Dave Singleton

Attachment: Native American Contact List

**Appendix C: Cultural Resources Technical Report  
Native American Contacts  
San Diego County  
October 16, 2012**

Pala Band of Mission Indians  
Historic Preservation Office/Shasta Gaughen  
35008 Pala Temecula Road, Luiseno  
Pala, CA 92059 Cupeno  
PMB 50  
(760) 891-3515  
sgaughen@palatribe.com  
(760) 742-3189 Fax

Pauma & Yuima Reservation  
Randall Majel, Chairperson  
P.O. Box 369 Luiseno  
Pauma Valley CA 92061  
paumareservation@aol.com  
(760) 742-1289  
(760) 742-3422 Fax

Pechanga Band of Mission Indians  
Paul Macarro, Cultural Resources Manager  
P.O. Box 1477 Luiseno  
Temecula, CA 92593  
(951) 770-8100  
pmacarro@pechanga-nsn.  
gov  
(951) 506-9491 Fax

Rincon Band of Mission Indians  
Vincent Whipple, Tribal Historic Preationv. Officer  
P.O. Box 68 Luiseno  
Valley Center, CA 92082  
twolfe@rincontribe.org  
(760) 297-2635  
(760) 297-2639 Fax

Pauma Valley Band of Luiseño Indians  
Bennae Calac, Tribal Council Member  
P.O. Box 369 Luiseno  
Pauma Valley CA 92061  
bennaecalac@aol.com  
(760) 617-2872  
(760) 742-3422 - FAX

Rincon Band of Mission Indians  
Bo Mazzetti, Chairperson  
P.O. Box 68 Luiseno  
Valley Center, CA 92082  
bomazzetti@aol.com  
(760) 749-1051  
(760) 749-8901 Fax

San Pasqual Band of Indians  
Kristie Orosco, Environmental Coordinator  
P.O. Box 365 Luiseno  
Valley Center, CA 92082 Diegueno  
(760) 749-3200  
council@sanpasqualtribe.org  
(760) 749-3876 Fax

San Luis Rey Band of Mission Indians  
Cultural Department  
1889 Sunset Drive Luiseno  
Vista, CA 92081 Cupeno  
760-724-8505  
760-724-2172 - fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7060.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Escondido RMC Project; located in the Escondido and Valley Center areas of North Metro San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.

**Appendix C: Cultural Resources Technical Report  
Native American Contacts  
San Diego County  
October 16, 2012**

La Jolla Band of Mission Indians  
Lavonne Peck, Chairwoman  
22000 Highway 76 Luiseno  
Pauma Valley CA 92061  
rob.roy@lajolla-nsn.gov  
(760) 742-3796  
(760) 742-1704 Fax

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Escondido RMC Project; located in the Escondido and Valley Center areas of North Metro San Diego County, California for which a Sacred Lands File search and Native American Contacts list were requested.**

## Appendix C: Cultural Resources Technical Report

### PALA TRIBAL HISTORIC PRESERVATION OFFICE

PMB 50, 35008 Pala Temecula Road  
Pala, CA 92059  
760-891-3510 Office | 760-742-3189 Fax



November 21, 2012

Matthew Gonzalez  
PCR Services Corporation  
201 Santa Monica Blvd., Suite 500  
Santa Monica, CA 90401

Re: Proposed RMC Escondido Project

Dear Mr. Gonzalez,

The Pala Band of Mission Indians Tribal Historic Preservation Office has received your notification of the project referenced above. This letter constitutes our response on behalf of Robert Smith, Tribal Chairman.

We have consulted our maps and determined that the project as described is not within the boundaries of the recognized Pala Indian Reservation. The project is also beyond the boundaries of the territory that the tribe considers its Traditional Use Area (TUA). Therefore, we have no objection to the continuation of project activities as currently planned and we defer to the wishes of Tribes in closer proximity to the project area.

We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone at 760-891-3515 or by e-mail at [sgaughen@palatribe.com](mailto:sgaughen@palatribe.com).

Sincerely,

Shasta C. Gaughen, PhD  
Tribal Historic Preservation Officer  
Pala Band of Mission Indians

ATTENTION: THE PALA TRIBAL HISTORIC PRESERVATION OFFICE IS RESPONSIBLE FOR ALL REQUESTS FOR CONSULTATION. PLEASE ADDRESS CORRESPONDENCE TO **SHASTA C. GAUGHEN** AT THE ABOVE ADDRESS. IT IS NOT NECESSARY TO ALSO SEND NOTICES TO PALA TRIBAL CHAIRMAN ROBERT SMITH.



# RINCON BAND OF LUISEÑO INDIANS

## Culture Committee

Post Office Box 68 · Valley Center, CA 92082 ·  
 (760) 297-2635 or (760) 297-2622 & Fax:(760) 297-2639

December 5, 2012

Matthew Gonzalez  
 Associate Archaeologist/Paleontologist  
 PCR Services Corporation  
 201 Santa Monica Boulevard, Suite 500  
 Santa Monica, CA 90401

Re: Proposed RMC Escondido Project; City of Escondido, San Diego County, California

Dear Mr. Matthew Gonzalez:

This letter is written on behalf of the Rincon Band of Luiseño Indians, and we are submitting these comments in response to your letter of October 29, 2012. We have concerns regarding the project's possible effects on Luiseño cultural resources, and Rincon has additional concerns for potential impacts to the cultural sites identified within the stated one-half mile buffer. This is to inform you that the identified construction location is within the Luiseño Aboriginal Territory, and is also within Rincon's historic boundaries.

The Luiseño Aboriginal Territory has significant meaning to Rincon's history, culture, and identity, and this area possesses known and yet to be discovered cultural resources. We agree with positions advanced by the California Native American Heritage Commission (NAHC) that 1) the absence of archaeological fixtures and other cultural resource items does not preclude their existence at the subsurface level, and 2) that the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity. Thus, we declare our Traditional Use Area as culturally significant, and we want you to be aware of the potential for cultural findings and discoveries.

We understand that facilities, 5.1 miles of water main, 4.9 miles of brineline, a water storage tank, and a water pump station are proposed to be built. Also, we recognize that a large amount of ground disturbance will occur as part of the project. For any archaeological survey assessments, and especially during construction phases, we recommend that a Native American Monitor be included as part of the project activities. We also request that you provide us with any updates regarding the project.

If you have any questions, please contact (760) 297-2635. Thank you for this opportunity to protect and preserve our cultural assets.

Sincerely,

Rose Duro  
 Rincon Culture Committee Chair

Bo Mazzetti  
 Tribal Chairman

Stephanie Spencer  
 Vice Chairwoman

Charlie Kolb  
 Council Member

Steve Stallings  
 Council Member

Laurie E. Gonzalez  
 Council Member

## Appendix C: Cultural Resources Technical Report

**APPENDIX C – Paleontological Resources Records Search Results**

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## Appendix C: Cultural Resources Technical Report

## Appendix C: Cultural Resources Technical Report



SAN DIEGO NATURAL HISTORY MUSEUM  
BALBOA PARK - SAN DIEGO SOCIETY OF NATURAL HISTORY - ESTABLISHED 1874

17 October 2012

Matthew Gonzalez  
PCR Services Corporation  
201 Santa Monica Blvd, Suite 500  
Santa Monica, CA 90401

RE: Paleontological record search – RMC Escondido Project

Dear Mr. Gonzalez:

This letter summarizes the results of a review of the paleontological locality and specimen records held in the Department of Paleontology at the San Diego Natural History Museum (SDNHM) for the RMC Escondido Project. The project right-of-way (ROW) is approximately 7 miles long and extends from the central-western portion of the city of Escondido into the central-eastern portion of the city. The ROW follows Escondido Creek for 5 miles northeast from approximately 0.8 miles west of Interstate 15 up to where the creek intersects Citrus Avenue. The ROW then makes a sharp turn southeast for approximately 1.2 miles to the northern edge of Mountain View Park where it then turns east again for an additional 0.5 miles. There is an additional section of ROW that picks up just south of Oak Hill Memorial Park Cemetery and follows Mountain View Drive for approximately 0.5 miles before terminating at the water tank.

Published geological reports (Kennedy, 1975) that describe the underlying geology of the ROW indicate that the majority of the project area along Escondido Creek is underlain by Late Pleistocene-age young alluvial flood plain deposits (“Qya” on the provided geologic map) that lie directly adjacent to Pleistocene-age (approximately 10,000 to 500,000 years old) older alluvial flood plain deposits (“Qoa”). Portions of the project ROW at its easternmost extent are underlain by Cretaceous-age (~90 to 120 million years old) igneous rocks.

Site records housed in the Department of Paleontology at the San Diego Natural History Museum document no recorded fossil collecting localities within a one-mile radius of the RMC Escondido Project. This lack of recorded paleontological sites is partially due to the occurrence of plutonic igneous rocks underlying portions and surrounding areas of the project ROW. The high temperature and pressure conditions associated with the origin of these plutonic rocks are responsible for the absence of fossils. In contrast, the sedimentary origins of the old alluvial flood plain deposits (Qoa) suggest the potential for paleontological resources (e.g., fossil material). Deméré and Walsh (1993) have assigned the old alluvial flood plain deposits a moderate paleontological sensitivity due to known occurrences of scientifically important fossil specimens found within similar rock units in other regions of San Diego County. The young alluvial flood plain deposits (Qya) have a low paleontological sensitivity.

Given the occurrence of non-fossiliferous plutonic igneous rocks along portions of the project ROW in the east, negative impacts to significant paleontological resources during construction of the northwest-southeast trending linear pipelines, water pumping station, and

## Appendix C: Cultural Resources Technical Report

water tank in the east are unlikely in those areas. However, negative impacts to significant paleontological resources could occur along the southwest-northeast trending portion of the ROW underlain by sedimentary rocks marked on the provided geologic map as Quaternary older alluvium (Qoa).

**Recommendations** — Some of the proposed project ROW does occur in areas underlain by, or directly adjacent to, sedimentary units with a moderate sensitivity potential for containing paleontological resources and it is possible the proposed trenching will result in significant impacts if they extend into these areas. Assuming the new pipelines will be installed in freshly excavated trenches, a standard paleontological mitigation program should be implemented for the affected segments described above. In addition, the moderate sensitivity rating for the Pleistocene-age older alluvial river deposits (Qoa) would suggest the implementation of a standard paleontological avoidance program consisting of excavation monitoring, fossil recovery, specimen preparation and curation, and production of a final report. Implementation of the paleontological recovery program will avoid impacts of the project on paleontological resources.

If you have any questions concerning these findings please feel free to contact me at 619-255-0320 or [nanderson@sdnhm.org](mailto:nanderson@sdnhm.org).

Sincerely,



Nikki Anderson  
Lead Fossil Preparator  
Department of PaleoServices

### References Cited:

- Deméré, T.A. and S.L. Walsh. 1993. Paleontological Resources, County of San Diego. Prepared for the San Diego Planning Commission 1-68.
- Kennedy, M.P. 1975. Geology of the Western San Diego Metropolitan area, California. California Division of Mines and Geology Bulletin. 200-A:1-39.

## Appendix D: Hazardous Materials Database Search Results

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
SL0607335843	CARSON CLEANERS (FORMER)	OPEN - SITE ASSESSMENT	1240 SOUTH ESCONDIDO BLVD	ESCONDIDO	33.10978	-117.0764574
SL209204195	PALOMAR PLATING SITE	OPEN - REMEDIATION	722 WEST 4TH AVENUE	ESCONDIDO	33.11518	-117.088294
SL209404237	FORMER CONTINENTAL CLEANERS FACILITY - CONTINENTAL CLEANERS	OPEN - INACTIVE	644 WEST MISSION AVENUE	ESCONDIDO	33.12748	-117.0955199
SLT19707999	LOVETT'S 1 HOUR CLEANERS	COMPLETED - CASE CLOSED	1378 E GRAND AV	ESCONDIDO	33.1289	-117.0615283
SLT19711778	NORTH COUNTY TRANSIT DISTRICT	OPEN - SITE ASSESSMENT	755 NORLAK AV	ESCONDIDO	33.1205	-117.092124
SLT19747294	NORTH COUNTY PLATING	COMPLETED - CASE CLOSED	1188 INDUSTRIAL AV	ESCONDIDO	33.11941	-117.104804
SLT19760118	NORTH COUNTY PLATING	COMPLETED - CASE CLOSED	1188 INDUSTRIAL AV	ESCONDIDO	33.11941	-117.104804
SLT9S0024209	QUINCE STREET PROPERTY	OPEN - INACTIVE	541 N QUINCE STREET	ESCONDIDO	33.12173	-117.089647
T06019700827	JOHNSON FURNITURE	OPEN - SITE ASSESSMENT	131 S BROADWAY	ESCONDIDO	33.1207	-117.081602
T06019701840	AUTO PARK CAR WASH	COMPLETED - CASE CLOSED	1400 AUTO PARK WY	ESCONDIDO	33.11424	-117.10427
T06019702644	DUNN-EDWARDS CORP.	OPEN - SITE ASSESSMENT	506 W WASHINGTON AV	ESCONDIDO	33.12531	-117.0904613
T06019717805	COPELAND TRANSMISSION	COMPLETED - CASE CLOSED	944 W MISSION AV	ESCONDIDO	33.12619	-117.098616
T06019750843	RAPID TRANSMISSIONS	COMPLETED - CASE CLOSED	260 N JUNIPER ST	ESCONDIDO	33.1245	-117.079791
T06019770849	SHUSTER OIL & CHEMICAL CO INC	COMPLETED - CASE CLOSED	635 W 03RD AV	ESCONDIDO	33.11577	-117.0876986
T06019778138	GREASE MONKEY	COMPLETED - CASE CLOSED	649 N BROADWAY	ESCONDIDO	33.1281	-117.084779
T06019794859	PACIFIC PETROLEUM	OPEN - SITE ASSESSMENT	750 N ESCONDIDO BL	ESCONDIDO	33.12885	-117.088644
T06019799773	UNOCAL	OPEN - SITE ASSESSMENT	1333 E VALLEY PY	ESCONDIDO	33.13168	-117.063621
T0607300049	MOBIL 18-GRN	OPEN - SITE ASSESSMENT	501 W FELICITA AV	ESCONDIDO	33.10294	-117.0758647
T0607300065	VONS	OPEN - REMEDIATION	469 W FELICITA AV	ESCONDIDO	33.10343	-117.0751212
T0607300101	RICK'S CONCRETE CONSTRUCTION	COMPLETED - CASE CLOSED	546 REDWOOD ST	ESCONDIDO	33.11349	-117.08633
T0607300125	ESCONDIDO ADVENTIST ACADEMY	COMPLETED - CASE CLOSED	1233 W 09TH AV	ESCONDIDO	33.10825	-117.0973867
T0607300138	PACIFIC BELL	COMPLETED - CASE CLOSED	575 N QUINCE ST	ESCONDIDO	33.12398	-117.0917452
T0607300159	BUD MILNER CHEVRON	COMPLETED - CASE CLOSED	515 W MISSION AV	ESCONDIDO	33.12787	-117.092284

## Appendix D: Hazardous Materials Database Search Results

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607300175	GAS AND SAVE	COMPLETED - CASE CLOSED	460 W FELICITA AV	ESCONDIDO	33.10386	-117.075363
T0607300268	DIXIELINE LUMBER CO	COMPLETED - CASE CLOSED	561 N TULIP ST	ESCONDIDO	33.11959	-117.0988137
T0607300296	GALLADE CHEMICALS INC	COMPLETED - CASE CLOSED	425 ANDREASEN DR	ESCONDIDO	33.11615	-117.1126471
T0607300323	HIETT MFG	COMPLETED - CASE CLOSED	1035 W WASHINGTON AV	ESCONDIDO	33.12167	-117.09922
T0607300326	7 DAY MARKET	COMPLETED - CASE CLOSED	503 W WASHINGTON AV	ESCONDIDO	33.12085	-117.1011081
T0607300362	MISSION FUEL CENTER-SKS INC	COMPLETED - CASE CLOSED	526 VENTURE ST	ESCONDIDO	33.12349	-117.1122837
T0607300395	PALOMAR POMERADO HEALTH CARE	COMPLETED - CASE CLOSED	100 VALLEY BL	ESCONDIDO	33.12429	-117.0766129
T0607300397	BOB PIVA ROOFING	COMPLETED - CASE CLOSED	1192 INDUSTRIAL AV	ESCONDIDO	33.11944	-117.105025
T0607300400	ESCONDIDO UNION SCHOOL DIST	COMPLETED - CASE CLOSED	150 W LINCOLN AV	ESCONDIDO	33.13345	-117.0879536
T0607300405	UNOCAL SERV STN #6993-31262	OPEN - REMEDIATION	711 W MISSION AV	ESCONDIDO	33.12703	-117.0954025
T0607300417	CITY OF ESCONDIDO	OPEN - REMEDIATION	470 N ESCONDIDO BL	ESCONDIDO	33.12445	-117.0869263
T0607300432	CITY OF ESCONDIDO	COMPLETED - CASE CLOSED	101 N MAPLE ST	ESCONDIDO	33.121	-117.0828913
T0607300446	ESCONDIDO VETERINARY HOSPITAL	COMPLETED - CASE CLOSED	630 ENTERPRISE ST	ESCONDIDO	33.12464	-117.113138
T0607300490	PENSKE AUTO CENTER #4252	COMPLETED - CASE CLOSED	620 W MISSION AV	ESCONDIDO	33.1284	-117.09499
T0607300504	FREEWAY EQUIPMENT RENTAL INC	COMPLETED - CASE CLOSED	240 N ENGEL ST	ESCONDIDO	33.11902	-117.1077879
T0607300519	ARCO FACILITY #9579	COMPLETED - CASE CLOSED	434 W 05TH AV	ESCONDIDO	33.11594	-117.0833553
T0607300571	PHIL HOADLEY	COMPLETED - CASE CLOSED	540 W GRAND AV	ESCONDIDO	33.11879	-117.087986
T0607300628	SDG&E	COMPLETED - CASE CLOSED	700 W 03RD AV	ESCONDIDO	33.11554	-117.0892757
T0607300635	KIMBERLY-CLARK PRINTING TECHNO	COMPLETED - CASE CLOSED	529 W 04TH AV	ESCONDIDO	33.11597	-117.0852884
T0607300716	EXPRESS GASOLINE #28	OPEN - VERIFICATION MONITORING	1266 E VALLEY PY	ESCONDIDO	33.13088	-117.0662778
T0607300759	COPELAND TRANSMISSION	COMPLETED - CASE CLOSED	944 W MISSION AV	ESCONDIDO	33.12635	-117.0984246

## Appendix D: Hazardous Materials Database Search Results

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607300761	D J PLASTERING INC	COMPLETED - CASE CLOSED	130 S HALE AV	ESCONDIDO	33.11557	-117.103226
T0607300771	HOLLANDIA DAIRY STORE	COMPLETED - CASE CLOSED	540 W FELICITA RD	ESCONDIDO	33.10284	-117.0767793
T0607300777	CITY OF ESCONDIDO	COMPLETED - CASE CLOSED	208 N BROADWAY	ESCONDIDO	33.12319	-117.081609
T0607300779	ABLE AUTO SERVICE	COMPLETED - CASE CLOSED	854 METCALF ST	ESCONDIDO	33.12714	-117.1021717
T0607300799	PACIFIC TRADITION HOMES	COMPLETED - CASE CLOSED	1832 BOUGHER RD	ESCONDIDO	33.11112	-117.0711151
T0607300830	PALOMAR PLATING CO INC	COMPLETED - CASE CLOSED	722 W 04TH AV	ESCONDIDO	33.11503	-117.0880258
T0607300858	PRESTIGE/ARCO #1754/PSI 5485	OPEN - REMEDIATION	300 W WASHINGTON AV	ESCONDIDO	33.12574	-117.0879904
T0607300860	VITAGOLD BRANDS CO/OP	OPEN - SITE ASSESSMENT	135 S QUINCE ST	ESCONDIDO	33.11757	-117.0879722
T0607300862	TEXACO	OPEN - REMEDIATION	209 S ESCONDIDO BL	ESCONDIDO	33.11897	-117.0837021
T0607300879	S D COUNTY WATER AUTHORITY	COMPLETED - CASE CLOSED	610 W 05TH AV	ESCONDIDO	33.11471	-117.0858604
T0607300910	MISSION ROOFING COMPANY	COMPLETED - CASE CLOSED	649 ROCK SPRINGS RD	ESCONDIDO	33.1246	-117.097026
T0607301003	SUPERIOR READY MIX CONCRETE LP	COMPLETED - CASE CLOSED	1508 W MISSION RD	ESCONDIDO	33.12645	-117.112805
T0607301008	KSQUARE FINANCIAL INC	COMPLETED - CASE CLOSED	1602 E VALLEY PY	ESCONDIDO	33.13399	-117.0594516
T0607301015	PACIFIC PETROLEUM	COMPLETED - CASE CLOSED	750 N ESCONDIDO BL	ESCONDIDO	33.12823	-117.0888394
T0607301016	HILL VALLEY ELECTRIC INC	COMPLETED - CASE CLOSED	852 METCALF ST	ESCONDIDO	33.12661	-117.101399
T0607301026	POWELL HELLER PTNRSHIP AT0165	COMPLETED - CASE CLOSED	265 W MISSION AV	ESCONDIDO	33.12927	-117.0886022
T0607301068	JOOR MANUFACTURING INC	COMPLETED - CASE CLOSED	1189 INDUSTRIAL AV	ESCONDIDO	33.11767	-117.106331
T0607301114	HANSON AGGREGATES	COMPLETED - CASE CLOSED	550 N TULIP ST	ESCONDIDO	33.12002	-117.098238
T0607301123	HESTONS GROCERIES & DELI	COMPLETED - CASE CLOSED	908 DEL DIOS HY	ESCONDIDO	33.10906	-117.0996347
T0607301172	ESCONDIDO DISPOSAL INC	COMPLETED - CASE CLOSED	775 NORLAK AV	ESCONDIDO	33.12015	-117.092213
T0607301173	PACIFIC BELL/DB-631	COMPLETED - CASE CLOSED	950 W WASHINGTON AV	ESCONDIDO	33.12371	-117.097727
T0607301177	CLASSIC BUICK-OLDSMOBILE-VW	COMPLETED - CASE CLOSED	1600 S AUTO PARK WY	ESCONDIDO	33.11759	-117.108485
T0607301183	CIRCLE K STORE #8545	COMPLETED - CASE CLOSED	1161 E VALLEY PY	ESCONDIDO	33.13008	-117.0674408

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607301196	USPS ESCONDIDO STATION	COMPLETED - CASE CLOSED	203 S ORANGE ST	ESCONDIDO	33.11869	-117.0848768
T0607301215	CITY OF ESCONDIDO	OPEN - SITE ASSESSMENT	101 N MAPLE ST	ESCONDIDO	33.121	-117.0828913
T0607301321	PACIFIC BELL ESCNC01/DB108	COMPLETED - CASE CLOSED	146 S BROADWAY	ESCONDIDO	33.12124	-117.0810718
T0607301338	JOHN HERROD CHEVRON #2	OPEN - REMEDIATION	550 N ESCONDIDO BL	ESCONDIDO	33.12524	-117.0874924
T0607301390	7-ELEVEN FOOD STORE #22894	OPEN - REMEDIATION	1030 N BROADWAY	ESCONDIDO	33.13424	-117.0868743
T0607301402	ACTION CAR WASH	COMPLETED - CASE CLOSED	410 E VALLEY PY	ESCONDIDO	33.12483	-117.0778651
T0607301409	BUDGET TRADE AND GAS *	COMPLETED - CASE CLOSED	510 5TH AVE W	ESCONDIDO	33.11541	-117.0850083
T0607301479	CENTER CITY MOTORS	COMPLETED - CASE CLOSED	445 W 09TH AV	ESCONDIDO	33.11214	-117.0808193
T0607301484	MOBIL 18-E6R	OPEN - VERIFICATION MONITORING	102 W MISSION AV	ESCONDIDO	33.13056	-117.0857969
T0607301485	SOUTH COAST ASPHALT PRODUCTS	COMPLETED - CASE CLOSED	500 N TULIP ST	ESCONDIDO	33.1208	-117.1010545
T0607301586	GOLDEN STATE GASOLINE	COMPLETED - CASE CLOSED	102 E MISSION AV	ESCONDIDO	33.13071	-117.085091
T0607301629	MISSION SHELL	COMPLETED - CASE CLOSED	340 W MISSION AV	ESCONDIDO	33.12893	-117.091128
T0607301630	ESCONDIDO MOBIL (08-231)	COMPLETED - CASE CLOSED	450 W 09TH AV	ESCONDIDO	33.11229	-117.0810253
T0607301631	FORMULABS INC	COMPLETED - CASE CLOSED	460 S QUINCE ST	ESCONDIDO	33.11507	-117.0859042
T0607301632	ESCONDIDO DISPOSAL INC	COMPLETED - CASE CLOSED	775 NORLAK AV	ESCONDIDO	33.12015	-117.092213
T0607301684	HOME FEDERAL BANK	OPEN - REMEDIATION	1202 E VALLEY PY	ESCONDIDO	33.13059	-117.0669208
T0607301703	RAPID TRANSMISSIONS	COMPLETED - CASE CLOSED	260 N JUNIPER ST	ESCONDIDO	33.12462	-117.0795722
T0607301716	H.E. BARNHOUSE	COMPLETED - CASE CLOSED	300 W GRAND AV	ESCONDIDO	33.12041	-117.084729
T0607301775	FELICITA SERVICE CENTER	COMPLETED - CASE CLOSED	501 W FELICITA AV	ESCONDIDO	33.10321	-117.0755532
T0607301867	HAWTHORNE RENT-IT SERVICE	COMPLETED - CASE CLOSED	530 ANDREASEN DR	ESCONDIDO	33.1158	-117.1134178
T0607301889	JIM L DANIELS	COMPLETED - CASE CLOSED	520 W GRAND AV	ESCONDIDO	33.119	-117.08756
T0607301946	SANDEFER RESIDENTIAL PROPERTY	COMPLETED - CASE CLOSED	353 W 05TH AV	ESCONDIDO	33.11625	-117.0821753
T0607301956	APRO 18	COMPLETED - CASE CLOSED	303 S ESCONDIDO BL	ESCONDIDO	33.11809	-117.0829725

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607301957	S D COUNTY WATER AUTHORITY	COMPLETED - CASE CLOSED	610 W 05TH AV	ESCONDIDO	33.11471	-117.0858604
T0607301961	CHEVRON #9-1454	OPEN - SITE ASSESSMENT	761 N BROADWAY	ESCONDIDO	33.12965	-117.0851303
T0607301966	CAMPBELL ESCONDIDO REFRIG INC	COMPLETED - CASE CLOSED	427 VENTURE ST	ESCONDIDO	33.12277	-117.113556
T0607301985	GOAL LINE LIMITED PARTERNERSHI	COMPLETED - CASE CLOSED	555 N TULIP ST	ESCONDIDO	33.11875	-117.0985
T0607301999	PARKHOUSE TIRE	COMPLETED - CASE CLOSED	841 ROCK SPRINGS RD	ESCONDIDO	33.12842	-117.0982266
T0607302163	KWIK STOP GAS FOOD	COMPLETED - CASE CLOSED	1140 E MISSION AV	ESCONDIDO	33.13555	-117.0717579
T0607302179	PARKWAY EXPRESS	OPEN - VERIFICATION MONITORING	1296 W VALLEY PY	ESCONDIDO	33.11384	-117.1014558
T0607302217	BATTERY SPECIALIST	COMPLETED - CASE CLOSED	551 N BROADWAY	ESCONDIDO	33.12633	-117.0836823
T0607302218	CULLIGAN WATER CONDITIONING	COMPLETED - CASE CLOSED	507 GANNON PL	ESCONDIDO	33.12218	-117.0888784
T0607302274	APRO 18	OPEN - VERIFICATION MONITORING	303 S ESCONDIDO BL	ESCONDIDO	33.1182	-117.0830423
T0607302292	PALOMAR TRANSIT MIX	COMPLETED - CASE CLOSED	849 W WASHINGTON AV	ESCONDIDO	33.12347	-117.0947205
T0607302298	WITT LINCOLN MERCURY	OPEN - VERIFICATION MONITORING	728 ESCONDIDO BL	ESCONDIDO	33.12814	-117.0881009
T0607302361	USA GASOLINE CORP #245	OPEN - REMEDIATION	411 S ESCONDIDO BL	ESCONDIDO	33.11725	-117.0824146
T0607302368	G & S GASOLINE & MINI MART	OPEN - REMEDIATION	501 W 09TH AV	ESCONDIDO	33.11167	-117.0818593
T0607302369	TIM TERRYS CHEVRON	OPEN - SITE ASSESSMENT	1575 E VALLEY PY	ESCONDIDO	33.13365	-117.0596536
T0607302378	REGAL AUTO SALES	COMPLETED - CASE CLOSED	851 W MISSION AV	ESCONDIDO	33.12641	-117.096459
T0607302394	PLAVAN PETROLEUM	COMPLETED - CASE CLOSED	321 S. QUINCE STREET	ESCONDIDO	33.11607	-117.087146
T0607302462	MOBIL 18-100	COMPLETED - CASE CLOSED	502 W MISSION AV	ESCONDIDO	33.12863	-117.0921886
T0607302515	ACURA OF ESCONDIDO	COMPLETED - CASE CLOSED	1502 N AUTO PARK WY	ESCONDIDO	33.11485	-117.105039
T0607302535	7-ELEVEN STORE #13597	OPEN - REMEDIATION	522 W 09TH AV	ESCONDIDO	33.11171	-117.0822563
T0607302566	SHUSTER OIL & CHEMICAL CO INC	OPEN - SITE ASSESSMENT	635 W 03RD AV	ESCONDIDO	33.11585	-117.087763
T0607302567	ESCONDIDO DISPOSAL INC	COMPLETED - CASE CLOSED	1044 W WASHINGTON AV	ESCONDIDO	33.12332	-117.09891

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607302577	REBEL RENTS	OPEN - SITE ASSESSMENT	142 W MISSION AV	ESCONDIDO	33.13019	-117.0860493
T0607302579	ALL MAKES SMOG & TUNE	OPEN - SITE ASSESSMENT	555 S ESCONDIDO BL	ESCONDIDO	33.1159	-117.0814008
T0607302591	SHELL GAS STATION	COMPLETED - CASE CLOSED	1574 E VALLEY PY	ESCONDIDO	33.13413	-117.06003
T0607302595	NORTH COUNTY TRANSIT DISTRICT	COMPLETED - CASE CLOSED	755 NORLAK AV	ESCONDIDO	33.12055	-117.0921038
T0607302600	APRO 19	OPEN - VERIFICATION MONITORING	555 W GRAND AV	ESCONDIDO	33.11823	-117.0877576
T0607302617	GOLDEN STATE GASOLINE	OPEN - SITE ASSESSMENT	225 W WASHINGTON AV	ESCONDIDO	33.126	-117.0864113
T0607302620	E Z GAS	OPEN - SITE ASSESSMENT	1158 E WASHINGTON AV	ESCONDIDO	33.13291	-117.0687319
T0607302623	HANSON AGGREGATES	COMPLETED - CASE CLOSED	550 N TULIP ST	ESCONDIDO	33.12002	-117.098238
T0607302632	KWIK STOP GAS FOOD	OPEN - SITE ASSESSMENT	1140 E MISSION AV	ESCONDIDO	33.13555	-117.0717579
T0607302647	FORMER UNOCAL STATION #0099	OPEN - SITE ASSESSMENT	128 N BROADWAY	ESCONDIDO	33.12263	-117.081573
T0607302680	ESCONDIDO CAR WASH	COMPLETED - CASE CLOSED	1300 E VALLEY PY	ESCONDIDO	33.1315	-117.065462
T0607302714	G & S GASOLINE & MINI MART	COMPLETED - CASE CLOSED	501 W 09TH AV	ESCONDIDO	33.11167	-117.0818593
T0607302734	COLLISIONS PLUS	COMPLETED - CASE CLOSED	240 N ANDREASEN DR	ESCONDIDO	33.11925	-117.108704
T0607302754	SAN DIEGO GLASS & PAINT COMPAN	COMPLETED - CASE CLOSED	404 E GRAND AV	ESCONDIDO	33.12408	-117.077421
T0607302764	APRO 18	COMPLETED - CASE CLOSED	303 S ESCONDIDO BL	ESCONDIDO	33.11813	-117.082994
T0607302783	GOLDEN STATE GASOLINE	COMPLETED - CASE CLOSED	102 E MISSION AV	ESCONDIDO	33.13043	-117.0852543
T0607302788	MISSION SHELL	COMPLETED - CASE CLOSED	340 W MISSION AV	ESCONDIDO	33.12893	-117.091128
T0607302794	NORTH COUNTY PACKING	OPEN - VERIFICATION MONITORING	559 N HALE AV	ESCONDIDO	33.12167	-117.1015763
T0607302796	MISSION FUEL CENTER-SKS INC	COMPLETED - CASE CLOSED	526 VENTURE ST	ESCONDIDO	33.12383	-117.1124258
T0607302828	HAN'S US PETROLEUM & SERVICE	OPEN - SITE ASSESSMENT	445 W 05TH AV	ESCONDIDO	33.11541	-117.0836806
T0607302837	ASH TEXACO	COMPLETED - CASE CLOSED	425 N ASH ST	ESCONDIDO	33.13075	-117.0672238
T0607302839	KSQUARE FINANCIAL INC	COMPLETED - CASE CLOSED	1602 E VALLEY PY	ESCONDIDO	33.13437	-117.059375
T0607302885	ESCONDIDO LINCOLN MERCURY	COMPLETED - CASE CLOSED	328 S ESCONDIDO BL	ESCONDIDO	33.11832	-117.082479

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607302951	CITY OF ESCONDIDO	COMPLETED - CASE CLOSED	208 N BROADWAY	ESCONDIDO	33.12319	-117.081609
T0607302999	CIRCLE K STORE #8545	COMPLETED - CASE CLOSED	1161 E VALLEY PY	ESCONDIDO	33.13008	-117.0674408
T0607303007	INVESTMENT MOTORCARS	COMPLETED - CASE CLOSED	230 E VALLEY PY	ESCONDIDO	33.12366	-117.0803042
T0607303048	SOUTH COAST ASPHALT PRODUCTS	COMPLETED - CASE CLOSED	500 N TULIP ST	ESCONDIDO	33.1208	-117.1010545
T0607303073	THRIFTY OIL CO. #123	OPEN - REMEDIATION	434 W 05TH AV	ESCONDIDO	33.11588	-117.0839542
T0607303109	BUDGET CAR SALES	COMPLETED - CASE CLOSED	855 N BROADWAY	ESCONDIDO	33.13117	-117.086501
T0607303123	PARAMOUNT CITRUS ASS	COMPLETED - CASE CLOSED	1155 W MISSION AV	ESCONDIDO	33.12377	-117.102179
T0607303140	MADISON SQUARE PART	COMPLETED - CASE CLOSED	488 E VALLEY PY	ESCONDIDO	33.12531	-117.0767681
T0607303147	CITY OF ESCONDIDO	COMPLETED - CASE CLOSED	137 W VALLEY PY	ESCONDIDO	33.12197	-117.082646
T0607303159	DEAN FOODS COMPANY OF CA	COMPLETED - CASE CLOSED	480 N SPRUCE ST	ESCONDIDO	33.12159	-117.092839
T0607303199	MADISON SQUARE PART	COMPLETED - CASE CLOSED	488 E VALLEY PY	ESCONDIDO	33.12558	-117.077397
T0607308614	JOOR MANUFACTURING INC	COMPLETED - CASE CLOSED	1189 INDUSTRIAL AV	ESCONDIDO	33.11772	-117.105831
T0607310761	CIVIC CENTER PLAZA, MR. TERRY 1-HR. MART	COMPLETED - CASE CLOSED	431 N ESCONDIDO BL	ESCONDIDO	33.12401	-117.086818
T0607345657	RCP BLOCK & BRICK, INC.	OPEN - SITE ASSESSMENT	1070 W MISSION AV	ESCONDIDO	33.12636	-117.101066
T0607364492	KSQUARE FINANCIAL INC	OPEN - SITE ASSESSMENT	1602 EAST VALLEY PARKWAY	ESCONDIDO	33.13427	-117.0594898
T0607366743	ESCONDIDO AUTO ELECTRIC	COMPLETED - CASE CLOSED	1450 S ESCONDIDO BL	ESCONDIDO	33.10814	-117.075255
T0607369044	AMS WAREHOUSE	COMPLETED - CASE CLOSED	1120 W MISSION AV	ESCONDIDO	33.12546	-117.1017694
T0607389047	PHIL HOADLEY	COMPLETED - CASE CLOSED	540 W GRAND AV	ESCONDIDO	33.11882	-117.088007
T0607391315	NORTH COUNTY TRANSIT DISTRICT	COMPLETED - CASE CLOSED	755 NORLAK AV	ESCONDIDO	33.12055	-117.0921038
T0607391333	7-ELEVEN FOOD STORE #21785	OPEN - REMEDIATION	260 E MISSION AV	ESCONDIDO	33.1313	-117.082846
T0607391917	RYDER TRUCK RENTAL LC-1093	COMPLETED - CASE CLOSED	520 GANNON PL	ESCONDIDO	33.12203	-117.0897102
T0607399080	SHELL GAS STATION	COMPLETED - CASE CLOSED	1574 E VALLEY PY	ESCONDIDO	33.13383	-117.0602
T0607399188	7 DAY MARKET	OPEN - SITE ASSESSMENT	503 W WASHINGTON AV	ESCONDIDO	33.12491	-117.090054

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0607399194	MISSION SHELL	COMPLETED - CASE CLOSED	340 W MISSION AV	ESCONDIDO	33.12893	-117.091128
T0607399221	ESC. CITY MAINTENANCE YARD	OPEN - SITE ASSESSMENT	475 N SPRUCE ST	ESCONDIDO	33.12153	-117.093793
T0607399251	TRUCPARCO	COMPLETED - CASE CLOSED	655 ENTERPRISE ST	ESCONDIDO	33.12514	-117.113601
T0607399279	SHUSTER OIL & CHEMICAL CO INC	COMPLETED - CASE CLOSED	635 W 03RD AV	ESCONDIDO	33.11573	-117.087661
T0608101408	LOVETTS ONE HOUR DRY CLEANER	OPEN - REMEDIATION	1378 EAST GRAND AVENUE	ESCONDIDO	33.13011	-117.0627165
T0608105447	7 DAY MARKET	COMPLETED - CASE CLOSED	503 W WASHINGTON AV	ESCONDIDO	33.12085	-117.1011081
T0608106147	FEDCO-AUTO SERVICE	COMPLETED - CASE CLOSED	1475 E VALLEY PY	ESCONDIDO	33.13275	-117.061717
T0608109080	SDG&E	COMPLETED - CASE CLOSED	700 W 03RD AV	ESCONDIDO	33.11558	-117.0891631
T0608109616	ARCO FACILITY #9579	COMPLETED - CASE CLOSED	434 W 5TH AV	ESCONDIDO	33.11584	-117.0839167
T0608110809	HAWTHORNE RENT-IT SERVICE	COMPLETED - CASE CLOSED	530 ANDREASEN DR	ESCONDIDO	33.11643	-117.112265
T0608111510	EXPRESS GASOLINE #28	COMPLETED - CASE CLOSED	1266 E VALLEY PY	ESCONDIDO	33.13122	-117.065432
T0608113677	MISSION MOBIL	COMPLETED - CASE CLOSED	502 W MISSION AV	ESCONDIDO	33.12869	-117.09222
T0608114754	SANDPIPER CLEANERS	COMPLETED - CASE CLOSED	695 E LINCOLN AV	ESCONDIDO	33.1355	-117.078703
T0608116835	G & S GASOLINE & MINI MART	COMPLETED - CASE CLOSED	501 W 09TH AV	ESCONDIDO	33.11165	-117.0818567
T0608118779	ED LYON PROPERTY	COMPLETED - CASE CLOSED	222 W MISSION AV	ESCONDIDO	33.12946	-117.088235
T0608118994	ESC. CITY MAINTENANCE YARD	COMPLETED - CASE CLOSED	475 N SPRUCE ST	ESCONDIDO	33.12212	-117.093876
T0608120017	PRESTIGE/ARCO #1754/PSI 5485	COMPLETED - CASE CLOSED	300 W WASHINGTON AV	ESCONDIDO	33.1259	-117.088423
T0608126924	SUPERIOR READY MIX CONCRETE LP	COMPLETED - CASE CLOSED	1508 W MISSION RD	ESCONDIDO	33.12633	-117.112687
T0608127924	COLLISIONS PLUS	COMPLETED - CASE CLOSED	240 N ANDREASEN DR	ESCONDIDO	33.11927	-117.10875
T0608127956	HANSON AGGREGATES	COMPLETED - CASE CLOSED	550 N TULIP ST	ESCONDIDO	33.12004	-117.098234
T0608130391	GOLDEN STATE GASOLINE	COMPLETED - CASE CLOSED	102 E MISSION AV	ESCONDIDO	33.13074	-117.085106
T0608134566	ESCONDIDO SAND & GRAVEL	COMPLETED - CASE CLOSED	440 TULIP ST	ESCONDIDO	33.11326	-117.0900705
T0608138784	SCHNIEPP PROPERTY	OPEN - REMEDIATION	1417 S ESCONDIDO BL	ESCONDIDO	33.108	-117.075918

## Appendix D: Hazardous Materials Database Search Results

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0608140408	PALOMAR PLATING CO INC	COMPLETED - CASE CLOSED	722 W 04TH AV	ESCONDIDO	33.11498	-117.08794
T0608142263	ESCONDIDO SAND & GRAVEL	COMPLETED - CASE CLOSED	440 N TULIP ST	ESCONDIDO	33.11863	-117.096726
T0608143796	MISSION MOBIL	COMPLETED - CASE CLOSED	502 W MISSION AV	ESCONDIDO	33.12869	-117.09222
T0608146045	DRY CLEANING EMPIRE OF AMERICA	COMPLETED - CASE CLOSED	649 W MISSION AV	ESCONDIDO	33.12668	-117.095053
T0608146854	PRESTIGE CLEANERS	COMPLETED - CASE CLOSED	655 N BROADWAY	ESCONDIDO	33.12852	-117.084534
T0608147832	VACANT LOT/FORMER ARCO	OPEN - REMEDIATION	304 E GRAND AV	ESCONDIDO	33.12343	-117.078789
T0608148333	JOHN HERROD CHEVRON #2	COMPLETED - CASE CLOSED	550 N ESCONDIDO BL	ESCONDIDO	33.12556	-117.087655
T0608148426	ESC. CITY MAINTENANCE YARD	COMPLETED - CASE CLOSED	475 N SPRUCE ST	ESCONDIDO	33.12212	-117.093876
T0608150966	PARKWAY EXPRESS	COMPLETED - CASE CLOSED	1296 W VALLEY PY	ESCONDIDO	33.11441	-117.101424
T0608154219	PARKHOUSE TIRE	COMPLETED - CASE CLOSED	841 ROCK SPRINGS RD	ESCONDIDO	33.12757	-117.097902
T0608160064	H.E. BARNHOUSE	COMPLETED - CASE CLOSED	300 GRAND AV	ESCONDIDO	33.1231	-117.07878
T0608161303	ROADWAY EXPRESS INC	COMPLETED - CASE CLOSED	730 N ANDREASEN DR	ESCONDIDO	33.12319	-117.106878
T0608162688	7-ELEVEN FOOD STORE #13619	COMPLETED - CASE CLOSED	1702 S ESCONDIDO BL	ESCONDIDO	33.10462	-117.072641
T0608162741	KENNETH AND FRANCES GOLDEN	COMPLETED - CASE CLOSED	1530 INDUSTRIAL AV	ESCONDIDO	33.12167	-117.110358
T0608166875	DUNN-EDWARDS CORP.	OPEN - SITE ASSESSMENT	506 W WASHINGTON AV	ESCONDIDO	33.12542	-117.090567
T0608168949	J&W REDWOOD	COMPLETED - CASE CLOSED	1179 W WASHINGTON AV	ESCONDIDO	33.12305	-117.103875
T0608169165	MISSION MOBIL	COMPLETED - CASE CLOSED	502 W MISSION AV	ESCONDIDO	33.12869	-117.09222
T0608170991	CHEVRON #9-1454	COMPLETED - CASE CLOSED	761 N BROADWAY	ESCONDIDO	33.12998	-117.085604
T0608171691	ESCONDIDO MOBIL (08-231)	COMPLETED - CASE CLOSED	450 W 09TH AV	ESCONDIDO	33.11241	-117.0813632
T0608172969	ESC. CITY MAINTENANCE YARD	COMPLETED - CASE CLOSED	475 N SPRUCE ST	ESCONDIDO	33.12212	-117.093876
T0608174591	7-ELEVEN STORE #13597	COMPLETED - CASE CLOSED	522 W 09TH AV	ESCONDIDO	33.11167	-117.0825434

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GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
T0608177161	ANODIZING SPECIALIST INC	COMPLETED - CASE CLOSED	270 PAUMA PL	ESCONDIDO	33.11822	-117.106292
T0608184149	B J'S TRANSMISSIONS	COMPLETED - CASE CLOSED	900 W MISSION AV	ESCONDIDO	33.12676	-117.097956
T0608187179	GOAL LINE LIMITED PARTNERSHI	COMPLETED - CASE CLOSED	555 N TULIP ST	ESCONDIDO	33.11864	-117.098503
T0608187441	CARPENTER PLUMBING	COMPLETED - CASE CLOSED	205 W MISSION AV	ESCONDIDO	33.12924	-117.087488
T0608189075	SHELL GAS STATION	COMPLETED - CASE CLOSED	1574 E VALLEY PY	ESCONDIDO	33.13417	-117.060011
T0608189126	G & S GASOLINE & MINI MART	COMPLETED - CASE CLOSED	501 W 09TH AV	ESCONDIDO	33.11165	-117.0818567
T0608189905	SUPERIOR READY MIX CONCRETE LP	COMPLETED - CASE CLOSED	1508 W MISSION RD	ESCONDIDO	33.12668	-117.1134453
T0608191910	KSQUARE FINANCIAL INC	COMPLETED - CASE CLOSED	1602 E VALLEY PY	ESCONDIDO	33.1344	-117.059394
T0608192883	MOSSY NISSAN ESCONDIDO	COMPLETED - CASE CLOSED	1551 N AUTO PARK WY	ESCONDIDO	33.11579	-117.106575
T0608193183	ESCONDIDO PLATING	OPEN - INACTIVE	860 METCALF ST	ESCONDIDO	33.12733	-117.101309
T0608193715	GRAYBILL MEDICAL GROUP INC	COMPLETED - CASE CLOSED	250 S KALMIA ST	ESCONDIDO	33.12099	-117.078696
T0608194256	ESC. CITY MAINTENANCE YARD	COMPLETED - CASE CLOSED	475 N SPRUCE ST	ESCONDIDO	33.12212	-117.093876
T0608194453	ESCONDIDO DISPOSAL INC	COMPLETED - CASE CLOSED	775 NORLAK AV	ESCONDIDO	33.12008	-117.092221
T0608197870	JOOR MANUFACTURING INC	COMPLETED - CASE CLOSED	1189 INDUSTRIAL AV	ESCONDIDO	33.11772	-117.105831
T0608199114	ESCONDIDO AUTO MART	COMPLETED - CASE CLOSED	332 S ESCONDIDO BL	ESCONDIDO	33.11791	-117.0822269
T0619774166	VONS	COMPLETED - CASE CLOSED	469 W FELICITA AV	ESCONDIDO	33.1032	-117.074881
T10000001221	ECONO LUBE-N-TUNE	COMPLETED - CASE CLOSED	1122 W VALLEY PY	ESCONDIDO	33.11677	-117.0976388
T10000002625	ESC. CITY MAINTENANCE YARD	OPEN - SITE ASSESSMENT	475 N. SPRUCE ST	ESCONDIDO	33.12132	-117.0941091
T10000002784	FORMER ESCONDIDO POLICE ADMIN BLDG	OPEN - SITE ASSESSMENT	700 WEST GRAND AVENUE	ESCONDIDO	33.11796	-117.0903003

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<b>GEOTRACKER ID</b>	<b>SITE NAME</b>	<b>CLEANUP STATUS</b>	<b>ADDRESS</b>	<b>CITY</b>	<b>LATITUDE</b>	<b>LONGITUDE</b>
T10000003383	FORMER CONTINENTAL CLEANERS FACILITY - MAR AND ASSOCIATES/RADER ESCONDIDO LLC	OPEN - SITE ASSESSMENT	644 WEST MISSION AVENUE	ESCONDIDO	33.12755	-117.0955789

## Appendix D: Hazardous Materials Database Search Results

ENVIROSTOR ID	PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
71002818	A & D Plating, Inc.	Inactive - Needs Evaluation	Tiered Permit	2265-A Micro Place	Escondido
37990004	BENTON BURN DUMP	Refer: Other Agency	Evaluation	END OF STILL WATER GLEN	ESCONDIDO
37010001	BERNARDO ELEMENTARY SCHOOL	No Further Action	School Investigation	Bernardo Avenue/Mountain Heights Road	Escondido
37000025	BROTHERTON PLAZA	Refer: 1248 Local Agency	Evaluation	2250 S. ESCONDIDO BLVD.	ESCONDIDO
80000213	CAMP ESCONDIDO	Inactive - Needs Evaluation	Military Evaluation		Escondido
37590002	CARSON CLEANERS	Refer: RWQCB	Evaluation	224 WEST 13TH AVENUE	ESCONDIDO
37490029	CHATHAM BROTHERS BARREL YARD	Active	State Response	2257 BERNARDO AVE	ESCONDIDO
60001151	Citracado High School	No Further Action	School Investigation	West Valley Parkway/Citracado Parkway	Escondido
60000750	Eddie's Smog Service	Refer: 1248 Local Agency	Evaluation	944 West Mission Ave	Escondido
71003443	Escondido Plating	Inactive - Needs Evaluation	Tiered Permit	860 Metcalf	Escondido
37750010	FEDCO, INC. PROPERTY (FORMER)	Refer: 1248 Local Agency	Evaluation	1475 EAST VALLEY PARKWAY	ESCONDIDO
37010019	FIG/FARR ELEMENTARY	No Further Action	School Investigation	Lincoln Avenue/Fig Street	Escondido
CAT080012651	GALLADE CHEMICAL INC	State Only	Non-Operating	1510 INDUSTRIAL AVE	ESCONDIDO
80001842	GALLADE CHEMICAL, INC	* Inactive	Corrective Action	1510 INDUSTRIAL AVE	ESCONDIDO
37150011	MISSION ESCONDIDO MALL	Refer: 1248 Local Agency	Evaluation	205 W. MISSION AVENUE	ESCONDIDO
37010009	MISSION HILLS HS AKA HOLLANDIA DAIRY	No Further Action	School Investigation	800/900 East Mission Road	San Marcos

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ENVIROSTOR ID	PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
71003809	North County Plating Metal Polishing	Inactive - Needs Evaluation	Tiered Permit	1188 Industrial Ave.	Escondido
71002785	Palomar Plating Co., Inc.	Refer: Other Agency	Tiered Permit	722 W. Fourth Avenue	Escondido
37150008	PARKWAY PLACE	Refer: 1248 Local Agency	Evaluation	649 WEST MISSION	ESCONDIDO
37010004	ROCKWOOD ROAD SCHOOL	No Action Required	School Investigation	Rockwood Road/Cloverdale Road	San Diego
37840001	SAN DIEGO WILD ANIMAL PARK	Refer: 1248 Local Agency	Evaluation	15500 SAN PASQUAL VALLEY ROAD	ESCONDIDO
37010002	SPRINGTIME/REIDY CREEK ELEMENTARY	No Further Action	School Investigation	2747 North Broadway	Escondido
37000060	TULIP STREET	Refer: 1248 Local Agency	Evaluation	440 N. TULIP ST.	ESCONDIDO
71002680	U S Circuit, Inc.	Inactive - Action Required	Tiered Permit	1526 Sterling Ct	Escondido
37000038	VACANT LOT	Refer: 1248 Local Agency	Evaluation	1401 SOUTH ESCONDIDO BLVD.	ESCONDIDO
37000026	VACANT LOT	Refer: 1248 Local Agency	Evaluation	304 EAST GRAND AVE.	ESCONDIDO
37010024	VALLEY HIGH SCHOOL	No Further Action	School Investigation	Washington Avenue/East Valley Parkway	Escondido