Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

6075 Kimball Avenue • Chino, CA 91708
P.O. Box 9020 • Chino Hills, CA 91709
TEL (909) 993-1600 • FAX (909) 993-1985
www.ieua.org

January 5, 2021

Matthew Hacker, P.G.
Stormwater Pilot Program Manager
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012-2944

Subject: Inland Empire Utilities Agency's Documentation on the Compliance with the California Environmental Quality Act for the Montclair Basin Improvement Project – MWD's Stormwater Pilot Program (Recharge)

Dear Mr. Hacker:

This letter serves to address Metropolitan Water District's (MWD's) request to have Inland Empire Utilities Agency (IEUA) complete the checklist showing compliance towards the California Environmental Quality Act (CEQA) and provide the addendum form to add MWD as a "responsible agency" under IEUA's CEQA documents for the purpose of IEUA's request for grant funding from MWD's Stormwater for Recharge Pilot Program for the Montclair Basin Improvement Project (Project).

The method of complying with CEQA for the Improvement Project was under an Environmental Impact Report (EIR). As the Lead Agency pursuant to CEQA, IEUA prepared the *Facilities Master Plans Program Environmental Impact Report* (FMP PEIR). Additional site-specific resource evaluations to confirm issues of air quality, biology, cultural resources and the FEMA FIRM panel were also compiled and completed for the Project as a requirement to meet the CEQA-Plus review conducted by the State Water Resources Control Board.

The following are enclosed documents as required by MWD's CEQA checklist under an EIR:

- Final Environmental Document – IEUA's *Facilities Master Plans Program Environmental Impact Report* (See Attachment A for FMP PEIR without appendices). The Mitigation, Monitoring and Reporting Program, the findings and Statement of Overriding Consideration (Reference IEUA's Resolution No. 2017-3-1) are included in the appendices of the FMP PEIR, which will be sent via an ftp link due to the large file size.

- Copy of the Environmental Filing Fee Cash Receipt, which shows a County Administration Fee of $50 stating the project is exempt from a fee with Department of Fish and Wildlife due to a no effect determination (See Attachment B).

- Copy of the Notice of Determination (See Attachment C). The document's contact information is the following:

  Pietro Cambiaso
  Inland Empire Utilities Agency
  6075 Kimball Avenue
  Chino CA 91708

The following additional site-specific resource evaluations are also enclosed for reference:

- Identification and Evaluation of Historic Properties, prepared by CRM TECH, December 2017 (See Attachment D).
- SIP/NEPA De Minimis Air Quality/Pollution Determination, prepared by Urban Crossroads, December 2017 (See Attachment E).
- Biological Survey for the Montclair Basins, prepared by Tom Dodson and Associates, January 2018 (See Attachment F).
- Flood Insurance Rate Map that displays nearby floodplains as delineated by the Federal Emergency Management Agency, Map No. 06071C8608H, August 2008 (See Attachment G).

Lastly, I do not believe an addendum form to add MWD as a "responsible agency" under IEUA's CEQA document will be necessary because IEUA's CEQA document already lists MWD as a potential "responsible agency." Please refer to page 2-49 (Section 2.7 Potential Responsible Agencies) of the FMP PEIR and verify whether this satisfies the requirement.

Please contact me further if you want to discuss the above responses or if you have any further questions or other concerns. Thank you.

Sincerely,

INLAND EMPIRE UTILITIES AGENCY

Jesse Pompa, P.E, BCEE
Manager of Grants

Enclosures

Attachment A - Final Environmental Document, Volume I
Attachment B - Environmental Filing Fee Cash Receipt
Attachment C - Notice of Determination
Attachment D - Identification and Evaluation of Historic Properties
Attachment E - SIP/NEPA De Minimis Air Quality/Pollution Determination
Attachment F - Biological Survey for the Montclair Basins
Attachment G - Flood Insurance Rate Map

CLERK OF THE
BOARD OF SUPERVISORS
2017 MAR 17 PM 2:39
COUNTY OF SAN BERNARDINO
CALIFORNIA

Notice of Determination

Appendix D

TO:

☒ Office of Planning and Research
For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044
Street Address: 1400 Tenth Street, Sacramento, CA 95814

☒ County Clerk
County of: San Bernardino
Address: 385 N. Arrowhead Avenue - San Bernardino, CA 92415

FROM: Public Agency: Inland Empire Utilities Agency
Address: 6075 Kimball Avenue
Chino, CA 91708
Contact: Pietro Cambiaso
Phone: (909) 993-1639
Lead Agency (if different from above):

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2016061064

Project Title: IEUA Facilities Master Plans

Project Location (include county): Various cities in San Bernardino County

Project Description: The FMP encompasses six of IEUA's master planning efforts including the Asset Management Plan, the Recycled Water Program Strategy, the Amendment to the 2010 Recharge Master Plan Update, the Wastewater Facilities Master Plan Update Report, the Integrated Water Resources Plan, and the Energy Management Plan. The activities that would be implemented within these individual Facilities Master Plans would provide for future wastewater treatment, biosolids handling, and recycled water production for the IEUA service area.

This is to advise that the Inland Empire Utilities Agency (☒ *Lead Agency or* ☐ *Responsible Agency*) has approved the above described project on _____ (*Date*) and has made the following determinations regarding the above described projects.

1. The project [☒ will ☐ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☒ was ☐ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to the General Public at:
IEUA Headquarters, 6075 Kimball Avenue, Building A, Chino, CA 91708

Signature (Public Agency) _____ Title: General Manager

Date: 3/15/17 Date Received for filing at OPR: _____

FILED / POSTED

County of Riverside
Peter Aldana
Assessor-County Clerk-Recorder
E-201700307
03/20/2017 08:19 AM Fee: $ 50.00
Page 1 of 1

Removed: By: Deputy

Governor's Office of Planning & Research
MAR 20 2017
STATE CLEARINGHOUSE

DATE FILED & POSTED
Posted On: 03/17/17
Removed On: 04/29/17
Receipt No: 36-031717-156

State of California - Department of Fish and Wildlife

2017 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/17) Previously DFG 753.5a

Print | StartOver | Finalize&Email

RECEIPT NUMBER: 36 — 031717 — 156

STATE CLEARINGHOUSE NUMBER *(If applicable)*: 2016061064

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
Inland Empire Utilities Agency		031717

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
San Bernardino	

PROJECT TITLE: IEUA Facilities Master Plans

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL	PHONE NUMBER
Inland Empire Utilities Agency		(909) 993-1639

PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE
6075 Kimball Avenue	Chino	CA	91708

PROJECT APPLICANT *(Check appropriate box)*

☑ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☑ Environmental Impact Report (EIR)	$3,078.25	$	3,078.25
☐ Mitigated/Negative Declaration (MND)(ND)	$2,216.25	$	0.00
☐ Certified Regulatory Program document (CRP)	$1,046.50	$	0.00

☐ Exempt from fee

- ☐ Notice of Exemption (attach)
- ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	0.00
☑ County documentary handling fee		$	50.00
☐ Other CHECK # 218223		$	

PAYMENT METHOD:

☐ Cash ☐ Credit ☑ Check ☐ Other **TOTAL RECEIVED** $ 3,128.25

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	Mariela Barrera, Deputy Clerk

Governor's Office of Planning & Research

MAR 20 2017

STATE CLEARINGHOUSE

ORIGINAL - PROJECT APPLICANT | COPY - CDFW/ASB | COPY - LEAD AGENCY | COPY - COUNTY CLERK | DFW 753.5a (Rev. 20151215)

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME

ENVIRONMENTAL FILING FEE CASH RECEIPT

Receipt #: 17-85639

State Clearinghouse # (if applicable): 2016061064

Lead Agency: INLAND EMPIRE UTILITIES AGENCY *Date:* 03/20/2017

County Agency of Filing: RIVERSIDE *Document No:* E-201700307

Project Title: IEUA FACILITIES MASTER PLANS

Project Applicant Name: INLAND EMPIRE UTILIES AGENCY *Phone Number:* (909) 993-1639

Project Applicant Address: 6075 KIMBALL AVENUE, CHINO, CA 91708

Project Applicant: LOCAL PUBLIC AGENCY

CHECK APPLICABLE FEES:

☐ *Environmental Impact Report*	
☐ *Negative Declaration*	
☐ *Application Fee Water Diversion (State Water Resources Control Board Only)*	
☐ *Project Subject to Certified Regulatory Programs*	
☒ *County Administration Fee*	$50.00
☒ *Project that is exempt from fees (DFG No Effect Determination (Form Attached))*	
☐ *Project that is exempt from fees (Notice of Exemption)*	
Total Received	$50.00

Signature and title of person receiving payment: Deputy

Notes:

Governor's Office of Planning & Research

MAR 20 2017

STATE CLEARINGHOUSE

ACR 533 (Est. 12/2013)

ATTACHMENT A

Final Environmental Document, Volume I

IEUA FACILITIES MASTER PLANS

Final Program Environmental Impact Report
State Clearinghouse #2016061064

Prepared for
Inland Empire Utilities Agency

February 2017

ESA



IEUA FACILITIES MASTER PLANS

Final Program Environmental Impact Report
State Clearinghouse #2016061064

Prepared for
Inland Empire Utilities Agency

February 2017

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Los Angeles, CA 90017
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EXECUTIVE SUMMARY

ES.1 Introduction

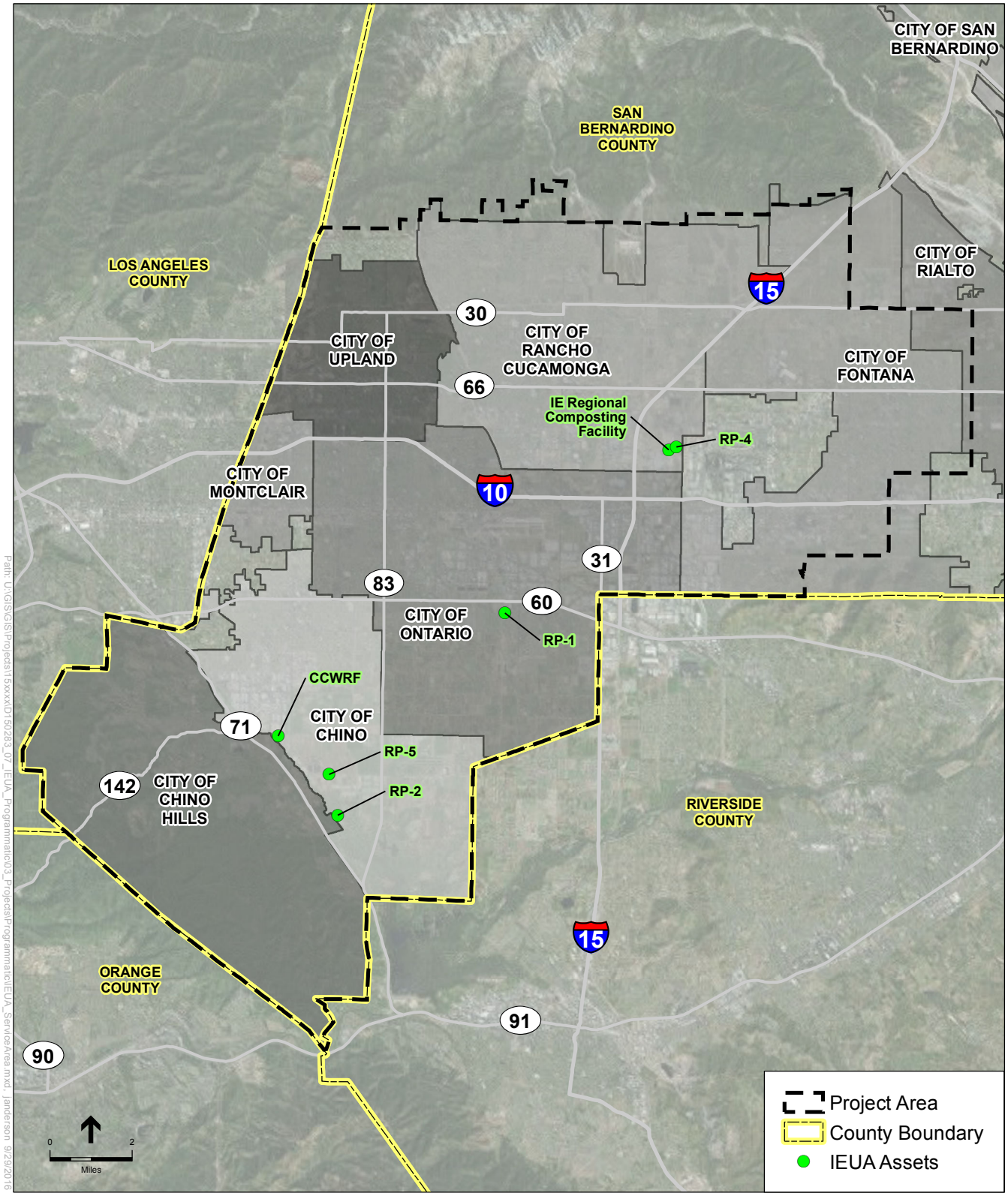
Inland Empire Utilities Agency (IEUA), as the Lead Agency pursuant to CEQA, is proposing to implement a program that includes updates and new Facilities Master Plans which encompass IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan Update Report (2015), Integrated Water Resources Plan (2015) and Energy Management Plan (2015). The activities that would be implemented within these individual Facilities Master Plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area located in the Chino Basin, which is located in the west end of San Bernardino Valley (**Figure ES-1**). This Program Environmental Impact Report (PEIR) serves as a first-tier environmental document that focuses on the overall effects of implementing the activities that make up the Facilities Master Plans (proposed program) with some site specific evaluation. As such, the information provided for each individual action is commensurate with this PEIR approach.

ES.2 Background

IEUA is a regional wastewater treatment agency and wholesale distributor of imported water and recycled water. Today the Agency is responsible for serving approximately 830,000 people in southwestern San Bernardino County. The Agency is focused on providing three key services: (1) treating wastewater and developing programs to reduce the region's dependence on imported water supplies; (2) converting biosolids and waste products into high-quality compost made from recycled materials; and (3) generating electrical energy from renewable sources to offset energy demand by IEUA facilities.

IEUA owns and operates four regional water recycling plants (RWRPs) where industrial and municipal wastewater is treated and recycled water is produced. In addition, the Agency treats biosolids at Regional Plant 1 (RP-1), RP-2 and at the Inland Empire Regional Composting Facility (IERCF).

In addition to recycled water and wastewater services, the Agency operates a network of groundwater recharge facilities in partnership with Chino Basin Watermaster (CBWM), San Bernardino County Flood Control District (SBCFCD), and Chino Basin Water Conservation District (CBWCD). The Agency participates in the operation of the Chino Desalter I facility in coordination with the Chino Basin Desalter Authority and other area agencies. The Agency also manages an extensive regional water use efficiency program.



Path: U:\GIS\GIS\Projects\15xxxx\D150283_07_IEUA_Programmatic003_Projects\Programmatic\IEUA_ServiceArea.mxd, janderson 9/29/2016

SOURCE: ESRI; County of San Bernardino

IEUA Facilities Master Plan PEIR . 150283.07

Figure ES-1

IEUA Service Area

Over the past several years, IEUA, in conjunction with the CBWM, has prepared or participated in the preparation of several master plans to provide the foundation for development and expansion of future wastewater treatment, biosolids handling, stormwater capture, groundwater recharge, and recycled water delivery to the Chino Basin and the Agency's service area. The six IEUA facility plans have now reached the stage where the Agency intends to consider these plans for final approval and implementation.

ES.3 Project Objectives

The primary objectives of the proposed project are to:

- Implement a program strategy that is consistent with the mission, vision, and core values of IEUA.
- Ensure that the IEUA service area is served with adequate wastewater treatment capacity that meets regulatory requirements and recycled water objectives through service area build out.
- Ensure that IEUA produces adequate recycled water supply to meet the objectives established in the Recycled Water Program Strategy through service area build out.
- Deliver sufficient wastewater discharge to meet IEUA's downstream discharge obligations to the Santa Ana River and to sustain Prado Basin Riparian/Wetland Habitat through service area build out.
- Provide sufficient processing capacity at the Inland Empire Regional Composting Facility to meet service area biosolids management demands through service area build out.
- To the maximum extent feasible provide sustainable energy generation to minimize IEUA demand for electricity and natural gas from the Southern California Edison (SCE) and the Southern California Gas Company (SCG) grids.
- Maintain IEUA's leadership role in developing and providing new water resources and working with other stakeholders in the Chino Basin to maintain the Chino Groundwater Basin aquifer as a suitable source of potable water within its service area.
- Identify key water resource supply vulnerabilities and evaluate water supply options that could reduce these vulnerabilities and continue to develop a robust water resource strategy that can adapt and respond to a wide range of possible futures.
- Implement an organics diversion program and food waste co-digestion in support of IEUA's Member Agencies and local businesses in complying with the State's organics diversion requirements, and the Agency long term goals of peak power independence and carbon neutrality.

ES.4 Project Description

The proposed program consists of the construction and operation of facilities identified in the six interrelated Facility Master Plans. These proposed facilities would implement the comprehensive strategy for managing IEUA's regional wastewater and recycled water distribution system in the future; the future strategy for the treatment and disposal of biosolids and manure; and reliable and sustainable energy infrastructure to support these activities. These six master plans are outlined below.

1. **Wastewater Facilities Master Plan Update Report**

   The Wastewater Facilities Master Plan Update Report (WFMP) was prepared by CH2MHill in association with Carollo Engineers and dated March 2015. Changes in economic conditions and water use efficiency practices, discharge permit requirements, and water recycling needs necessitated the re-evaluation of the assumptions put forth in the 2002 WFMP and resulted in the update of the WFMP.

2. **IEUA Asset Management Plan**

   The IEUA Asset Management Plan for the Fiscal Year 2015/2016 was developed by staff members of the Agency. The Asset Management Plan addresses the Agency's need to manage their assets in order to coordinate decisions and take actions that allow the Agency to meet the business goals set in the document at the lowest lifecycle cost.

3. **Recycled Water Program Strategy**

   The Recycled Water Program Strategy (RWPS), which is considered a Facility Master Planning Study, was prepared by Stantec for the Agency in April 2015. This document serves to update the 2005 Recycled Water Implementation Plan and the 2007 Recycled Water Three Year Business Plan. The objective of the RWPS is to update supply and demand forecasts and to help map changes for the Recycled Water Program to maximize the beneficial use of recycled water through the planning year 2035.

4. **2013 Amendment to the 2010 Recharge Master Plan Update**

   The 2013 Amendment to the 2010 Recharge Master Plan Update (RMPU), prepared in September 2013 by Wildermuth Environmental, Inc., documents the investigation that was conducted pursuant to the direction of the Court and the Chino Basin Watermaster to amend its 2010 RPMU.

5. **IEUA 2015 Energy Management Plan**

   The IEUA 2015 Energy Management Plan of December 2015 analyzes historical energy use, defines a current energy and Greenhouse Gas emissions baseline, forecasts future demands, examines procurement strategies (including an Organics Diversion program), and proactively explores measures that can ease the Agency's load on utilities while cultivating a reliable and sustainable energy infrastructure across its facilities.

6. 2015 Integrated Water Resources Plan

The 2015 Integrated Resources Plan: Water Supply & Climate Change Impacts 2015-2040 (IRP) is a regional blueprint for ensuring reliable, cost-effective and environmentally responsible water supplies for the next 25 years. It takes into consideration availability of current and future water supplies and accounts for possible fluctuations in demand forecasts and climate change impacts.

In addition to facilities proposed within the six master plans, there are additional facilities proposed within the Agency's Capital Improvement Plan, described below.

Fiscal Year 2016/17 Ten-Year Capital Improvement Plan

Fiscal Year 2016/17 Ten-Year Capital Improvement Plan (CIP) provides a cataloging and scheduling of projects over a multiyear period. Projects within the CIP are necessary to accomplish the Agency's goals based on physical conditions of assets and forecasted regional projections of water and wastewater needs. The projects involve the purchase, improvement or construction of major fixed assets and equipment, which are typically large in size, expensive, and permanent.

The six master plans and the CIP are collectively known as the Facilities Master Plans. Many of the projects that make up the Facilities Master Plans are in the concept development or planning phase and all would take place within the IEUA service area, largely in the vicinity of IEUA's existing assets (refer to Figure ES-1). The implementation of the facilities proposed within the Facilities Master Plans consists of construction, operation, and maintenance. These potential facilities are separated into three project categories: (1) Project Category 1: Treatment Facility Upgrades, (2) Project Category 2: Conveyance Systems and Ancillary Facilities, and (3) Project Category 3: Groundwater Recharge and Extraction. Below are general descriptions of the facilities and operations proposed within the six master plans.

Project Category 1: Treatment Facility Upgrades

Treatment Facility Upgrades include, but are not limited to, liquid and solid treatment capacity, sludge system, dewatering treatment, pipelines, dosing facilities, odor control, flares, electrical, pumps, pump stations, lift stations, meters, tanks, filters, HVAC (heating, ventilation, and air conditioning), emergency generators, rip-rap, lighting, drains, energy storage, odor control, solar panels, filters, fire sprinklers, conveyor belts, lighting, drains, screens, parking lot improvements, bathrooms, signage, and blowers and maintenance/rehabilitation of existing facilities.

Project Category 2: Conveyance Systems and Ancillary Facilities

Conveyance and ancillary facilities include, but are not limited to, pipelines, pump stations, lift stations, emergency generators, meters, electrical, system improvements, storage tanks or reservoirs, facility repairs, manhole replacements, septic systems, dry weather diversion points, and discharge relocations.

Project Category 3: Groundwater Recharge and Extraction

Groundwater recharge and extraction projects include, but are not limited to, recharge basins, ancillary facilities, injection and extraction wells, meters, facility well-housing, basin maintenance, emergency generators, and groundwater treatment.

ES.5 Summary of Impacts

Table ES-1 presents a summary of the impacts and mitigation measures identified for the PEIR. The complete impact statements and mitigation measures are presented in Chapter 3. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds; less-than-significant impacts would not exceed the thresholds. Table ES-1 indicates the measures that will avoid, minimize, or otherwise reduce significant impacts to a less-than-significant level.

There is potential for hazardous waste sites enumerated under Government Code 65962.5 to occur within the IEUA service area. However, mitigation measures have been incorporated in this Final PEIR to avoid or minimize impacts associated with hazardous waste to less than significant levels. Potentially-significant temporary impacts to air quality, historical resources, and noise have been identified at the program level due to air emissions, ground disturbance, noise, and vibration resulting from construction activities for certain FMP projects. However, as stated in this Final PEIR, the identification of potentially-significant program-level impacts does not preclude the finding of future less-than-significant impacts for individual PEIR projects.

ES.6 Areas of Known Controversy

Pursuant to Section 15123(b)(2) of the *CEQA Guidelines,* a lead agency is required to include areas of controversies raised by agencies and the public during the public scoping process in the EIR. Areas of controversy have been identified for the PEIR based on comments made during the 30-day public review period in response to information published in the NOP. Commenting parties have requested more detailed information on the program and specific project locations, related to public and private rights-of-way and compatible land uses. Additionally, commenting parties have expressed concern for water quality and supplies. These issues have been considered during preparation of this Final PEIR.

ES.7 Significant Irreversible Environmental Changes

CEQA Guidelines (CCR, Section 15126.2(c)) requires identification of potential significant, irreversible environmental changes that could result from the implementation of the Final PEIR. Construction and operation of the proposed projects would require the use and consumption of nonrenewable resources, such as steel and other metals. Renewable resources, such as lumber and other wood byproducts, would also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Construction of facilities would require the commitment of a relatively small amount of building materials. The small quantity of building materials used

during implementation of proposed projects would not result in a significant impact because these types of resources are anticipated to be in adequate supply into the foreseeable future.

Energy would be consumed during both construction and operation of the proposed project. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction and site restoration activities. The projects would not result in the wasteful, inefficient or unnecessary consumption of energy during construction or operation. The proposed projects would result in the irretrievable and irreversible commitment of energy resources in the form of diesel fuel, gasoline and electricity during construction and operation. However, these types of resources are anticipated to be in adequate supply into the foreseeable future, and in general, the production and use of recycled water is more energy efficient than imported water. Since the FMP would decrease reliance on imported water by offsetting its use for replenishment with recycled water, the proposed project would reduce the energy requirement otherwise associated with the use of imported water for replenishment.

ES.8 Project Alternatives

In accordance with *CEQA Guidelines* (Section 15126.6), an EIR must describe and compare a range of reasonable alternatives to a project, or alternative locations for a project, that could feasibly attain most of the basic project objectives but avoid or substantially lessen any significant environmental impacts associated with the project. An EIR must consider a reasonable range of feasible alternatives to facilitate informed decision making and public participation. An EIR need not consider every conceivable alternative to a project and is not required to consider alternatives which are infeasible. The lead agency shall select a range of project alternatives and disclose its reasoning for selecting those alternatives.

Overview of Alternatives Process

In the development of the Final FMP, IEUA determined which projects or combination of projects would be most effective in meeting the goals of the Agency. The process began with the definition of specific FMP goals and the establishment of current facilities operations. System constraints were identified, and scenarios to achieve the FMP goals were developed given the acknowledged constraints.

Project Alternatives

Three alternatives were selected for detailed analysis. The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the project, while attaining most of the project objectives. Significant impacts of the project include construction air emissions, construction noise, historical resources impacts from construction, and secondary effects of growth.

Alternative 1: No Project Alternative

An analysis of the No Project Alternative is required under CEQA Guidelines Section 15126.6(e). According to Section 15126.6(e)(2) of the CEQA Guidelines, the "no project" analysis shall discuss:

> *what is reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.*

The No Project Alternative represents a "no build" scenario in which the proposed project would not be constructed or operated. It assumes that all proposed treatment plant facilities, treated water conveyance systems, storage reservoirs, conveyance ancillary facilities, sewage collection facilities, groundwater recharge basins, injection and extraction wells, and groundwater recharge ancillary facilities, along with other elements of the project would not be implemented and no project components would be constructed. Under the No Project Alternative, IEUA would continue to convey wastewater to the treatment plants for treatment then convey recycled water treated to Title 22 standards to creeks, recharge basins, biosolids, other facilities, storage reservoirs, or injection wells. There would be no increase in the use of recycled water to solve regional water supply challenges and there would be no availability of recycled water for multiple beneficial uses within the Santa Ana Watershed and Chino Groundwater Basin. Additionally, there would be no increase in the operational flexibility for potable water resources within the IEUA service area by advancing the localized recycled water management and groundwater recharge objectives of the region.

Alternative 2: Reduced Groundwater Recharge

All proposed FMP projects either directly or indirectly support the FMPs goal of increasing groundwater recharge to reduce reliance on imported water. The 2013 RMPU proposes the most projects that would directly impact groundwater recharge in order to achieve this goal. These projects would increase stormwater and dry-weather runoff recharge in the Chino Basin by about 4,066 AFY and increase recycled water recharge capacity by about 3,025 AFY. When fully implemented, the 2013 RMPU would reduce the future demand for SWP water by about 12,600 AFY. Table 2-13 in Chapter 2 of the PEIR displays key improvement projects that would support this increased recharge capacity. Groundwater recharge projects consist of improved conveyance systems, ancillary facilities such as pump stations, drainage structures, berms, injection wells and recharge basins. The proposed projects that would construct new recharge basins and/or implement upgrades to existing recharge basins would result in the most substantial environmental impacts as compared to other proposed groundwater recharge facility projects.

Alternative 2 would reduce groundwater recharge by 25 percent by eliminating all new recharge basin locations and only implementing the enlarging of existing recharge basins. Under this Alternative a maximum of 702,000 CY of material (soil) would be excavated as opposed to 936,000 CY under the proposed project. Since no new recharge basins would be built, no impacts to undeveloped property would occur. The reduced recharge basin capacity would reduce some of the impacts associated with the proposed project from excavation and grading. Construction activities would occur intermittently throughout the 20-year FMP implementation period. Basin

excavation and grading would result in VOC and NOx emissions during construction. Recharge basins would also account for the most truck haul and delivery trips needed to export and import soil, and therefore would attribute to greenhouse gas emissions. Additionally, construction of the recharge basins would impact traffic the most out of other proposed recharge facilities.

By not implementing all recharge basin projects, there would be a reduction in the total amount of cubic yards of soil that would need to be excavated; therefore, impacts to air quality, cultural resources, greenhouse gases, land use, traffic, and potentially other environmental resources would be proportionately reduced.

Alternative 3: Expanded Advanced Water Treatment Facility

Alternative 3 would construct an advanced water treatment facility (AWTF) to supply approximately 9 million gallons per day (MGD) of highly treated recycled water beyond the proposed FMP. The Integrated Water Resources Plan includes projects to increase direct-use and groundwater recharge by up to 22 MGD recycled water. Alternative 3 would construct an additional 9 MGD of AWTF capacity, enough to treat all potentially available recycled water supply through buildout. The proposed AWTF would be constructed within existing IEUA facilities, or at a member agency facility. The AWTF would utilize recycled water, potentially from Regional Water Recycling Plant No. 1 (RP-1), IEUA's largest and most central wastewater treatment facility located in Ontario, California. The AWTF may treat a sidestream of the facility's available recycled water.

The proposed AWTF under Alternative 3 may include construction of a Microfiltration (MF) treatment facility, Reverse Osmosis (RO) treatment facility, Ultraviolet-Advanced Oxidation Process (UV-AOP) treatment or similar disinfection process, booster pump station, standby power for critical processes, chemical storage, truck off-loading pad, and associated piping and ancillary systems. The advance treated water may be used as facility treated effluent to neighboring creeks or recharged in recharge basins within the IEUA service area, potentially with the first phase to be basins closest to RP-1 , such as RP-3, San Sevaine and/or Victoria Basins. The MF/RO membrane treatment process followed by UV-AOP provides tertiary-treated high quality recycled water suitable for groundwater recharge. The process provides the level of treatment needed to meet the Title 22 regulatory requirements for groundwater recharge through spreading and direct injection.

Each facility to be constructed as part of the AWTF would be designed and installed to meet applicable local, State and Federal regulations and would undergo related permitting. The AWTF may utilize approximately 150,000 – 200,000 square feet within an existing IEUA facility. Alternatively, IEUA may consider offsite AWTF locations such as Monte Vista Water District's Plant 28 in the city of Montclair for treatment and injection into Chino Basin Management Zone 1 (MZ1), such as Brooks Basin, Montclair Basin, College Heights and Upland Basin.

Environmentally Superior Alternative

CEQA requires that an EIR identify an environmentally superior alternative of a project other than the No Project Alternative (CEQA Guidelines Section 15126.6(e)(2)). The No Project Alternative (Alternative 1) would reduce or eliminate all proposed program impacts, including significant and unavoidable impacts of the proposed project, but it would result in new potentially significant impacts that could result from aging equipment including process malfunctions and inefficiencies that could result in hazardous material spills, increased energy usage, groundwater quality degradation, and increased air emissions.

Alternative 2 would reduce but not eliminate the potential significant impacts of the proposed program. However, by reducing the proposed recharge capacity, additional water sources would be necessary to meet growing water demands of the region. The only other available water supplies are recycled water and imported water. The proposed program includes recycled water production. Therefore, only imported water could replace the proposed new stormwater recharge capacity. Imported water requires a significant amount of energy to convey water from the Colorado River or Northern California and increases air emissions associated with energy production. In addition, imported water has more dissolved salts compared with local stormwater which increases salt loading in the Inland Empire groundwater basins. Because Alternative 2 does not maximize the use of low-TDS stormwater supplies, it results in greater impacts to energy demands and air emissions and is not the environmentally superior alternative.

Alternative 3 would differ from the proposed program only in the construction of an additional AWTF to produce up to 9 MGD of high-quality recycled water. The water could be used for groundwater recharge, discharge to creeks, or eventually to augment potable water supplies. The operation of the treatment facility would require greater energy than the proposed tertiary treatment which would result in greater air emissions associated with energy production. Construction of the treatment facility would emit greater amounts of air pollutants, and operation of the plant would require storage of more hazardous chemicals needed in the treatment. However, the removal of salts from the recharge water would improve groundwater quality and assist in managing the salt balance of the region.

The proposed program would implement necessary improvements to minimize the need for imported water, while maximizing the efficiency of wastewater treatment, local water supply augmentation, energy efficiency, and asset maintenance. Upgrading aging infrastructure provides for greater operating efficiency that reduces the risk of spills, malfunctions, and air emissions associated with treatment facilities and energy production. As a result, the proposed program is the environmentally superior alternative since it provides for the careful planning and timed implementation of necessary public services while minimizing environmental impacts.

ES.9 Organization of this EIR

This Final EIR has been organized into the following chapters:

ES. Executive Summary. This chapter summarizes the contents of the Final PEIR.

1. **Introduction.** This section discusses the CEQA process and the purpose of the Final PEIR.
2. **Project Description.** This section provides an overview of the proposed program, describes the need for and objectives of the proposed program, and provides detail on the characteristics of the proposed program.
3. **Environmental Setting, Impacts and Mitigation Measures.** This chapter describes the environmental setting and identifies impacts of the proposed program for each of the following environmental resource areas: Aesthetics; Agriculture and Forestry; Air Quality and Greenhouse Gas Emissions; Biological Resources; Cultural Resources; Geology, Soils, and Mineral Resources; Hazards and Hazardous Materials; Hydrology; Land Use and Planning; Noise; Population and Housing; Public Services; Recreation; Traffic and Transportation; and Utilities. Measures to mitigate the impacts of the proposed program are presented for each resource area.
4. **Other CEQA Sections.** This chapter describes the effects that were found not to be significant and those that were found to be significant and unavoidable. In addition, this section discusses the significant irreversible environmental changes and growth-inducing impacts associated with the program.
5. **Alternatives Analysis.** This chapter presents an overview of the alternatives development process and describes the alternatives to the proposed program that were considered.
6. **Introduction to Response to Comments.** This chapter includes and introduction to CEQA and the Response to Comments process.
7. **Comment Letters.** This chapter contains a list of persons, organizations, and public agencies commenting on the Draft PEIR, and the written comments received on the Draft PEIR.
8. **Response to Comments.** This chapter contains each comment received on the Draft PEIR and written responses to each comment.
9. **Corrections and Additions.** This chapter contains revisions made to the Draft PEIR in response to comments received or initiated by the Lead Agency.
10. **Mitigation, Monitoring and Reporting Program.**
11. **Report Preparation.** This chapter identifies the key staff at IEUA and the authors involved in preparing this Final PEIR.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE FACILITIES MASTER PLAN

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 Aesthetics			
Impact 3.1-1: The proposed program would have significant and cumulatively considerable effects on a scenic vista**.**	Potentially Significant	**AES-1:** Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.	Less than Significant
Impact 3.1-2: The proposed program could have a significant and cumulatively considerable impacts related to damage of scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Potentially Significant	Implementation of Mitigation Measure **AES-1** is required.	Less than Significant
Impact 3.1-3: The proposed program could have a significant and cumulatively considerable degradation of the existing visual character or quality of the sites and their surroundings.	Potentially Significant	Implementation of Mitigation Measure **AES-1** is required.	Less than Significant
Impact 3.1-4: The proposed program could create new sources of substantial light or glare which could result in significant and cumulatively considerable adverse effects on day or nighttime views in the IEUA service area.	Potentially Significant	**AES-2:** All new permanent exterior lighting associated with proposed project components shall be shielded and directed downward to avoid any light intrusion to surrounding uses. The maximum light allowed beyond the property boundary adjacent to sensitive light receptors shall be limited to 1.5 candles. **AES-3:** Development of the proposed project and associated facilities shall comply with existing and future lighting ordinances. **AES-4:** Structures with large facades shall not include highly reflective building materials.	Less than Significant
3.2 Agriculture and Forestry Resources			
Impact 3.2-1: The proposed program could have significant and cumulatively considerable impacts from the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use.	Potentially Significant	**AG-1:** Where an ancillary facility is proposed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the improvement shall be relocated to urban land or non-important Farmland. Alternatively, if important farmland must be utilized for an ancillary facility, then IEUA shall conduct a California Land Evaluation and Assessment (LESA) Model. If the evaluation determines the loss of designated Farmland is significant, then it shall be offset by acquisition of agricultural land conservation credits at a minimum ratio of 1:1	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.2-2: The proposed program could have significant and cumulatively considerable impacts from conflicts with existing zoning for agricultural use, or a Williamson Act Contract.	Potentially Significant	Implementation of Mitigation Measure **AG-1** is required.	Less than Significant
Impact 3.2-3: The proposed program would have no impact and no contribution to cumulative impacts on existing zoning because the program would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.	No Impact	No mitigation measures are required.	No Impact
Impact 3.2-4: The proposed program would have no impact and no contribution to cumulative impacts on forestland uses because the program would not result in the loss of forest land or conversion of forest land to non-forest use.	No Impact	No mitigation measures are required.	No Impact
Impact 3.2-5: The proposed program could have significant and cumulatively considerable effects from conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	Potentially Significant	Implementation of Mitigation Measure **AG-1** is required.	Less than Significant
3.3 Air Quality and Greenhouse Gas Emissions			
Impact 3.3-1: The proposed program would have less than significant and less than cumulatively considerable effects on implementation of the South Coast Air Quality Management Plan (AQMP) because the program would not conflict with or obstruct implementation of the AQMP.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.3-2: The proposed program could have significant and cumulatively considerable effects because the program could violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Potentially Significant	**AIR-1:** The following measures shall be incorporated to minimize emissions of NOx and VOC associated with construction activities for the proposed facilities: • Construction activities shall require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) to the extent feasible. Under conditions where it is determined that 2010 model year or newer diesel trucks are not readily available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use trucks that meet USEPA 2007 model year NOx emissions requirements. • Off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 3 emissions standards at a minimum and Tier 4 where available. Under conditions where it is determined that equipment meeting Tier 4 emission standards are not readily	Significant and Unavoidable with Mitigation

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use USEPA Tier 3 equipment. **AIR-2:** For each individual FMP project, IEUA shall require by contract specifications that: • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use to avoid excessive idling. • Construction operations shall minimize use of diesel-powered generators and rely on the electricity infrastructure where feasible. • Construction trucks shall be routed away from congested streets or sensitive receptor areas where feasible.	
Impact 3.3-3: The proposed program could result in a cumulatively considerable net increase of a criteria pollutant.	Potentially Significant	Implemented of Mitigation Measures **AIR-1 and AIR-2** is required.	Less than Significant
Impact 3.3-4: The proposed program could result in significant and cumulatively considerable effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.	Potentially Significant	Implementation of Mitigation Measures **AIR-1, AIR-2,** and AIR-3 is required. **AIR-3:** Unpaved roads on the project site used for any vehicular travel are required to be watered by water trucks at least four times per eight hour workday or otherwise sufficient to reduce fugitive dust (PM_{10} and $PM_{2.5}$) emissions consistent with Rule 403.	Significant and Unavoidable with Mitigation
Impact 3.3-5: The proposed program could result in significant and cumulatively considerable effects from the creation of objectionable odors affecting a substantial number of people.	Potentially Significant	**AIR-4:** Prior to the construction upgrades at each treatment facility, IEUA would be required to prepare an Odor Impact Minimization Plan (OIMP), pursuant to Title 14, California Code of Regulations Section 17863.4. The OIMP provides operational protocols covering the implementation of the odor control system including during varied meteorological conditions. The OIMP would include complaint response protocol, operating procedures, and an odor monitoring program. A complaint response protocol would be implemented to receive complaints, investigate the source, and implement changes to minimize the odors.	Less than Significant
Impact 3.3-6: The proposed program would result in less than significant and less than cumulatively considerable effects associated with greenhouse gas emissions because the program would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.3-7: The proposed program would result in less than significant and less than cumulatively considerable effects on a greenhouse gas plan because the program would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant	No mitigation measures are required.	Less than Significant
3.4 Biological Resources			
Impact 3.4-1: The proposed program could have significant and cumulatively considerable effects on species because the program could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	Potentially Significant	**BIO-1:** Construction of the proposed improvements should avoid, where possible, special status natural communities and other vegetation communities that provide suitable habitat for a special-status species known to occur within the IEUA Service Area. If construction within potentially suitable habitat must occur, a presence/absence survey of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species, including listed species, are determined to occupy any portion of a project site, avoidance and minimization measures such as temporary fencing, inspection of trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspection of pipes, culverts, and similar construction material for entrapped wildlife, and the prohibition of chemical uses shall be incorporated into the construction phase of the proposed improvement to avoid direct or incidental take of a listed species to the greatest extent feasible. **BIO-2**: If direct or incidental take of a listed species is unavoidable, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation but shall include the following or comparable mitigation: restoration of habitat to comparable value as existed prior to disturbance; compensation for take or habitat loss through conserving suitable habitat in perpetuity off site; or participating in a habitat mitigation bank approved by the resource agency(ies). At a minimum IEUA will provide compensation at a 1:1 ratio for direct or indirect loss of habitat that supports listed species, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis. **BIO-3a:** Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		(2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012). **BIO-3b**: Construction of proposed improvements within the IEUA Service Area shall avoid special-status natural communities, unless deemed essential by the Agency. If a proposed improvement must be installed and result in a loss of a special-status natural community that is not occupied by a special-status species, compensatory habitat-based mitigation consisting of onsite preservation of habitat, restoration of similar habitat, or purchase of off-site credits from an approved mitigation bank shall be implemented. At a minimum IEUA will provide compensation at a 0.5:1 ratio for loss of habitat, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis. **BIO-4:** The proposed improvement projects within the IEUA Service Area shall avoid, if possible, construction within the general nesting season of February 1 through August 31 for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor.	
Impact 3.4-2: The proposed program could have significant and cumulatively considerable effects on habitat because the program could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.	Potentially Significant	Implementation of Mitigation Measures **BIO-1, BIO-3,** and **BIO-5** is required. **BIO-5:** Any future project that must discharge fill into a channel or otherwise alter a streambed shall be mitigated. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. For jurisdictional waters without any riparian or wetland habitat IEUA will mitigate at a 1:1 ratio. For loss of any riparian or other wetland areas, the	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A revegetation plan using native riparian vegetation common to the project area shall be prepared and reviewed and approved by the appropriate regulatory agencies. The Agency shall also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Santa Ana Regional Water Quality Control Board and CDFW) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. The regulatory agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.	
Impact 3.4-3: The proposed program could have significant and cumulatively considerable effects on wetlands because the program could 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.	Potentially Significant	Implementation of Mitigation Measures **BIO-5** and **BIO-6** is required. **BIO-6:** Best Management Practices (BMPs) shall be incorporated into the design and construction phase of the project to ensure that no pollutants or silt drain into a federal or state protected jurisdiction area, including wetlands and riparian areas. Project design features (BMPs) to fulfill this mitigation requirement shall be clearly identified as part of project engineering plans prior to initiating construction.	Less than Significant
Impact 3.4-4: The proposed program could have significant and cumulatively considerable effects on the movement of species because the program could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Potentially Significant	Implementation of Mitigation Measures **BIO-4** and **BIO-7** is required. **BIO-7:** Construction of a proposed project shall avoid, where possible, a wildlife corridor; however, if the wildlife corridor cannot be avoided, such as a discharge location within a drainage channel or creek, construction activities shall use best management practices such as placing temporary fencing to protect wildlife and plant species from construction activities, inspecting trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspecting pipes, culverts, or similar construction material for entrapped wildlife, and prohibiting the use of rodenticides, herbicides, insecticides or other chemicals that could potentially harm migratory species. **BIO-8:** Once construction is completed, restore the impacted wildlife corridor area to its original vegetation and in accordance with any regulatory permitting, if applicable.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.4-5: The proposed program could have significant and cumulatively considerable effects on biological resources because the program could have conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Potentially Significant	**BIO-9:** Prior to construction activities to provide treatment facilities upgrades, the IEUA shall comply with the local policies and ordinances to protect biological resources.	Less than Significant
Impact 3.4-6: The proposed program could have significant and cumulatively considerable effects on a conservation plan because the program could have conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.	Potentially Significant	**BIO-10:** IEUA shall avoid constructing facilities within existing habitat conservation plan areas such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana, unless the habitat conservation plans allow the construction of the proposed facility. If the HCP identifies specific mitigation measures for activities within the HCP area, IEUA shall follow the mitigation procedures outlined in such HCP.	Less than Significant
3.5 Cultural Resources			
Impact 3.5-1: The proposed program could have significant and cumulatively considerable effects on historical resources because the program could cause a substantial adverse change in the significance of a historical resource.	Potentially Significant	**CUL-1:** Prior to development involving ground disturbance, IEUA shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology to conduct a study of the project area(s) for all project components that involve ground disturbance. The archaeologist shall conduct a cultural resources inventory designed to identify potentially significant resources. The cultural resources inventory would consist of: a cultural resources records search to be conducted at the South Central Coastal Information Center located at California State University Fullerton; consultation with the NAHC and with interested Native Americans identified by the NAHC; a field survey where deemed appropriate by the archaeologist; and recordation of all identified archaeological resources located on a project site on California Department of Parks and Recreation 523 Site Record forms. The archaeologist shall provide recommendations regarding resource significance and additional work for those resources that may be affected by a project. **CUL-2:** Development involving ground disturbance and containing structures 50 years old or older shall be subject to a historic built environment survey, and potentially historic structures shall be evaluated for their potential historic significance, prior to IEUA's approval of project plans. The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior's Standards for Architectural History. If potentially significant resources are encountered during the survey, a treatment plan shall be prepared prior to demolition or substantial alteration of such resources identified.	Significant and Unavoidable with Mitigation

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.5-2: The proposed program could have significant and cumulatively considerable effects on archaeological resources because the program could have cause a substantial change in the significance of an archeological resource.	Potentially Significant	Implementation of Mitigation Measure **CUL-1** is required.	Less than Significant
Impact 3.5-3: The proposed program could have significant and cumulatively considerable effects on paleontological resources because the program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	**CUL-3:** For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources.	Less than Significant
Impact 3.5-4: The proposed program could have significant and cumulatively considerable effects on human remains because the program could disturb human remains.	Less than Significant	No mitigation measures are required.	Less than Significant
3.6 Geology, Soils, and Mineral Resources			
Impact 3.6-1: The proposed program could have significant and cumulatively considerable potential to expose people or structures to adverse geologic effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction or landslides.	Potentially Significant	**GEO-1:** Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects. **GEO-2**: If an improvement is proposed within a designated Alquist-Priolo Fault Zone, the improvement shall be relocated, if possible. If relocation is not possible, the improvement shall be designed in accordance with the CBC or a project specific geotechnical study.	Less than Significant
Impact 3.6-2: The proposed program would have less than significant and less than cumulatively considerable effects from soil erosion or the loss of topsoil.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.6-3: The proposed program could have significant and cumulatively considerable instability effects because the program could be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed program and potentially result in on-or off-site landslide, subsidence, or collapse.	Potentially Significant	Implementation of Mitigation Measure **GEO-1** is required.	Less than Significant
Impact 3.6-4: The proposed program could have significant and cumulatively considerable effects on species because the program could be located on expansive soils as defined in 24 CCR 1803.5.3 of the California Building Code (2013), or corrosive soils creating substantial risks to life or property.	Potentially Significant	Implementation of Mitigation Measure **GEO-1** is required.	Less than Significant
Impact 3.6-5: The proposed program would have no impact and no contribution to cumulative impacts on 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 because the program does not include the use of septic tanks or alternative waste water disposal systems.	No Impact	No mitigation measures are required.	No Impact
Impact 3.6-6: The proposed program would have a less than significant and less than cumulatively considerable impacts on mineral resources because the program would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.6-7: The proposed program would have a less than significant and less than cumulatively considerable impacts to locally important mineral resources because the program would either not include facilities large enough to interfere with locally important mineral resources recovery sites delineated on a local general plan, specific plan or other land use plan or prohibit the future extraction of locally important mineral resources.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.7 Hazards and Hazardous Materials			
Impact 3.7-1: The proposed program would have less than significant and less than cumulatively considerable hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.7-2: The proposed program would have less than significant and less than cumulatively considerable hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less than Significant	~~No mitigation measures are required.~~ **HAZ-6**: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.	Less than Significant
Impact 3.7-3: The proposed program would have less than significant and less than cumulatively considerable impacts from emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.7-4: The proposed program could 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, could create significant and cumulatively considerable hazard impacts to the public or the environment.	Potentially Significant	**HAZ-1:** Prior to the initiation of any construction requiring ground-disturbing activities, IEUA shall complete a Phase I Environmental Site Assessments (ESA) for soil and groundwater contamination in the project areas. The recommendations set forth in the Phase I ESA shall be implemented to the satisfaction of applicable agencies before and during construction. If the Phase I ESA indicates the potential for hazardous concentrations of contamination within the construction zone, Phase II ESA studies shall be completed before construction begins. Phase II studies shall include soil and/or groundwater sampling and analysis for anticipated contaminants. The Phase II sampling is intended to identify how to dispose of any potentially harmful material from excavations, and	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		to determine if construction workers need specialized personal protective equipment. **HAZ-2:** If the Phase II ESA determines that the site has contaminated soil and/or groundwater, a Soil and Groundwater Management Plan that specifies the method for handling and disposing of contaminated soil and groundwater prior to demolition, excavation, and construction activities shall be prepared and implemented. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information: • Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. • Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils. • Detailed control measures for use and storage of hazardous materials to prevent the release of pollutants to the environment, and emergency procedures for the containment and cleanup of accidental releases of hazardous materials to minimize the impacts of any such release. These procedures shall also include reporting requirements in the event of a reportable spill or other emergency incident. At a minimum, the IEUA or its contractor shall notify applicable agencies in accordance with guidance from the California Office of Emergency Services as well as the San Bernardino County Department of Public Health, Division of Environmental Health Services. • Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method used to analyze groundwater for hazardous materials likely to be encountered at specific locations and the appropriate treatment and/or disposal methods.	
Impact 3.7-5: The proposed program could be located within an airport land use plan or within two miles of a public airport, public use airport, or private airstrip, which could result in significant and cumulatively considerable safety hazards for people residing or working in the project area.	Potentially Significant	**HAZ-3**: For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use plan. All design plans within an airport land use planning area shall be submitted to the appropriate airport management agencies for review and comment prior to implementation.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.7-7: The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and as a result could result in significant and cumulatively considerable emergency impacts.	Potentially Significant	**HAZ-4:** Prior to initiating construction of proposed facilities, IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access. 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. In addition, 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. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan.	Less than Significant
Impact 3.7-8: The proposed program could have significant and cumulatively considerable wildfire impact on people or structures due to the intermixing of urbanize areas with wildlands.	Potentially Significant	**HAZ-5:** During construction of facilities located in areas designated as Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks.	Less than Significant
3.8 Hydrology			
Impact 3.8-1: The proposed program would have less than significant and less the cumulatively considerable water quality impacts when compared to water quality standards or waste discharge requirements.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.8-2: The proposed program could have significant and cumulatively considerable groundwater impacts due to potentially depleting groundwater supplies or interfering with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	Potentially Significant	**HYDRO-1:** Prior to installing new injection or extraction wells, IEUA and the Watermaster shall ensure that IEUA conduct groundwater modeling near the affected areas sufficient to estimate extraction and injection capacities at specific locations and to avoid impacts to neighboring production well operations. **HYDRO-2:** IEUA shall continue supporting monitoring of groundwater levels throughout the Chino Basin to identify areas of elevated groundwater levels. IEUA and the Watermaster shall ensure that, where necessary, future groundwater recharge projects are designed with groundwater monitoring capabilities sufficient to evaluate and minimize impacts of shallow groundwater on subsurface and surface infrastructure.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.8-3: The proposed program could have significant and cumulatively considerable groundwater impacts due to potentially altering the existing drainage pattern of a site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, or flooding on-or off-site.	Potentially Significant	**HYDRO-3: Implementation of a Grading and Drainage Plan**. Prior to construction of project facilities, the IEUA shall prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of San Bernardino and/or the city in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, best management practices, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements. **HYDRO-4:** Following the demolition of RP-2 facilities, IEUA shall implement a soil stability plan that ensures soil and wind erosion does not substantially occur at the RP-2 site. The soil stability plan shall provide best management practice (BMP) measures such as soil binders, hydroseeding, straw mulch or other measures to ensure the onsite soils do not erode off of the RP-2 site. **HYDRO-5:** All creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the SBCFCD and USACE to ensure that they do not impede high flow capacity.	Less than Significant
Impact 3.8-4: The proposed program would not impact or contribute to cumulative flooding impacts on housing because the program would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.	No Impact	No mitigation measures are required.	No Impact
Impact 3.8-5: The proposed program could have significant and cumulatively considerable flooding impacts on structures because the program could place within a 100-year flood hazard area structures that could impede or redirect flood flows.	Potentially Significant	**HYDRO-6:** Where a facility is proposed within a 100-year flood zone, the improvement shall be relocated to land that is not within a 100-year flood zone. Alternatively, if a 100-year flood zone must be utilized for a facility, a hydrology study shall be conducted to ensure that there is no substantial impediment or redirection of flood flows.	Less than Significant
Impact 3.8-6: The proposed program would have less than significant and less than cumulatively considerable exposure of 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.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.8-7: The proposed program would have no impact and no contribution to cumulative impacts from the exposure of people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	No Impact	No mitigation measures are required.	No Impact
3.9 Land Use and Planning			
Impact 3.9-1: The proposed program would have no impact and would not contribute to cumulative community impacts from physically dividing an established community.	No Impact	No mitigation measures are required.	No Impact
Impact 3.9-2: The proposed program would have a less than significant and less than cumulatively considerable environmental impacts associated with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.9-3: The proposed program could have significant and cumulatively considerable effects on a conservation plan because the program could have conflicts with an applicable habitat conservation plan or natural community conservation plan.	Potentially Significant	Implementation of Mitigation Measure **BIO-10** is required.	Less than Significant
3.10 Noise			
Impact 3.10-1: The proposed program could have significant and cumulatively considerable impacts on the 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.	Potentially Significant	**NOISE-1:** IEUA shall implement the following measures during construction: • Include design measures where feasible to reduce the construction noise levels if necessary to comply with local noise ordinances. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site. • Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals. • Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.	Significant and Unavoidable after Mitigation

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible, and require that these noise sources be muffled and enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances.. • Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications. • If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged. • For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations. • For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking. **NOISE-2:** IEUA shall require that all FMP-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable city or county noise level requirements at neighboring property lines. **NOISE-3:** For construction activities during non-standard working hours or hours that are not exempt from compliance with applicable city or county noise ordinances (e.g., 24-hour well drilling), IEUA will secure a noise waiver from the appropriate jurisdiction if available. **NOISE-4:** ~~Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible.~~ Prior to commencement of construction related to the FMP programs at a specific site that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		the start of such activity.	
Impact 3.10-2: The proposed program could have significant and cumulatively considerable impacts on persons and structures from ground-borne vibration or ground-borne noise levels.	Potentially Significant	**NOISE-5:** IEUA shall require the construction contractor(s) to implement the following measure: Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various FMP projects. Use of small rubber-tired bulldozers shall be encouraged within these areas during grading operations to reduce vibration effects. **NOISE-6:** Where a FMP project would be constructed adjacent to an existing or potential historic building, IEUA shall require by contract specifications that a certified structural engineer be retained to submit evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building. Contract specifications shall be included in the construction documents for the applicable FMP project development.	Less than Significant
Impact 3.10-3: The proposed program could have a significant and cumulatively considerable permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Potentially Significant	Implementation of Mitigation Measure **NOISE-2** is required.	Less than Significant
Impact 3.10-4: The proposed program could have a significant and cumulatively considerable temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project.	Potentially Significant	Implementation of Mitigation Measures **NOISE-1, NOISE-3, and NOISE-4** is required.	Significant and Unavoidable with Mitigation
Impact 3.10-5: The proposed program would have a less than significant and less the cumulatively considerable noise level impacts on people residing or working within two miles of a public airport, public use airport, or private airstrip.	Less than Significant	No mitigation measures are required.	Less than Significant
3.11 Population and Housing			
Impact 3.11-1: The proposed program would have less than significant and less than cumulatively considerable population growth inducement impacts.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.11-2: The proposed program would have less than significant and less than cumulatively considerable housing not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.11-3: The proposed program would have no impact and no contribution to cumulative impacts from the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere.	No Impact	No mitigation measures are required.	No Impact
3.12 Public Services			
Impact 3.12-1: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the provision of, or the need for, new or physically altered police or fire protection facilities, the construction of which could cause environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire and police services.	No Impact	No mitigation measures are required.	No Impact
Impact 3.12-2: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the provision of, or the need for, new school facilities, the construction of which could cause environmental impacts, in order to maintain acceptable performance objectives for the school district.	No Impact	No mitigation measures are required.	No Impact
Impact 3.12-3 The proposed program could have significant and cumulatively considerable physical impacts associated with the provision of, or the need for, new or physically altered parks and recreation facilities, the construction of which could cause environmental impacts, in order to maintain acceptable performance objectives for parks and recreation.	Potentially Significant	**PS-1:** If a proposed improvement results in the removal of park or recreational facilities, IEUA will either relocate the proposed improvement or coordinate with the local jurisdiction to develop replacement park or recreational facility capacity.	Less than Significant
3.13 Recreation			
Impact 3.13-1: The proposed program would have less than significant and less than cumulatively considerable park impacts from the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than Significant	No mitigation measures are required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.13-2: The proposed program could have significant and cumulatively considerable impacts on recreational facilities thus require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Potentially Significant	Implementation of Mitigation Measure **PS-1** is required.	Less than Significant
3.14 Traffic and Transportation			
Impact 3.14-1: Implementation of the proposed program could have a significant and cumulatively considerable impact on 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.	Potentially Significant	**TT-1:** For projects that may affect traffic flow along existing roadways, IEUA shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following: • Develop circulation and detour plans if necessary to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. • To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours. • Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones. • For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls. • Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.	Less than Significant
Impact 3.14-2: Construction of the proposed program could have a significant and cumulatively considerable hazard impacts due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Potentially Significant	Implementation of Mitigation Measure **TT-1** is required.	Less than Significant
Impact 3.14-3: The proposed program could have a significant and cumulatively considerable emergency access impact.	Potentially Significant	Implementation of Mitigation Measure **TT-1** is required.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
The proposed program would not conflict or contribute to a cumulative conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards and travel demand measures, or other standards established by the county congestion management agency for designated road or highways because the CMP is intended to monitor and address long-term traffic impacts.	Less than Significant	No mitigation measures are required.	Less than Significant
The proposed program would not cause or contribute to a cumulative impact in changing air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risk	No Impact	No mitigation measures are required.	No Impact
The proposed program would not impact or contribute to a cumulative impact on adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities.	No Impact	No mitigation measures are required.	No Impact
3.15 Utilities			
Impact 3.15-1: The proposed program would have a less than significant and less than cumulatively considerable effects regarding wastewater treatment requirements of the applicable Regional Water Quality Control Board.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.15-2: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause environmental effects, in order to maintain acceptable service.	No Impact	No mitigation measures are required.	No Impact
Impact 3.15-3: The proposed program could have significant and cumulatively considerable environmental effects from the construction of new stormwater drainage facilities or expansion of existing facilities.	Potentially Significant	**U-1: Implementation of a Drainage Plan to Reduce Downstream Flows.** Prior to construction of project facilities, the IEUA shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.	Less than Significant

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.15-4: The proposed program would have less than significant and less than cumulatively considerable effects from new or expanded water supply resources or entitlements.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.15-5: The proposed program would have less than significant and less than cumulatively considerable effects on wastewater treatment capacity.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.15-6: The proposed program would have less than significant and less than cumulatively considerable effects on solid waste disposal facilities.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 3.15-7: The proposed program would have less than significant and less than cumulatively considerable effects associated with solid waste federal, state, and local statutes and regulations.	Less than Significant	No mitigation measures are required.	Less than Significant

CHAPTER 1
Introduction

1.1 Introduction

To comply with the California Environmental Quality Act (CEQA), the Inland Empire Utilities Agency (IEUA) has developed a Facilities Master Plan Program Environmental Impact Report (FMP PEIR). The FMP PEIR integrates all of the IEUA's related planning activities into one comprehensive document in order to address the environmental concerns of the overall effects of the projects contemplated by the IEUA. The FMP PEIR encompasses IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), 2013 Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan Update Report (2015), Energy Management Plan (2015), and Integrated Water Resources Plan (2015).

IEUA, as the Lead Agency, has prepared this Final Program Environmental Impact Report (PEIR) to provide the public and trustee agencies with information about the potential effects on the local and regional environment associated with implementation of the proposed activities under the integrated Facilities Master Plan (proposed program). This Final PEIR has been prepared in compliance with the CEQA of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. Seq. and the *CEQA Guidelines* in the Code of Regulations, Title 14, Division 6, Chapter 3.

1.2 Purpose of the Environmental Impact Report

This PEIR has been prepared to address the potential environmental impacts associated with implementing the proposed program. Since the IEUA's integrated Facilities Master Plan consists of numerous planning initiatives that involve implementation of projects over a long time period, a Program EIR (PEIR) has been prepared. The *CEQA Guidelines*, Section 15168, states that a PEIR may be used to evaluate a plan or program that has multiple components (projects and actions) or addresses a series of actions that are related:

- Geographically;
- As logical parts in the chain of contemplated actions;
- In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental affects that can be mitigated in similar ways.

A PEIR can provide the following additional advantages:

- Provide for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;
- Ensure consideration of cumulative impacts that might not be evident in a case-by-case or project-by-project analysis;
- Avoid duplicative consideration of basic policy issues;
- Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures early in the process when the agency has greater flexibility to deal with basic problems or cumulative impacts; and
- Facilitate a reduction in paperwork.

A PEIR may be prepared for a plan before the details of each and every project within the long-term plan have been developed. For the proposed project, many of the supporting initiatives are in the concept development or planning phase. The PEIR analysis is not intended to focus on the site-specific construction and operation details of individual actions. Rather, this PEIR serves as a first-tier environmental document that focuses on the overall effects of implementing the proposed program as a plan to provide for future wastewater treatment, biosolids handling, and recycled water to the west end of San Bernardino County.

1.3 CEQA Environmental Review Process

1.3.1 CEQA Process Overview

The basic purposes of CEQA are to (1) inform the public and governmental decision makers regarding potential significant environmental effects of proposed activities, (2) identify ways in which potential environmental damage can be avoided or significantly reduced, (3) prevent significant, avoidable environmental damage by requiring changes in projects through the use of alternatives or mitigation measures, and (4) disclose to the public the reasons why a governmental agency approved the project if significant environmental effects are involved.

An Environmental Impact Report (EIR) should use a multidisciplinary approach applying social and natural sciences to provide a qualitative and quantitative analysis of all the foreseeable environmental impacts that a proposed project would exert on the surrounding area. As stated in *CEQA Guidelines* Section 15151:

> *"An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which intelligently takes an account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonable feasible."*

This PEIR was prepared to comply with CEQA regulations and is to be used by local regulators and the public in their review of the potential environmental impacts of the proposed project, alternatives, and mitigation measures that would minimize or avoid the potential environmental effects. IEUA will consider the information presented in this PEIR, along with other factors, prior to approving the Facilities Master Plan and related projects for implementation.

1.3.2 Notice of Preparation

On June 29, 2016, in accordance with Sections 15063 and 15082 of the *CEQA Guidelines*, the IEUA published a Notice of Preparation (NOP) of a Draft PEIR, and circulated it to governmental agencies, organizations, and persons who may be interested in this project. The NOP requested comments on the scope of the Draft PEIR, and asked that those agencies with regulatory authority over any aspect of the project describe that authority. The comment period extended through July 29, 2016. The NOP provided a general description of the proposed program, a description of the proposed program area, and a preliminary list of potential environmental impacts. A copy of the NOP and responses to the NOP are included in this Final PEIR in **Appendix A**. Nine comment letters were received in response to the NOP. Specific environmental concerns that were raised in the comments received on the NOP are discussed in **Table 1-1**, below.

TABLE 1-1
SUMMARY OF NOP COMMENTS

Commenter/Date	Summary of Environmental Issues Raised in Comment Letter	Section where Addressed
Notice of Preparation – June 29, 2016		
State of California, Office of Planning and Research, State Clearinghouse and Planning Unit June 29, 2016	The comment letter did not raise any environmental issues	Comment is noted. This is not an environmental issue and not addressed in the PEIR.
State of California Department of Transportation (Cal Trans)-District 8 July 27, 2016	Conduct a preliminary scoping meeting prior to the preparation of Traffic Impact Analysis (TIA)	Comment is noted. No evaluation is required.
	Prepare a TIA to determine near-term and long-term potential impacts to state facilities	See Section 3.14, Transportation and Traffic
	Submit TIA prior to circulation of the PEIR	Comment is noted. No evaluation is required.
	Evaluate site grading and drainage impacts affecting State Right-of-Way	See Section 3.8, Hydrology and Water Quality
	Submit Hydraulic Report, plans, and written construction clearance for Cal Trans review	Comment is noted. No evaluation is required.
	Evaluate where construction activities may effect normal function of public roadways	See Section 3.14, Transportation and Traffic
	Prepare a Traffic Control Plan prior to construction activity and submit for Cal Trans review	See Section 3.14, Transportation and Traffic
Metropolitan Water District of Southern California (MWD) August 1, 2016	Requests that the PEIR discuss MWD involvement as a responsible agency	See Chapter 2, Project Description
	Development and redevelopment associated with proposed projects must not restrict MWD's operations and/or access to MWD facilities or conflict with MWD Rights-of-Way	Comment is noted. This is not an environmental issue and not addressed in the PEIR.

Commenter/Date	Summary of Environmental Issues Raised in Comment Letter	Section where Addressed
	Determine if proposed projects would affect the water quality of MWD supplies by allowing for non-compatible land uses	See Section 3.8, Hydrology and Water Quality
	Requests that all designs and plans of proposed projects within MWD Rights-of-Way are submitted for review and written approval	Comment is noted. This is not an environmental issue and not addressed in the PEIR.
Southern California Association of Governments (SCAG) July 29, 2016	Recommends review of SCAG documentation so PEIR is consistent with SCAG 2016 RTP/SCS goals	See Section 3.11, Population and Housing
	Comment provides growth forecasts to refer to within PEIR	See Section 3.11, Population and Housing
South Coast Air Quality Management District July 12, 2016	Use the SCAQMD CEQA Air Quality Handbook for the preparation of the air quality analysis for the project	See Section 3.2, Air Quality
	Identify any potential air quality impacts during construction of the project	See Section 3.2, Air Quality
	Identify any potential air quality impacts during operation of the project	See Section 3.2, Air Quality
	Quantify criteria pollutant emissions and compare to regional and localized significance thresholds	See Section 3.2, Air Quality
	Requested a mobile source health risk assessment	See Section 3.2, Air Quality
	Include all feasible mitigation measures to reduce significant adverse air quality impacts	See Section 3.2, Air Quality
San Bernardino County, Department of Public Works July 27, 2016	The comment letter did not raise any environmental issues.	No evaluation is required.
County of Riverside Flood Control and Water Conservation District July 28, 2016	Evaluate the potential for impacts affecting the Riverside County Flood Control District and Water Conservation Districts' facilities and/or properties	See Section 3.8, Hydrology and Water Quality
	If there are impacts to District facilities, the District should be named as a Responsible Agency	See Chapter 2, Project Description
	Any work that involves District rights-of-way, easement, or facilities will require encroachment permit from the District	Comment is noted. This is not an environmental issue and not addressed in the PEIR.
	Provide copy of Draft PEIR to District	Comment is noted. This is not an environmental issue and not addressed in the PEIR. A copy of the Draft PEIR will be provided to the District.
City of Rancho Cucamonga July 28, 2016	Stated that the NOP was overly general and incomplete; requests recirculation of NOP so that the City can provide more input	IEUA disagrees with the City's request to recirculate because the NOP provided adequate information regarding the proposed program and the potential environmental effects.
City of Fontana Water Company July 29, 2016	The comment letter did not raise any environmental issues	Comment is noted. This is not an environmental issue and not addressed in the PEIR.

1.3.3 Scoping Meetings

On July 21, 2016, in accordance with CEQA Section 21083.9,[1] the City held a public scoping meeting to describe the program, identify the environmental topics that would be addressed in the PEIR, and describe the CEQA process for the PEIR. The IEUA provided an opportunity for attendees to provide written comments on the scope of the environmental evaluation; however, there were no written comments provided at the scoping meeting. There was a request that written comments be provided no later than July 29, 2016.

1.3.4 PEIR

As described above, a PEIR can be prepared on a series of related actions characterized as one large project or program (*CEQA Guidelines* Section 15168(a)). Prior to implementation, each action in the program must be evaluated to determine if additional environmental documentation is required (*CEQA Guidelines* Section 15168(c)). If the environmental effects resulting from an action are fully covered by the analysis in this PEIR and no new mitigation measures are required, then the action is within the scope of this PEIR, and no additional environmental documentation is necessary (*CEQA Guidelines* Section 15168(c)(2)). If an action would result in significant or more severe significant environmental effects or new mitigation measures not included in the PEIR then additional environmental documentation, such as a Negative Declaration or EIR, would be required (*CEQA Guidelines* Section 15168(c)(1)). The mitigation measures developed in a PEIR may be incorporated into subsequent environmental documents (*CEQA Guidelines* Section 15168(c)(3)).

This Final PEIR describes the proposed program and the existing environmental setting, identifies short-term, long-term, and cumulative environmental impacts, identifies mitigation measures for impacts found to be significant, and provides an analysis of program alternatives. Significance criteria have been developed for each environmental resource analyzed in this Final PEIR.

1.3.5 Known Areas of Controversy and Issues of Concern

Pursuant to Section 15123(b)(2) of the *CEQA Guidelines,* a lead agency is required to include areas of controversies raised by agencies and the public during the public scoping process in the EIR. Areas of controversy have not been identified for the program based on comments provided during the 30-day public review period in response to information published in the NOP. Commenting parties have identified issues of concern. These issues include traffic, hydrology, growth, and air quality.

[1] CEQA Section 21083.9 requires that a lead agency call at least one scoping meeting for a project of statewide, regional, or area-wide significance.

1.3.6 Public Review

In accordance with Section 15105 of the CEQA Guidelines, the Draft PEIR was made available for public review and comment for a 30-day review period. The Draft PEIR was circulated to federal, state, and local agencies and interested parties, to review and provide comments on its contents. Please send all comments to:

Pietro Cambiaso, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Email: Pcambias@ieua.org

1.3.7 Final PEIR Publication and Certification

Written and oral comments received on the Draft PEIR were addressed in the Response to Comments document (see Chapter 6) which, together with changes and corrections to the Draft PEIR, will constitute the Final PEIR. Following review of the Final PEIR, the IEUA will decide whether to certify the Final PEIR. If the PEIR identifies environmental impacts that are considered significant and unavoidable, the IEUA must state in writing, the reasons for certifying the PEIR in a Statement of Overriding Considerations, which will be included in the record of the program approval, and mentioned in the Notice of Determination (*CEQA Guidelines* Section 15093[c]).

1.3.8 Mitigation Monitoring and Reporting Program

CEQA Guidelines Section 21081.6(a) requires lead agencies to "adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." Throughout the PEIR, mitigation measures are clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. Any mitigation measures adopted by the IEUA will be included in a Mitigation Monitoring and Reporting Program (MMRP) to verify compliance. The MMRP will be included within the Final PEIR.

1.4 Approach to this PEIR

This PEIR evaluates impacts that could result from implementation of the proposed program as compared to existing conditions. CEQA requires that before a decision can be made to approve a project with potentially significant environmental impacts, an EIR must be prepared that fully describes the environmental impacts of the project and identifies feasible mitigation for significant impacts. The PEIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental consequences of a proposed project, to recommend mitigation measures to lessen or eliminate adverse impacts, and to examine feasible alternatives to the project. The information contained in the PEIR is reviewed and considered by the governing agency prior to the ultimate decision to approve, disapprove, or modify the proposed project.

CEQA requires that a lead agency shall neither approve nor implement a project as proposed unless the significant environmental impacts of that project have been reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the expected impact. As with the underlying environmental documents, if the lead agency approves the project despite residual significant adverse impacts that cannot be mitigated to less than significant, the agency must state the reasons for its action in writing.

Section 15093 of the *CEQA Guidelines* requires the lead agency to adopt a Statement of Overriding Considerations if the lead agency determines impacts are significant and approves the project. As required by Section 15093 of the *CEQA Guidelines*, a Statement of Overriding Considerations shall be adopted by a lead agency if the agency finds that the benefits of a project outweigh several significant, unavoidable adverse impacts and decides to approve a project even though these impacts cannot be mitigated to less than significant.

1.5 PEIR Organization

This Final PEIR is organized into the following chapters and appendices:

Executive Summary. This chapter summarizes the contents of the Final PEIR.

Chapter 1, Introduction. This chapter discusses the CEQA process and the purpose of the PEIR.

Chapter 2, Project Description. This chapter provides an overview of the proposed project, describes the need for and objectives of the proposed project, and provides detail on the characteristics of the proposed project.

Chapter 3, Environmental Setting, Impacts and Mitigation Measures. This chapter describes the environmental setting and identifies impacts of the proposed project for each of the following environmental resource areas; Aesthetics; Agriculture and Forestry Resources; Air Quality and Greenhouse Gas Emissions; Biological Resources; Cultural Resources; Geology, Soils, and Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Public Services; Recreation; Transportation and Traffic; and Utilities. Measures to mitigate the impacts of the proposed project are presented for each resource area.

Chapter 4, Other CEQA Sections. This chapter describes the effects that were found not to be significant and those that were found to be significant and unavoidable. In addition, this section discusses the significant irreversible environmental changes and growth-inducing impacts associated with the project.

Chapter 5, Alternatives. This chapter presents an overview of the alternatives development process and describes the alternatives to the proposed project that were considered.

Chapter 6, Introduction to Response to Comments. This chapter includes and introduction and CEQA and the Response to Comments process.

Chapter 7, Comment Letters. This chapter contains a list of persons, organizations, and public agencies commenting on the Draft PEIR, and the written comments received on the Draft PEIR.

Chapter 8, Response to Comments. This chapter contains each comment received on the Draft PEIR and written responses to each comment.

Chapter 9, Corrections and Additions. This chapter contains revisions made to the Draft PEIR in response to comments received or initiated by the Lead Agency.

Chapter 10, Mitigation, Monitoring and Reporting Program.

Chapter 11, Report Preparation. This chapter identifies the key staff at IEUA and the authors involved in preparing this Final PEIR.

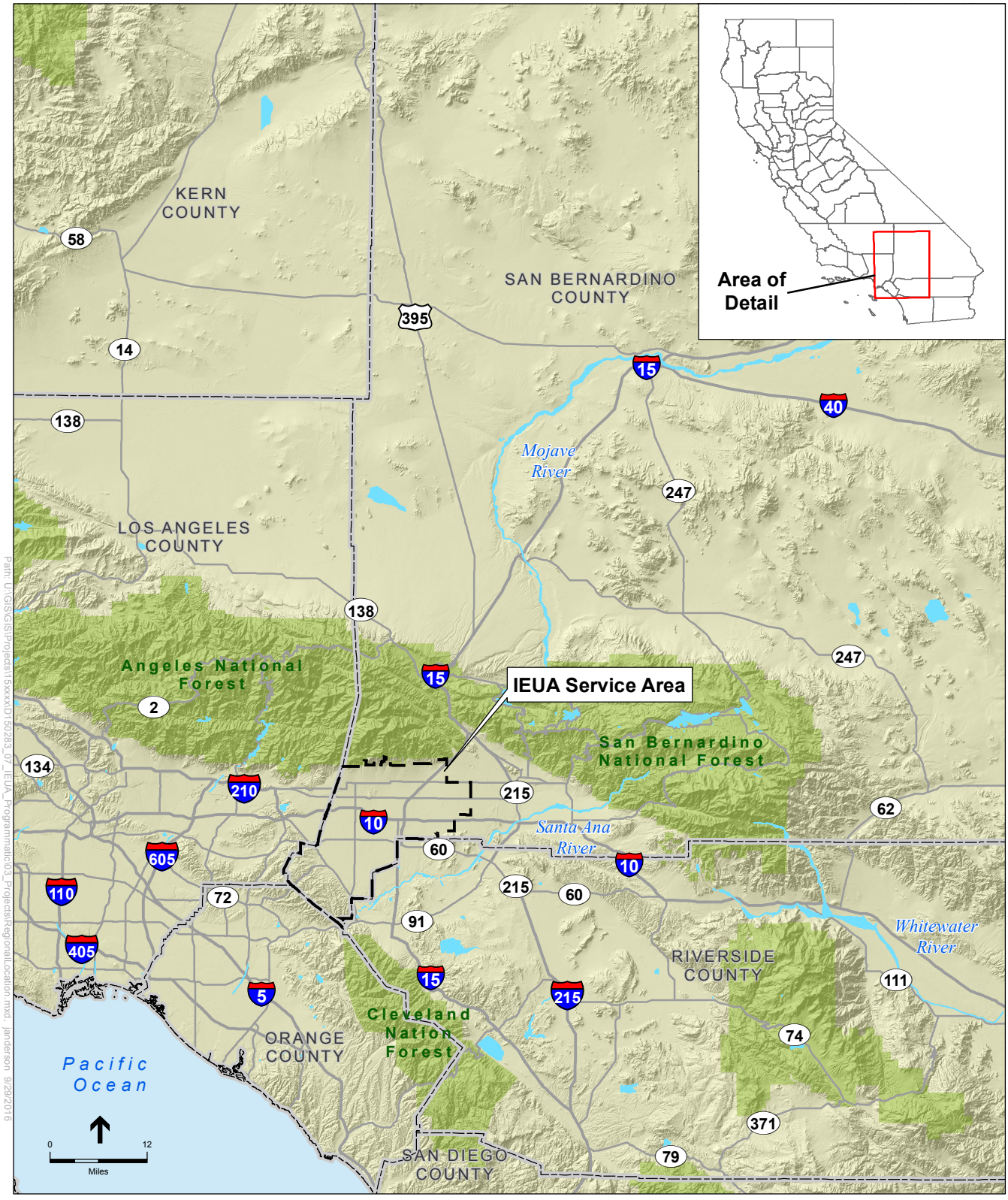
CHAPTER 2
Project Description

2.1 Introduction

Inland Empire Utilities Agency (IEUA), as the Lead Agency pursuant to CEQA, is proposing to implement a program that includes updates and new Facilities Master Plans which encompass IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan Update Report (2015), Integrated Water Resources Plan (2015) and Energy Management Plan (2015). The activities that would be implemented within these individual Facilities Master Plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area located in the Chino Basin, which in turn is located west end of San Bernardino Valley. As detailed in this project description, many of the activities that make up the Facilities Master Plans are in the concept development or planning phase. This Program Environmental Impact Report (PEIR) analysis primarily focuses on the plan level implementation, but also includes site-specific construction and operation details of individual actions. Rather, this PEIR serves as a first-tier environmental document that focuses on the overall effects of implementing the activities that make up the Facilities Master Plans (proposed program) with some site specific evaluation. As such, the information provided for each individual action is commensurate with this PEIR approach.

2.2 Project Location

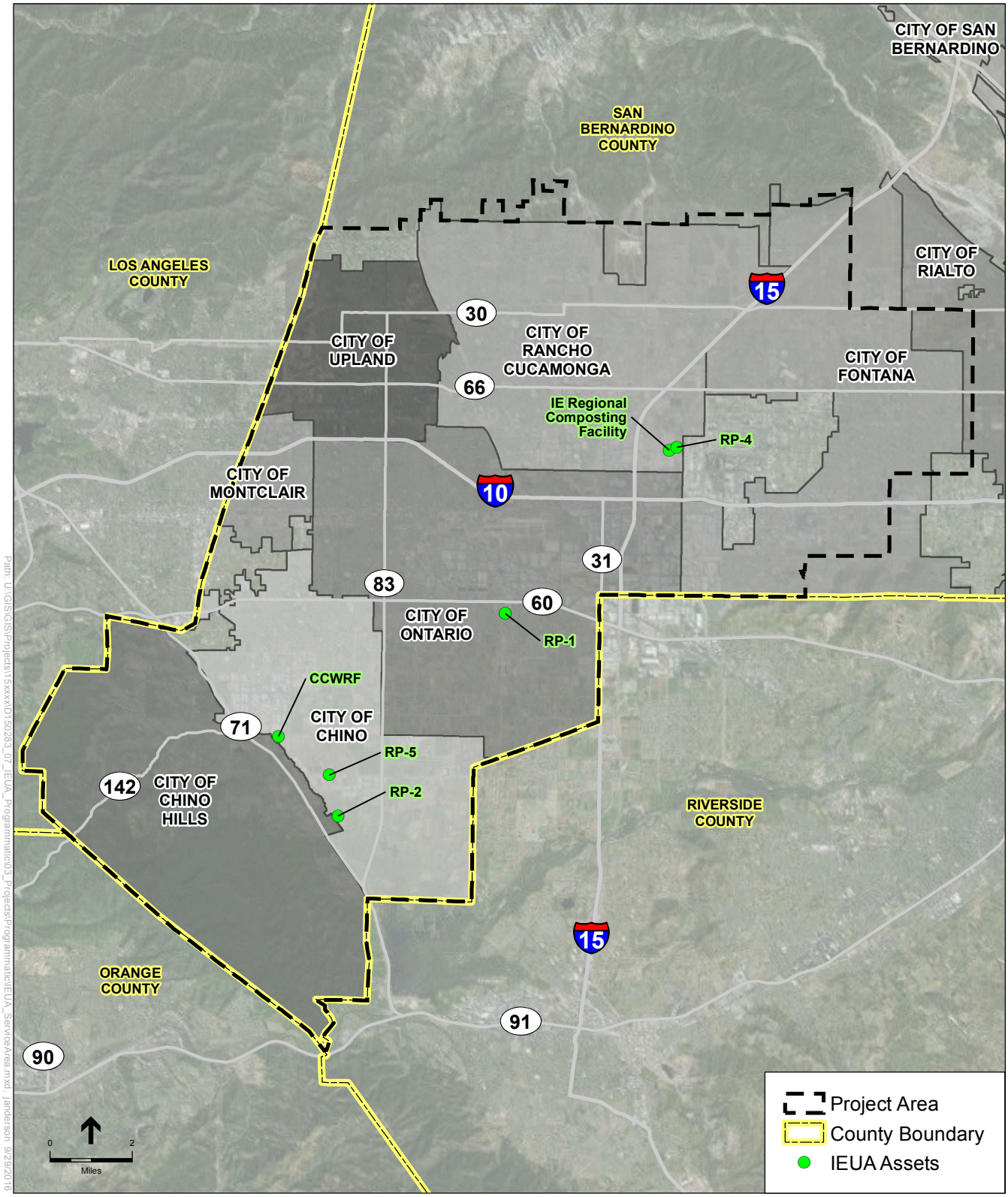
The IEUA service area is located in southern California within the west end of San Bernardino Valley; just east of Los Angeles County, northeast of Orange County, and north of Riverside County boundary lines (refer to **Figure 2-1**). Its 242-square-mile service area includes the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills; City of Rancho Cucamonga; and the unincorporated areas of San Bernardino County, including the Chino Agricultural Preserve. The service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The service area is bordered to the north by the San Gabriel Mountains; to the east by the Rialto-Colton Basin, the Jurupa Mountains and the Riverside County/San Bernardino County boundary, to the south by the Prado Flood Control Basin and to the west by the Chino Hills, Puente Hills and the Pomona and Claremont Basins. All proposed projects would be located inside the IEUA Service Area boundaries. Therefore, for purposes of this PEIR, the "project area" includes the IEUA service area as depicted in **Figure 2-2**.



SOURCE: ESRI; County of San Bernardino

IEUA Facilities Master Plan PEIR . 150283.07

Figure 2-1
Regional Location



Path: U:\GIS\GIS\Projects\150xxx\150283_07_IEUA_Programmatic\003_Projects\Programmatic\IEUA_ServiceArea.mxd, janderson 9/29/2016

SOURCE: ESRI; County of San Bernardino

IEUA Facilities Master Plan PEIR . 150283.07

Figure 2-2

IEUA Service Area

2.3 Project Objectives

The primary objectives of the proposed project are to:

- Implement a program strategy that is consistent with the mission, vision, and core values of IEUA.
- Ensure that the IEUA service area is served with adequate wastewater treatment capacity that meets regulatory requirements and recycled water objectives through service area build out.
- Ensure that IEUA produces adequate recycled water supply to meet the objectives established in the Recycled Water Program Strategy through service area build out.
- Deliver sufficient wastewater discharge to meet IEUA's downstream discharge obligations to the Santa Ana River and to sustain Prado Basin Riparian/Wetland Habitat through service area build out.
- Provide sufficient processing capacity at the Inland Empire Regional Composting Facility to meet service area biosolids management demands through service area build out.
- To the maximum extent feasible provide sustainable energy generation to minimize IEUA demand for electricity and natural gas from the Southern California Edison (SCE) and the Southern California Gas Company (SCG) grids.
- Maintain IEUA's leadership role in developing and providing new water resources and working with other stakeholders in the Chino Basin to maintain the Chino Groundwater Basin aquifer as a suitable source of potable water within its service area.
- Identify key water resource supply vulnerabilities and evaluate water supply options that could reduce these vulnerabilities and Continue to develop a robust water resource strategy that can adapt and respond to a wide range of possible futures. Refer to the Integrated Water Resources Plan (IRP) Water Supply and Climate Change Impacts 2015-2040 (Appendix J).
- Implement an organics diversion program and food waste co-digestion in support of IEUA's Member Agencies and local businesses in complying with the State's organics diversion requirements, and the Agency long term goals of peak power independence and carbon neutrality. Refer to the Energy Management Plan (EMP) (Appendix I).

2.4 Existing IEUA Regional Programs and Facilities Overview

The IEUA (Agency) is a regional wastewater treatment agency and wholesale distributor of imported water and recycled water. Today the Agency is responsible for serving approximately 830,000 people over 242 square miles in western San Bernardino County. The Agency is focused on providing three key services: (1) treating wastewater, developing recycled water, local water resources, and conservation programs to reduce the region's dependence on imported water supplies and drought-proof the service area; (2) converting biosolids and waste products into a

high-quality compost made from recycled materials; and (3) generating electrical energy from renewable sources to offset energy demand by IEUA facilities.

Industrial and municipal wastewater collections are provided through regional wastewater interceptors and two non-reclaimable wastewater pipeline systems. Recycled water is produced at four regional water recycling plants (RWRPs). In addition, the Agency has three facilities where the biosolids produced at the water recycling plants are handled: Regional Plant (RP)-1 Solids Handling Facility, RP-2 Solids Handling Facility, and the Inland Empire Regional Composting Facility (IERCF). The Agency also has a solids handling facility at RP-5, which is leased to a private enterprise that produces biogas and energy from food waste.

Although the Agency is a wholesale water provider, the Agency has very little direct infrastructure or assets related to potable water treatment, conveyance, or use. However, IEUA provides support and interacts with most of the water purveyors in its service area as outlined in the Chino Basin IRP. Water resource-related assets are primarily connected to imported water facilities and the Agency's recycled water program. In addition to recycled water and wastewater services, the Agency operates a network of groundwater recharge facilities in partnership with Chino Basin Watermaster (CBWM), San Bernardino County Flood Control District (SBCFCD), and Chino Basin Water Conservation District (CBWCD). The Agency also operates the Chino Desalter I facility in coordination with the Chino Desalter Authority. The Agency also manages an extensive regional water use efficiency program, and collaborates with Santa Ana Watershed Project Authority (SAWPA), Metropolitan Water District of Southern California (MWD), and the Regional Water Quality Control Board (RWQCB) to develop regional planning documents.

Over the past several years, IEUA, in conjunction with the Chino Basin Watermaster (CBWM), has prepared or participated in the preparation of several master plans to provide the foundation for development and expansion of future wastewater treatment, biosolids handling, and recycled water delivery to the Chino Basin and the Agency's service area. The first of these plans is the Wastewater Facilities Master Plan Update Report (WFMP), which was prepared by CH2M-Hill in association with Carollo Engineers dated March 2015. Changes in economic conditions and water use efficiency practices, discharge permit requirements, and water recycling needs necessitated the re-evaluation of the assumptions put forth in the 2002 WFMP and resulted in this update of the WFMP.

The IEUA Asset Management Plan for the Fiscal Year 2015/2016 was developed by staff members of the Agency. The Asset Management Plan addresses the Agency's need to manage their assets in order to coordinate decisions and take actions that allow the Agency to meet the business goals set in the document at the lowest lifecycle cost. Additionally, the Recycled Water Program Strategy (RWPS), which is considered a Facility Master Planning Study was prepared by Stantec for the Agency in April 2015. This document serves to update the 2005 Recycled Water Implementation Plan and the 2007 Recycled Water Three Year Business Plan. The objective of the RWPS is to update supply and demand forecasts and to help map changes for the Recycled Water Program to maximize the beneficial use of recycled water through the planning year 2035.

The 2013 Amendment to the 2010 Recharge Master Plan Update (RPMU), prepared in 2013 by Wildermuth Environmental, Inc. in September 2013, documents the investigation that was conducted pursuant to the direction of the Court and the Chino Basin Watermaster to amend its 2010 RPMU.

Finally, the IEUA 2015 Energy Management Plan of December 2015 analyzes historical energy use, defines a current energy and Greenhouse Gas emissions baseline, forecasts future demands, examines procurement strategies (including an Organics Diversion program), and proactively explores measures that can ease the Agency's load on utilities while cultivating a reliable and sustainable energy infrastructure across its facilities.

Six IEUA facility plans have now reached the stage where the Agency intends to consider these plans for final approval and implementation. The six plans collectively address the comprehensive strategy for managing IEUA's regional wastewater and recycled water distribution system in the future; the future strategy for the treatment and disposal of biosolids and manure; and reliable and sustainable energy infrastructure to support these activities. These six plans as outlined above are:

1. Wastewater Facilities Master Plan Update Report, which will be referenced in this document as the "Wastewater Facilities Master Plan" (WFMP);
2. IEUA Asset Management Plan, which will be referenced in this document as the "Asset Management Plan" (AMP);
3. Recycled Water Program Strategy, which will be referred to as the acronym RWPS;
4. 2013 Amendment to the 2010 Recharge Master Plan Update, which will be referenced in this document as the "2013 Recharge Master Plan Update" (RPMU); and
5. IEUA 2015 Energy Management Plan, which will be referenced in this document as the Energy Management Plan (EMP)
6. 2015 Integrated Water Resources Plan: which will be referenced in this document as the "Integrated Resources Plan" (IRP);

This environmental impact report (EIR) serves as a program EIR (PEIR) for the six plans listed above. A PEIR has been selected as the appropriate documentation for compliance with the California Environmental Quality Act (CEQA) based on the definition of a program document contained in Section 15168 of the State CEQA Guidelines, which states:

"A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As a logical part in the chain of contemplated actions, (3) In conjunction with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

IEUA is working from a core concept that these six plans and their associated activities are so interrelated that they merit consideration under a single PEIR. The rationale supporting this concept includes the following key concepts:

1. IEUA intends to continue to recycle as much tertiary treated wastewater (recycled water) as possible into the future through the expansion of their facilities in order to meet the demand within the Agency's service area. The main purpose of the WFMP was to address long term projection of growth and capacity needs within the service area, capacity utilization of the four Regional Water Recycling Plants (RWRPs), relocation of RP-2 solids handling facilities to RP-5, and diversion of flows to RP-1 to maximize groundwater recharge in the northern service area (NSA). Though this issue was addressed in the 2002 PEIR, the 2015 WFMP puts forth several alternatives, one of which is the preferred alternative, diverts flow from both Whispering Lakes and Haven pump stations to RP-1, which will service the NSA. Since the 2002 WFMP, wastewater strength has increased and the influent flows are projected to increase at each of the RWRPs, primarily as a result of population growth. RP-2 will be demolished as a result of the U.S. Army Corps of Engineers (USACE) decision to raise the elevation of the Prado Dam, which would cause the solids handling facilities at RP-2 to be below the 100-year floodplain. This necessitates the relocation of all RP-2 operations to RP-5, which includes relocation of the RP-2 solids handling facilities to RP-5 and relocation of the RP-2 lift station to a location above the floodplain. The Capital Improvement Project (CIP) list set forth in the 2015 WFMP will allow the Agency to meet capacity demands within the service area in the foreseeable future.
2. The IRP was compiled by stakeholder participants to evaluate the best options for ensuring reliable, cost-effective, and environmental responsible water supplies for the next 25 years (2015-2040). It takes into consideration availability of current and future water supplies and accounts for possible fluctuations in demand forecasts and climate change impacts. By generating data on future demand forecasts; available water resources, present and future; and examining and testing future supply portfolios (options), the IRP identifies the best future sustainable strategies for ensuring the region's future water needs through 2040, including a list of projects that can be implemented to achieve future potable water supplies through 2040.
3. A primary goal of the AMP is to align the Agency's financial capacity with long-term service objectives, thereby enabling the Agency to implement the projects and actions with the most beneficial/efficient overall outcome. The AMP evaluates each of the Agency's assets through the following criteria: an asset profile, a capacity profile, an asset rating, key issues, history of key assets, and potential projects. By identifying both existing and potential projects to address needed rehabilitation, replacement, and upgrades to assets, the AMP helps the Agency to predict what actions are necessary to implement in the future.
4. The RWPS updates the 2005 Recycled Water Implementation Plan and the 2007 Recycled Water Three Year Business Plan. The primary objective of the RWPS was to update supply and demand forecasts and to help map changes for the Recycled Water

Program (RW Program) to maximize the beneficial use of recycled water throughout the year. The RWPS discusses the growing need for groundwater recharge of recycled water supply throughout the year and proposes a number of projects through Year 2035 that address the improvements necessary to achieve the goal of maximizing the beneficial use of recycled water. A majority of recommended projects focus on either increasing the ability to deliver reuse supply to groundwater recharge, or relieving capacity constraints in order to meet the demand.

5. The Amendment to the RMPU discusses how groundwater levels have changed since the OBMP was approved in 2000 and how the groundwater levels are projected to change in the future. In order to ensure that the Agency maintains sustainable groundwater production, the RMPU proposes that the Agency adopt a number of yield enhancement and production sustainability projects. These projects are vital to ensuring that the groundwater level does not fall below the sustainability metric, which would cause the agency to either lower their pumping equipment or reduce production.
6. The EMP addresses the need to meet both water and energy demands in the Agency's region in a reliable and environmentally responsible manner, which has proven a challenge for many water agencies. The Agency developed the EMP to focus on resource optimization and sustainable operations through a variety of site-specific energy projects designed to meet the anticipated seasonal demands at each IEUA facility. The energy demands within the Agency's service area can be met through improved sustainable energy projects, which ultimately enhance the water-energy relationship.
7. Although not one of the plans that are being evaluated in this document, IEUA has developed a conceptual "Salinity Management" program. IEUA staff has developed a Salinity Impact spreadsheet to evaluate the effect on the salinity of groundwater and recycled water from the implementation of the many Agency projects in its current planning documents. These documents include the Ten Year Capital Improvement Plan, Recharge Master Plan Update, Recycled Water Program Strategy, and the Phase 1 Integrated Resources Plan. Within these documents, IEUA has identified over 300 potential projects to improve water conservation, water infrastructure, delivery capacity, and available supply within the IEUA service area. These projects once operational will have an aggregate impact on the salinity of the groundwater basin, recycled water supplies, and discharges to the Santa Ana River. The evaluation only includes the relative impacts from the planned project and does not include impacts from other activities in the Chino Basin.

Projects identified from the Agency planning documents have been catalogued in the Salinity Impact spreadsheet by the project's source document, year of implementation, annual supply or demand, the water source, and the total dissolved solids (TDS) of that water source. The end destination of a project's water (groundwater or recycled) is also catalogued. A project's source water TDS and annual volumes allowed for an estimate of the net change in tons of salt per year to be calculated for that project's end destination. Projects that do not impact groundwater or source water are included on the project list but are not included in the salinity impact evaluation.

Based on project implementation year and the input or removal of tons of salt, a time-series of salinity change is estimated for all project to each end destination (groundwater or recycled water). The evaluation spreadsheet allows for modification of the year or implementation and source volume to estimate how these changes would impact salinity to better achieve a desired salinity impact. The spreadsheet also allows each project be removed from the project list used in the evaluation.

IEUA is in the unique position to integrate the management of these various plans within the Chino Basin and derive important benefits by cooperating with various other water and waste management agencies in the Basin.

Each of the Master Plans has a planning period in which the potential projects and improvements are projected to be implemented.

This planning period also includes certain triggers that will occur at some estimated point in the future that will require a project to be implemented. The WFMP measures capacities within its wastewater treatment plants as measured in 2015 as the current year; the planning horizon year as 2035, and the buildout year as 2060. The capital improvement project necessary to meet projected capacity are proposed within the planning year 2035 of the document, while the buildout year anticipates flows exceeding capacity further into the future with a few projects proposed to accommodate projected flows.

The AMP measures the lifecycle cost of each Asset owned by the Agency; this requires the Agency to look at routine maintenance costs, minor rehab and repairs, immediate rehab and repairs, major rehabs, and finally asset decommissioning. Thus, the AMP looks at the lifecycle of each Agency Asset and proposed projects that may be implemented from 10 to 50 years into the future. The main planning year for the AMP, therefore, is a 10-year projection to the year 2025 for proposed projects; however, the potential projects addressed for each asset's treatment process/pressure zone may extend beyond this planning period into the 10 to 50 year range.

The planning period of the RWPS begins with the existing year as 2015 and extends through 2035, with a focus on the first ten years, through 2025. The strategy used in the RWPS analyzes and plans in 5-year increments to 2035, which includes identifying the proposed basins to be connected to the recycled water system, when they will be connected, and a mass balance of demands and basin flows versus recycled water supply projection.

The IRP examines the water supply management actions required to deliver a sustainable water supply through the year 2040. Some of these management actions overlap other plans (RWPS), but others are distinct actions (for example implementing outdoor water use efficiency standards) that must be carried out by local jurisdictions, such as cities or local water purveyors.

The 2013 ~~Amendment to the 2010~~ RMPU projects groundwater elevation through data collected in 2010, through the planning year 2030 in order to anticipate what projects will be necessary to maintain a sustainable system. The RMPU also analyzes current and future groundwater production from 2010 to 2035 in 5-year increments, creating scenarios for projected groundwater

production within these planning years. Finally, the implementation plan for the yield enhancement and production sustainability projects proposed in the RMPU outlines the necessary steps to complete before any propose project is implemented; the planning years for this implementation plan follow year 1 - 2014 to year 5 and 6 – 2018 and 2019, in which the recommended projects will be completed over this final 2-year period.

The EMP plans from the 2013/2014 fiscal year to the 2033/2034 fiscal year (a 20-year period) through forecasts on the demand due to the Agency's various demands on utilities/energy. The EMP presents a number of potential new projects for each facility to be considered for implementation, however the timing for the implementation of each project is dependent on available resources, facility load, and cost effectiveness. Thus, each potential project requires a set of circumstances to trigger its implementation, and therefore the EMP potential projects have no specific planning period within which to be considered.

What follows are descriptions of the components that make up the facilities and programs of which the Agency is in control including: regional wastewater facilities; recycled water distribution system; groundwater recharge basins; and the inland empire regional composting facility.

2.4.1 Regional Wastewater Facilities

The Agency has four RWRPs which produce recycled water that meets Title 22 standards for indirect reuse and groundwater recharge. All of the RWRPs have primary, secondary, and tertiary treatment and recycled water pumping facilities and are interconnected in a regional network. Agency staff routinely uses the Agency's bypass and diversion facilities, such as the San Bernardino Lift Station, Montclair Diversion Structure, Etiwanda Trunk Line, and Carbon Canyon bypass, to optimize the Agency's flows and capacity utilization. In general, flows are routed between regional plants in order to maximize recycled water deliveries while minimizing overall pumping and treatment costs.

Regional facilities are: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5), and Carbon Canyon Water Recycling Facility (CCWRF). The biosolids produced at RP-4 and RP-1 are thickened, digested, and dewatered at solids handling facilities located at RP-1. Similarly, the CCWRF and RP-5 biosolids are treated at Regional Water Recycling Plant No. 2 (RP-2). The stabilized and dewatered solids are then transported to the Inland Empire Regional Composting Facility (IERCF) for processing into soil amendment.

The Agency has a network of regional interceptor sewers that can be used to bypass flow from one RWRP to another to balance and optimize the use of treatment capacity. Currently, the regional interceptors can bypass flow from RP-4 to RP-1 and from CCWRF to RP-5. In addition, primary effluent can be bypassed from the RP-1 equalization basins to RP-5. The Agency also has four wastewater lift stations, which are used to shift flows that would naturally flow from one portion of the service area to a different treatment plant. The lift stations are instrumental in

balancing flows and keeping water in the northern portion of the service area to maximize potential recycled water use.

IEUA is also planning for projects that divert dry weather flow from concrete-lined flood control channels into its sewage collection system. Indirectly, this will increase the volume of wastewater treated at IEUA Regional Plants, thus generating additional water that can be recharged into the Chino Basin at the various recharge basins. Dry weather is essentially water originating as street runoff from over irrigation or other uncollected water uses that have entered flood control channels at time when rainwater runoff from the streets would not otherwise exist in these channels. The diverted water would provide a benefit in San Bernardino County (SBC) by enhancing control of bacteria in the Basin to meet the Total Maximum Daily Load (TMDL) in creeks. It would also benefit IEUA in providing a supplemental water source for conversion to recycled water at its treatment plants during peak recycled water demand months (April through October).

IEUA is also embarking on another program that will increase the volume of sewage conveyed in its sewage collection system and delivered to its regional plants. Although in its preliminary planning stages, IEUA plans to initiate a program to convert residual areas that remain on septic systems within its service area by sewering these areas. This program has two objectives. First, it will reduce the nitrate loading to the groundwater in the vicinity of the areas that remain on septic tanks. Second, some unquantifiable increment of sewage in the septic tanks does not reach the groundwater table (particularly in areas where the groundwater table is at substantial depth beneath the septic system, instead wetting the vadose zone or evaporating due to proximity of the ground surface above the system) and by connecting the wastewater to the regional collection/treatment system, the volume of treated effluent will be increased and can be used for recycled water or to maintain surface discharges from the regional plants.

Using calibrated unit flow factors (flow per person per day, data already available from the Integrated Resources Plan), IEUA and its consultants will develop estimates of existing and future wastewater flows from areas that contain a sufficient number of septic systems to justify installation of the necessary infrastructure (collection system, trunk system and pump stations). The objective will be to identify areas to be converted from septic systems to sewers. Septic system conversion projects will be ranked based on a number of factors, including number of systems to be replaced, accessibility to existing sewer infrastructure, and a logical expansion of the collection systems

2.4.2 Recycled Water Distribution System

The Agency has been serving recycled water to its member agencies since formation of the Regional Sewerage Service Contract in 1973. Initially, recycled water was delivered to Whispering Lakes Golf Course and Westwind Park in the city of Ontario, as well as to Prado Regional Park and El Prado Golf Course in San Bernardino County. In the early 1990's, the Agency planned and built the first phase of the Carbon Canyon Recycled Water Project, which now serves customers in Chino and Chino Hills. The connected demand for the recycled water

has more than tripled since FY 2006/07 from 13,000 AFY to over 43,800 AFY. Recycled water and groundwater recharge sales have nearly tripled as well.

2.4.3 Groundwater Recharge Basins

The Agency, in conjunction with the CBWM is implementing the groundwater recharge program to increase artificial groundwater recharge within Chino Basin using stormwater, recycled water, and imported water. By enhancing the recharge capacity in the Chino Basin, greater quantities of high quality water can be captured and stored during wet years and through dry-weather years. Subsequently, the stored water can be drawn from the Basin during droughts and shortages of imported water. Annual recharge varies due to weather patterns and the availability of imported water and recycled water supplies.

2.4.4 Inland Empire Regional Composting Facility

The IERCF, constructed in Rancho Cucamonga in 2007 under a Joint Powers Authority agreement between the Agency and the County Sanitation Districts of Los Angeles County (CSDLAC), is completely enclosed to control odors and meet stringent air quality regulations. It is the nation's largest indoor biosolids composting facility. The IERCF uses the Aerated Static Pile composting process to recycle approximately 150,000 wet tons per year of dewatered and stabilized biosolids from the Agency and CSDLAC's wastewater treatment processes, as well as wood waste from local communities. The facility is currently operating at its design capacity, receiving nearly 600 tons per day of combined biosolids and recycled waste amendments and producing over 230,000 cubic yards of high quality compost each year for local landscaping and horticultural use. For energy management purposes, RP-4 and IERCF are considered to be a single entity, as they share the same electrical meter.

2.5 Proposed Project

The proposed project consists of six interrelated facility master plans that identify future facility requirements and future operational scenarios based on the best forecasts available at this time. An electronic copy of each master plan is provided in the Appendices, and these master plans will be referenced throughout this section of the project description. This section provides a detailed summary of the proposed future facilities; the timing of facility implementation; and the anticipated future operations, based on forecasts of future population growth within the IEUA service area. The potential future facilities are outlined in Appendix B of this Final PEIR. These potential facilities are separated into three project categories: (1) Project Category 1: Treatment Facility Upgrades, (2) Project Category 2: Conveyance Systems and Ancillary Facilities, and (3) Project Category 3: Groundwater Recharge and Extraction. Below are descriptions of the facilities and operations proposed in the Wastewater Facilities Master Plan Update (WFMP Update). These facilities are located within Project Category 1.

2.5.1 Regional Plant No. 1

The issues addressed in the RP-1 Technical Memorandum include the following: alternatives for improving RP-1 flow equalization (balancing flows between different wastewater reclamation plants); identifies future RP-1 plant ~~expansion~~ rehabilitation projects within the 20-year planning period (2035); and identifies future influent flow and loading projections. The tertiary effluent from RP-1 is currently regulated by the Santa Ana Regional Water Quality Control Board under Order No. R8-2015-0036. Effluent quality standards (**Table 2-1**) require tertiary treatment with filters and disinfection equivalent to Title 22 requirements for recycled water, due to the use of the receiving water for recreation. Effluent from RP-1 is used as recycled water for irrigation and groundwater recharge via spreading in 13 recharge basin sites. Recycled water from RP-1 is discharged to these basins overlying the Chino North "Max Benefit" Groundwater Management Zone.

TABLE 2-1
SUMMARY OF EFFLUENT QUALITY LIMITS

	Weekly Average	Monthly Average	Annual Average	Daily Maximum	Instantaneous Maximum
BOD	30 mg/L[b]	20 mg/L[b]	-	-	-
TSS	30 mg/L[b]	20 mg/L[b]	-	-	-
NH_4-N	-	4.5 mg/L[b]	-	-	-
Chlorine Residual	-	-	-	-	30 mg/L[b]
TIN	-	-	8 mg/L[b]	-	-
TDS[c]	-	-	550 mg/L[b]	-	-
pH	-	-	-	6.5 to 8.5	-
Turbidity[d]	24-hr Average 2 NPU	-	-	24-hr 5% Max 5 NTU	10 NTU
Coliform	7-day Median 2.2 MPN	30-day Max 23 MPN	-	-	240 MPN

[a] RWQCB Order No. R8-2015-0036
[b] Without 20:1 dilution in the receiving water and for recycled water. BOD and TSS limits increased to 45 mg/L average weekly and 30 mg/L average monthly with 20:1 dilution. Chorine residual limits increased to 2.1 mg/L instantaneous maximum with dilution.
[c] Shall not exceed 12-month running average TDS concentration in water supply by more than 250 mg/L.
[d] When treated through natural undisturbed soils or a bed of filter media.

TIN—Total inorganic nitrogen; TDS—Total dissolved solids; NTU—nephelometric turbidity unit(s); MPN—Most probably number

The capacity of the existing RP-1 system was evaluated in the technical memorandum using a model that focused on operations and performance, solids yields and water quality data. Facility reliability and redundancy considerations were based on IEUA's overall wastewater treatment system with RP-5 being the end-of-the-line facility receiving all flow diversions, if needed. The overall liquid treatment capacity was determined by its most limiting process capacity. **Table 2-2** provided below identifies the RP-1 Existing Process Capacity Summary. For RP-1 the secondary treatment capacity is limited to 32 million gallons per day (MGD) with all units in service, with primary flow equalization, for an effluent Total Nitrogen (TIN) of 8 milligrams per liter (mg/L)

assuming the mixed liquor return system is installed and dewatering recycles go to the NRW system or are treated separately. Therefore, the RP-1 liquid treatment capacity is 32 MGD. This is less than the rated capacity of 44 MGD, which was based on completion of treatment Train D not yet constructed, as well as the wastewater strength and permit requirements at the time.

TABLE 2-2
RP-1 EXISTING PROCESS CAPACITY SUMMARY

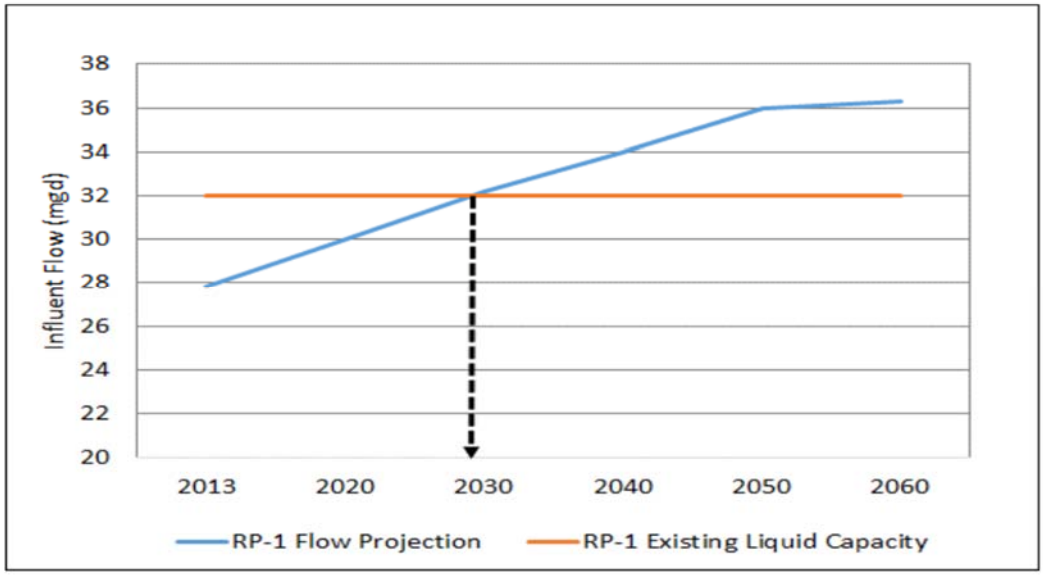
	Process Capacity (MGD)[a,b,c]
Primary / Secondary Treatment	32
Filtration	43.8
Disinfection	49.8
Overall Liquid Treatment Capacity	**32**
PS Thickening	43.3
WAS Thickening	54
Digestion	38
Dewatering	54
Overall Solids Handling Capacity	**38**

[a] Secondary process capacity based on all units in service, with redundancy provided at RP-5. Plant effluent TIN < 8 mg/L. Assumes internal mixed liquor return is in place and SVI is 150 milliliters per gram or better.
[b] Filtration capacity based on two filter cells out of service. Disinfection capacity based on all units in service.
[c] Solids handling capacities based on largest unit out of service. PS thickening is achieved using one gravity thickener, with redundancy provided by primary clarifiers. Values represent equivalent plant influent capacity and include RP-4 solids diverted to RP-1. Dewatering recycles were considered to be handled separately or treated onsite, not adding to the main plant nutrient loads.

PS – primary sludge.

In evaluating the solids handling system capacity, operational considerations as well as Part 503 Rule requirements were taken into account when considering the average and maximum month loading. The results of this analysis indicate digestion is the limiting unit process of the solids handling system. Currently, the digestion capacity is limited to 38 MGD under these criteria, however greater digestion capacity may be realized with improved digester feed thickening or if IEUA targets a different biosolids classification since IEUA biosolids are composted at IERCF. Refer to Table 2-1 for an evaluation of the existing solids handling system.

Based on the identified capacities presented in Table 2-2 and project influent wastewater flows presented in **Figure 2-3**, the influent flows are projected to exceed the RP-1 liquid treatment capacity by 2030. In addition the current influent flows exceed the RP-1 digestion capacity. However, this limited digestion capacity is based assumptions listed above and on producing Class B biosolids. Additional digestion capacity will be needed in the future to produce Class B biosolids and these additional facilities are identified below.



IEUA Facilities Master Plan / 150283.07

SOURCE: Tom Dodson and Associates, 2016

Figure 2-3
RP-1 Influent Flow Projected to Exceed Liquid Treatment Capacity

2.5.1.1 Recommended Flow Equalization Alternative

As part of the capacity and site planning for RP-1, primary flow equalization was evaluated for the project future RP-1 influent flows. The facility currently has three flow management lagoons for flow management of primary and secondary effluent. Three alternatives were evaluated and Alternative 3 (Eliminate primary effluent equalization by adding planned aeration basin improvements and secondary clarifiers, and converting the lagoons for other uses) was selected because it offers a sustainable and cost-effective approach that significantly eliminates plant odors from primary effluent storage and pumping, and frees up the existing lagoons for other flow management needs, such as emergency primary effluent storage, secondary effluent equalization, or recycled water storage.

2.5.1.2 Plant ~~Expansion~~ Rehabilitation Needs

In addition to the flow equalization improvements described above, additional liquid treatment facilities and solids handling facilities will be needed to accommodate project influent flows and loads at RP-1. These include construction of Train D for secondary treatment, new secondary clarifiers, and new digesters. **Table 2-3** summarizes ~~expansion~~ rehabilitation requirements for RP-1 and **Figure 2-4** shows these new facilities at RP-1. Based on the analysis in this section, three plant ~~expansion~~ rehabilitation projects have been identified for inclusion in the 20-year CIP: the RP-1 Primary Effluent Equalization Project; the RP-1 Liquid Treatment Expansion Project; and the RP-1 Solids Treatment ~~Expansion~~ Rehabilitation Project.

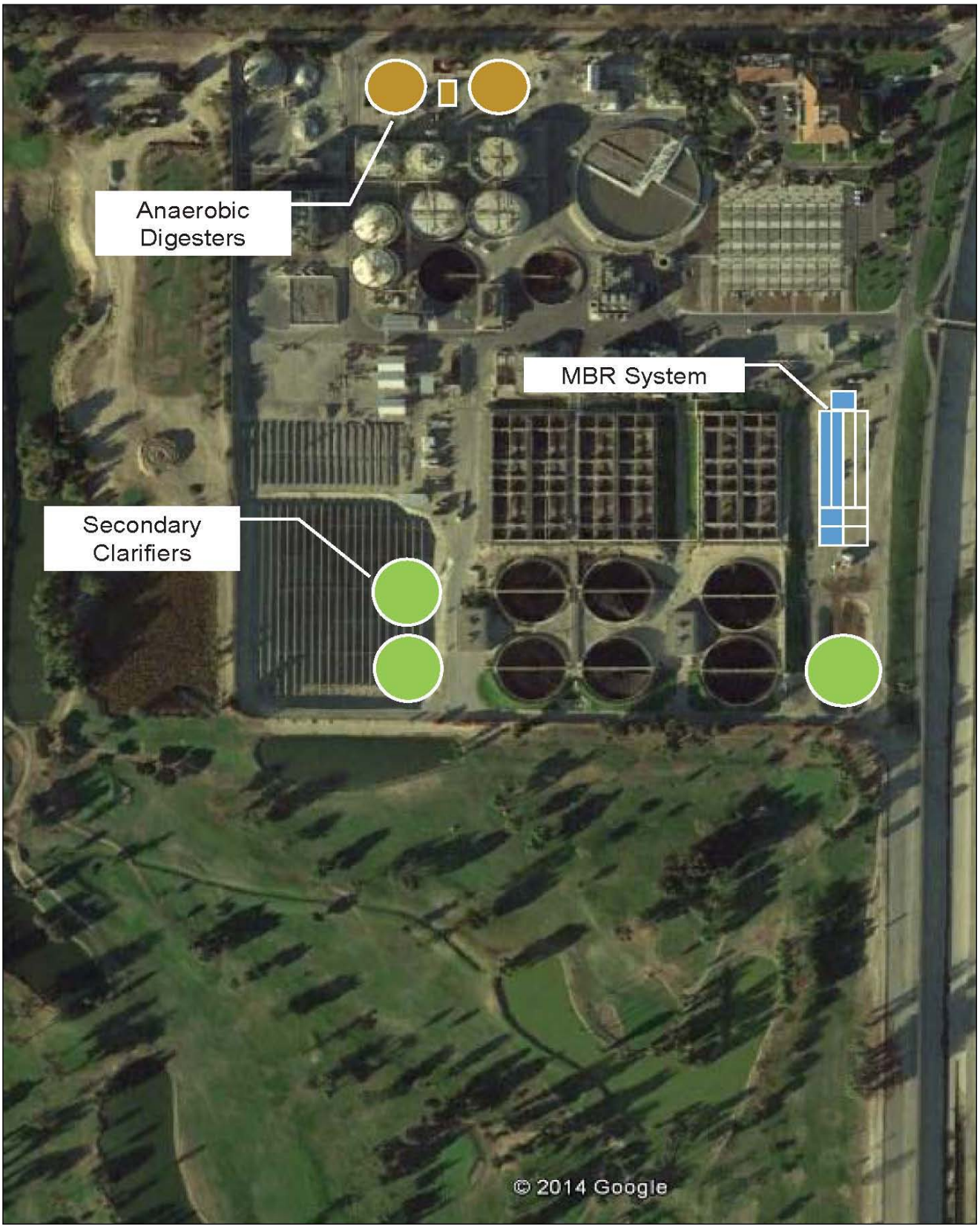
TABLE 2-3
RP-1 FACILITY ~~EXPANSION~~ REHABILITATION REQUIREMENTS FOR PLANNING YEAR 2035

Parameter	Size of New Units	Comments
Primary Clarifiers		No new units are needed.
Train D Secondary Treatment (MBR)	1 module (8 mg/L TIN)	Includes fine screening for the MBR system feed, MBR equipment includes permeate blowers and pumps.
Train D MBR Bioreactor	1 module 130-foot x 60-foot x 18-foot	Two trains per module
Train D Membrane Tank	1 module 30-foot x 60-foot x 10-foot	Three trains per module.
Trains A, B, C New Secondary Clarifiers (PE EQ Elimination)	2 x 120-foot (Trains A and B) 1 x 130-foot (Train C)	Flow splitting structure for each of the trains, new RAS/WAS piping and pumping
Anaerobic Digesters	2 digesters 110-foot diameter 30-foot sidewater depth	New digesters with complete sludge transfer and recirculation, mixing and heating, and pumping equipment.
Flow Management Lagoons	2 digesters	Modifications to piping and pumping systems.
PE – primary effluent // EQ – equalization // RAS – return activated sludge // WAS – waste activated sludge	-	

Appendix B contains a table outlining all potential projects from each of the six Management Plans that would occur at RP-1.

2.5.2 Regional Plant No. 4

Due to incorporation of septic flows into the IEUA sewer system in the future, RP-4 plant influent flows and loads are projected to increase substantially by 2035. Although the existing primary and secondary treatment processes at RP-4 have sufficient capacity to treat project flows and loads through the planning horizon of 2035, the tertiary process will need to be expanded. Additional filtration and disinfection units will be needed by 2035 to handle the increased flows and loads. The flow and loading projections and effluent requirements were used to evaluate the existing capacities of the RP-4 liquid treatment facilities. The estimated capacities were compared to the project flow and loads to determine the RP-4 processes that require expansion by planning year 2035. The tertiary effluent from RP-4 is regulated by the Santa Ana Regional Water Quality Control Board under Order No. R8-2015-0036. Effluent quality standards (refer to Table 3.5-5 of the WFMP Update) require tertiary treatment with filters and disinfection equivalent to Title 22 requirements for recycled water, due to the use of the receiving water for recreation. Effluent from RP-4 is used as recycled water for irrigation and groundwater recharge via spreading in 13 recharge basin sites. Recycled water from RP-4 is discharged to these basins overlying the Chino North "Max Benefit" Groundwater Management Zone.



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SOURCE: IEUA, Recharge Master Plan Update, 2013

Figure 2-4

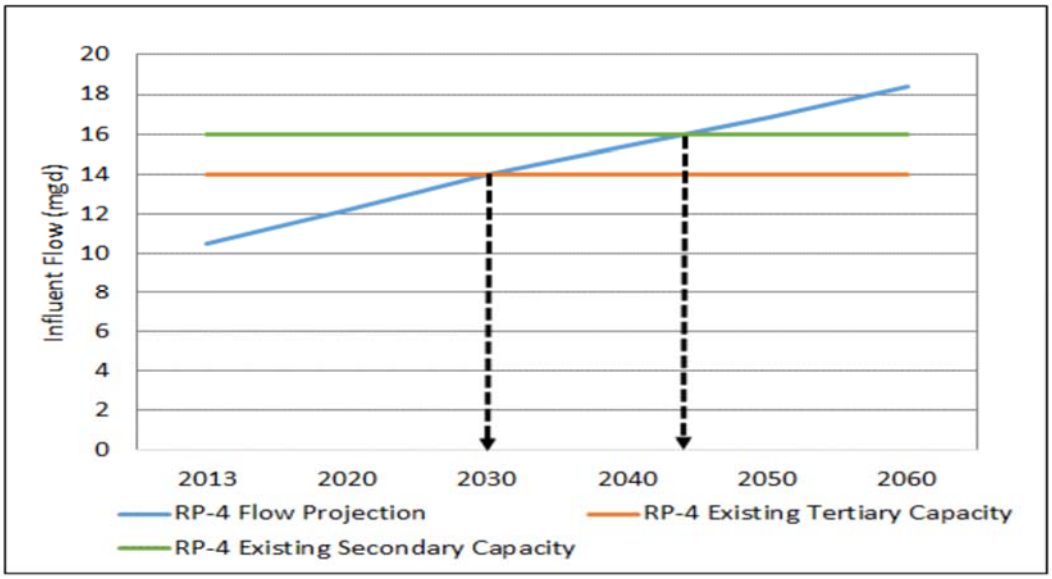
RP-1 Facilities Site Plan, Planning Year 2035

The capacity of the existing RP-4 system was evaluated in the technical memorandum using a model that focused on operations and performance, solids yields and water quality data. Facility reliability and redundancy considerations were based on IEUA's overall wastewater treatment system with RP-5 being the end-of-the-line facility receiving all flow diversions, if needed, from other RWRPs. The tertiary treatment process capacity was determined to be RP-4's most limiting process capacity. **Table 2-4** provided below identifies the RP-4 Existing Liquid Treatment Capacity Summary. Therefore, the RP-4 current liquid treatment capacity is 14 MGD. Influent flows are projected to exceed the RP-4 tertiary treatment capacity and secondary treatment capacity by 2030 and 2044, respectively. This is shown on **Figure 2-5**, which illustrates when these capacities will be exceeded based on the future influent forecast.

TABLE 2-4
RP-4 EXISTING LIQUID TREATMENT CAPACITY

	Process Capacity (MGD)[a,b]
Primary / Secondary Treatment	16
Filtration	14.1
Disinfection	14.2
Overall Liquid Treatment Capacity	**14**

[a] Secondary process capacity based on all units in service, with redundancy provided at RP-5. Plant effluent TIN ≤ 8 mg/L.
[b] Filtration capacity based on one dual-media filter cell in backwash and one cloth filter out of service. Disinfection capacity based on all units in service.



IEUA Facilities Master Plan / 150283.07

SOURCE: Tom Dodson and Associates, 2016

Figure 2-5
RP-4 Influent Flow Projected to Exceed Secondary and Tertiary Treatment Capacity

2.5.2.1 Plant Expansion Needs

Due to incorporation of septic flows into the IEUA sewer system in the future, RP-4 plant influent flows and loads are project to increase substantially by 2035. Although the existing primary and secondary treatment processes at RP-4 have sufficient capacity to treat project flows and loads through the planning horizon of 2035, the tertiary process will need to be expanded. Additional filtration and disinfection units will be needed by 2035 to handle the increased flows and loads. **Table 2-5** summarizes expansion requirements for RP-4, and **Figure 2-6** shows these new facilities at RP-4. Based on the analysis in this section, one plant expansion project (containing two new facilities) has been identified for inclusion in the 20-year CIP: the RP-4 Tertiary Expansion Project.

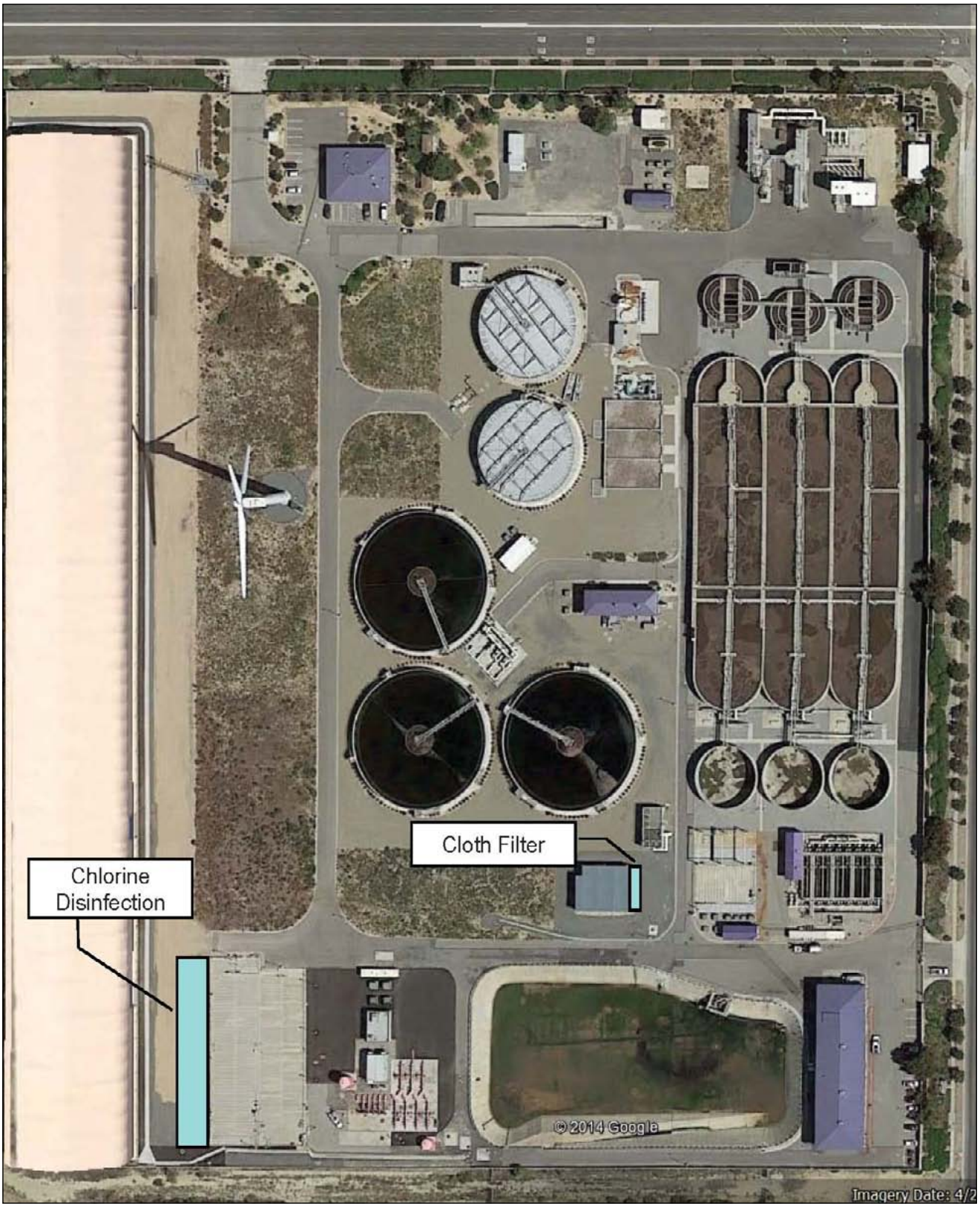
TABLE 2-5
RP-4 FACILITY EXPANSION REQUIREMENTS FOR PLANNING YEAR 2035

Parameter	Size of New Units	Comments
Primary Clarifiers	-	No new units are needed.
Secondary Treatment	-	No new units are needed.
Tertiary Filters	1 Cloth Filter	Same size as existing cloth filters, with 12 discs per filter.
Disinfection	1 Train	Same size as existing Chlorine Contact Tank No. 2 train, with 3 passes or channels per train.

Appendix B contains a table outlining all potential projects from each of the six Management Plans that would occur at RP-4.

2.5.3 Regional Plant No. 5 and RP-2 Complex Future Plans

The issues addressed in this section include potential locations for the RP-2 solids facilities at RP-5 and the RP-5 plant expansion projects within the 20-year planning period. The tertiary effluent from RP-5 is regulated by the Santa Ana Regional Water Quality Control Board under Order No. R8-2015-0036. Effluent quality standards (refer to Table 2-1 above) require tertiary treatment with filters and disinfection equivalent to Title 22 requirements for recycled water, due to the use of the receiving water for recreation. Effluent from RP-5 is used as recycled water for irrigation in the area overlying the Chino North “Max Benefit” Groundwater Management Zone.



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SOURCE: IEUA, Recharge Master Plan Update, 2013

Figure 2-6

RP-4 Facilities Site Plan, Planning Year 2035

The capacity of the existing RP-5 system was evaluated in the technical memorandum using a model that focused on operations and performance, solids yields and water quality data. Facility reliability and redundancy considerations were based on IEUA's overall wastewater treatment system with RP-5 being the end-of-the-line facility receiving all flow diversions, if needed. Thus, the RP-5 capacity evaluation was based on taking the largest unit out of service. **Table 2-6** provided below identifies the R-5 Existing Process Capacity Summary. For RP-5 all of the onsite treatment systems are equally limited to about 16.3 MGD. The primary/secondary treatment capacity is 15 MGD with one unit out of service, plus 1.3 MGD of return flows from the RP-2 Lift Station. Therefore, the RP-5 plant capacity is approximately 15 MGD plus 1.3 MGD of return flows, which is consistent with the permitted capacity of 15 MGD previously established during design.

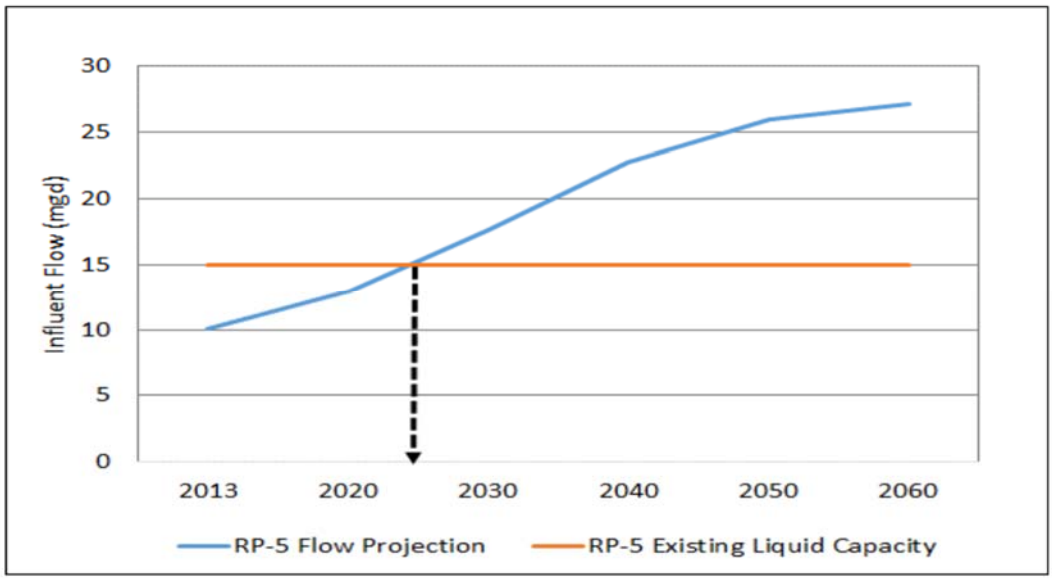
In evaluating the solids handling system capacity, operational considerations as well as Part 503 Rule requirements were taken into account when considering the average and maximum month loading. The results of this analysis indicate digestion is the limiting unit process of the solids handling system at 18 MGD. Refer to Table 2-6 for an evaluation of the existing solids handling system.

Based on the identified capacities presented in Table 2-6 and project influent wastewater flows presented in Table 4 of the Technical Memorandum, the influent flows are projected to exceed the RP-5 liquid treatment capacity by 2025, as shown on **Figure 2-7**. In addition the current influent flows exceed the RP-5/RP-2 digestion capacity. However, this limited digestion capacity is based assumptions listed above and on producing Class B biosolids. Additional digestion capacity will be needed in the future to produce Class B biosolids and these additional facilities are identified below.

TABLE 2-6
RP-5 EXISTING LIQUID TREATMENT CAPACITY

	Process Capacity (MGD)[a,b,c]
Primary / Secondary Treatment	15 (+1.3 from RP-2 LS)
Filtration	16.5
Disinfection	16.3
Overall Liquid Treatment Capacity	15 (+1.3 from RP-2 LS)
PS Thickening	30.3
WAS Thickening	30.3
Digestion	18
Dewatering	34.8
Overall Solids Handling Capacity	18

[a] Secondary process capacity based on one secondary clarifier and one aeration basin out of service. Includes recycled solids.
[b] Filtration capacity based on one filter out of service. Disinfection capacity based on all units in service.
[c] Solids handling capacities based on largest unit out of service in each process.



IEUA Facilities Master Plan / 150283.07

SOURCE: Tom Dodson and Associates, 2016

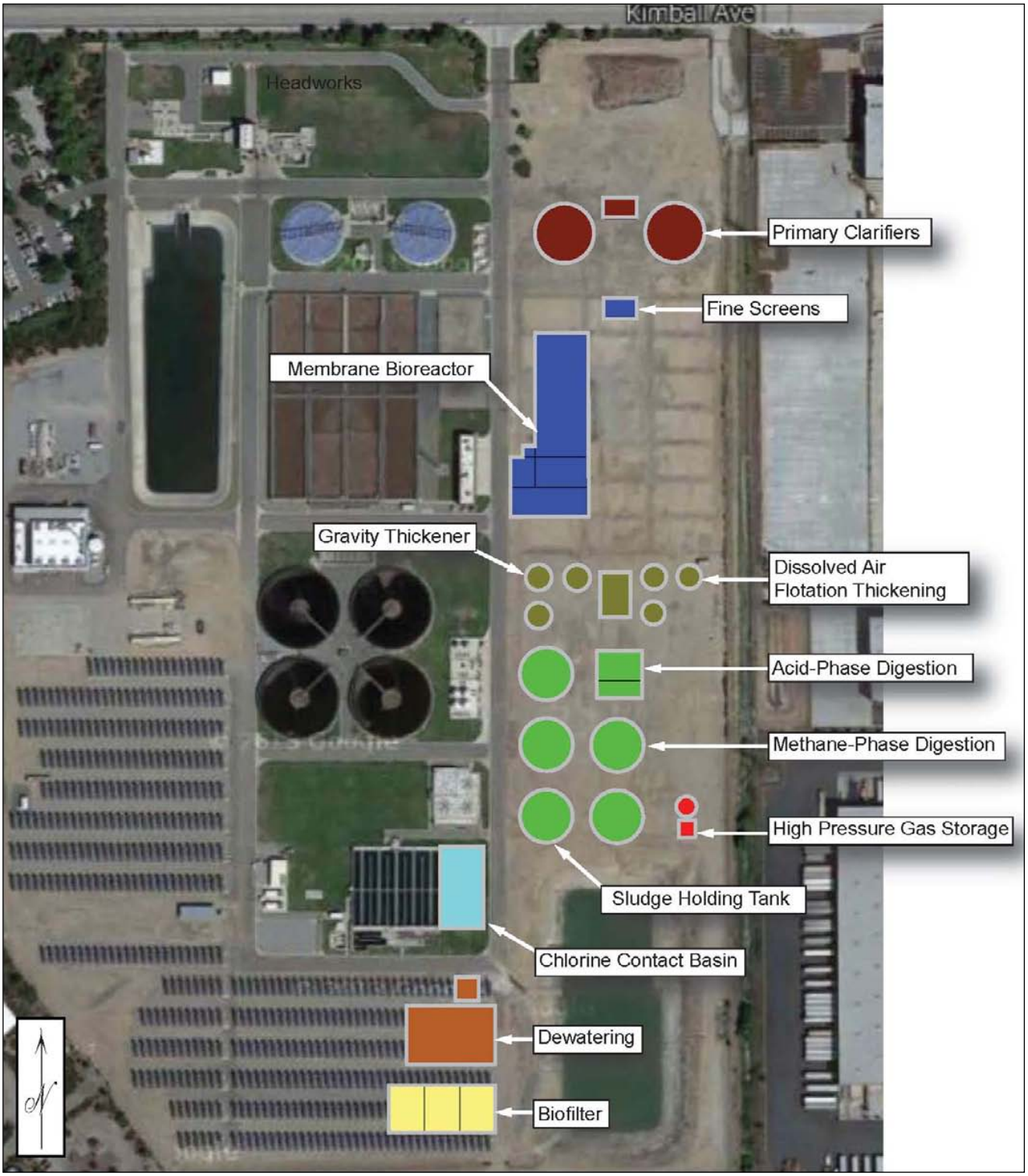
Figure 2-7
RP-4 Influent Flow Projected to Exceed
Secondary and Tertiary Treatment Capacity

2.5.3.1 RP-2 Solids Handling Facilities Relocation Alternatives

As previously noted due to the U.S. Army Corps of Engineers (USACE) decision to raise the elevation of Prado Dam, the RP-2 solids handling facilities need to be relocated to RP-5 during the 20-planning year period. In addition to the RP-2 facilities that need to be relocated to RP-5, the existing facilities at RP-2 need to be demolished and removed from the site since RP-2 is on land that is leased from the USACE. The proposed demolition would be performed on the existing solids handling facilities, the RP-2 Lift Station, and the RP-2 liquid treatment facilities that were abandoned after RP-5 was placed into service. Alternative 2, relocation of the RP-2 solids handling facilities to the east side of the RP-5 site, was selected as the preferred alternative.

2.5.3.2 Plant Expansion Needs

In addition to the solids handling facility relocation and demolition of RP-2 facilities, additional liquid treatment facilities and solids handling facilities will be needed to accommodate project influent flows and loads at RP-5. Similar to RP-1 MBR treatment technology was used as the basis for capacity expansion and establishing footprint requirements. **Table 2-7** summarizes expansion requirements for RP-5 and **Figure 2-8** shows these new facilities at RP-5. Based on the analysis in this section, two plant expansion projects have been identified for inclusion in the 20-year CIP: the RP-5 Solids Handling Facilities Project; and the RP-5 Expansion Project.



SOURCE: IEUA, Recharge Master Plan Update, 2013

IEUA Facilities Master Plan PEIR . 150283.07

Figure 2-8

RP-5 Facilities Site Plan, Planning Year 2035

The RP-5 Solids Handling Facilities Project would relocate solids handling facilities from RP-2 to RP-5, demolish RP-2 facilities, and relocate the RP-2 Lift Station to a location above the flood-plain. This project would include the construction of thickening, digestion, dewatering, and ancillary facilities at RP-5. The RP-5 Expansion Project would expand the RP-5 liquid treatment capacity from a 15 MGD to 22.5 MGD, and would include construction of primary treatment, MBR, disinfection, and ancillary facilities.

TABLE 2-7
RP-5 FACILITY EXPANSION REQUIREMENTS FOR PLANNING YEAR 2035

Facility	Number of Units	Size of Units
Liquid Treatment		
Primary Clarifier	2	100-foot diameter
Membrane Bioreactor	1[a]	7.5 MGD
Chlorine Contact Basin	1	0.8 MG
Solids Treatment		
Gravity Thickener	3	45-foot diameter
DAFT	3	40-foot diameter
Acid-Phase Anaerobic Digestion	6 cells	20-ft^2 30-foot SWD per cell
Methane-Phase Anaerobic Digestion	4	90-foot diameter 35-foot DWD
Sludge Holding Tank	1	90-foot diameter 35-foot SWD
High-Pressure Gas Storage	1	35-foot diameter w/ 30-ft^2 equipment pad
Dewatering Building	1	100-foot x 150-foot Building
Biofilter	3 cells	60-foot x 80-foot per cell
RP-2 Lift Station	1	10 MGD

NOTE: Includes fine screens, bioreactor, blowers, membrane tanks, RAS/WAS pump station, and associated equipment.

MG – million gallons // ft^2 – square feet // SWD – sidewater depth

Appendix B contains a table outlining all potential projects from each of the six Management Plans that would occur at RP-5.

2.5.4 Carbon Canyon Water Reclamation Facility (CCWRF)

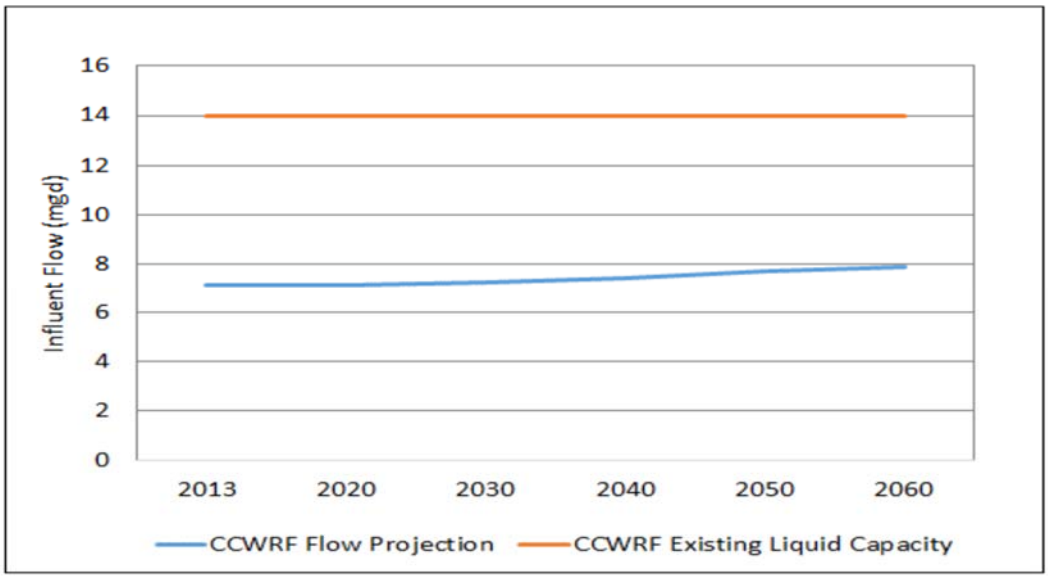
The flow and loading projections and effluent requirements were used to evaluate the existing capacities of the CCWRF liquid treatment facilities. The estimated capacities were compared to the project flow and loads to determine the CCWRF processes that require expansion by planning year 2035. The tertiary effluent from CCWRF is regulated by the Santa Ana Regional Water Quality Control Board under Order No. R8-2015-0036. Effluent quality standards (refer to Table 2-1 above) require tertiary treatment with filters and disinfection equivalent to Title 22 requirements for recycled water, due to the use of the receiving water for recreation. Effluent from CCWRF is used for irrigation in the area overlying the Chino North "Max Benefit" Groundwater Management Zone.

The capacity of the existing CCWRF system was evaluated in the technical memorandum using a model that focused on operations and performance, solids yields and water quality data. Facility reliability and redundancy considerations were based on IEUA's overall wastewater treatment system with RP-5 being the end-of-the-line facility receiving all flow diversions, if needed, from other RWRPs. The secondary treatment process capacity was determined to be CCWRF's most limiting process capacity. **Table 2-8** provided below identifies the CCWRF Existing Liquid Treatment Capacity Summary. Therefore, the CCWRF current liquid treatment capacity is 14 MGD. Influent flows are not projected to exceed the CCWRF liquid treatment capacity by 2035. This is shown on **Figure 2-9**, which illustrates when these capacities will be exceeded based on the future influent forecast.

TABLE 2-8
CCWRF EXISTING LIQUID TREATMENT CAPACITY

	Process Capacity (MGD) [a,b]
Primary / Secondary Treatment	14
Filtration	18.4
Disinfection	15.4
Overall Liquid Treatment Capacity	**14**

[a] Secondary process capacity based on all units in service, with redundancy provided at RP-5. Plant effluent TIN ≤ 8 mg/L.
[b] Filtration capacity based on one filter out of service. Disinfection capacity based on all units in service. Per Title 22 Engineering Report, the reliable annual average capacity due to the ability to discharge to RP-5, availability of short-term onsite storage, standby equipment, and use of automatic flow controls to provide reliability and redundancy.



IEUA Facilities Master Plan / 150283.07

SOURCE: Tom Dodson and Associates, 2016

Figure 2-9
CCWRF Influent Flow Not Projected to Exceed Liquid Treatment Capacity

2.5.4.1 Plant Expansion Needs

Figure 2-10 shows the existing facilities and also illustrates that no new facilities will be needed at CCWRF through the planning horizon. Figure 2-9 above shows that CCWRF will have excess capacity through buildout, and it is possible that some of the excess capacity at CCWRF can be used to manage some of flows (estimated to be about 1 MGD) that are tributary to both RP-5 and CCWRF.

Appendix B contains a table outlining all potential projects from each of the six Management Plans that would occur at CCWRF.



IEUA Facilities Master Plan PEIR . 150283.07

SOURCE: IEUA, Recharge Master Plan Update, 2013

Figure 2-10

CCWRF Facilities Site Plan, Planning Year 2035

2.5.5 Diversion of Dry Weather Flow

Water Code section 1701 requires a petition to the State Water Resources Control Board (SWRCB) to add points of diversion. The right to divert dry-weather discharge within the Chino Basin is held by the Chino Basin Watermaster; therefore, the Chino Basin Watermaster will be required to amend their diversion permit from the SWRCB before IEUA can implement the proposed diversion project.

IEUA has identified five locations where SBC flood control channels cross IEUA sewage collection lines as listed in **Table 2-9**. Expected diversions would range from 0.5 to 3.0 cfs and are anticipated to be typically about 1 cfs. Annual diversions over 180 days would be a maximum of 1,000 acre-feet. The diverted dry weather flow would be treated to Title 22 standards and pumped into IEUA's recycled water distribution system for subsequent direct non-potable reuse or indirect reuse through groundwater recharge.

The diversion project would consist of connecting the existing stream channel with the existing regional sewage pipeline. The project would have a construction impact of approximately 1,000 square feet in public or flood control rights-of way near the creek and road intersections. The would include modifying the channel floor to direct up to 3 cfs of flow into a constructed opening in the channel floor or wall leading to piping that connects to a below ground collection chamber or vault. Diversion would operate by gravity and would by-pass flows in excess of approximately 3 cfs. Flow to the collection chamber would be equipped with a valve or other mechanical mechanism to stop all diversions at higher flow rates.

TABLE 2-9
LOCATIONS OF POTENTIAL DRY WEATHER DIVERSIONS

Creek	Cross Street	City	Plant Fed by Diversion	Max Flow	Max Annual Diversion	Latitude	Longitude
Chino Creek (above CCWRF)	Chino Hills Parkway	Chino	CCWRF	3 cfs	1,000 AFY	33.982415	-117.69798
Cucamonga (above RP1)	60 Freeway	Ontario	RP1	3 cfs	1,000 AFY	34.030157	-117.59922
Day Creek (below Wineville Basin)	Francis Street (extended)	Ontario	RP1	3 cfs	1,000 AFY	34.040684	-117.54616
San Sevaine Creek (below Jurupa Basin)	Marlay Ave	Fontana	RP1	3 cfs	1,000 AFY	34.040848	-117.51579
Lower Deer Creek (above Chris Basin)	Archibald Ave	Ontario	RP5	3 cfs	1,000 AFY	34.007716	-117.59338

From the collection chamber, debris in the water could settle and water would rise and overflow a partition to allow routing to the sewer system. Diverted water flow would be measured at the chamber overflow point using a hydraulic calculation. Depending on relative elevations of the channel to the sewers and the pressure in the sewer system, routing from the collection chamber to the sewer line would be by gravity overflow or by pumping into piping leading to the sewer collection system. The piping would have a one-direction back flow prevention device that would stop sewage from entering the collection chamber. The facility would be maintained as needed to remove debris from the channel inlet and settling chamber and to keep equipment functional. Locations for implementation are shown on the following matrix. **Figure 2-11** shows the potential locations of the diversion facilities.

2.5.6 Organics Management Plan

The purpose of the IEUA Organics Management Plan is to assess the existing solids handling and composing capacities within the northern and southern service areas and determine the facilities expansion needs through the buildout year 2060 based on the project plant influent flows and loads, and the corresponding projected biosolids quantities. The expected solids generation in wet and dry tons per day from now until buildout was calculated based on the current wastewater characteristics and project influent wastewater flows to each of the four RWRPs. By comparing these future quantities with existing capacity for solids handling and composing facilities, the potential needs for future facilities were defined.

Based on the preceding analysis, the solids handling facilities at RP-1 and RP-5/RP-2 will need to be expanded beyond their existing solids handling capacities of 38 MGD and 18 MGD, respectively, to meet demands in the northern and southern service areas. **Table 2-10** provides a summary of the estimated current and projected average biosolids quantities for 2035 and buildout, 2060. RP-1 will require the addition of anaerobic digesters, and RP-5/RP-2 solids handling facilities will be consolidated at RP-5 by 2023. In addition the RP-2 Lift Station will also need to be relocated to an elevation above the floodplain. New RP-5 solids handling facilities required by 2035 include thickening, anaerobic digestion, dewatering, digester gas storage and utilization, and odor control. Additional thickening and digestion capacity would be needed at RP-5 by 2060 to meet the projected demands in the southern service area. Overall biosolids production is projected to increase by 37% from 145 to 198 wet tons per day by 2035, and up to 241 wet tons per day by 2060 using current dewatering technologies.



SOURCE: ESRI; Tom Dodson and Associates, 2016

IEUA Facilities Master Plan. 150283.07

Figure 2-11

Dry Weather Diversion Locations

TABLE 2-10
ESTIMATED CURRENT AND PROJECTED AVERAGE BIOSOLIDS QUANTITIES

	Current			Planning			Buildout		
	Influent Flow (MGD)	Biosolids (WT/d)	Biosolids (DT/d)	Influent Flow (MGD)	Biosolids (WT/d)	Biosolids (DT/d)	Influent Flow (MGD)	Biosolids (WT/d)	Biosolids (DT/d)
RP-1 / RP-4	38.5	100	24	47..8	130	31	54.7	139	33
RP-5 / CCWRF	17.2	45	11	25.7	68	16	33.2	102	25
Total	**55.7**	**145**	**35**	**73.5**	**198**	**47**	**87.9**	**241**	**58**

[a] Reflects projected flows for IEUA preferred Flow Diversion Alternative 2, with Whispering Lakes and Haven Pump Stations online, and a biosolids cake solids content of 24 percent.

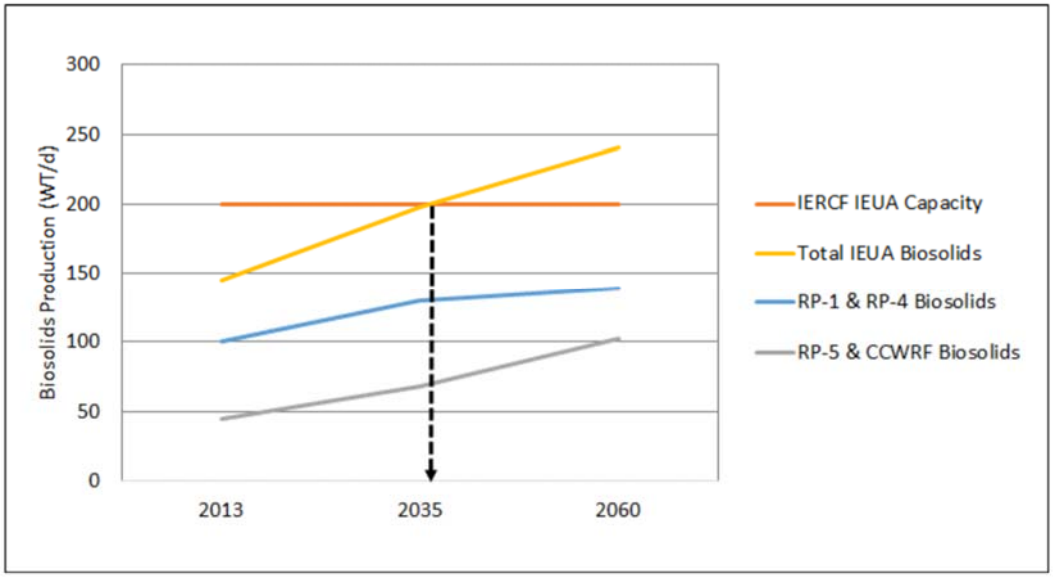
[b] Site planning considerations are based on the projections established for the 2060 buildout year.

WT/d = wet tons per day // DT/d = dry tons per day

2.5.6.1 IERCF Biosolids Management Considerations

IERCF has a current throughput capacity of 209,625 annual wet tons of biosolids and amendments. Under present agreement, IEUA may contribute up to one/half of this amount, which equates to 200 wet tons of biosolids per day. Thus, IERCF has adequate capacity to receive and process IEUA biosolids over the next 20 years. As shown on **Figure 2-12**, biosolids processing capacity at IERCF will be exceeded in about 2035, at which time IEUA needs to explore additional biosolids management options. These options may include implementing technologies such as heat drying, improved dewatering technologies or diversifying biosolids management by contracting with private companies for land application, composting, energy production, or other biosolids product markets. Responsible agency

Appendix B contains a table outlining all potential projects from each of the six Management Plans that would occur at IECRF.



IEUA Facilities Master Plan / 150283.07

SOURCE: Tom Dodson and Associates, 2016

Figure 2-12
RWRF Biosolids Production Projected to Exceed IERCF Capacity Beyond 2035

2.5.7 Recycled Water Program Strategy

The analysis and facility recommendations for the RWPS are based on the recycled water demands and effluent supplies provided by the Agency and their member agencies. The planning period of the RWPS was to 2035, with a focus on the first ten years, to 2025. The estimated recycled water supply is compared to the total direct use demand and total supply available for GW recharge to determine what strategies the Agency can implement to achieve the Agency's goal to increase GWR to a higher priority use of recycled water along with direct use through the planning year 2035, a summary of which is provided in **Table 2-11**. The Agency currently operates approximately 11 existing groundwater basins that are connected to the recycled water system, and are therefore currently receiving recycled water for recharge. The Agency's projected recycled water demands and supplies through the 2035 planning year were created under the assumption that the Agency would connect several other basins to the recycled water system that are currently configured only to recharge stormwater, local runoff, and/or imported MWD water. In addition to the existing basins that will be connected to the recycled water system, several sites or basins have been identified by the Agency as new basins that will come online in the future.

TABLE 2-11
SCENARIO B - SUMMARY OF RECYCLED WATER DEMANDS AND SUPPLIES

	Existing	Year 2020	Year 2025	Year 2030	Year 2035
Total Recycled Water Supply	61,944	66,312	77,913	77,514	82,330
Total Direct Use Demand	24,655	30,757	36,507	40,320	43,019
Total Supply Available for GW Recharge[a,b]	16,095	13,977	13,027	13,707	14,871

[a] Based on a 9-month recharge program between March and November and Monthly Mass Balance analyzed in the RWPS
[b] Remaining supply (reuse supply) after direct use and contribution to Santa Ana River Base Flow

The capacity of the existing recycled water system was analyzed using Hydraulic Modeling to inform the strategy proposed for the timing of the implementation of each of the new basins or basins to connect to the recycled water system. Several scenarios were analyzed in the RWPS, and under the sensitivity analysis, Scenario B was the recommended CIP forecast to 2025, in which the Agency assumes that only the existing Groundwater Recharge (GWR) basins and committed 2013 RMPU Basins are connected to receive recycled water supply for recharge and that the Agency continues to contribute to and meet the joint minimum obligation for Santa Ana River Base Flow (SARBF) at Prado from their recycled water effluent. For capital improvements beyond 2025, Scenario A will be used to determine buildout condition of the RW program. Scenario A was developed to determine the ultimate extent of capital improvements needed to the RW program. These facilities would be in addition to the facilities recommended in Scenario B. Scenario A includes additional GWR basins and distribution facilities needed if an additional non-potable water supply source was connected to supplement the Agency's recycled water system. **Table 2-12** illustrates the capital improvements through 2035 under Scenario A. Scenario A adds the following additional capital improvements to Scenario B: turnout modifications at Ely, Brooks, Hickory, Turner and Victoria Basins; an additional 113,659 lineal feet of new pipeline ranging from 12" to 54" in size; six additional pump stations; and three additional reservoirs at 15 MG, 1.6 MG and 8 MG storage capacity. These facilities would be installed between the present and 2035. Since the proposed improvements that are recommended will be required to either meet direct use demands or groundwater recharge objectives, Table 2-12 includes a description of the project under Scenario A, the demand condition that triggers the need for the project and the type of deficiency that the project is intended to mitigate.

TABLE 2-12
SCENARIO A SENSITIVITY ANALYSIS FACILITY IMPROVEMENTS

Year	Demand Condition Trigger	Deficiency	Proposed Improvement	Quantity
Exist	GWR in 1630E PZ	System optimization for GWR flows, system expansion to serve GWR	Conversion of 18 MG 1630E Storage Tank	1 LS
Exist	GWR in 1630E PZ	System optimization for GWR flows, system expansion to serve GWR	36-inch 1630E Pipeline to 1630E Tank	6715 lf
Exist	GWR in 1630E PZ	Insufficient supply capacity to 1630E PZ for GWR flows, system expansion to serve GWR	RP-1 1158 PS Upgrades	1 LS
Exist	GWR Increase Flow	Deficient 1299 PZ transmission mains, serve east & 7th/8th St Basins	16-inch Parallel 1299 PZ Pipeline	15289 lf
Exist	GWR Increase Flow	Deficient 1299 PZ transmission mains, serve east & 7th/8th St Basins	24-inch Parallel 1299 PZ Pipeline	13600 lf
Exist	GWR Increase Flow	Turnout Capacities undersized at Brooks, Ely, Hickory, Turner, Victoria	Increase Basin turnout capacities	1 LS
2020	GWR to Wineville Basin	System expansion to serve GWR Basin	16-inch Pipeline to Wineville Basin	1200 lf
2020	Average Direct Use	Existing 18-inch pipeline undersized in Bickmore, increase flow from RP-5	24-inch 800 PZ Pipeline in Kimball Ave	12620 lf
2020	GWR Increase to1630E PZ	Capacity in 1630 E PZ	1630E Pump Station Upgrades	1 LS
2020	GWR increase to Upper Zones	Pump capacity exceeded	RP-4 1158 PZ Pump Station Capacity Upgrades	1 LS
2020	GWR to Banana	Pipe capacity exceeded from Etiwanda to Hickory turnout	16-inch Parallel 1299 PZ Pipeline	3000 lf
2025	GWR to Lower Day Basin	System expansion to serve GWR Basin	24-inch Pipeline to Lower Day	10520 lf
2025	GWR to Etiwanda Debris Basin	System expansion to serve GWR Basin	16-inch 1630E Pipeline	2670 lf
2025	Max Summer Direct Use & GWR	Supply Deficiency in RP-1	24 MG EQ Storage	1 LS
2025	Max Summer DU	Existing 30-inch pipeline undersized from RP-1 to Riverside Dr.	54-inch 930 PZ Parallel Pipeline	2300 lf
2025	Max Summer DU	Pump capacity exceeded to serve peak DU demand periods	RP-1 930 PZ Pump Station Capacity Upgrades	1 LS
2025	Max Summer DU	Pump capacity exceeded to serve peak DU demand periods	CCWRF Pump Station Capacity Upgrades	1 LS
2030	GWR to College Heights Basin	System expansion to serve GWR Basin	36-inch 1630W Pipeline in Foothill Blvd	19600 lf
2030	GWR to Montclair Basin	System expansion to serve GWR Basin	30-inch 1299 PZ Pipeline to Montclair Basins	7840 lf

Year	Demand Condition Trigger	Deficiency	Proposed Improvement	Quantity
2030	GWR to 1630W PZ	System expansion to serve GWR Basin	1630W Booster Pump Station Capacity Upgrades	1 LS
2030	GWR to 1630W PZ	System operations for 1630W PZ and reduce impacts to 1299 PZ	15 MG 1630W Storage Tank	15 MG
2030	GWR Supply to Upper Zones	Increased flow to upper zones, deficient supply from RP-1, surplus at RP-5	New RP5 1158PZ Pump Station	1 LS
2030	GWR Supply to Upper Zones	Increased flow to upper zones, deficient supply from RP-1, surplus at RP-6	30-inch 1158PZ Pipeline from RP5	48500 lf
2030	GWR to 1630E PZ	Increased flow to 1630E PZ, deficient capacity in 1299 PS	Capacity Upgrades to 1299PS at RP-4	1 LS
2030	Max Summer Direct Use & GWR	Supply Deficiency in RP-4	1.6 MG EQ Storage at RP-4	1.6 MG
2030	Max Summer Direct Use & GWR	Capacity in the 930 PZ, reduce supply constraint from RP-1	3 MG EQ Storage at CCWRF	3 MG
2030	Max Summer DU	Increase capacity at the CCWRF 930 PZ Pump Station	CCWRF Pump Station Capacity Upgrades	1 LS
2030	Max Summer DU	Capacity in the 930 PZ	42-inch Parallel Pipeline in Chino Avenue	1680 lf
2030	Max Summer DU	Capacity in the 1158 PZ and 1299 PZ	30-inch 1158 PZ Pipeline	31800 lf
2030	Max Summer DU	Capacity in the 1158 PZ and 1299 PZ	1158 PZ Storage Tank	8 MG
2030	Max Summer DU	Capacity in the 1158 PZ and 1299 PZ	New 1158 to 1299 Booster Pump Station	1 LS
2035	GWR to Grove Basin	System expansion to serve GWR Basin	2-inch to Grove Basin	1000 lf
2035	GWR to Jurupa (1158 PZ)	System expansion to serve GWR Basin	36-inch Pipeline in 1158 PZ	19600 lf
2035	GWR to Jurupa (1158 PZ)	System expansion to serve GWR Basin	30-inch Pipeline in Jurupa Street to Jurupa Basin	5400 lf
2035	GWR to Jurupa (1158 PZ)	System expansion to serve GWR Basin	20-inch Pipeline in Jurupa Street	1300 lf
2035	Max Summer DU	Pipeline undersized for demands condition	24-inch 1050 PZ Parallel Pipeline	2000 lf
2035	Max Summer DU	Pump capacity exceeded to serve peak DU demand periods	RP-1 930 Pump Station Capacity Upgrades	1 LS
2035	Max Summer DU	Pump capacity exceeded to serve peak DU demand periods	RP-1 1050 Pump Station Capacity Upgrades	1 LS

2.5.8 2013 ~~Amendment to the 2010~~ Recharge Master Plan Update

The IEUA and Watermaster prepared the 2013 RMPU~~2010 Recharge Master Plan Update and amended it in 2013~~. The 2013 RMPU was ~~2010 Recharge Master Plan Update and its 2013 amendment were~~ developed in a public, transparent process, including nine workshops for the ~~2010 Recharge Master Plan Update~~ and 67 steering committee meetings and workshops for the 2013 RMPU. The steering committee meetings were open to all stakeholders with an interest in storm water and dry-weather runoff management and groundwater management in the Chino Basin. The IEUA and Watermaster Boards of directors approved the 2013 RMPU, and it was submitted to the Court in the fall of 2013 for review and approval. The Court approved the 2013 RMPU in 2014 and directed the IEUA and Watermaster to implement it.

In order to estimate the water demands and establish other water supply plans, Wildermuth Environmental, Inc. (WEI) collected available Urban Water Master Plans from the Chino Basin Parties for the 2013 ~~Amendment to the 2010~~ RMPU. WEI found that the total water demand is projected to increase from about 309,000 AFY in 2010 to about 417,000 AFY by 2035, while Chino Basin groundwater production is projected to decrease from about 162,000 AFY in 2010 to about 159,000 AFY by 2020 but will gradually increase to 191,000 AFY in 2035. This gradual increase would occur due to a projected recycled water increase from about 14,000 AFY in 2010 to about 41,000 AFY in 2035; cumulatively, these findings indicate that the GW production projections for 2012 are substantially less than assumed in the 2010 RMPU.

Over a period of four months in 2012, the Steering Committee conducted several meetings to discuss recharge improvement projects put forth by Watermaster parties (agencies) and were characterized by their potential impact on production sustainability and their contribution to improving the balance of recharge and discharge in the Basin. After selecting a series of criteria from which to analyze the benefits of each proposed project, the Amendment to the 2010 RMPU puts forth five production sustainability projects and fifty-four yield enhancement projects and subprojects for potential implementation. However, the magnitude of the production sustainability challenge is currently unknown and future projects will depend on groundwater production and recharge at existing facilities.

The 2013 RMPU will increase stormwater and dry-weather runoff recharge in the Chino Basin by about 4,066 AFY and increase recycled water recharge capacity by about 3,025 AFY. The total cost to implement the 2013 RMPU is about $41 million. When fully implemented, the 2013 RMPU will reduce the future demand for SWP water by about 12,600 AFY. **Table 2-13** below lists the project name, new storm water recharge, and recycled water recharge capacity.

TABLE 2-13
KEY PROJECT IMPROVEMENTS

Project ID	Basin Projects	Key Project Improvements	Additional Yield (acre-feet per year) SW	RW
18a	CSI Storm Water Basin	New storage and recharge facility by deepening/removing 36,000 CY	100	-
23a	Wineville, Jurupa, and RP3	Improve storage and recharge capacity with pumps/conveyance systems between basins and provide new diversion structures	2,921	2,905
27	Declez Basin	Improve capacity by modifying existing/adding new structures	507	-
11	Victoria Basin	Improve the infiltration rate and increase storage by removing settled deposits	75	120
14	Turner Basin	Increase storage and recharge by raising the spillway height	23	-
15a	Ely Basin	Improve storage and recharge by removing 470,000 CY	101	-
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	233	-
Total			**3,960**	**3,025**

Appendix B of this Final PEIR contains all potential projects from the RMPU within Project Categories 1, 2 and 3 under the Recycled Water and Groundwater Recharge Potential Projects.

2.5.9 Energy Management Plan

The EMP relies on forecasting to evaluate the feasibility of site-specific energy projects to meet anticipated seasonal demands at each IEUA facility. The Agency's long-term goal is to attain grid independence during peak periods and the EMP establishes a related business goal that will require 100 percent of the Agency's electricity needs to be procured from carbon neutral sources by 2030. This goal can be achieved with renewable technologies through building an energy infrastructure that is capable of handling the full demand at each facility at any given time, with an export of energy when generation exceeds demand. The Agency's short-term goal is to assess the possibility of becoming the owner of the solar arrays it currently leases, thereby eliminating electricity expenses generated from the panels and assuming the O&M expenses of maintaining the solar arrays moving forward. The types of projects that are under consideration are as follows: operational efficiency, energy management, and renewable resources (solar, digester gas production and beneficial use, etc.). The EMP ultimately puts forth 4 agency-wide projects, and 7 site-specific projects that are considered feasible based on available resources, facility load, and cost effectiveness as shown in the tables outlining all potential projects from the EMP at each of the Agency's facilities.

Within the context of the EMP is the Organics Diversion program as an acceptable alternative to disposal of organic materials (fat, oil and grease (FOG), domestic and commercial food waste, and high strength industrial waste) through anaerobic digestion. The objective is to assist member

agencies to meet the AB 1826 requirements (recycle organic waste by April 1, 2016) and to produce digester gas that can be used for onsite electricity generation (internal combustion engine, microturbine, fuel cell) or conversion to natural gas pipeline quality fuel for use in vehicles or delivery to natural gas suppliers

2.5.10 Asset Management Plan

The AMP assesses the key issues that face each of the agencies twelve assets and the potential projects that address needed rehabilitation, replacement, and upgrades to assets. These physical assets include the following: RP-1, RP-2 (to be demolished as described in Section 2.5.3), CCWRF, RP-4, RP-5, RW and GWR Systems, Inland Empire Regional Composting Facility (IECRF), Agency Lift Stations (LS), Regional Conveyance System (RC), Agency Laboratory (Lab), Agency Headquarters (HQ), Business (BIZ) and Process Automation Control (PAC) Networks. Most of the AMP projects fall under the discussions presented above for each agency WTP or Management Plan, however projects for the Lab, HQ, BIZ, and PAC Networks the AMP serves as the document that presents potential projects proposed for future implementation. For instance, the Lab will require a new water quality laboratory and laboratory equipment, and several upgrades to HQ are proposed for implementation. Implementation of the proposed projects at these four assets would meet the Agency's long-term service objectives. The AMP identifies 22 agency-wide projects, 64 asset specific potential projects, and 122 asset specific projects (outlined in Appendix B, which contains several tables outlining all potential projects from the AMP at each of the Agency's facilities) in the following project categories: capital construction project (CC), capital major equipment project (EQ), operations and maintenance project (OM), reimbursable project (RE), capital replacement project (RP).

2.5.11 Septic System Conversion Program

The Septic System Conversion Program is also proposed within the WFMP Update; however, projects associated with septic conversion would fall under Project Category 2 Projects, conveyance systems and ancillary facilities. The process of the Septic System Conversion Program is described below.

Once the final data is available on the order in which Sewer Service Region (SSRs) will be converted to wastewater collection systems, the collection system infrastructure will be installed and the septic systems will be abandoned. The new local collection system facilities will be installed, such as 8" sewer lines. All efforts will be utilized to install gravity flow collection systems, but it may be necessary to install pump stations to collect the new wastewater. Since the detailed information regarding conversion of septic systems is not yet completed, the exact length of new collection system or trunk sewers (primarily replacement of existing inadequate trunk sewers) is not known. Also, the number of pump stations is not known. However, for purposes of analysis this document will assume up to 100,000 lineal feet of new sewer line (varying from 8" to 36") will be installed through 2035 and up to 10 pump stations will be installed in conjunction with the Conversion Program to deliver wastewater to the regional plants. Also, for purposes of analysis it will be assumed that up to 10,000 septic systems will be abandoned. The abandonment process may include collapse and filling of the septic systems or leaving them in the ground

undisturbed. Also, for purposes of planning this document will use the following value for increase in wastewater to regional plants per day: an average of 100 gallons per day per septic system will be shifted to the collection system. This could result in a daily increase in flows at the five regional treatment plants of an additional 1,000,000 gallons of wastewater requiring treatment per day. These are the parameters that will be evaluated in the PEIR

2.6 Program/Project Implementation of the IEUA Master Plans

Project implementation consists of constructing the future facilities and once construction is completed, operating and maintaining them. The types, configuration and location of future specific projects that will be constructed in support of the above-described Master Plans have been generally determined, particularly for the WRFs. Therefore, it is possible to project the maximum expected impacts that would result from construction and operation of these infrastructure improvements. Impacts associated with specific future projects would be re-evaluated in subsequent CEQA reviews to determine if the actual impacts fall within the range of impacts forecast by this analysis, or whether subsequent CEQA environmental determinations require additional evaluation.

2.6.1 Construction Activities

The construction activities associated with the future projects within Project Categories 1, 2 and 3 are identified below.

It is assumed for all activities that construction would take place during maximum 10-hour workdays for a 6-day workweek (except in emergencies), but not all equipment would be operating continuously over the 10-hour daily work period. Small electric tools would be connected to the utility grid, but welders and other large electric equipment would be powered by an on-site generator. The number of construction workers and daily equipment-operating scenarios would vary according to the type and phase of construction project. It is further assumed that each worker would commute using his or her own vehicle and the average commute would be approximately 20 miles one-way. Emissions from the planting of landscape materials and screening wall construction are expected to be minimal and have not been calculated.

2.6.1.1 Project Category 1: Treatment Facility Upgrades

Regional Plant Modifications

Regional Plant modification projects would be constructed in several phases over the next 20 years. Each project is anticipated to be divided up into three construction phases that would not overlap each other. The construction phases would include; (1) Site Preparation/Earthwork; (2) Piping and Forming Concrete; and (3) Site Finishing, including delivery and installation of equipment. The typical equipment mix and estimated number of construction workers for each of the three phases is shown below. Keep in mind that all of the WRFs already exist and their sites have been engineered. Thus, minimal mass grading will be required at these facilities.

Site preparation/earthwork would require a dozer, compactor, grader, excavator, dump/haul trucks (2), front-end loader, and water truck. Approximately 16 workers would be required during this phase.

Piping and forming concrete placement would require a backhoe, crane (2), water truck, concrete trucks (15 trips), concrete pump, concrete vibrator, diesel generator (2), material truck (2 with 5 trips each), welding machine (3), and concrete saw. Approximately 24 construction workers would be required during this phase.

Site finishing would require a paver, material truck (10 trips), sand blaster, dozer, roller/compactor, crane, and water truck. Approximately 12 construction workers would be required during this phase.

Demolition

RP-2 will be abandoned over the next 20 years and the existing facilities will be demolished and the site restored to an adequate level for return to the Corps of Engineers. Based on the level of improvements, it is anticipated that 16,500 cubic yards of concrete and other building materials will be removed from the site. In order to fill the holes in the landscape that will result from demolition, an estimated 46,000 cubic yards of clean fill material will be delivered to the site and installed as required to achieve a final elevation acceptable to the Corps. There are no known contaminated sites at RP-2, so it is assumed that the concrete, steel and other building materials generated by demolition can and will be disposed of at any of several inert construction debris landfills. Up to 10,000 septic tanks may need to be demolished (collapsed) in conjunction with the septic system conversion program.

IECRF and other Biosolids Management

IECRF has sufficient capacity to receive and process IEUA biosolids up to planning year 2035 at which time the capacity is projected to be exceeded. The WFMP does not propose a capacity increase as a project to consider for the 2035 planning year, but as a future concern that will be addressed at a later date. The RP-1 and RP-5/RP-2 solids handling facilities will require an increase in capacity for the planning (2035) and buildout (2060) years. RP-2 solids handling facilities will be decommissioned and relocated to RP-5. The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and RMPU Amendment), put forth several potential projects for implementation at IECRF, RP-5/RP-2, and RP-1 regarding biosolids management.

Most projects related to IECRF involve energy storage, installation of solar panels, and several upgrades to existing components of the facility to more efficient equipment. These projects should not require any grading or site preparation as IECRF already exists and all facilities have been engineered. It is anticipated installation of the various upgrading equipment would require a maximum of 20 workers and typical construction site equipment (cranes for setting ion exchange vessels, front-end loaders, forklifts, etc.) Impact estimates will assume one vehicle trip per worker and 5-10 deliveries per day over a 12 months construction period.

RP-1 will require the addition of anaerobic digesters to facilitate capacity ~~expansion~~ rehabilitation. RP-1 solids handling ~~expansion~~ rehabilitation may require some grading, however the facility already exists and has been engineered so any grading would be minimal. The construction phases would include; (1) Site Preparation/Earthwork; (2) Forming Concrete; and (3) Site Finishing, including delivery and installation of equipment. Site preparation/earthwork would require a dozer, compactor, grader, excavator, dump/haul trucks (2), front-end loader, and water truck. Approximately 16 workers would be required during this phase. Piping and forming concrete placement would require a backhoe, crane (2), water truck, concrete trucks (15 trips), concrete pump, concrete vibrator, diesel generator (2), material truck (2 with 5 trips each), welding machine (3), and concrete saw. Approximately 24 construction workers would be required during this phase. Site finishing would require a paver, material truck (10 trips), sand blaster, dozer, roller/compactor, crane, and water truck. Approximately 12 construction workers would be required during this phase.

RP-2, as described under the Demolition section above, will be decommissioned and relocated to RP-5. Demolition activities are described in the section above. Relocation of the solids handling facilities to RP-5 will occur per the following construction scenario: (1) Construction will begin in 2023; (2) Major construction steps will include demolition, excavation, new building(s), thickening, anaerobic digestion, dewatering, digester gas storage and utilization, odor control, landscaping modifications, mechanical equipment installation, and electrical installation; (3) estimated grading will be minimal (less than 1,000 cubic yards); (4) an estimated 10 truck trips per day during construction; (5) a 30-person crew on a one-shift operation with a four month construction schedule; (6) estimated construction equipment to include: a dozer, front end loader, two dump/haul trucks, water truck, grader, excavator, backhoe, two material trucks, crane (5-ton), roller/compactor, scraper - assume all equipment used up to six hours per day.

2.6.1.2 Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines

Up to 220,000 LF of pipeline may be installed in support of the Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP and 2013 ~~Amendment to the~~ RMPU). It is forecast that most of the pipe will range from 12 to 54-inch diameter, with the majority of pipeline measuring 24-inch in diameter. For analysis purposes it is assumed that this pipeline will be installed by 2035, the planning horizon for most of the Master Plans. Trucks delivering the pipe and appurtenant equipment can carry an average of about 900 feet of 12 and 16-inch pipe per load, or approximately 450 feet of 24-inch and 30-inch pipe per load and installation of up to 120,000 LF of pipe of different diameters will require approximately 250 truck deliveries in total. It is anticipated that the majority of the pipe and equipment will come from the Fontana, Ontario, Mira Loma area by way of the freeways and will travel to the project location within the Agency's service area. Such deliveries will result in round-trips that average about 40 miles at an average speed of about 40 mph.

Typically, up to 900 feet of pipeline trench could be excavated, the pipe installed, backfilled, and compacted each day during pipeline installation in undeveloped areas whereas only 200 feet per

day can be installed in developed roadways. In either case, equipment would be operated for roughly the same portion of the day and daily equipment emissions would be the same, except that undeveloped areas would not require pavement removal and reinstallation.

Ground disturbance emissions assume roughly half an acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine). Materials delivery would require approximately one truck per day for unimproved area and one truck every three days for improved alignment installation. This phase of construction will require up to two truck trips per day with an estimated average round trip of 40 miles delivering construction materials and equipment (concrete, steel, pipe, etc.) Calculations assume twelve workers will each commute 40 miles round-trip to the work site, and that only one work crew is installing pipeline at a time.

Reservoirs

The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 Amendment to the RMPU) propose to construct 3 storage tanks, convert one storage tank, and install two surge tanks within the 2035 planning year period. The five new proposed storage tanks will be 3 MG, 5 MG, 15 MG, 1.6 MG, 8 MG, and 24 MG in size; an 18 MG storage tank will be converted to support IEUA's recycled water system; there will be two surge tanks—one at 1299 PZ and another at 1630W PZ Pump Station (PS). Impacts associated with reservoir construction are described below.

It is forecast that for site preparation of a reservoir/surge tank and access road no more than 2 acres will be actively graded on a given day. It is anticipated that grading activities will occur over a 10-15 day period (work days) and will require one bull dozer, a front end loader, water truck, grader, excavator and two dump/haul trucks operating 6 hours per day. Calculations assume eight workers will each commute approximately 40 miles round-trip to any site within the Agency's service area.

Construction of the reservoir(s) or surge tank(s) will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation of each reservoir or surge tank would occur over about 60 days and would require the use a crane, forklift, backhoe, front loader and two haul trucks operating 6 hours per day.

In addition to the above construction equipment, heavy-duty trucks will be employed for on-site deliveries. Smaller trucks and automobiles will be utilized for on-site supervision and employee commuting. The diesel delivery trucks were assumed to require 300 on-road miles per day.

Typically, the exteriors of reservoirs are coated with a primer and enamel coats both to prevent corrosion and for aesthetic purposes. South Coast Air Quality Management District Rule 1113, as amended, sets limits on the volatile reactive organic compounds (VOC or ROC) that can be released by coatings sold within the South Coast Air Basin (SoCAB). Impact estimates will assume that a 24 MG reservoir would be the largest future reservoir and that it would be coated to a 6-mil thickness.

Booster Stations and Pump Stations

A total of 12 pump stations will be upgraded to increase capacity of existing facilities. This will require the replacement of existing pumps with larger capacity pumps. An additional 10 pump stations may be required to support conversion of septic systems to the collection systems. The construction crew will consist of a maximum of seven people on the project site at any one time: a foreman, operating engineer and five support crew persons. The equipment at the site will consist of a backhoe for part of the time and a small crane to remove the current pumps and replace the pump with a larger capacity pump. It is assumed that one truck load of concrete, one truck miscellaneous construction material, one truck delivery for the pump station will occur during the construction of each pump station, and one truck for every existing pump will be necessary to haul them away upon installation of the new pump.

The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU) propose to construct one new booster pump station for the 1158-1299 pressure zones. The 1158 to 1299 Booster Pump Station is proposed to be located at the 1158 Storage Tank Site (proposed as part of the reservoir section above). It is assumed that the pump station will have four pumps of equal size, each with 75 Hp with VFDs. It is forecast that no more than 0.5 acres will be actively graded on a given day for site preparation of each booster station. It is anticipated that grading activities will occur over a 5-day period and will require one bull dozer or motor grader operating 6 hours per day, one water truck operating 4 hours per day and one dump truck operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to the work site.

Construction of each pump station will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst case day with an average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation of the booster station will require the use a crane, forklift, backhoe and front loader operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to the work site.

2.6.1.3 Project Category 3: Groundwater Recharge and Extraction

Groundwater Recharge Basin Upgrades

The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU) propose a number of basin upgrades and new basins to increase recharge capacity and connect existing basins to the recycled water system. The proposed improvements include constructing new basins, deepening several basins, constructing internal berms, inlet

improvements, new basins, basin enlargement, increased drainage area, gate outlets, increasing conservation storage, increasing frequency of basin maintenance, etc. Construction activities at each open-trench would generate pollutant emissions from the following construction activities: (1) site preparation, excavation, and pipe installation; (2) construction workers traveling to and from the construction site; (3) delivery and hauling of construction supplies and debris to and from the construction site; (4) the fuel combustion by onsite construction equipment; and (5) restoration of the work site. The aforementioned construction activities would require site preparation using graders; grading would require cranes, forklifts, excavators, generator sets, welders, and tractors/loaders/backhoes; facility or basin modifications would require tractors, loaders, backhoes, generator sets, air compressors, and skid steer loaders.

Field construction crews will excavate the area for the proposed action (such as inlet structures) and will set forms; oversee pouring of concrete; and carry out final connection of the inlet to the pipelines. Periodic deliveries of concrete and other construction materials will occur in support of the installation of the proposed basin modifications. It is assumed that during construction of each basin upgrade a maximum of 40 truck trips will occur depending on the type of modifications to be implemented.

Wells

The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and RMPU Amendment), specifically the RMPU Amendment, puts forth 5 sustainability projects that are under consideration for implementation; three of these projects include the construction of new wells and related conveyance to transfer water to the Jurupa Community Services District (JCSD) or extend Ontario Groundwater Recovery Program (OGRP) raw water conveyance. The new supply from these wells is expected to be around 20,300 AFY from up to 7 new wells.

Development of up to seven new wells during a given year, assuming all wells were constructed in a single year, will require the delivery and set up of the drilling rig. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment seven times in a year will result in seven 50 mile round-trips at an average speed of 30 mph.

The drilling and development of each well to an average depth of 850 feet will take approximately 45 days, of which 15 to 20 days would include 24-hour drill activity. Delivery of the well casings, pumps, motors, etc. for each well is forecast to result in about 1,000 miles being traveled by trucks averaging about 45 mph. Calculations assume two workers will each commute 40 miles round-trip to the work site. Typically, well drilling requires only minimal earth movement and/or grading. The well casings are expected to be welded and it will be assumed that well development and installation will require two weeks of a diesel generator.

2.6.2 Program Operational Activities

The operational activities associated with the future projects within Project Categories 1, 2 and 3 are identified below.

In order to assess certain future impacts from implementing the Master Plans, it is essential to understand future operations relative to current operations. For example, operational air quality impacts would consist of vehicle trips to service the proposed facilities; energy required to power the proposed facilities; and delivery and storage of chemicals. Operational impacts vary depending upon the type of infrastructure proposed. Most water related infrastructure, including wells, pump stations and pipelines, require very few vehicle trips for maintenance and operation, typically less than one trip per day per facility. On the other hand, increased energy consumption (electricity, natural gas, etc.) by future facilities will increase overall project-related energy emissions, sometimes locally and at other times regionally or nationally. This will occur until or if IEUA develops energy sources carbon neutral and/or non-fossil fuel energy resources.

2.6.2.1 Project Category 1: Treatment Facility Upgrades

WRF Modifications

Regional Plants – The majority of the projects necessary to meet demand in future years at RP-1, RP-4, and RP-5 require expanding liquid treatment capacity and/or solids treatment capacity. RP-1 will require a liquid treatment capacity ~~expansion~~ rehabilitation of 4 MGD from the present capacity of 32 MGD to 36 MGD projected flow by 2050. RP-4 will require expanding secondary and tertiary treatment capacity. Tertiary capacity at RP-4 is presently 14 MGD and will require expansion to 17 MGD by 2050; Secondary capacity is presently at 16 MGD and will require expansion to 17 MGD by 2050. RP-5 will require a liquid treatment capacity expansion of 11 MGD by 2050 from the present capacity of 15 MGD to 26 MGD in 2050. As a result of these treatment capacity expansions and rehabilitations at each regional facility, operations of each facility will require greater energy consumption. However, as previously stated, over the course of the next 15 years, IEUA intends to procure 100 percent of its electricity needs from carbon neutral sources, so in that period of time IEUA will slowly begin to use less carbon sourced energy for greater operational demands. Several other projects at each regional facility involve replacement of existing facilities within each WRF, so once replaced/constructed operational demands again should remain consistent with existing conditions. Also, a review of the aerial photos illustrating the future facilities at each location shows that all of the proposed facilities can be implemented within the existing boundaries of the WRFs.

CCWRF – CCWRF does not require wastewater treatment capacity expansion as the influent is expected to remain approximately 6 MGD under liquid capacity through at least 2060, so operational demands should remain consistent with or better than existing conditions as several projects proposed at this WRF involve reducing energy consumption. Several other projects involve replacement of existing features within the facility, so once constructed, operational demands on energy and support resources again should remain consistent with existing conditions. Additionally, CCWRF will require recycled water pump station capacity upgrades, which will allow for increased flow of recycled water to be pumped from the facility. This will

require a greater use of energy. Note that over the planning period IEUA will slowly begin to use less carbon sourced energy for greater operational demands.

In a manner similar to the pump stations, increased demand for energy by the WRFs will be calculated at a broad level using percentage increase in operational capacity at each of the four WRFs. The WRFs also require periodic delivery and storage of chemicals to support treatment operations. The expansion/rehabilitation of treatment capacity at RP-1, RP-4, and RP-5 will require additional chemical delivery and storage at the WRFs. Estimates of future effects on chemical delivery and storage will be included in the impact forecast.

IECRF and other Biosolids Management

The majority of the projects necessary to meet demand in future years at RP-1, RP-5, and IECRF involve expanding solids handling facilities or upgrades of existing equipment/facilities. RP-1 solids handling facilities will require capacity upgrades from an influent capacity 38 MGD to 54.7 MGD by the 2060 buildout year. RP-5/RP-2 solids handling facility will require capacity upgrades from an influent capacity of 18 MGD to 25 MGD by the 2060 buildout year. As a result of these solids handling capacity expansions at RP-1 and RP-5, operations of each facility will require greater energy consumption. However, as previously stated, over the course of the next 15 years, IEUA intends to procure 100 percent of its electricity needs from carbon neutral sources, so in that period of time IEUA will slowly begin to use less carbon sourced energy for greater operational demands. Several projects at IECRF involve replacement of existing equipment/facilities, so once replaced/constructed operational demands again should remain consistent with existing conditions.

RP-2 Solids Handling Relocation to RP-5 — The anticipated truck trips to deliver biosolids to the project is 35 trucks per day, to deliver bulking agent to the project is 12 trucks per day, and 14 trucks per day would be needed to remove the final compost from the site. There would be no significant storage on site for any of the composting materials, which means a high degree of trucking organization will need to be maintained, resulting in the delivery of a biosolids load every 40 minutes over the course of 24-hours.

In a manner similar to the pump stations and regional facilities, increased demand for energy by the solids handling facilities will be calculated at a broad level using percentage increase in operational capacity at each of the three facilities. The solids handling facilities all require several deliveries of biosolids loads per day (similar to what is quoted above for RP-5's new facility). The ~~expansion~~ rehabilitation of treatment capacity at RP-1 and the new facilities/expansion at RP-5 will require additional biosolids delivery at each solids handling facilities. Estimates of future effects on biosolids delivery will be included in the impact forecast.

2.6.2.2 Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines

As indicated above, IEUA plans on installing up to 220,000 lineal feet of pipeline through 2035. Once a pipeline is installed, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required. Although energy is required to push water uphill in pipes, the pipelines themselves do not consume energy.

Reservoirs

As noted above, the Master Plans envision six new storage reservoirs; conversion of one storage reservoir, and installation of two surge tanks over the planning period. Overall storage capacity is estimated to increase by about 32 million gallons and about 18 million gallons of existing capacity will be converted to support recycled water programs. Once the reservoirs are installed, operation of the reservoirs would not require any shifts or employees as they will be monitored and controlled remotely. Scheduled maintenance visits to each reservoir site will occur in the future with one trip per maintenance event. Reservoirs typically do not directly consume energy as water or recycled water is pumped into reservoirs directly from wells or through booster pump stations.

Pump Stations

Several pump stations require capacity upgrades, which will increase the gallons per minute capabilities of each pump to be replaced. Operations of pumps with greater capacities will require greater electricity generation to support greater flow output. The pump station capacities that will require replacement pumps, or in one case a new pump, are as follows:

- RP-1 1158 – capacity is currently 11,100 gpm, to be upgraded to 12,700 gpm by replacing 2 pumps for the 2020 planning year
- RP-4 1158 – capacity is currently 22,500 gpm, to be upgraded to 29,100 gpm by replacing 3 pumps and adding one new pump for the 2025 planning year
- RP-1 930 – capacity is currently 27,030 gpm, to be upgraded to 30,700 gpm by replacing 1 pump for the 2025 planning year
- CCWRF – capacity is currently 10,340 gpm, to be upgraded to 13,000 gpm by replacing 2 pumps for the 2025 planning year
- RP-1 930 – capacity is currently 27,030 gpm, to be upgraded to 39,000 gpm by replacing 2 pumps for the 2035 planning year
- RP-1 1050 – capacity is currently 11,250 gpm, to be upgraded to 15,879 by replacing 2 pumps for the 2035 planning year
- Septic System Conversion Program – up to 10 pump stations to support collection of new wastewater from closure of septic tank systems. Assume 250 horsepower pump at each pump station.

- In addition, under Scenario A an additional six pump stations would be installed to support transfer of recycled water to the various pressure zones.

Booster Stations

Energy consumption for booster stations depends on the location within the basin to be pumped to and from and the volume of water to be pumped. One new booster pump station is planned for the 1158-1299 pressure zone. An estimated average power requirement for booster stations is 380 kW per hour. Assuming a booster station runs 6 hours per day, the energy consumption would be 2300 kWhr per day. Total maximum daily electrical consumption is estimated to be 4.3 MW for the booster station.

In order to forecast energy consumption for the above facilities, the existing energy consumption for the pump stations will be identified for the current pumping volumes; the additional increment of pumping capacity will be defined; and the percentage increase in pumping capacity will be used to estimate future energy consumption. This analytical approach can provide the broad analysis consistent with a programmatic level of review. It also supports IEUA's program objective of procuring 100 percent of its electricity needs from carbon neutral sources.

2.6.2.3 Project Category 3: Groundwater Recharge and Extraction

Groundwater Recharge Basins

In the future IEUA plans on utilizing up to 25 existing basins for groundwater recharge. Sources of recharge include native stormwater; imported water; and recycled water. IEUA currently has permits from the regulatory agencies (Corps of Engineers, Regional Board and CDFW) to conduct operation and maintenance (O & M) activities for 21 of these basins. New applications will be submitted to the regulatory agencies to allow O & M activities at up to 25 basins over the planning period, including an application for an individual permit from the Corps. Operations consist of the following activities: diversion, capture and recharge of stormwater runoff and urban runoff into certain basins; diversion and recharge of imported water from Southern California Metropolitan Water District (MWD) imported water lines that cross the Chino Basin; and pumping of recycled water from the four WRFs to the basins for recharge. Only the latter activity requires a substantial amount of energy. Basin maintenance occurs every two- to three years for each basin. Basin maintenance is assumed to be at a frequency that would ensure that 50 percent of post cleaning infiltration is maintained at all times. The RWPS puts forth four basins that should require increased basin maintenance on an annual and semi-annual basis. One trip per maintenance visit will be required for each basin during operations, and generally occur as part of a basin maintenance schedule established at the beginning of each new calendar year.

Wells

IEUA directly operates only a few existing wells. Most wells are operated by the potable water supplier within the Chino Basin, including the Chino Desalter Authority. The Master Plans include five sustainability projects, some of which include new wells. Up to seven new wells are proposed to be installed over the planning period. Well operations require energy but no net

addition of personnel to support well operations. Energy consumption for wells depends on where the wells are located within the basin and how much water the wells are pumping. The power required for the wells ranges from 60-500 kW per hour. Assuming the wells are run 6 hours per day, the energy consumption would be 360-3000 kW-hr per day. The total maximum daily electrical consumption is estimated to be 3 MW per day for each well. Using these values the future increase in IEUA energy consumption from the new wells will be estimated and impacts dependent upon this energy consumption increase, air emissions, will be forecast. Periodic well maintenance will be contracted by IEUA. Such maintenance occurs once every few years. A maintenance activity scenario will be developed and evaluated as part of this document.

2.7 Potential Responsible Agencies

The Inland Empire Utilities Agency Board of Directors must approve and certify the PEIR before any of the proposed development will be allowed to proceed and cause the corresponding changes to the environment. This PEIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the Inland Empire Utilities Agency, and subsequently by the Watermaster and any constituent agencies should they decide to adopt the six management plans. Responsible agencies for this PEIR may include:

- ~~Chino Basin Watermaster~~
- Chino Basin Water Conservation District
- San Bernardino County Flood Control District
- California Air Resources Board
- California Department of Water Resources
- Regional Water Quality Control Board
- South Coast Air Quality Management District
- State Water Resources Control Board
- United States Army Corps of Engineers
- Cities as follows:
  - Chino
  - Chino Hills
  - Ontario
  - Rancho Cucamonga
  - Montclair
  - Upland
  - Fontana
  - Pomona
- Counties as follows:

  - San Bernardino County
  - Riverside County
- Monte Vista Water District
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Metropolitan Water District of Southern California
- Santa Ana River Water Company
- Santa Ana Watershed Project Authority
- Three Valleys Municipal Water District
- Western Municipal Water District
- California Department of Toxic Substances Control
- California Department of Transportation
- California Department of Fish and Wildlife
- U.S. Fish and Wildlife Service
- California Department of Public Health will be a responsible agency if permits or funding are requested from their department.
- Encroachment permits may be required from local jurisdictions, such as individual cities (listed above), California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), Flood Control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as BNSF Railway Company.

CHAPTER 3
Environmental Setting, Impacts and Mitigation Measures

This Final PEIR is prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.), the *CEQA Guidelines* (California Code of Regulations, Title 14, Section 15000 et seq.), and applicable rules and regulations of regional and local entities. This Final PEIR evaluates the potential environmental impacts associated with the construction and operation of the projects contemplated by IEUA. This Final PEIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the proposed program.

3.0 Scope of the Environmental Impact Analysis

In accordance with Section 15126 of the *CEQA Guidelines*, Chapter 3 provides an analysis of the direct and indirect, project and cumulative, environmental effects of the proposed projects with respect to existing conditions at the time the Notice of Preparation (NOP) was published (**Appendix A**). The determination of whether an impact is significant has been made based on the physical conditions established at the time the NOP was published (*CEQA Guidelines*, Section 15125(a)). The proposed projects within IEUA planning documents consist of management strategies and implementation actions that would require construction of and changes to various IEUA facilities and infrastructure. The specific locations and design elements of these facilities have yet to be finalized. As such, the proposed projects are evaluated in this PEIR at a programmatic level, in accordance with *CEQA Guidelines*, Section 15168. As previously stated in Chapter 1, the PEIR analysis is not intended to focus on the site-specific construction and operation details of each management strategy and project included in the FMP. Rather, this PEIR serves as a first-tier environmental document that focuses on the effects of implementing the overall FMP as a plan to provide a comprehensive document that addresses environmental concerns of the overall effects of the projects contemplated within IEUA planning documents.

The following environmental resources are assessed in this chapter in accordance with Appendix G of the *CEQA Guidelines:*

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology, Soils and Mineral Resources

- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Traffic and Transportation
- Utilities

Approach to Environmental Analysis

Sections 3.1 through 3.15 of this PEIR contain discussions of the environmental setting, regulatory framework, and potential impacts related to construction and operation of the proposed project facilities. The environmental evaluation includes a project analysis and a cumulative analysis. The project and cumulative analyses include a level of impact before the implementation of mitigation measures. The analyses also include a level of impact after the implementation of mitigation measures.

The project analysis is separated into an evaluation of three categories of projects related to the FMP. The categories include (1) Project Category 1: Treatment Facility Upgrades, (2) Project Category 2: Conveyance Systems and Ancillary Facilities, and (3) Project Category 3: Groundwater Recharge and Extraction. The project analysis also includes an evaluation of combined effects of constructing and operating facilities associated with all three project categories simultaneously.

The cumulative analysis was prepared in accordance with Section 15130 of the State CEQA Guidelines that requires an EIR to discuss cumulative impacts of a project when the incremental effects of a project are cumulatively considerable. Cumulative impacts are defined as an impact that is created as a result of the combination of the project evaluated in this PEIR together with other projects causing related impacts. Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. According to Section 15130(b) of the CEQA Guidelines, elements considered necessary to provide an adequate discussion of cumulative impacts of a project include either: (1) list of past, present, and probable future projects producing related or cumulative impacts; or (2) a summary of projection contained in an adopted General Plan or related planning document which is designed to evaluate regional or area-wide conditions. The cumulative analysis discussed in this PEIR is provided within each technical section in Section 3.Generally, a summary of projections contained in an adopted regional planning document was utilized to understand potential cumulative growth and development within the IEUA service area. The growth forecast provided by the Southern California Association of Governments was used to understand the population, housing and employment growth that would occur within the cities located within the

IEUA service area as well as within the County of San Bernardino. These projection are provided in Section 3.11, Population and Housing in this PEIR.

Organization of Environmental Issue Area

Implementation actions associated with the proposed program will achieve the goals and objectives of IEUA. These actions include the construction and operation of various FMP projects. Potential environmental issues associated with each environmental analysis that is addressed in Section 3 contain the following components.

Environmental Setting

This section identifies and describes the existing physical environmental conditions of the IEUA service area associated with each of the impact sections. According to Section 15125(a) of the *CEQA Guidelines*, an EIR must include a description of the existing physical environmental conditions in the vicinity of the specific proposed project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the proposed program was published in June 2016, which is considered the baseline for the analysis contained in this PEIR.

Regulatory Framework

The Regulatory Framework provides an understanding of the regulatory environment that exists prior to the implementation of the project. The regulatory framework used in this PEIR included federal, state, regional, and local regulations and policies applicable to the IEUA service area.

Impacts and Mitigation Measures

This section describes environmental changes to the existing physical conditions that may occur if the proposed FMP projects are implemented, and evaluates these changes with respect to the significance criteria. This section also includes a project impact analysis and a cumulative impact analysis. The level of impact prior to the implementation of mitigation is identified. Mitigation measures are identified for potential significant project and cumulative impacts, if determined feasible. The mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also includes a discussion of the level of significance after mitigation that describes the level of impact significance remaining after mitigation measures are implemented.

Significance Criteria

Significance criteria have been developed for each environmental resource in accordance with Appendix G of the *CEQA Guidelines* and are defined at the beginning of each impact analysis section. Impacts are categorized as follows:

- **Significant and Unavoidable:** mitigation might be recommended but impacts are still significant;
- **Potentially Significant:** mitigation might be recommended but impacts are potentially significant at the programmatic level;
- **Less than Significant with Mitigation:** potentially significant impact but mitigated to a less-than-significant level;
- **Less than Significant:** mitigation is not required under CEQA but may be recommended; or
- **No Impact**.

References

Sources relied upon for each environmental topic analyzed in this document are provided at the end of each section.

3.1 Aesthetics

This section includes a description of existing aesthetic conditions within the IEUA service area, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to a level of less than significant.

3.1.1 Environmental Setting

Regional Setting

IEUA is located in the Inland Empire region of Southern California, within southwestern San Bernardino County. San Bernardino County, with a land area of 20,106 square miles, is the largest County in the continental United States, containing vast undeveloped tracts of land that offer significant scenic vistas. This vast County consists of three distinct geographic regions: the Mountains; the Valley; and the Desert. The IEUA service area is located within the Valley Region, which is approximately 35-miles long from east to west and averages approximately 10 miles long from north to south, covering only 2.5 percent of the total County land, but supporting approximately 75 percent of the County's population. The San Bernardino Mountain Range trending southeast forms the eastern limit of the valley, along with the Yucaipa and Crafton Hills. The southern limits of the Valley Region are marked by alluvial highlands extending south from the San Bernardino and the Jurupa Mountains (County of San Bernardino, 2014). Visual resources in the region comprise natural landscapes and scenic views, including landforms, vegetation, and water features, as well as unique elements of the built environment. The topography of the area provides scenic views from various public vantage points.

Scenic Resources in the Service Area

The IEUA service area is bordered to the north by the San Gabriel Mountains; to the east by the Rialto-Colton Basin, the Jurupa Mountains and the Riverside County/San Bernardino County boundary, to the south by the Prado Flood Control Basin and to the west by the Chino Hills, Puente Hills and the Pomona and Claremont Basins. The area includes 242-square miles within the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills, Rancho Cucamonga; and unincorporated areas of San Bernardino County. The IEUA service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Elevations range from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The service area is characterized primarily by dense urbanization including residential, commercial and industrial land uses interspersed with undeveloped hilltops and distant mountain vistas. Valuable scenic resources within the service area are found sporadically on the valley floor and are visible from specific viewpoints on the valley floor. In contrast the surrounding hilltops and mountain scenic vistas are generally available from all locations within the service area, with the majestic view of the San Gabriel Mountains forming the primary background vista within the area.

San Bernardino County

The most significant visual resources in the unincorporated County are the hills and mountains, pastoral landscapes in and within view of the service area and the Prado Basin wetlands that occur in the southern portion of the service area. The predominant scenic vistas in the service area, as identified in local General Plans (Cities of Upland, Montclair, Chino Hills, Chino, Ontario, Rancho Cucamonga, Fontana, and Counties of San Bernardino) include: views of the San Gabriel, San Bernardino and Santa Ana Mountains; Chino Hills, Jurupa Hills, Puente Hills and San Jose Hills; Tonner Canyon; Prado Basin; and the remaining pastoral Chino farmlands. The Santa Ana River, Mill Creek (the southern portion of Cucamonga Creek), Chino Creek (the southern portion of San Antonio Creek, and the Prado Basin provide vegetated natural settings including riverine and wetland features bordering the southern edge of the service area.

The County of San Bernardino General Plan identifies State Route (SR) 71, within the unincorporated areas, as a local scenic route. In addition, the following Eligible State Scenic Highways are located within the southwestern portion of the service area: SR 142 (south of SR 71) and SR 71 (south of SR 83), and SR 91 (south of SR 71). Eligible State Scenic Highways are highways that have been identified and recommended for designation, but are not officially designated by the California Scenic Highway Mapping System (Caltrans, 2016).

Chino

The City is relatively flat as it lies on the southwestern alluvial valley floor of the Chino Basin. The City of Chino has views of the San Gabriel and San Bernardino Mountains to the north, the Jurupa Hills and Santa Ana Mountains to the east and south, respectively, and the Chino Hills to the west. The Chino General Plan does not identify specific scenic resources or local roadways of importance within its jurisdiction (City of Chino, 2010). The southern portion of the City contains pastoral agricultural areas that are slowly transitioning to suburban residential neighborhoods, some supporting commercial areas, and industrial warehouse areas. The southern-most portion of Chino is located below the 536 elevation that transitions into unincorporated territory that constitutes the 100-year flood hazard area occupied by a mix of agricultural areas and Prado Basin, the largest riparian woodland remaining in southern California.

Chino Hills

Grass covered oak savannah woodland hillsides dominate the western and southern portion of the community and are a key aspect to the area's visual character. The hills are visible from nearly every neighborhood and major street within this community. Single-family neighborhoods penetrate into the hills in the northern half of the City, while most of the southern half is preserved as undeveloped open space. The principal component of the southern area is the Chino Hills State Park; a wilderness park of rangeland, oak woodlands, and chaparral. The Chino Hills General Plan identifies city and state eligible and officially designated scenic highways, as well as the following Exceptionally Prominent Ridgelines as important scenic resources and defers to Chapter 16 of the Municipal Code of development standards and policies regarding visual resources:

- Chino Valley Freeway (SR 71);

- Carbon Canyon Road (SR 142);
- Butterfield Ranch Road;
- Soquel Canyon Parkway;
- Chino Hills Parkway;
- Peyton Drive;
- Woodview Road;
- Eucalyptus Avenue;
- Tonner Canyon Road; and
- Grand Avenue.

Fontana

The central portion of the City of Fontana is located on an alluvial plain that gently slopes south from the San Gabriel Mountains. The northern portion of the City extends into the San Gabriel foothills and the southern portion of the City extends into the northern-edge of the Jurupa Hills. The topography varies from characteristically flat in the central portion of the City, to gently to steep sloping hillsides in the San Gabriel foothills and Jurupa Mountains to the south. Views of the mountains at the northern and southern borders of the City are an important component of the City's aesthetic quality. The Fontana General Plan discusses the importance of preserving the character of the city, downtown landmarks and view of nearby hills and mountains but does not identify specific scenic resources or local scenic roadways within its jurisdiction (City of Fontana, 2003).

Montclair

According to the Montclair General Plan, the most dominant visual element within the community is the I-10 Freeway which is elevated above existing grade for that entire segment between Mills Avenue (on the west) and Benson Avenue (on the east). The I-10 Freeway physically divides northern Montclair (which is predominately allocated to commercial uses) from the remainder of the community (which is predominately allocated for residential uses). Physical access between these segments is only available along four roadways that link north to south (i.e., Mills Avenue, Monte Vista Avenue, Central Avenue, and Benson Avenue). Many of the major roadways within the community lack a distinct visual character that promotes a sense of identity for the City, enhances the driving experience, links the roadway to adjoining uses, or softens the urban edge between the automotive and non-automotive domains (City of Montclair, 1999).

Ontario

The dominant visual characteristic in the City of Ontario is the San Gabriel Mountain range to the north. Other visual characteristics include the Jurupa Mountains and the San Bernardino Mountains to the east, the Santa Ana Mountains to the south, and Chino Hills to the southwest. Ontario is located in a highly developed, urban/suburban area with developed land uses

(residential, commercial, industrial, agricultural, recreational, public, institutional, airport, and utility and transportation easements) located throughout the City. The City of Ontario is served by three freeways: I-10, I-15, and SR-60. I-10 and SR-60 traverse the northern and central portion of the City, respectively, in an east–west direction. I-15 traverses the northeastern portion of the City in a north–south direction. These segments of I-10, I-15, and SR-60 have not been officially designated as scenic highways by the California Department of Transportation. However, the Ontario General Plan identifies the Euclid Corridor and the Mission Boulevard Corridor as the primary scenic resources in the City of Ontario (City of Ontario, 2009).

Rancho Cucamonga

The City of Rancho Cucamonga lies on the sloping alluvial plain and extends up to the foothills of the San Gabriel Mountains. As the City's most prominent natural feature, the mountains run east-west and form an impressive visual background to the north. The orientation of the roadway network and elevation change (north-south) provides views of the foothills, the San Gabriel Mountains, and the San Bernardino National Forest. From the foothill area, long, open vistas to the south provide outstanding views of the Chino Basin to the Chino Hills and Santa Ana Mountains. These north-south views are particularly prominent along the straight alignments of Archibald, Haven, and Etiwanda Avenues. Additional scenic resources include the remaining stands of eucalyptus windrows, vineyards, and natural vegetation associated with flood control lands and utility corridors. Views of these resources are most prominent from the roadways and in certain locations from places of work and residences.

The Rancho Cucamonga General Plan identifies specific roadways as Special Boulevards and Historic and Special Design Streets. Special Boulevards are designated to incorporate extensive landscape setback areas, and denote where landscape and hardscape design, trails, and setback standards will be master planned and implemented and include all major arterials (divided and undivided), as well as several important secondary and collector segments. Historic and Special Design Streets are defined as streets worthy of special treatment due to their historic character and include: Etiwanda Avenue, Hillside Road, Hellman Avenue, and Foothill Boulevard (City of Rancho Cucamonga, 2010).

Upland

The City of Upland is located on the upper alluvial fan of San Antonio Creek, where the City extends into the San Gabriel Mountain foothills. The topography of the City is fairly flat sloping gradually north toward the San Gabriel Mountains. Scenic resources in the City include Foothill Boulevard and Euclid Avenue north of Interstate 10. The Upland General Plan designates Foothill Boulevard and Euclid Avenue as scenic roadways (City of Upland, 2015).

Visual Resources Concepts and Terminology

Light and Glare

Sources of light within the service area include lighting typically found in the urban/suburban setting with residential, commercial and industrial land uses such as building lighting, street

lighting, parking lot lighting, industrial and commercial signage, etc. In addition, existing light from motorists along local roads and freeways is present throughout the IEUA service area. Sources of glare include reflective building materials (e.g., windows and awnings), cars in the parking lots and along the local roadways, and potentially from rooftop solar panels.

Local Viewshed

For the purpose of this analysis the local viewshed comprises areas from which the existing IEUA facilities would be visible including residents, motorist and other viewers within the foreground viewing distance with views of the proposed projects that would take place at existing IEUA assets. Regional Plant No. 1 adjacent to the State Route 60 Freeway is an example of such a facility. The viewshed for future projects under the Facilities Master Plan would vary by project type and location, and would include varied local visual settings throughout the IEUA service area.

Potentially Affected Viewers and Sensitive Receptors

Accepted visual assessment methods, including those adopted by federal agencies, establish sensitivity levels as a measure of public concern for changes to scenic quality (FHWA, 1988). Viewer sensitivity, typically divided into high, moderate, and low categories, is among the criteria employed for evaluating visual impacts and their degree of significance. The factors considered in assigning a scenic resource's sensitivity level include viewer activity (and viewers' expectations, as influenced by their activity), view frequency and duration, viewing distance, adjacent land use, types of individuals and groups of viewers, and special management or planning designation. Research on the subject suggests that certain activities tend to heighten viewer awareness of visual and scenic resources, while other activities tend to be distracting. In general, the degree of visual impact tends to be more substantial where the sensitivity of affected viewers is highest. Potentially affected viewers in the local viewshed include motorists, residents, and recreational visitors.

3.1.2 Regulatory Framework

State

State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. The state regulations and guidelines governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway is designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. When a city or county nominates an eligible scenic highway for official designation, it defines the scenic corridor, which is land generally adjacent to and visible to a motorist on the highway.

Within the IEUA service area there are roadways classified as eligible for state scenic highway status, but there are no officially designated scenic highways. Roadways within the IEUA service area classified as eligible for state scenic highway status include: State Route (SR) 142 south of SR 71 and SR 71 south of SR 83 (Caltrans, 2016).

Local

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding preservation of scenic resources.

3.1.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to aesthetics are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impacts Discussion

Scenic Vistas

Impact 3.1-1: The proposed program would have significant and cumulatively considerable effects on a scenic vista.

The proposed program would construct and operate facilities identified in the six interrelated Facility Master Plans. Implementation of actions under this program would require the construction and maintenance of various aboveground facilities and support infrastructure. Based on the typical sizing for such facilities, the proposed program may potentially affect scenic vistas. The predominant scenic vistas in the service area, as identified in local General Plans include: views of the San Gabriel, San Bernardino and Santa Ana Mountains; Chino Hills, Jurupa Hills, Puente Hills and San Jose Hills; Tonner Canyon; Prado Basin; and the pastoral Chino farmlands.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed construction activities within the treatment facilities primarily include upgrades, but there is one of the facilities that will be demolished. The treatment facilities include Regional

Water Recycling Plant 1 (RP-1), RP-2, RP-4, RP-5, Carbon Canyon Water Recycling Facility (CCWRF), and Inland Empire Regional Composting Facility (IERCF). Improvements to existing treatment facilities include but are not limited to: liquid and solid treatment upgrades, sludge system, headworks and in-plant conveyance system, dewatering treatment, dosing facilities, odor control, flairs, electrical, pumps, pump stations, meters, tanks, filters, HVAC, emergency generators, lighting, drains, energy storage, expansion and maintenance/rehabilitation of existing facilities.

The construction of the treatment facility upgrades would require temporary ground-disturbance within existing treatment facilities. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Thus, impacts would be less than significant.

IEUA assets are located in the cities of Ontario, Rancho Cucamonga, and Chino; and within developed land supporting industrial, commercial, and residential uses (see Figure2-2):

Ontario

RP-1 is located in the City of Ontario directly south of SR-60. East of RP-1 is a concrete lined channel and commercial development. To the south and west are Whispering Lakes Golf Course and light residential uses, respectively. City-designated scenic vistas of the Jurupa Mountains and San Bernardino Mountains to the east are visible from SR-60. Construction of treatment facility upgrades could be visible to motorists traveling on the highway, some residential development to the west, and recreational users of the golf-course. Upgrades to facilities would be similar to the existing conditions of RP-1 and City-designated scenic vistas; Euclid Corridor and Mission Boulevard do not run adjacent to or near the regional plant. The upgrades would have a small footprint and would not substantially reduce the views of the mountains to the east. Therefore, impacts would be less than significant.

Rancho Cucamonga

RP-4 and IERCF are located in the southeastern portion of the City of Rancho Cucamonga. The assets are directly adjacent to each other and surrounded by heavy industrial uses in all directions. The orientation of the roadway network and elevations provide north and south views of the City's most prominent natural features: the San Gabriel Mountains and San Bernardino National Forest to the north, and the Chino Hills and Santa Ana Mountains to the south. These north-south views are particularly prominent along the straight alignments of Etiwanda Avenue which runs directly adjacent the east side of RP-4. Upgrades to RP-4 and IERCF may obstruct views of these scenic vistas from motorists traveling along Etiwanda Avenue. However, upgrades to RP-4 would be similar to existing conditions, and the upgrades would have a small footprint. Therefore, implementation of the treatment facility upgrades would not have a substantial effect on a designated scenic view or vista.

Chino

RP-5, RP-2, and the CCWRF are located in the southern portion of the City of Chino. The City has views of the San Gabriel and San Bernardino Mountains to the north, the Jurupa Hills and

Santa Ana Mountains to the east and south, respectively, and the Chino Hills to the west. The southern portion of the City contains pastoral agricultural areas that are slowly transitioning to suburban residential neighborhoods, except below the 100-year flood hazard elevation of 566 feet above mean sea level. Both RP-5 and CCWRF are surrounded by commercial and open space uses. Implementation of the treatment facility upgrades at RP-5 and CCWRF would be similar to the existing conditions of RP-5 and CCWRF. However, motorists traveling along Central Avenue, Chino Hills Parkway, El Prado Road, and Kimball Avenue may have obstructed views of scenic vistas previously mentioned. The upgrades would have a small footprint and would not substantially reduce the views of the mountains to the east. Therefore, impacts would be less than significant.

RP-2 is surrounded entirely by open space and recreational uses. Furthermore, RP-2 is less than 1 mile northwest of Prado Basin; a City-designated scenic area. All of RP-2 facilities are to be demolished and relocated to RP-5. Temporary obstruction of scenic vistas would occur in this area during demolition and would not permanently affect any scenic views or vistas. Impacts are less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Improvements to conveyance systems and ancillary facilities include but are not limited to: installation of new pipelines, rehabilitation of old pipelines, pump stations, lift stations, emergency generators, meters, electrical, system improvements, tanks, and discharge relocations. The proposed improvements to conveyance systems and ancillary facilities would be implemented throughout the entire IEUA service area.

The construction of the collection system facilities, conveyance systems and ancillary facilities would require temporary ground-disturbance within existing roadway/public ROWs. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not affect any scenic views or vistas. Construction of the conveyance pipelines and ancillary facilities would not permanently affect views or scenic vistas. Thus, impacts would be less than significant.

The conveyance pipelines would be placed underground and would not be visible once construction is complete. Implementation of conveyance system upgrades would not alter a scenic vista. The impact to a scenic vista would be less than significant. Although several of the proposed ancillary facilities would individually have small footprints and be low profile, some recycled water storage reservoirs would be high profile to hold up to 18 million gallons. Depending on the location of the recycled water storage reservoirs, they could affect views or designated scenic vistas. The conveyance systems and ancillary facilities project components would result in potentially significant impacts to scenic vistas.

Project Category 3: Groundwater Recharge and Extraction

Improvements associated with groundwater recharge and extraction facilities include: new and modified recharge basins, extraction wells and associated well housing, and groundwater monitoring. Similar to conveyance systems, groundwater recharge and extraction improvements

are proposed throughout the IEUA service area. The specific locations of future new extraction facilities are not currently known.

The construction of the groundwater recharge basins and extraction facilities would require temporary ground-disturbance within the project sites. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Thus, impacts would be less than significant.

Operational recharge basins are typically flat, below the ground surface, earthen excavations with berms. Operation of the recharge basins would not obstruct or alter existing view of scenic vistas. The project would include aboveground ancillary facilities associated with the basins. The aboveground ancillary facilities would not be located on a designated scenic vista. The ancillary facilities would be located in areas that are generally flat, and proximate to developed areas. Furthermore, the proposed aboveground ancillary facilities would not have size or massing that significantly reduces views of scenic vistas. Impacts would be less than significant.

Combined Project Categories

The combination of improvements proposed in Project Categories 1, 2, and 3 would not substantially impact views of scenic vistas within the IEUA service area during construction. Construction would be temporary and not substantially impact views of County and local-designated scenic vistas. Unlike project construction, implementation of the project would result in new aboveground structures. These structures could have massing and scale that substantially obstruct views of scenic vistas. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development could eliminate portions of the remaining natural areas that are within the service area. With regard to the overall visual and scenic character of the service area, cumulative development would result in more alterations of the existing visual quality of the region and could result in cumulatively significant impacts to existing scenic vistas.

The proposed project would not result in substantial degradation of existing scenic vistas; however, the proposed project could result in impacts to views of scenic vistas. Consequently, the project's contribution to cumulative impacts to scenic resources would be cumulatively considerable. Therefore, the project would result in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

Not mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

AES-1: Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.

Project Category 3: Groundwater Recharge and Extraction

Not mitigation measures are required.

Combined Project Categories

Implementation of Mitigation Measures AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities meet local design and landscape standards to be visually compatible with surrounding uses and reduce the potential for obstructing views of scenic vistas to less than significant.

Cumulative Measures

Implementation of Mitigation Measure AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities' contribution to cumulative scenic vista impacts would be reduced to less than cumulatively considerable by meeting the local design and landscape standards.

Scenic Resources within a State Scenic Highway

Impact 3.1-2: The proposed program could have a significant and cumulatively considerable impacts related to damage of scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

There are roadways classified as eligible for state scenic highway status within the IEUA service area; however, there are no officially designated scenic highways. Eligible state scenic highways include: State Route (SR) 142 south of SR 71 and SR 71 south of SR 83 (Caltrans, 2016). In addition, there are 19 locally designated scenic roadways (City of Chino, 2010; City of Chino Hills, 2015; City of Ontario, 2009; City of Rancho Cucamonga, 2010; City of Upland, 2015).

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would be located within the IEUA service area. Construction activities within the treatment facilities primarily include upgrades. The treatment facilities include Regional Water Recycling Plant 1 (RP-1), RP-2, RP-4, RP-5, Carbon Canyon Water Recycling Facility (CCWRF), and Inland Empire Regional Composting Facility (IERCF). There are no officially-designated State scenic highways or eligible State scenic highways that run adjacent to or near the project areas. Therefore, the project would not impact scenic resources within a State scenic highway corridor.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipeline installation would occur within existing right-of-ways; however, they could potentially be placed within an eligible scenic highway, or a locally-defined scenic corridor identified in a local General Plan. Pipeline construction activities would progress along the alignment; however, construction would be temporary. Therefore, construction impacts would be less than significant.

Once constructed and repaved or revegetated, the proposed conveyance systems would not detract from the visual quality along an eligible scenic highway, or a locally-defined scenic corridor or route because pipelines would be buried underground. Therefore, there would be no long-term impacts to these scenic corridors. The impact to locally-defined scenic corridors or routes would be less than significant.

Once constructed, new aboveground ancillary facilities could permanently affect views experienced by roadway users along locally-defined scenic corridors or routes. Potential impacts to scenic highways, routes, and corridors could be significant.

Project Category 3: Groundwater Recharge and Extraction

Groundwater recharge and extraction facilities could potentially be placed adjacent to an eligible scenic highway, or a locally-defined scenic corridor identified in a local General Plan. Existing views could be interrupted during construction due to equipment staging and fencing; however, construction would be temporary. Therefore, construction impacts would be less than significant.

The precise locations of proposed groundwater recharge basins and extraction facilities are undetermined, but will likely be located on flat, undeveloped land. The recharge basins and associated extraction facilities could be placed adjacent to a locally-defined scenic corridor or route. The groundwater recharge basins would be subsurface; however, the basins could be delineated by berms. These berms and new extraction facilities could alter existing views along a corridor. Potential impacts to scenic highways, routes, and corridors could be significant.

Combined Project Categories

It is possible that construction of aboveground ancillary facilities, groundwater recharge basins, and extraction facilities could result in potentially significant physical impacts to the scenic character along an eligible state scenic highway or locally-defined scenic corridor or route.

Therefore, the improvements associated with the project categories could significantly impact scenic highways, routes, and corridors.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development could eliminate portions of the remaining natural areas that are within the service area. With regard to the overall visual and scenic character of the service area, cumulative development would result in more alterations of the existing visual quality of the region and could result in cumulatively significant impacts to the existing scenic character along an eligible state scenic highway or locally-defined corridor or route.

Since the project could result in potential significant impacts on an eligible state scenic highway or locally-defined scenic corridors, the project's contribution is considered cumulatively considerable, and therefore, would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measures AES-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measures AES-1 is required.

Combined Project Categories
Implementation of Mitigation Measures AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities meet local design and landscape standards to be visually compatible with surrounding uses and reduce the potential for impact to scenic highways, routes, and corridors to less than significant.

Cumulative Measures

Implementation of Mitigation Measures AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities' contribution to cumulative impacts on scenic highways, routes, and corridors would be reduced to less than cumulatively considerable by meeting the local design and landscape standards.

Visual Character

Impact 3.1-3: The proposed program could have a significant and cumulatively considerable degradation of the existing visual character or quality of the sites and their surroundings.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction activities associated with treatment facility upgrades would result in short-term impacts to aesthetic resources. Construction activities would require the use of construction equipment and storage of materials within the existing treatment facilities for project components. Excavated areas, stockpiled soils and other materials generated during construction would present negative aesthetic elements to the existing visual landscape. However, these effects would be nominal because they would be located within the existing treatment facilities, and the effects would be temporary and therefore not substantially affect the existing visual character of the surrounding area.

The treatment facility upgrades would be located within existing treatment facilities and would not substantially alter the existing visual character of the site or its surroundings. Further, the projects would not be visually incompatible when viewed with the surrounding urban and developed areas. RP-2 would be demolished, and no facilities would be implemented on site. Demolition activities would include placement of soil on the RP-2 site so that the site is relatively flat. Post-demolition, the site would be bare and blend in with the surrounding area of open space. This altered site would not substantially degrade the visual character or quality of the site or surrounding area because the site with no RP-2 facilities would be more compatible with the surrounding open space character compared to the existing RP-2 facilities. Visual character impacts would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed conveyance pipelines would be buried underground; thus, no long-term impacts to the existing visual character or quality of the project sites or surrounding area would occur. The locations of associated ancillary facilities are unknown. Some of the aboveground ancillary facilities may be constructed in urban areas. Any aboveground structures within these urban areas would be constructed on or adjacent to existing developed and built-up landscapes. Therefore, there would be no impact to the visual character within these urban areas. Some aboveground facilities may be constructed in locally-designated corridors with specific visual characteristics. The proposed aboveground ancillary facilities may contrast with the visual character of these areas. Impacts to the existing visual character could be significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

It is possible that construction of aboveground ancillary facilities, groundwater recharge basins, and extraction facilities could result in physical impacts to the visual character of the project site and its surroundings. These potential visual character impacts could be significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development could eliminate portions of the remaining natural areas that are within the service area. With regard to the overall visual and scenic character of the service area, cumulative development would result in more alterations of the existing visual quality of the region and could result in cumulatively significant impacts to visual character.

Since the project could result in potential significant impacts to the existing visual character or quality of the site and surroundings, the project's contribution is considered cumulatively considerable, and therefore, would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures AES-1 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures AES-1 is required.

Combined Project Categories

Implementation of Mitigation Measures AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities meet local design and landscape standards to be visually compatible with surrounding uses and reduce the potential for physical impacts to the visual character of the site and surrounding area to less than significant.

Cumulative Measures

Implementation of Mitigation Measures AES-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AES-1 would ensure that the proposed facilities' contribution to cumulative impacts on visual character would be reduced to less than cumulatively considerable by meeting the local design and landscape standards.

Light or Glare

Impact 3.1-4: The proposed program could create new sources of substantial light or glare which could result in significant and cumulatively considerable adverse effects on day or nighttime views in the IEUA service area. A significant impact would occur if the proposed project caused a substantial increase in ambient light levels near light-sensitive land uses such as residential and natural/open space areas.

If nighttime construction is required, nighttime lighting at construction sites would contribute to ambient light. This source of nighttime lighting would result in a potentially significant impact. However, nighttime security lighting used during the construction phase of the proposed projects may introduce new sources of light and glare to the existing views of the area. This impact is potentially significant.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The treatment facility upgrades would be located within existing treatment facilities that contain lighting. The facilities are also located within an urban area developed with residential and commercial uses. Implementation of the proposed improvements could result in new exterior nighttime lighting for operational and security purposes within the existing treatment facilities. The increase in lighting within existing treatment facilities could result in spill over lighting onto residential and commercial uses. Therefore, increase lighting within the treatment facilities could represent a potential significant lighting impact.

Some proposed facility upgrades, primarily proposed for the IERCF, include the addition or expansion of solar panel use. Solar panels could create sources of glare during various times of the day. Proposed upgrades and additions of solar panels to treatment facilities could result in glare impacts on airplanes navigating from airports in the IEUA service area. The Chino Airport is located approximately 1.7 miles southwest of RP-2; 1.7 miles west of RP-5; and 2.6 miles northwest of CCWRF. RP-2 is located within the Chino Airport Safety Zone II, or Referral Area "B". This area is made up of a departure zone but does not fall within the Runway Protection Zone (RPZ). No solar panels or reflective materials are proposed to be implemented at RP-2 as this facility will be demolished and relocated to RP-5. RP-5 and the CCWRF are located in Chino Airport Safety Zone III, or Referral Area "C". The threat of aircraft accidents in this area is below that of the other referral areas. These assets are not within a RPZ and implementation of proposed solar panels would not interfere with flight paths. Less than significant impacts to glare would occur. The City of Ontario International Airport is located approximately 1.7 miles north of RP-1. RP-1 is not within any airport safety zones or flight paths, therefore proposed solar panel usage at

this treatment facility would result in a less than significant related to the interference with flight paths of the Ontario International Airport. RP-4 is approximately 3 miles northeast of the City of Ontario International Airport. RP-4 is not within any airport safety zones or flight paths, therefore proposed solar panel usage at this treatment facility would result in a less than significant related to the interference with flight paths of the Ontario International Airport.

Project Category 2: Conveyance Systems and Ancillary Facilities

The conveyance systems would not require nighttime lighting, and they would be placed underground. As a result, there would be no new sources of lighting to the project area. No impacts related to light and glare would occur.

The ancillary facilities may include nighttime security lighting mounted to the buildings and/or structures. These new sources of lighting could result in significant light intrusion impacts onto adjacent land uses.

The proposed ancillary facilities would not include aboveground structures that would include uninterrupted expanses of glass or other highly-reflective construction material. Water storage reservoirs could be a source of glare due to highly reflective materials. Therefore, potentially significant impacts related to glare would occur.

Project Category 3: Groundwater Recharge and Extraction

Recharge basins are relatively flat, earthen excavations that are surrounded by earthen berms. Nighttime security lighting could be included with the groundwater recharge facilities; however, due to these facilities being located on relatively flat terrain, potential lighting impacts would be less than significant. The potential for glare from proposed recharge basins containing surface water to affect specific residences and/or viewsheds for short periods of time is low and would not introduce substantial new sources of glare, and therefore, would represent a less than significant impact.

Ancillary facilities associated with the recharge and extraction facilities could require nighttime security lighting. This new lighting could result in significant light intrusion impacts onto adjacent land uses.

Combined Project Categories

All project categories have the potential to introduce new sources of light and glare to the project areas. The combination of improvements proposed in Project Categories 1, 2 and 3 could result in significant lighting impacts on adjacent uses; however, the potential for glare impacts would be less than significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development could increase additional sources of light and glare. With

regard to the overall sources of light and glare of the service area, cumulative development would result in more new sources of light and glare in the region and could result in cumulatively significant light and glare impacts.

Since the project could result in potential significant impacts related to light spillover and glare, the project's contribution is considered cumulatively considerable, and therefore, would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

The following mitigation measures are required to reduce potential impacts from light and glare.

Project Category 1: Treatment Facility Upgrades

AES-2: All new permanent exterior lighting associated with proposed project components shall be shielded and directed downward to avoid any light intrusion to surrounding uses. The maximum light allowed beyond the property boundary adjacent to sensitive light receptors shall be limited to 1.5 candles.

AES-3: Development of the proposed project and associated facilities shall comply with existing and future lighting ordinances.

AES-4: Structures with large facades shall not include highly reflective building materials.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures AES-2, AES-3, and AES-4 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures AES-2, AES-3, and AES-4 is required.

Combined Project Categories

Implementation of Mitigation Measures AES-2, AES-3, and AES-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measures AES-2 and AES-3 will limit the maximum light beyond the property boundary and comply with existing and future lighting ordinances so that lighting impacts on adjacent uses would be less than significant. The implementation of Mitigation Measure AES-4 will ensure that proposed structures with large facades will not include highly reflective building materials so that glare impacts could be reduced to less than significant.

Cumulative Measures

Implementation of Mitigation Measures AES-2, AES-3, and AES-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measures AES-2, AES-3 and AES-4 would ensure that the proposed facilities' contribution to cumulative light and glare impacts would be reduced to less than cumulatively considerable by limiting the maximum light beyond the property boundary, complying with existing and future lighting ordinances and not including highly reflective building materials on proposed structures with large facades.

3.1.4 References

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3.2 Agriculture and Forestry Resources

This section describes the environmental setting for agriculture and forestry resources, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to less than significant.

3.2.1 Environmental Setting

Regional

According to the California Department of Conservation's (DOC) *2015 California Farmland Conversion Report*, Southern California had approximately 2,973,000 acres of non-irrigated and irrigated important farmlands in 2012, but has continued to see a decline in farmlands over the years. Specifically, San Bernardino County experienced significant urban growth since 2010, ranking tenth in the state for urban growth. Approximately 1,440 acres have been converted from agricultural to nonagricultural uses in San Bernardino County between 2010 and 2012. In 2012, San Bernardino County had 924,790 acres of irrigated and non-irrigated important farmland and 278,910 of urban built-up land (DOC, 2016a).

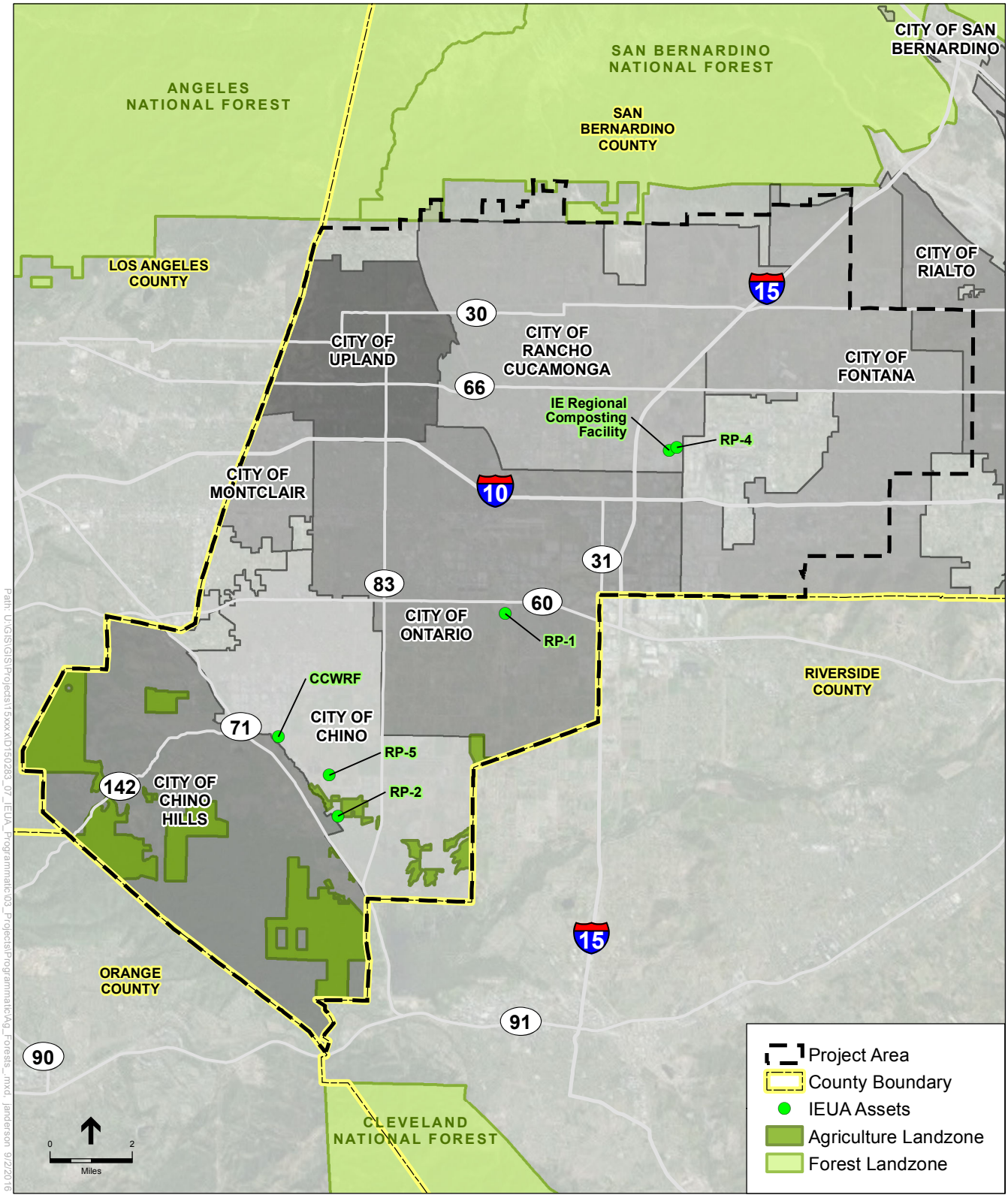
According to the *2014 Annual Crop Report for San Bernardino County*, the gross value of agricultural production in San Bernardino County for 2014 totaled approximately $527 million, which equates to an increase of more than 26 percent since 2013, primarily due to an increase in acreage used for field and vegetable crops and higher prices being received for some commodities such as milk, eggs, alfalfa, lemons, oranges, and oriental vegetables. Despite continued conversion of agricultural land in the County to business and residential development, agriculture is still an integral component of the economy in San Bernardino County (County of San Bernardino Agricultural Weight and Measures, 2014).

IEUA Service Area

Agriculture

The IEUA service area is located within the Valley Region of the county, within an area historically containing significant agricultural resources; primarily dairy ranches located in the southwestern portion of San Bernardino around the Chino, Chino Hills, and Ontario areas of the IEUA service area. Some of the historic dairy and agricultural operations in the Chino Basin have been converted to urban uses during the housing construction boom in the early part of this decade (DOC, 2016a). **Figure 3.2-1** shows the agriculture and forest land zones within San Bernardino County.

There are several parcels of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the IEUA service area (DOC, 2016b). Most of the Prime Farmland is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which is located in the southwestern portion of the program area. DOC Important Farmland designations within the service area are shown on **Figure 3.2-2**.

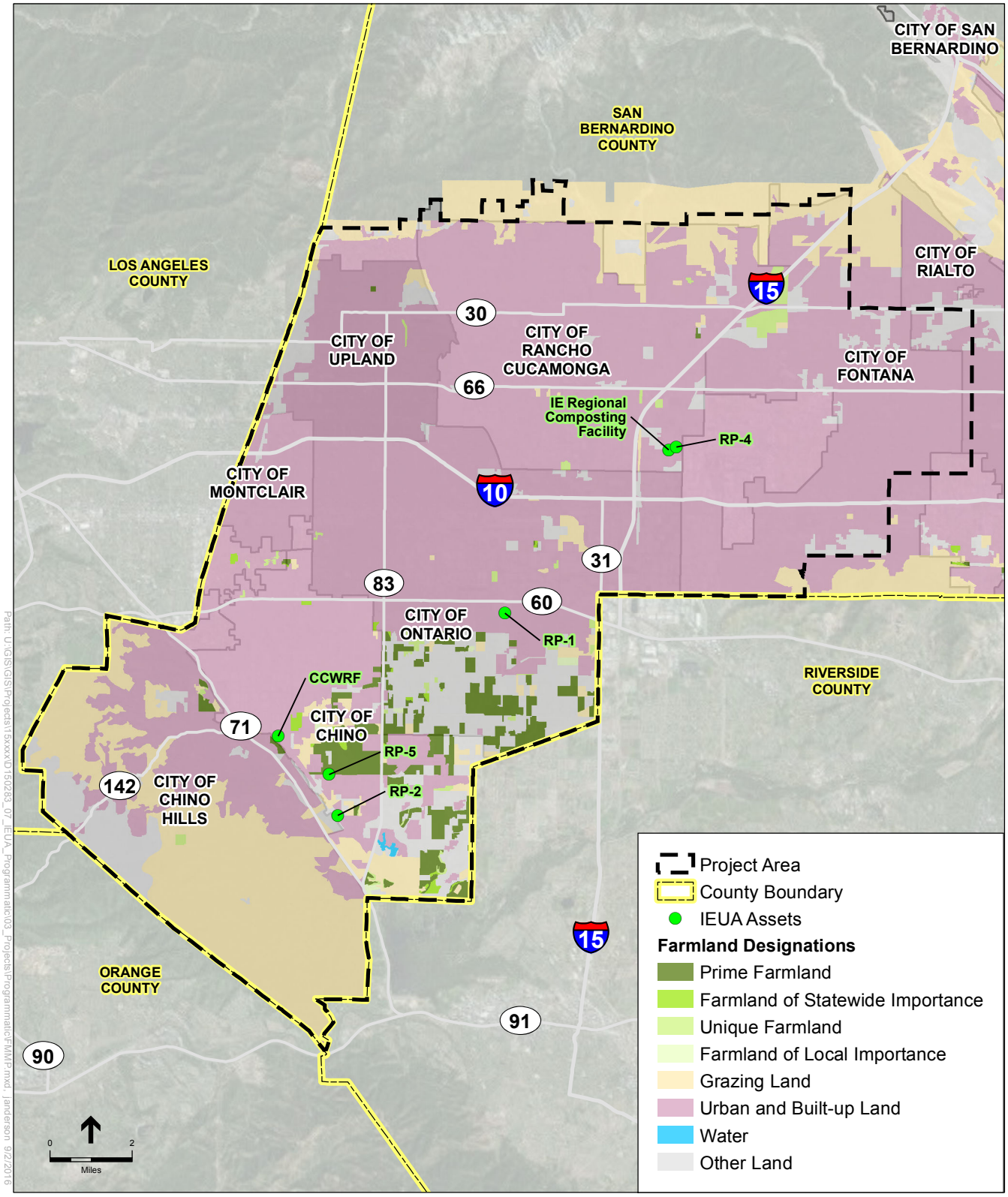


SOURCE: ESRI; County of San Bernardino

IEUA Facilities Master Plan PEIR . 150283.07

Figure 3.2-1

Agriculture and Forest Landzones



SOURCE: ESRI; County of San Bernardino; CA Dept of Conservation

IEUA Facilities Master Plan PEIR . 150283.07

Figure 3.2-2

FMMP Farmland Designations

IEUA currently supplies more than 1,600 acre-feet per year of recycled water for agriculture irrigation to the City of Chino Hills from its Carbon Canyon Water Recycling Facility (CCWRF) and Regional Plant No. 5, both located in the City of Chino. CCWRF's product water delivery system includes over four miles of pipeline for service to the cities of Chino and Chino Hills. The CCWRF has been operational since 1992 with a current plant capacity of 11.4 MGD for irrigation and agricultural use and has a current plant capacity to produce 16.3 MGD recycled water (City of Chino Hills, 2015).

Forestry

The San Bernardino National Forest is located just north of Upland, Rancho Cucamonga, Fontana, and portions of the unincorporated area San Bernardino County. The IEUA service area borders the San Bernardino National Forest, but it does not overlap with the IEUA service area (see Figure 3.2-1).

3.2.2 Regulatory Framework

State

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years (DOC, 2016b). Important farmlands are divided into the following five categories based on their suitability for agriculture:

Prime Farmland. Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.

Unique Farmland. Unique Farmland has even lesser quality soils and produces the state's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.

Farmland of Local Importance. Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act

The California Land Conservation Act 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. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The IEUA service area has no County Williamson Act contracts in place (DOC, 2016).

California Public Resources Code Section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526

The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)

The California Government Code defines "timberland production zone" under Section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Projects may significantly impact timberland resources if the project conflicts with existing areas zoned for timberland production.

California Land Evaluation and Site Assessment Model

The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features.

The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land

conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including in CEQA reviews.

The California Agricultural LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance (DOC, 2016).

Local

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. The County of San Bernardino, City of Chino, and City of Ontario contain goals and policies regarding farmland preservation.

San Bernardino County General Plan

The General Plan identifies areas of prime and non-prime agricultural soils and operations to establish areas where agriculture and compatible uses may coexist with development, identified as Agriculture Land Use Zoning Districts, which include the following (County of San Bernardino, 2007):

- Areas with limited infrastructure facilities and where limited public improvements will be planned or developed in the next 20 years.

The Conservation Element of the San Bernardino General Plan includes the following goal and policy regarding agriculture that may be applicable to all project activities within the IEUA service area.

Goal CO 6: The County will balance the productivity and conservation of soil resources.

Policy CO 6.1: Protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

City of Chino General Plan, Open Space and Conservation Element

The City of Chino Open Space and Conservation Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the IEUA service area:

Goal OSC-2: Connect Chino's residents to historic agricultural uses and support appropriate ongoing agricultural uses.

Objective OSC-2.1: Support links to Chino's agricultural history.

Objective OSC-2.2: Preserve and protect the remaining agricultural land in Chino.

Objective OSC-2.3: Minimize conflicts between agricultural and urban uses.

City of Ontario, Biological, Mineral, and Agricultural Resources Element

The City of Ontario, Biological, Mineral, and Agricultural Resources Element includes the following goal and policy regarding agriculture that may be applicable to all program activities within the IEUA service area:

Goal ER5: Protected high value habitat and farming and mineral resource extraction activities that are compatible with adjacent development.

Policy ER5-4: *Transition of Farms.* We protect both existing farms and sensitive uses around them as agricultural areas transition to urban uses.

3.2.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to Agricultural and Forestry resources are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to Agricultural and Forestry resources if it would:

- 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;
- Conflict with existing zoning for agricultural use, or a Williamson Act Contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- 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; or
- Result in the loss of forest land or conversion of forest land to non-forest use.

A discussion of the impacts and mitigation measures for the proposed program are presented below.

Impacts Discussion

Convert Farmland to Non-Agricultural Use

Impact 3.2-1: The proposed program could have significant and cumulatively considerable impacts from the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use.

The IEUA service area historically contains significant agricultural resources; primarily dairy ranches located in the southwestern portion of the County of San Bernardino. There are several parcels of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the IEUA service area (see Figure 3.2-2). Most of this farmland is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which is located in the southwestern portion of the program area.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would be located within the existing IEUA assets boundaries: Regional Water Recycling Plant 1 (RP-1), RP-2, RP-4, RP-5, Carbon Canyon Water Recycling Facility (CCWRF), and Inland Empire Regional Composting Facility (IERCF). IEUA assets are located in the Cities of Ontario, Rancho Cucamonga, and Chino; within developed land supporting industrial, commercial, and residential uses.

Chino

CCWRF, RP-5, and RP-2 are located in the southern portion of the City of Chino. The southern portion of the City contains pastoral agricultural areas that are slowly transitioning to suburban residential neighborhoods. According to the DOC's FMMP, the CCWRF is located within urban and built up land. Just west, separated by a concrete channel, is land designated as Prime Farmland. Construction and operation of the proposed facility upgrades would not require expanding the CCWRF facility across the channel and into Prime Farmland; therefore, there would be no conversion of that Prime Farmland to non-agricultural use. No impact would occur.

Similar to CCWRF, RP-5 is also located in urban and built-up land. Just north of the regional plant, across Kimball Avenue is Prime Farmland and just south of the plant is unirrigated farmland. Upgrades to this treatment facility would remain within the regional plant boundaries. RP-2 is proposed to be demolished and relocated to RP-5; this relocation would not require expansion of RP-5's existing footprint. RP-5 facilities would not be expanded across Kimball Avenue and onto Prime Farmland but constructed within available open space on IEUA property. Therefore, no impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur.

RP-2 is to be demolished over approximately 20 years and operating activities of the facility would be relocated to RP-5. RP-2 is currently on land designated by the FMMP as "other land"

but would be relocated on land that is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No impact would occur.

Ontario

RP-1 is located in the City of Ontario directly south of SR-60. According to the FMMP, the regional plant is located entirely within urban and built-up land. There is one parcel of Prime Farmland just south of Whispering Lakes Golf Course, which is adjacent to RP-1. Construction and operation of upgrades to this facility would not require expansion outside of RP-1, and therefore, would not convert this farmland to non-agricultural use. No impact would occur.

Rancho Cucamonga

RP-4 and IERCF are located in the southeastern portion of the City of Rancho Cucamonga. Both IEUA assets are within land designated as urban and built-up land and surrounded by land designated as "other." Upgrades and improvements proposed for these facilities would not convert any farmland to non-agricultural use. Therefore, no impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines would be constructed and operated within public rights-of-way, which are not located on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Farmland with these designations could be located adjacent to conveyance systems. Construction and operation of pipelines would not convert any designated farmland to non-agricultural uses; however ancillary facilities such as pump stations could be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Construction and operation of ancillary facilities could convert Prime, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, impacts would be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Proposed upgrades to existing groundwater recharge such as deepening of recharge basins would not alter existing footprints and would not convert any farmland to non-agricultural use. Some proposed projects include the construction of new recharge basins or storage tanks, which could operate on important agricultural land. The majority of the proposed recharge basins would be located north of SR-60 which includes a nominal amount of farmland and the implementation of the proposed recharge facilities is not expected to be located on farmland. However, for this analysis, IEUA is assuming that the implementation of recharge basins could significantly impact farmland. Additionally, groundwater production, extraction, and monitoring wells include well-housings that may be constructed and operated on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Similar to conveyance system ancillary facilities, above-ground facilities (including reservoirs) associated with groundwater recharge could convert farmland to non-agricultural use. Therefore, impacts would be potentially significant.

Combined Project Categories

Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The cumulative analysis for impacts to agricultural resources involves the projected growth of the IEUA service area. It is projected that the Inland Empire will experience substantial growth within the next 20 to 25 years, which means rapid development of commercial, industrial, and residential land uses could convert farmlands to non-agricultural use. Because agricultural land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is limited within the Valley Region, the loss of any of the remaining agricultural land in the area would be considered a significant cumulative impact. The proposed FMP projects in conjunction with projected development projects within the IEUA service area are potentially significant and impacts to important farmland are cumulatively considerable.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

AG-1: Where an ancillary facility is proposed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the improvement shall be relocated to urban land or non-important Farmland. Alternatively, if important farmland must be utilized for an ancillary facility, then IEUA shall conduct a California Land Evaluation and Assessment (LESA) Model. If the evaluation determines the loss of designated Farmland is significant, then it shall be offset by acquisition of agricultural land conservation credits at a minimum ratio of 1:1.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure AG-1 is required.

Combined Project Categories

Implementation of Mitigation Measure AG-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 includes the need to conduct a LESA Model if a facility is proposed on designated farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, IEUA would offset the loss by acquiring agricultural land conservation credits

at a minimum ratio of 1:1 so that potential impacts to farmland would be reduced to less than significant.

Cumulative Measures

Implementation of Mitigation Measure AG-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 would ensure the proposed facilities' contribution to cumulative farmland impacts would be reduced to less than cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination of significance, then IEUA will offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1.

Conflict with Existing Zoning or Williamson Act Contract

Impact 3.2-2: The proposed program could have significant and cumulatively considerable impacts from conflicts with existing zoning for agricultural use, or a Williamson Act Contract.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

According to the City of Chino, City of Ontario, and City of Rancho Cucamonga General Plan Zoning Maps, none of the IEUA assets are located within areas zoned for agriculture (see Figure 3.2-1). Additionally, none of the proposed treatment facility upgrades would conflict with active Williamson Act Contracts. No impacts to agricultural zoning or Williamson Act Contracts would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines would be constructed and operated within public rights-of-way, which are not located on land zoned for agriculture or on land under a Williamson Act Contract. Ancillary facilities such as storage tanks and pump stations could be constructed on land zoned as agriculture, and therefore, impacts could be potentially significant.

There are no Williamson Act contracts within the IEUA services area (DOC, 2016). Thus, no impact would occur.

Project Category 3: Groundwater Recharge and Extraction

Project impacts would be the same as Project Category 2.

Combined Project Categories

Some proposed ancillary facilities could be implemented on land zones for agricultural use, therefore impacts could be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The cumulative analysis for determining conflicts between proposed projects and agricultural zoning and Williamson Act Contracts, involves the projected growth of the IEUA service area. It is projected that the Inland Empire will experience substantial growth within the next 25 years, which means rapid development of commercial, industrial, and residential land uses could convert farmlands to non-agricultural use. Because land zoned for agriculture is limited within the Valley Region, the loss of any of the remaining agricultural land in the area would be considered a significant cumulative impact. The proposed FMP projects in conjunction with projected development projects within the IEUA service area are potentially significant, and impacts to agricultural zones are cumulatively considerable.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure AG-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure AG-1 is required.

Combined Project Categories
Implementation of Mitigation Measure AG-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 includes the need to conduct a LESA Model if a facility is proposed on designated farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, IEUA would offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1 so that potential impacts to land zoned for agriculture would be reduced to less than significant.

Cumulative Measures

Implementation of Mitigation Measure AG-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 would ensure the proposed facilities' contribution to cumulative impacts on land zoned for agriculture would be reduced to less than cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination of significance, then IEUA will offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1.

Zoning or Rezoning of Forest Land or Timberland

Impact 3.2-3: The proposed program would have no impact and no contribution to cumulative impacts on existing zoning because the program would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Project Impact Analysis

The IEUA service area does not include zoning designations for forest land, timberland, or timberland zoned Timberland Production. The IEUA service area borders the San Bernardino National Forest, but it does not overlap with the IEUA service area.

Project Category 1: Treatment Facility Upgrades

Treatment Facility upgrades would occur within existing treatment facilities in the IEUA service area. As described above, none of these facilities are zoned for forest land, timberland, or zoned for Timberland Production. No impact would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts are the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts are the same as Project Category 1 and 2.

Combined Project Categories

Project Categories 1, 2, and 3 would have no impact to areas zoned for forest land, timberland, or for Timberland Production. Therefore combined project categories would have no impact.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

The proposed projects would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; and therefore would not contribute to any cumulative effect on forest or timberland.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Loss or Conversion of Forest Land

Impact 3.2-4: The proposed program would have no impact and no contribution to cumulative impacts on forestland uses because the program would not result in the loss of forest land or conversion of forest land to non-forest use.

Project Impact Analysis

The IEUA service area does not include zoning designations for forest land. The IEUA service area borders the San Bernardino National Forest, but it does not overlap with the IEUA service area.

Project Category 1: Treatment Facility Upgrades

All treatment facility upgrades would be constructed and operated at the IEUA assets within the cities of Chino, Ontario, and Rancho Cucamonga. According to the City of Chino, City of Ontario, and City of Rancho Cucamonga General Plan Zoning Maps, none of the IEUA assets are located within forest land. Implementation of the treatment facility upgrades would not result in the conversion of forest land to non-forest use. No impact would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Categories 1 and 2.

Combined Project Categories

The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, and therefore, would not contribute to any cumulative effect on forest or timberland.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

There is no forest land within the IEUA service area. The proposed FMP projects would not result in a loss of forest land or conversion of forest land to non-forest use, therefore, the FMP would not cumulatively contribute to the loss of forest land or conversion of forest land. Therefore, the FMP would result in no cumulative impacts.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Conversion to Non-Agricultural use and Conversion to Non-Forest Use

Impact 3.2-5: The proposed program could have significant and cumulatively considerable effects from conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed projects would upgrade existing facilities and construct new facilities within the IEUA service area on land that generally consists of industrial, commercial and residential uses. The proposed treatment facilities do not contain agricultural uses and would not result in the

conversion of farmland to a non-agricultural use. Therefore, the proposed improvements within the treatment facilities would result in no impacts.

IEUA service area does not have any land use designations or zoning designations for forest land or timberland. The IEUA service area borders the San Bernardino National Forest, but it does not overlap with the IEUA service area. The proposed projects would not result in the loss of forest land or convert forest land to non-forest use. There would be no impact.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction and operation of pipelines would not convert any existing farmland to a non-agricultural use; however ancillary facilities such as pump stations could be constructed on existing agricultural land. Construction and operation of ancillary facilities could convert existing agricultural land to non-agricultural uses. Therefore, impacts would be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Proposed upgrades to existing groundwater recharge such as deepening of recharge basins would not alter existing footprints and would not convert any existing farmlands to non-agricultural use. Some proposed projects include the construction of new recharge basins or storage tanks, which could operate on existing agricultural land. Additionally, groundwater production, extraction, and monitoring wells include well-housings that may be constructed and operated on existing agricultural land. Similar to conveyance system ancillary facilities, above-ground facilities associated with groundwater recharge could convert existing farmland to non-agricultural uses. Therefore, impacts would be potentially significant.

Impacts associated with forest land are the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts associated with farmland and forest land are the same as Project Category 2.

Combined Project Categories

Project Categories 2 and 3 could have potentially significant existing farmland conversion impacts. Therefore, the combined farmland conversion impacts would be potentially significant.

Project Categories 1, 2, and 3 would result in no impacts associated with forest land conversion. Therefore, the combined forest land conversion would result in no impact.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Cumulative development within the IEUA service area could result in the conversion of existing farmlands to non-farmland uses. Therefore, potential significant cumulative farmland conversion impacts could occur. Because the proposed project would result in potential significant farmland

conversion impacts, the project's contribution to the cumulative conversion of farmland would be cumulatively considerable.

Because the IEUA service area does not contain forest land, cumulative development as well as the proposed project would not result in the conversion of forest land to non-forest uses. Therefore, no cumulative forest land conversion impacts would occur.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
Implementation of Mitigation Measure AG-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure AG-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure AG-1 is required.

Combined Project Categories
Implementation of Mitigation Measure AG-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 includes the need to conduct a LESA Model if a facility is proposed on farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, IEUA would offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1 so that potential impacts from converting existing farmland to a non-agricultural use would be reduced to less than significant.

Cumulative Measures

Implementation of Mitigation Measures AG-1 and AG-2 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AG-1 would ensure the proposed facilities' contribution to cumulative impacts from converting existing farmland to a non-agricultural use would be reduced to less than cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination of significance, then IEUA will offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1.

3.2.4 References –Agricultural Resources and Forestry

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3.3 Air Quality and Greenhouse Gas Emissions

This section provides an overview of existing air quality conditions within the IEUA service area and surrounding region, regulatory framework applicable to air pollutant emissions, and an analysis of potential air quality impacts that would result from implementation of the FMP and mitigation measures that can minimize future air emissions from its implementation.

3.3.1 Environmental Setting

Criteria Air Pollutants

Criteria air pollutants are those pollutants for which standards have been established to meet specific public health and welfare criteria set forth in the Federal Clean Air Act (FCAA). California has adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State Ambient Air Quality Standards, or state standards) and has adopted air quality standards for some pollutants for which there are no corresponding national standard.

Ozone. Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NOx as a secondary pollutant under the influence of wind and sunlight.

Carbon Monoxide. Ambient CO concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, CO concentrations may be distributed more uniformly over an area that may extend some distance from vehicular sources. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

CO concentrations have declined dramatically in California due to existing controls and programs in most areas of the state. CO measurements and modeling were important in the early 1980's when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, fewer emissions from new vehicles and improvements in fuels. The clear success in reducing CO levels is evident in the first paragraph of the executive summary of the California Air Resources Board *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas* (CARB, 2004), shown below:

The dramatic reduction in carbon monoxide (CO) levels across California is one of the biggest success stories in air pollution control. Air Resources Board (CARB or Board) requirements for cleaner vehicles, equipment and fuels have cut peak CO levels in half since 1980, despite growth. All areas of the State designated as non-attainment for the federal 8-hour CO standard in 1991 now attain the standard, including the Los Angeles urbanized area. Even the Calexico area of Imperial County on the congested Mexican border had no violations of the federal CO standard in 2003. Only the South Coast and Calexico continue to violate the more protective State 8-hour CO standard, with declining levels beginning to approach that standard.

Respirable Particulate Matter (PM10 and PM2.5). PM10 and PM2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility. Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fraction, PM10 and PM2.5, are a health concern particularly at levels above the federal and state ambient air quality standards. PM2.5 (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus, are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM10 and PM2.5 because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health (Dockery and Pope, 2006). The CARB has estimated that achieving the ambient air quality standards for PM10 could reduce premature mortality rates by 6,500 cases per year (CARB, 2002).

Nitrogen Dioxide (NO_2). NO_2 is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide (SO_2). SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate, particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. The maximum SO_2 concentrations recorded in the Chino Basin are well below federal and state standards. Accordingly, the region is in attainment status with both federal and state SO_2 standards.

Lead. Ambient lead concentrations meet both the federal and state standards in the air basin. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead.

Non-Criteria Air Pollutants

Toxic Air Contaminants

Non-criteria air pollutants or toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors. Generally, increasing the distance between the receptor and the source can mitigate odor impacts through dilution.

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased emission of GHGs and long term global temperature. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. Both natural processes and human activities emit GHGs.

GHGs include but are not limited to carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (California Health and Safety Code section 38505(g)). CO_2 is the reference gas for climate change because it gets the most attention and is considered the most important greenhouse gas. To account for the warming potential of different GHGs, GHG emissions are quantified and reported as CO_2 equivalents (CO_2e). The effects of GHG emission sources (i.e., individual projects) are reported in metric tons/year of CO_2e.

Climate and Meteorology

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, and vertical air temperature gradients in the atmosphere interact with physical landscape features to determine the movement and dispersal of criteria air pollutants.

The IEUA is located in the South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD) is the local air district with jurisdiction over air pollution sources in the IEUA service area. The IEUA service area is comprised of highly urbanized areas, natural open space, and agricultural areas that are primarily associated with the dairy industry. The applicable general plans (cities and county) envision additional urban development in the future with a reduction in existing agricultural uses.

Existing Conditions

SCAQMD maintains monitoring stations within district boundaries that monitor air quality and compliance with associated ambient standards. The IEUA service area is located in the San Bernardino Valley Air Monitoring Region. There are five monitoring stations within the IEUA service area. The Upland Monitoring Station (1350 San Bernardino Road) and Fontana-Arrow Highway Monitoring Station (14360 Arrow Highway) both monitor ambient concentrations of ozone, particulate matter (PM0 PM_{10}, $PM_{2.5}$, and NO_2, but do not monitor SO_2 or CO. The three Ontario Monitoring Stations (1408 Francis Street, Route 60 Near Road, and NW Corner Interstate (I)-10 and Etiwanda Avenue) monitor ambient concentrations of PM_{10}, $PM_{2.5}$, and NO_2, but do not monitor ozone, SO_2 or CO. Historical data of ambient ozone, PM_{10}, $PM_{2.5}$, and NO_2 concentrations from the relevant monitoring stations for the most recent three years (2013 – 2015) are shown in **Table 3.3-1**. There is no data available for ambient concentrations of SO_2 or CO within the South Coast Air Basin from the last three years (CARB, 2016).

TABLE 3.3-1
AIR QUALITY DATA SUMMARY (2013–2015)

Pollutant	Standard[a]	Monitoring Data by Year 2013	2014	2015
UPLAND MONITORING STATION – 1350 San Bernardino Road				
Ozone				
Highest 1 Hour Average (ppm)[b]		**0.143**	**0.126**	**0.136**
Days over State Standard	0.09	25	34	49
Highest 8 Hour Average (ppm)[b]		**0.112**	**0.101**	**0.106**
Days over National Standard	0.075	27	42	53
Days over State Standard	0.070	44	60	69
Particulate Matter (PM10)				
Highest 24 Hour Average ($\mu g/m^3$)[b] – State Measurement		NA	NA	NA
Est. Days over State Standard[c]	50	NA	NA	NA
Highest 24 Hour Average ($\mu g/m^3$)[b] – National Measurement		96.8	80.8	69.6
Est. Days over National Standard[c]	150	0	0	0
State Annual Average ($\mu g/m^3$)[b]	20	NA	NA	NA
Particulate Matter (PM2.5)				
Highest 24 Hour Average ($\mu g/m^3$)[b]		**83.2**	**40**	**49.1**
Est. Days over National Standard[c]	35	NA	NA	NA
State Annual Average ($\mu g/m^3$)[b]	12	16.5	NA	NA
Nitrogen Dioxide (NO_2)				
Highest 1 Hour Average (ppb)[b] – State Measurement		62	74	71
Days over State Standard	180	0	0	0
Highest 1 Hour Average (ppb)[b] – National Measurement		62.1	74.1	71.6
Days over National Standard	100	0	0	0
State Annual Average (ppb)[b]	30	NA	16	15
Sulfur Dioxide (SO_2) [d]		NA	NA	NA
Carbon Monoxide (CO) [d]		NA	NA	NA
FONTANA MONITORING STATION – 14360 Arrow Highway				
Ozone				
Highest 1 Hour Average (ppm)[b]		**0.151**	**0.127**	**0.133**
Days over State Standard	0.09	34	31	36
Highest 8 Hour Average (ppm)[b]		**0.123**	**0.106**	**0.111**
Days over National Standard	0.075	42	37	39
Days over State Standard	0.070	68	52	59
Particulate Matter (PM10)				
Highest 24 Hour Average ($\mu g/m^3$)[b] – State Measurement		**86.0**	**65.0**	**53.0**
Days over State Standard[c]	50	15	10	2
Highest 24 Hour Average ($\mu g/m^3$)[b] – National Measurement		90.0	68.0	56.0
Days over National Standard[c]	150	0	0	0
State Annual Average ($\mu g/m^3$)[b]	20	**38.8**	NA	NA
Particulate Matter (PM2.5)				
Highest 24 Hour Average ($\mu g/m^3$)[b]		43.6	78.9	50.5
Est. Days over National Standard[c]	35	**3.0**	**3.8**	**10.4**
State Annual Average ($\mu g/m^3$)[b]	12	12.3	NA	11.0

Pollutant	Standard[a]	Monitoring Data by Year 2013	2014	2015
FONTANA MONITORING STATION – 14360 Arrow Highway (cont.)				
Nitrogen Dioxide (NO_2)				
Highest 1 Hour Average (ppb)[b] – State Measurement		81	70	89
Days over State Standard	180	0	0	0
Highest 1 Hour Average (ppb)[b] – National Measurement		81.7	70.4	89.1
Days over National Standard	100	0	0	0
State Annual Average (ppb)[b]	30	20	NA	18
Sulfur Dioxide (SO_2) [d]		NA	NA	NA
Carbon Monoxide (CO) [d]		NA	NA	NA
ONTARIO MONITORING STATION – 1408 Francis Street, Route 60 Near Road, or NW Corner I-10 and Etiwanda Ave				
Particulate Matter (PM10) – 1408 Francis St.				
Highest 24 Hour Average ($\mu g/m^3$)[b] – State Measurement		**113**	**65.0**	NA
Est. Days over State Standard[c]	50	18.8	NA	NA
Highest 24 Hour Average ($\mu g/m^3$)[b] – National Measurement		17.0	67.0	NA
Days over National Standard[c]	150	0	0	NA
State Annual Average ($\mu g/m^3$)[b]	20	**33.9**	NA	NA
Particulate Matter (PM2.5) – 1408 Francis St.				
Highest 24 Hour Average ($\mu g/m^3$)[b]		**49.3**	**38.4**	NA
Days over National Standard[c]	35	1	1	0
State Annual Average ($\mu g/m^3$)[b]	12	NA	NA	NA
Nitrogen Dioxide (NO_2) – Route 60 Near Road				
Highest 1 Hour Average (ppb)[b] – State Measurement		NA	NA	79
Days over State Standard	180	0	0	0
Highest 1 Hour Average (ppb)[b] – National Measurement		NA	NA	79.2
Days over National Standard	100	0	0	0
State Annual Average (ppb)[b]	30	NA	NA	NA
Nitrogen Dioxide (NO_2) – NW Corner I-10 and Etiwanda Ave				
Highest 1 Hour Average (ppb)[b] – State Measurement		NA	NA	87
Days over State Standard	180	0	0	0
Highest 1 Hour Average (ppb)[b] – National Measurement		NA	NA	87.2
Days over National Standard	100	0	0	0
State Annual Average (ppb)[b]	30	NA	NA	29
Ozone [d]		NA	NA	NA
Sulfur Dioxide (SO_2) [d]		NA	NA	NA
Carbon Monoxide (CO) [d]		NA	NA	NA

a Generally, state standards and national standards are not to be exceeded more than once per year.
b ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter.
c PM10 and PM2.5 are not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.
d Pollutant not measured at listed monitoring station.

Values in **bold** are in excess of at least one applicable standard. NA = Not Available.

SOURCE: California Air Resources Board, 2016. *Summaries of Air Quality Data*, 2013 through 2015; http://www.arb.ca.gov/adam/

Based on the data from Table 3.3-1, ozone and particulate matter have generally decreased over the past three years while nitrogen oxide has increased over the past three years.

Sensitive Receptors

Land uses such as schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality conditions because infants, children, the elderly, and people with health afflictions (especially respiratory ailments) are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. There are numerous sensitive receptors throughout the IEUA service area and there is the potential for many sensitive receptors to be within one-mile of existing or proposed IEUA assets.

3.3.2 Regulatory Framework

Regulation of air pollution is achieved through both national and state ambient air quality standards and through emissions limits on individual sources of air pollutants. Local air quality management districts (AQMDs) and air pollution control districts (APCDs) are responsible for demonstrating attainment with state air quality standards through the adoption and enforcement of Attainment Plans.

Federal

The FCAA requires the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS, or national standards) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter (PM10 and PM2.5), and lead. These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria set forth in the FCAA. California has adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State Ambient Air Quality Standards, or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard. **Table 3.3-2** presents current national and state ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant.

Pursuant to the 1990 Federal Clean Air Act Amendments (FCAAA), the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the NAAQS had been achieved. **Table 3.3-3** shows the current attainment status of the IEUA service area.

TABLE 3.3-2
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm	0.075 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	0.75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 μg/m3	150 μg/m3	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 μg/m3	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 μg/m3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
	Annual Avg.	12 μg/m3	15 μg/m3		
Lead	Monthly Avg.	1.5 μg/m3	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 μg/m3		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 μg/m3	No National Standard	Breathing difficulties, aggravates asthma, reduced visibility	Produced by the reaction in the air of SO2.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM2.5.

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

SOURCES: California Air Resources Board (CARB), 2015. *Ambient Air Quality Standards,* available at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf Standards last updated October 1, 2015. California Air Resources Board, 2001. *ARB Fact Sheet: Air Pollution Sources, Effects and Control,* http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, page last updated December 2009.

TABLE 3.3-3
INLAND EMPIRE UTILITIES AGENCY SERVICE AREA ATTAINMENT STATUS

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard	Nonattainment
Ozone – eight hour	Nonattainment	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Attainment
CO	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-Reducing Particles	No Federal Standard	Unclassified

SOURCES: California Air Resources Board, Area Designations Maps/ State and National. http://www.arb.ca.gov/desig/adm/adm.htm. 2013.

The FCAA required each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Regulation of TACs, termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal, State and local controls on individual sources. The 1977 Clean Air Act Amendments required the U.S. EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. There is uncertainty in the precise degree of hazard.

State

The CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county APCDs and regional AQMDs. CARB establishes state ambient air quality standards and vehicle emissions standards.

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These are shown in Table 3.3-2. Under the California Clean Air Act (CCAA) patterned after the FCAA, areas have been designated as attainment or nonattainment with respect to the state standards. Table 3.3-3 summarizes the attainment status with California standards in the IEUA service area vicinity.

Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as a TAC. CARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* in 2005 (CARB, 2005). The primary goal in developing the handbook was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. The handbook highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities (i.e., distribution centers, rail yards, chrome platers, etc.). However, the health risk is greatly reduced with distance. For that reason, CARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences.

Climate Change and Greenhouse Gases

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, California has passed laws directing CARB to develop actions to reduce GHG emissions, and several state legislative actions related to climate change and GHG emissions have come into play in the past decade. These are summarized below.

Executive Order B-30-15

In 2015, in recognition of California's vulnerability to the effects of climate change, Governor Brown established Executive Order B-30-15, which sets forth a series of target dates by which statewide emission of greenhouse gas would be progressively reduced, as follows:

- By 2020, reduce greenhouse gas emissions to 1990 levels;
- By 2030, reduce greenhouse gas emissions to 40 percent below 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

Assembly Bill 32 (AB 32)

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the CARB to design and implement emission limits, regulations, and other measures, such that statewide greenhouse gas emissions will be reduced to 1990 levels by 2020.

In December 2007, CARB approved the 2020 emission limit of 427 million metric tons of CO_2 equivalents of greenhouse gases. The 2020 target of 427 million metric tons of CO_2e requires the reduction of 169 million metric tons of CO_2e, or approximately 30 percent, from the state's projected 2020 emissions of 596 million metric tons of CO_2e (business-as-usual).

Also in December 2007, CARB adopted mandatory reporting and verification regulations pursuant to AB 32. The regulations became effective on January 1, 2009, with the first reports covering 2008 emissions. The mandatory reporting regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. Currently, the draft regulation language identifies major facilities as those that generate more than 25,000 metric tons/year of CO_2e. Cement plants, oil refineries, electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO2e, make up 94 percent of the point source CO2e emissions in California (CARB, 2007).

In May 2014, CARB published its *First Update to the Climate Change Scoping Plan* (CARB, 2014). The *First Update to the Climate Change Scoping Plan* reported that CARB met the first milestones set by AB 32 in 2007: developing a list of early actions to begin sharply reducing greenhouse gas emissions; assembling an inventory of historic emissions; and establishing the 2020 emissions limit. This first update to the initial AB 32 Scoping Plan describes progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. It also frames activities and issues facing the State as it develops an integrated framework for achieving both air quality and climate goals in California beyond 2020. Specifically, this update covers a range of topics:

- An update of the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants.
- A review of progress-to-date, including an update of Scoping Plan measures and other state, federal, and local efforts to reduce GHG emissions in California.

- Potential technologically feasible and cost-effective actions to further reduce GHG emissions by 2020.
- Recommendations for establishing a mid-term emissions limit that aligns with the State's long-term goal of an emissions limit 80 percent below 1990 levels by 2050.
- Sector-specific discussions covering issues, technologies, needs, and ongoing State activities to significantly reduce emissions throughout California's economy through 2050.
- Priorities and recommendations for investment to support market and technology development and necessary infrastructure in key areas.
- A discussion of the ongoing work and continuing need for improved methods and tools to assess economic, public health, and environmental justice impacts.

CARB has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions; however, the *Scoping Plan* does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors (CARB, 2014).

Senate Bill 97

SB 97, signed August 2007 (Chapter 185, Statutes of 2007; Public Resources Code Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the state Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA, by July 1, 2009. On December 31, 2009, the Natural Resources Agency delivered its rulemaking package to the Office of Administrative Law for their review pursuant to the Administrative Procedure Act. The adopted guidelines became effective on March 18, 2010.

OPR Technical Advisory, CEQA and Climate Change

On June 19, 2008, OPR published a technical advisory on CEQA and Climate Change. The advisory provides OPR's perspective on the emerging role of CEQA in addressing climate change and greenhouse gas emissions, while recognizing that approaches and methodologies for calculating greenhouse gas emissions and addressing environmental impacts through CEQA review are rapidly evolving. The advisory recognizes that OPR will develop, and the Resources Agency will adopt amendments to the CEQA Guidelines pursuant to SB 97. In the interim, the technical advisory "offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents" (OPR, 2008).

The technical advisory points out that neither CEQA nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. "This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable". OPR recommends that "the global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions". Until such a standard is established, OPR advises that each lead agency should develop its own approach to performing an analysis for projects that generate greenhouse gas emissions (OPR, 2008).

Agencies should then assess whether the emissions are "cumulatively considerable" even though a project's greenhouse gas emissions may be individually limited. OPR states: "Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment". Individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice (OPR, 2008).

Finally, if the lead agency determines emissions are a cumulatively considerable contribution to a significant cumulative impact, the lead agency must investigate and implement ways to mitigate the emissions. OPR states: "Mitigation measures will vary with the type of project being contemplated, but may include alternative project designs or locations that conserve energy and water, measures that reduce vehicle miles traveled (VMT) by fossil-fueled vehicles, measures that contribute to established regional or programmatic mitigation strategies, and measures that sequester carbon to offset the emissions from the project". OPR concludes that "A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is "less than significant" (OPR, 2008). The technical advisory includes a list of mitigation measures that can be applied on a project-by-project basis.

OPR Proposed Amendments to the CEQA Guidelines

On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) (OPR, 2009). These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency adopted the CEQA Guidelines Amendments with minor, non-substantial changes on December 31, 2009 and transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law (OAL). The adopted guidelines became effective on March 18, 2010.

The amendments suggest relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

Amendments include a new section (15064.4) to assist lead agencies in determining the significance of the GHG impacts. This section urges lead agencies to quantify, where possible, the GHG emissions of proposed projects. In addition to quantification, this section recommends consideration of several other qualitative factors that may be used in determination of significance

including: (1) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the GHG emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The amendments include a new subdivision 15064.7(c) to clarify that in developing thresholds of significance, a lead agency may appropriately review thresholds developed by other public agencies, or recommended by other experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

The amendments include a new section 15183.5 that provides for tiering and streamlining the analysis of GHG emissions. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of GHG emissions in the region over a specified time period.

In addition, the amendments added a new set of environmental checklist questions (VII. Greenhouse Gas Emissions) to the CEQA Guidelines, Appendix G. The new checklist questions are included as part of the impact analysis in this chapter.

California Air Pollution Control Officers Association

In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating and addressing GHGs under CEQA (CAPCOA, 2008). This resource guide was prepared to support local governments as they develop their programs and policies around climate change issues. The paper is not a guidance document. It is not intended to dictate or direct how any agency chooses to address GHG emissions. Rather, it is intended to provide a common platform of information about key elements of CEQA as they pertain to GHGs, including an analysis of different approaches to setting significance thresholds.

The paper notes that for a variety of reasons local agencies may decide not to have a CEQA threshold. Local agencies may also decide to assess projects on a case-by-case basis when the projects come forward. The paper also discusses a range of GHG emission thresholds that could be used. The range of thresholds discussed includes a GHG threshold of zero and several non-zero thresholds. Non-zero thresholds include percentage reductions for new projects that would allow the state to meet its goals for GHG emissions reductions by 2020 and perhaps 2050. These would be determined by a comparison of new emissions versus business as usual emissions and the reductions required would be approximately 30 percent to achieve 2020 goals and 90 percent (effectively immediately) to achieve the more aggressive 2050 goals. These goals could be varied to apply differently to new projects, by economic sector, or by region in the state.

Other non-zero thresholds are discussed in the paper, including:

- 900 metric tons/year CO_2e (a market capture approach);
- 10,000 metric tons/year CO_2e (potential CARB mandatory reporting level with Cap and Trade);

- 25,000 metric tons/year CO_2e (the CARB mandatory reporting level for the statewide emissions inventory);
- 40,000 to 50,000 metric tons/year CO_2e (regulated emissions inventory capture – using percentages equivalent to those used in air districts for criteria air pollutants),
- Projects of statewide importance (9,000 metric tons/year CO_2e for residential, 13,000 metric tons/year CO_2e for office project, and 41,000 metric tons/year CO_2e for retail projects), and
- Unit-based thresholds and efficiency-based thresholds that were not quantified in the report.

Local

SCAQMD

The SCAQMD has jurisdiction over air quality for the IEUA service area. The SCAQMD adopted an Air Quality Management Plan (AQMP) in December 2012 for determination of the significance of a project's contribution to local or regional pollutant concentrations. The purpose of the AQMP is to set forth a comprehensive program that will lead the South Coast Air Basin into compliance with the Federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the Basin's commitments towards meeting federal 8-hour ozone standards (SCAQMD, 2012). The AQMP contains baseline emissions inventory and projected emissions based on the Southern California Association of Governments (SCAG) regional growth projections. SCAQMD is currently in the process of review and approval of a 2016 AQMP.

SCAQMD Rules and Regulations

All projects are subject to SCAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction anticipated under the proposed program would include the following:

Rule 401 – Visible Emissions. This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than 3 minutes in any 1 hour that is as dark or darker in shade than that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 402 – Nuisance. This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust. This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and requires best available control measures to be applied to earthmoving and grading activities.

Rule 1179 – Publicly Owned Treatment Works Operations. This Rule applies to existing Publicly Owned Treatment Works (POTWs). For large-capacity POTWs with a design capacity of 10 MGD or greater, the rule requires submission of an Emissions Inventory Plan for quantification and reporting of VOC and odor emissions through 2010.

Rule 3001 – Title V. Title V Permits are major source facility permits required by Title V of the CAA. The emissions thresholds for requiring a Title V Permit are as follows:

- VOC: 10 tons per year.
- NOx: 10 tons per year.
- SOx: 100 tons per year
- CO: 50 tons per year
- PM_{10}: 70 tons per year.
- A single Hazardous Air Pollutant (HAP): 10 tons per year.
- Combination of HAPs: 25 tons per year

3.3.3 Impacts and Mitigation Measures

Methodology

This EIR section focuses on the nature and magnitude of the change in the air quality environment and greenhouse gas emissions due to implementation of the proposed plan. Air pollutant emissions associated with the proposed plan would result from the construction and operation of the treatment facility upgrades, pipelines, pump stations, reservoir tanks, wells, and recharge basins. The emissions generated by these activities and other secondary sources have been estimated and compared to the applicable thresholds of significance recommended by SCAQMD.

Construction

Short-term construction-generated emissions of criteria air pollutants and ozone precursors associated with the proposed plan were modeled using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, as recommended by SCAQMD. CalEEMod was used to determine whether short-term construction-related emissions of criteria air pollutants associated with the proposed plan would exceed SCAQMD's applicable regional thresholds and whether mitigation would be required.

The duration of use for each construction phase, types of equipment, construction equipment specifications, the number of workers, vendors and haul trucks, and vehicle miles traveled were

estimated based on reasonable assumptions of a worst-case annual construction scenario. The worst-case annual construction scenarios modeled for each project component represent the maximum amount of construction equipment used, acres disturbed, and vehicle trips traveled in order to demonstrate a peak-day of emissions generated during construction as a result of program implementation. Modeling was based on project-specific data, where available. Where project-specific information was not available, reasonable assumptions based on other similar projects and default model settings were used to estimate criteria air pollutant and ozone precursor emissions. All construction assumptions are provided in Appendix C of this PEIR.

For the purposes of the analysis, the worst-case of each phase assumes that the maximum number of construction equipment was operating for the maximum amount of hours on a peak-day of construction (see Appendix C of this PEIR for construction equipment list and operating duration). Since no set construction schedule has been established for the implementation of the Program, it is possible that the Project Category 1 construction phases could occur concurrently, i.e. piping and forming concrete at RP-1 may coincide with demolition at RP-2. Therefore, a worst-case construction scenario assumes that all construction phases within each Category will occur simultaneously.

There are three main categories of the proposed program. Project Category 1 includes improvements to existing regional treatment plant (RP) facilities, including RP-1, RP-4, RP-5, and Carbon Canyon Water Recycling Facility (CCWRF), and the demolition of RP-2 and restoration of the site. The construction of treatment plant improvements would be divided up into three construction phases: (1) site preparation and earthwork, (2) piping and forming concrete, and (3) site finishing. Regional plant facilities already exist and sites have been engineered, therefore minimal mass grading will be required at these facilities.

RP-2 facilities are expected to be demolished over the next 20 years. For the purposes of analyzing the worst-case annual construction emissions, the project assumes that 10 percent of the facilities will be demolished within one year. It is anticipated that a total of 16,500 CY of concrete and materials will be removed from the site from demolition. Complete restoration of the RP-2 site is anticipated to occur within one year, therefore 100 percent of restoration (46,000 CY of soil fill material) was modeled to represent the worst-case scenario.

Project Category 2 includes the construction of three project components: (1) pipelines, (2) reservoir tanks, and (3) pump stations. Approximately 220,000 linear feet of pipeline installation are proposed in the overall program. Two scenarios were conducted for pipeline installation modeling – worst-case daily and worst-case annual scenarios. Annual construction assumes 10 percent of all pipelines (12,000 linear feet) will be constructed in one year. The project assumes that construction will occur on 60 days within a year. Therefore, daily construction assumes approximately 200 linear feet of pipeline installation per day. In addition, the program proposes to construct five new storage tanks and two new pump stations, the largest of which is a 24 million gallon (MG) reservoir tank. As a worst-case scenario, the model assumes that the 24 MG tank will be constructed within one year. Tank dimensions are estimated and calculated below.

Project Category 3 includes the development and construction of groundwater recharge basins and extraction wells. The program proposes to construct a number of groundwater recharge basins and up to seven extraction wells in the service area. A maximum of 936,000 CY of excavated material from the recharge basins was modeled as a worst-case annual scenario.

Daily construction impacts associated with the treatment facility upgrades would occur during the day and would be limited to the location of the regional plant when construction activity is taking place for that particular component and phase. As discussed in the methodology section, for the purpose of this analysis, an emissions estimate for a representative "worst-case" construction scenario of each component phase is provided to demonstrate the magnitude of the daily emissions that can be generated by each activity. In addition, the construction year of 2016 was used as the construction analysis year to provide a conservative analysis, since construction equipment used in future years beyond 2016 would likely emit pollutants at a lower rate because of more stringent emission standards, advances in technologies and fuels, and equipment turnover.

In addition to regional pollutant emissions, localized impacts on sensitive receptors must also be addressed. The potential for localized effects from the on-site portion of daily emissions are evaluated at nearby sensitive receptor locations that could be impacted by the proposed plan based on the SCAQMD's LST methodology, which utilizes on-site mass emission rate look-up tables and project specific modeling, where appropriate. According to SCAQMD's LST methodology, LSTs are only applicable to the on-site construction emissions that are generated by a project and do not apply to emissions generated offsite such as mobile emissions on roadways from worker, vendor, and haul truck trips. LSTs are only applicable to the following criteria pollutants: NOx, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5}$, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA and can be used to determine whether or not a project may generate significant adverse localized air quality impacts.

For the purpose of analyzing localized air quality impacts, SCAQMD has developed LSTs for one-acre, two-acre and five-acre project sizes based on their distances to the nearest sensitive receptors. Under conditions where the project's on-site construction emissions, with or without mitigation is below the LST threshold, the project would result in less than significant impacts. Where emissions, implementing all appropriate mitigation, exceed the LSTs, air dispersion modeling would be required to fully evaluate the potential impacts of the proposed plan on its surrounding off-site sensitive receptors.

Because the plan is a series of pipelines, facility improvements, wells, spreading basins, pump stations, and storage tank development spread throughout the IEUA service area, each segment of the pipeline, or other individual infrastructure development would impact different local receptors. Therefore each component of plan development is compared to the LST thresholds for

a 1 acre site at 25 meters. This is because the closest receptors (overall) are 25 meters or closer and the SCAQMD recommends the use of the 25 meter thresholds for any receptor that is within 25 meters of a source. Additionally the 1-acre site thresholds are used because these thresholds are more stringent than the 2-acre and 5-acre thresholds and represent a worst case evaluation.

Operation and Maintenance

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors associated with the proposed plan, including mobile- and area-source emissions, were also quantified using the CalEEMod computer model. Operational activities would consist of the operation of the facility improvements, pumps for the pump stations, wells, and general inspections/maintenance of the infrastructure. Maintenance activities would produce emissions primarily from vehicle trips to the treatment and ancillary facilities. Project Categories 1, 2 and 3 estimates a maximum of eight, six, and three maintenance vehicle trips per day, respectively, resulting in a total maximum of 17 maintenance vehicle trips per day for the entire program. Other emissions from maintenance would include the occasional re-painting of storage tank structures, as well as the collection of trash generated by the inspection and maintenance activities.

Emissions produced from operation of the proposed program were modeled as an increase from existing conditions of the facilities. For example, the amount of energy usage is estimated based on the increase of new energy demand from the proposed facilities, and the water usage is estimated based on the increase of new employees that would use water in the facilities. Therefore, all operational emissions modeled in the analyses below represent the new emissions generated as a result of implementation of the proposed projects.

In addition to regional pollutant emissions, localized impacts on sensitive receptors must also be addressed from operational activities. Because operational activities consist strictly of offsite emission sources (mobile sources) of criteria pollutants, the localized impacts from operation would not occur, and therefore, the analysis includes a qualitative discussion of associated impacts.

CO Hotspots

Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. Emissions of CO are produced in greatest quantities from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Carbon monoxide decreased dramatically in the SCAB with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS.

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los

Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be 8.7 ppm (one-hour average) and 5.6 ppm (eight-hour average). Based on the data, more than 400,000 vehicles per day would need to pass through an intersection in order for the thresholds to be exceeded. As the proposed plan would add at a nominal amount of trips through any intersection within the IEUA service area, CO impacts are discussed qualitatively in this analysis.

TAC Emissions

Diesel PM was identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM outweighs the potential for all other health impacts. At this time, SCAQMD has not adopted a methodology for analyzing such impacts and does not recommended the completion of health risk assessments for construction-related emissions of TACs. A qualitative analysis of TAC emissions from construction activities is included in the analysis.

A qualitative analysis of TAC emissions from operational activities will also be included since the proposed plan could include stationary sources of TACs, such as pumps. Some types of stationary sources would be subject to SCAQMD's rules, regulations and permitting. Thus, during the permitting process SCAQMD would analyze such sources (e.g., health risk assessment) based on their potential to emit TACs. If it is determined that the sources would emit TACs in excess of SCAQMD's applicable significance threshold, the SCAQMD would deny the operating permit.

Significance Criteria

The criteria used to determine the significance of air quality impacts are based on Appendix G of the *CEQA Guidelines*. The proposed program would have a significant effect on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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 threshold for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;

As guided by Appendix G of the *CEQA Guidelines*, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. As such, the significance thresholds and analysis methodologies in

SCAQMD's *CEQA Air Quality Handbook* are used in evaluating project impacts. The SCAQMD has established regional daily mass emissions thresholds for criteria pollutants and ozone precursors, which are shown in **Table 3.3-4.**

TABLE 3.3-4
SCAQMD REGIONAL AIR QUALITY SIGNIFICANCE THRESHOLDS

	Mass Daily Thresholds (lbs/day)	
Pollutant	**Construction**	**Operations**
Oxides of Nitrogen (NO_X)	100	55
Reactive Organic Gases (ROG)	75	55
Respirable Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_X)	150	150
Carbon Monoxide (CO)	550	550
Lead[a]	3	3
TACs (including carcinogens and non-carcinogens	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	

[a] As the proposed plan would not involve the development of any major lead emissions sources, lead emissions are not analyzed further in the PEIR.

SOURCE: SCAQMD, 2015b.

Aside from regional air quality impacts, projects in the Basin are also required to analyze local air quality impacts. As discussed previously, SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of that pollutant for each of the 38 source receptor areas (SRAs) in the Basin. The localized thresholds, which are found in the mass rate look-up tables in SCAQMD's *Final Localized Significance Threshold Methodology* document, were developed for use on projects that are less than or equal to five acres in size and are only applicable to the following criteria pollutants: NOx, CO, PM_{10}, and $PM_{2.5}$.

According to the *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* from SCAQMD, LSTs for construction emissions can be determined for a project based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment. The construction equipment inputs used for the modeling analysis calculated that a maximum of one acre would be disturbed on a peak day of construction for the facilities within each of the three Project Categories. As stated previously, the one-acre threshold was used because it is more stringent than the 3-acre and 5-acre thresholds and represents a worst-case

analysis. The applicable construction and operational LSTs for SRA 32 (Northwest San Bernardino Valley), SRA 33 (Southwest San Bernardino Valley) and SRA 34 (Central San Bernardino Valley) in which the plan activities are located, are shown in **Table 3.3-5**. The LSTs for a one-acre at various receptor distances within SRA 32, 33 and 34 are presented below.

It should be noted that with regards to NOx emissions, the two principal species of NOx are NO and NO_2, with the vast majority (95 percent) of the NOx emissions being comprised of NO. However, because adverse health effects are associated with NO_2 and not NO, the analysis of localized air quality impacts associated with NOx emissions is focused on NO_2 levels. For combustion sources, SCAQMD assumes that the conversion of NO to NO_2 is complete at a distance of 5,000 meters from the source.

TABLE 3.3-5
SCAQMD LOCALIZED AIR QUALITY SIGNIFICANCE THRESHOLDS

	Allowable emissions (pounds/day) as a function of receptor distance (feet) from site boundary				
	82 (ft.)	**164 (ft.)**	**328 (ft.)**	**656 (ft.)**	**1,640 (ft.)**
1-Acre Site in SRA 32 and 33 – Northwest Southwest San Bernardino Valley					
Construction Thresholds					
Nitrogen Oxides (NO_x)[a]	118	148	211	334	652
Carbon Monoxide (CO)	863	1,328	2,423	5,691	23,065
Respirable Particulate Matter (PM_{10})	5	14	44	103	280
Fine Particulate Matter ($PM_{2.5}$)	4	6	12	32	141
Operational Thresholds					
Nitrogen Oxides (NO_x)[a]	118	148	211	334	652
Carbon Monoxide (CO)	863	1,328	2,423	5,691	23,065
Respirable Particulate Matter (PM_{10})	2	4	11	25	68
Fine Particulate Matter ($PM_{2.5}$)	1	2	3	8	34
1-Acre Site in SRA 34 – Central San Bernardino Valley					
Construction Thresholds					
Nitrogen Oxides (NO_x)[a]	118	148	211	334	652
Carbon Monoxide (CO)	667	1,059	2,141	5,356	21,708
Respirable Particulate Matter (PM_{10})	4	13	33	74	196
Fine Particulate Matter ($PM_{2.5}$)	3	5	9	23	98
Operational Thresholds					
Nitrogen Oxides (NO_x)[a]	118	148	211	334	652
Carbon Monoxide (CO)	667	1,059	2,141	5,356	21,708
Respirable Particulate Matter (PM_{10})	1	3	8	18	47
Fine Particulate Matter ($PM_{2.5}$)	1	2	3	6	24

[a] The localized thresholds listed for NOx in this table take into consideration the gradual conversion of NO to NO_2.The analysis of localized air quality impacts associated with NOx emissions focuses on NO_2 levels as they are associated with adverse health effects.

SOURCE: SCAQMD, 2009.

According to Appendix G of the *CEQA Guidelines*, a project would have a significant effect on GHG emissions if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As noted above, the increased concentration of GHGs in the atmosphere has been linked to global warming, which can lead to climate change. Construction and operation of the proposed project would incrementally contribute to GHG emissions along with past, present and future activities. As such, impacts of GHG emissions are analyzed here on a cumulative basis.

Currently, while SCAQMD has issued proposed standards and guidelines, there is no adopted state or local standard for determining the cumulative significance of the proposed project's GHG emissions on global climate change. In December 2008, SCAQMD adopted a 10,000 $MTCO_2e$/year for industrial facilities, but only with respect to projects where SCAQMD is the lead agency. Although SCAQMD has not formally adopted a significance threshold for GHG emissions generated by a proposed project for which SCAQMD is not the lead agency, or a uniform methodology for analyzing impacts related to GHG emissions on global climate change, in the absence of any industry-wide accepted standards the SCAQMD's significance threshold of 10,000 MT/year CO_2e for projects is the most relevant air district-adopted GHG significance threshold and is used as a benchmark for the project. It should be noted that the SCAQMD's significance threshold of 10,000 MT/year CO_2e for industrial projects is intended for long-term operational GHG emissions. The SCAQMD has developed guidance for the determination of the significance of GHG construction emissions that recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the threshold (SCAQMD 2008).

Impacts Discussion

Air Quality Plan

Impact 3.3-1: The proposed program would have less than significant and less than cumulatively considerable effects on implementation of the South Coast Air Quality Management Plan (AQMP) because the program would not conflict with or obstruct implementation of the AQMP.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

In preparation of the AQMP, SCAQMD and SCAG used land use designations contained in General Plan documents to forecast, inventory, and allocate regional emissions from land use and development-related sources. For purposes of analyzing consistency with the AQMP, projects that are consistent with the regional population, housing, and employment forecasts identified by SCAG are considered to be consistent with the AQMP growth projections, since the forecast assumptions by SCAG forms the basis of the land use and transportation control portions of the AQMP. Additionally, since SCAG's regional growth forecasts are based upon, among other

things, land uses designated in General Plans, a project that is consistent with the land use designated in a city's General Plan would also be consistent with the SCAG's regional forecast projections, and thus also with the AQMP growth projections.

The proposed program is not a residential or commercial development project and its implementation is not forecast to induce any additional growth within the service area. Additionally, the proposed IEUA facilities would accommodate demands of planned growth and would not alter the growth projections identified in the General Plans that have jurisdiction within the IEUA service area. Therefore, the proposed plan would not conflict with, or obstruct, implementation of the AQMP, and this impact would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Impacts would be the same as Project Categories 1, 2, and 3.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development in the IEUA service area could introduce land uses that could induce growth, such as residential or commercial developments, and could be inconsistent with a city's or county general plan. Therefore, cumulative development has a potential to impact growth projections and thus the AQMP. Cumulative impacts on the AQMP could be cumulatively significant. Because the proposed FMP projects would not induce growth or conflict with the implementation of the AQMP, the project's contribution to cumulative impacts associated with the AQMP would be less than cumulatively considerable. Therefore, the project would result in a less than cumulatively significant impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Air Quality Standards/Violations

Impact 3.3-2: The proposed program could have significant and cumulatively considerable effects because the program could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction

For purposes of this analysis, construction activities associated with the proposed project are expected to begin in 2016 and would be completed over a 20-year period in 2035. Development of the proposed components in Category 1 includes new and/or upgraded treatment facilities. Construction activities associated with each project within Category 1 would generate pollutant emissions from the following construction activities: (1) demolition of RP-2 facilities; (2) restoration of RP-2 site; (3) site preparation and earthwork of treatment facilities; (4) piping and forming concrete for facilities; and (5) site finishing.

These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. Construction activities involving site preparation, grading, and soil movement would primarily generate PM_{10} emissions. Mobile source emissions (use of diesel-fueled equipment onsite, and traveling to and from a construction site) would primarily generate NOx emissions. Asphalt paving and the application of architectural coatings, where necessary, would primarily result in the release of ROG (i.e., VOC) emissions. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring at the same time.

It is expected that construction activities of Category 1 projects would occur gradually throughout the 20-year implementation period. As discussed in the Methodology section above, 10 percent of RP-2 would be demolished on an annual basis, while total restoration of the RP-2 site would be completed in one year. Construction impacts would be short-term and limited to the period of time when construction activities are taking place. The analysis below assumes that all construction phases of each project component may occur concurrently (i.e. demolition of RP-2 may occur simultaneously as piping and forming concrete at RP-4). In addition, the analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). Therefore, the maximum daily emissions generated by each project component and their sum are shown below in **Table 3.3-6**.

TABLE 3.3-6
PROJECT CATEGORY 1 REGIONAL DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)					
Project Component	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Demolition of RP-2	3.93	44.75	22.42	0.05	4.82	2.42
Restoration of RP-2	5.64	84.94	42.58	0.17	10.68	5.37
Site Preparation and Earthwork	3.69	44.59	23.21	0.06	5.28	3.08
Piping and Forming Concrete	5.92	58.20	36.72	0.08	3.68	2.90
Site Finishing	3.21	35.86	20.49	0.04	2.20	1.67
Total	**22.40**	**268.34**	**145.42**	**0.41**	**26.66**	**15.43**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	No	**Yes**	No	No	No	No

As shown in Table 3.3-6, implementation of the treatment facility upgrades in Category 1 would exceed the SCAQMD significance threshold for NOx emissions and therefore, would result in a potentially significant impact.

Operation

Implementation of the project components in Category 1 would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with energy consumption of the regional plant facilities and mobile sources associated with chemical deliveries and maintenance of the facilities. The net increase of energy usage, water consumption, solid waste generation, and vehicle trip generation as a result of implementation of the program were used to calculate and model operational emissions. Model defaults were adjusted to reflect estimated project data, where available. Detailed modeling assumptions are included in Appendix C. Modeled operations emissions are presented in **Table 3.3-7**.

As shown in Table 3.3-7, the emissions from operation of the project components in Category 1 would not result in long-term regional emissions of VOC, NOx, CO, SOx, PM_{10} or $PM_{2.5}$ that exceed regulatory thresholds. Therefore, the operational emissions from the proposed treatment plant upgrades in Category 1 would not result in pollutant concentrations that would violate an air quality standard, and this impact would be less than significant.

TABLE 3.3-7
PROJECT CATEGORY 1 REGIONAL DAILY OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
Emissions Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Net Project Increase						
Area Sources	0.02	0.00	0.00	0.00	0.00	0.00
Energy Sources	0.00	0.01	0.01	0.00	0.00	0.00
Mobile Sources	0.02	0.06	0.23	0.00	0.08	0.02
Total Emissions	**0.04**	**0.07**	**0.24**	**0.00**	**0.08**	**0.02**
SCAQMD Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	No	No	No	No	No	No

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Development of the proposed components in Category 2 includes the construction of pipelines, reservoir tanks, and pump stations. Construction activities associated with each project within Category 2 would generate pollutant emissions from the following construction activities: (1) excavation and shoring, pipeline installation and street restoration for pipelines, (2) site preparation and earthwork, reservoir construction, and architectural coating for reservoir tanks; and (3) site preparation and piping, building construction, and equipment installation for pump stations.

It is expected that construction activities of Category 2 projects would occur gradually throughout the 20-year implementation period. As discussed in the Methodology section above, 10 percent of total pipeline installation would be constructed on an annual basis to represent a worst case construction scenario. In addition, the emissions resulting from the construction of a 24 MG reservoir and two pump stations within one year is analyzed as a worst case construction scenario. Similar to Category 1, the analysis below assumes that all construction phases of each project component may occur concurrently. In addition, the analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). The maximum daily emissions generated by each project component and their sum are shown below in **Table 3.3-8**.

TABLE 3.3-8
PROJECT CATEGORY 2 REGIONAL DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)					
Project Component	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Pipelines						
Excavation and Shoring	3.91	41.84	29.61	0.06	2.90	2.17
Pipe Installation	3.16	35.75	20.76	0.06	2.66	1.64
Street Restoration	0.95	2.26	3.13	0.01	0.53	0.24
Reservoirs						
Site Prep and Earthwork	2.68	28.49	14.82	0.03	3.49	2.36
Reservoir Construction	2.49	23.17	15.51	0.03	1.78	1.38
Architectural Coating	39.48	2.44	2.62	0.00	0.35	0.24
Pump Stations						
Site Prep and Piping	2.31	22.26	14.61	0.03	1.49	1.23
Building Construction	1.39	13.27	10.78	0.02	1.04	0.81
Equipment Installation	3.25	26.42	18.69	0.04	1.79	1.55
Total	**59.62**	**195.90**	**130.52**	**0.27**	**16.04**	**11.61**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	No	**Yes**	No	No	No	No

As shown in Table 3.3-8, implementation of the conveyance and ancillary facilities in Category 2 would exceed the SCAQMD significance threshold for NOx emissions and therefore, would result in a potentially significant impact.

Operation

Implementation of the project components in Category 2 would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with energy consumption of the pump stations and mobile sources associated with maintenance of the facilities. Electrical energy associated with the operation of the pipelines and reservoir tanks would not result in direct emissions of criteria pollutants. Although the pipelines, reservoirs and pump stations would involve the transportation or storage of water, the projects do not directly use water or generate wastewater; therefore, no water usage was modeled for this analysis. The net increase of energy usage and vehicle trip generation as a result of implementation of the program was used to calculate and model operational emissions. Modeled operational emissions are presented in **Table 3.3-9**.

As shown in Table 3.3-9, the emissions from operation of the pump stations in Category 2 would not result in long-term regional emissions of VOC, NOx, CO, SOx, PM_{10} or $PM_{2.5}$ that exceed regulatory thresholds. Therefore, the operational emissions from Project Category 2 would not result in pollutant concentrations that would violate an air quality standard, and this impact would be less than significant.

TABLE 3.3-9
PROJECT CATEGORY 2 REGIONAL DAILY OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
Emissions Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Net Project Increase						
Area Sources	0.02	0.00	0.00	0.00	0.00	0.00
Energy Sources	0.00	0.01	0.01	0.00	0.00	0.00
Mobile Sources	0.01	0.04	0.18	0.00	0.06	0.02
Total Emissions	**0.03**	**0.05**	**0.18**	**0.00**	**0.06**	**0.02**
SCAQMD Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	No	No	No	No	No	No

Project Category 3: Groundwater Recharge and Extraction

Construction

Development of the proposed components in Category 3 includes the construction of recharge basins and wells. Construction activities associated with each project within Category 2 would generate pollutant emissions from the following construction activities: (1) excavation and grading for recharge basins and (2) drilling and construction for wells.

It is expected that construction activities of Category 3 projects would occur intermittently throughout the 20-year implementation period. As discussed in the Methodology section above, the total acreage of groundwater recharge basins is undetermined; therefore, as a conservative analysis, the emissions generated below account for the construction of approximately 40 acres of basins, as well as seven wells, within one year. Similar to Category 1, the analysis below assumes that all construction phases of each project component may occur concurrently. In addition, the analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). The maximum daily emissions generated by each project component and their sum are shown below in **Table 3.3-10**.

TABLE 3.3-10
PROJECT CATEGORY 3 REGIONAL DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)					
Project Component	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Basin Excavation	10.51	159.77	87.63	0.34	16.37	8.25
Basin Grading and Site Improvement	2.94	31.16	15.38	0.03	1.96	1.49
Well Drilling	2.55	20.02	12.33	0.03	1.11	0.99
Well Development	2.17	16.63	11.22	0.02	1.11	1.01
Total	**18.17**	**227.58**	**126.56**	**0.43**	**20.53**	**11.73**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	No	**Yes**	No	No	No	No

As shown in Table 3.3-10, implementation of the groundwater recharge basins and wells in Category 3 would exceed the SCAQMD significance threshold for NOx emissions and therefore, would result in a potentially significant impact.

Operation

Implementation of the project components in Category 3 would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with energy consumption of the wells and mobile sources associated with maintenance of the facilities. Operation of the recharge basins would involve no energy usage. Although the basins and wells would involve the transportation or storage of water, the projects do not directly use water or generate wastewater; therefore, no water usage was modeled for this analysis. The net increase of energy usage and vehicle trip generation as a result of implementation of the program was used to calculate and model operational emissions. Modeled operational emissions are presented in **Table 3.3-11**.

As shown in Table 3.3-11, the emissions from operation of the wells in Category 3 would not result in long-term regional emissions of ROG, NOx, CO, SOx, PM_{10} or $PM_{2.5}$ that exceed regulatory thresholds. Therefore, the operational emissions from Project Category 3 would not result in pollutant concentrations that would violate an air quality standard, and this impact would be less than significant.

TABLE 3.3-11
PROJECT CATEGORY 3 REGIONAL DAILY OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
Emissions Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Net Project Increase						
Area Sources	0.02	0.00	0.00	0.00	0.00	0.00
Energy Sources	0.00	0.01	0.01	0.00	0.00	0.00
Mobile Sources	0.01	0.02	0.09	0.00	0.03	0.01
Total Emissions	**0.03**	**0.03**	**0.10**	**0.00**	**0.03**	**0.01**
SCAQMD Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	No	No	No	No	No	No

Combined Project Categories

Construction

Construction of the combination of Project Categories 1, 2 and 3 assumes that all construction phases of each project component would be constructed simultaneously. Since SCAQMD determines air quality impacts on a regional level, the emissions of all pollutants from each project location within the IEUA service area are combined in order to compare to SCAQMD's regional significance thresholds and assess the significance of the construction impact on a regional level. In addition, the analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). The maximum daily emissions generated by each project component and their sum are shown below in **Table 3.3-12**.

As shown in Table 3.3-12, implementation of the all Project Categories would exceed the SCAQMD significance daily thresholds for VOC and NOx emissions during construction activities and therefore, would result in a potentially significant impact.

TABLE 3.3-12
COMBINED PROJECT CATEGORIES REGIONAL DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)					
Project Component	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
RP-2 Demolition						
Demolition	3.93	44.75	22.42	0.05	4.82	2.42
Restoration	5.64	84.94	42.58	0.17	10.68	5.37
RP Facility Improvements						
Site Preparation and Earthwork	3.69	44.59	23.21	0.06	5.28	3.08
Piping and Forming Concrete	5.92	58.20	36.72	0.08	3.68	2.90
Site Finishing	3.21	35.86	20.49	0.04	2.20	1.67
Pipelines						
Excavation and Shoring	3.91	41.84	29.61	0.06	2.90	2.17
Pipe Installation	3.16	35.75	20.76	0.06	2.66	1.64
Street Restoration	0.95	2.26	3.13	0.01	0.53	0.24
Reservoirs						
Site Prep and Earthwork	2.68	28.49	14.82	0.03	3.49	2.36
Reservoir Construction	2.49	23.17	15.51	0.03	1.78	1.38
Architectural Coating	39.48	2.44	2.62	0.00	0.35	0.24
Pump Stations						
Site Prep and Piping	2.31	22.26	14.61	0.03	1.49	1.23
Building Construction	1.39	13.27	10.78	0.02	1.04	0.81
Equipment Installation	3.25	26.42	18.69	0.04	1.79	1.55
Recharge Basins						
Excavation	10.51	159.77	87.63	0.34	16.37	8.25
Grading and Site Improvement	2.94	31.16	15.38	0.03	1.96	1.49
Wells						
Drilling	2.55	20.02	12.33	0.03	1.11	0.99
Development	2.17	16.63	11.22	0.02	1.11	1.01
Total	**100.19**	**691.82**	**402.50**	**1.10**	**63.24**	**38.78**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	**Yes**	**Yes**	No	No	No	No

Operation

Operation of the combination of Project Categories 1, 2 and 3 assumes that all project components have been built out and are operating simultaneously. Since SCAQMD determines air quality impacts on a regional level, the emissions of all pollutants from each project location within the IEUA service area are combined in order to compare to SCAQMD's regional significance thresholds and assess the significance of the operational impact on a regional level. The maximum daily emissions generated by each project component and their sum are shown below in **Table 3.3-13**.

TABLE 3.3-13
COMBINED PROJECT CATEGORIES REGIONAL DAILY OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
Emissions Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Net Project Increase						
Project Category 1	0.04	0.07	0.24	0.00	0.08	0.02
Project Category 2	0.03	0.05	0.18	0.00	0.06	0.02
Project Category 3	0.03	0.03	0.10	0.00	0.03	0.01
Total Emissions	**0.10**	**0.15**	**0.52**	**0.00**	**0.17**	**0.05**
SCAQMD Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Significant Impact?	No	No	No	No	No	No

As shown in Table 3.3-13, implementation of the all Project Categories would not exceed the SCAQMD regional significance thresholds for any criteria pollutant during operational activities and therefore, would result in a less than significant impact.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The project site is located within the SCAB, which is considered the cumulative study area for air quality. Because the SCAB is currently classified as a state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, cumulative development that includes future projects in the SCAB could violate an air quality standard or contribute to an existing or projected air quality violation.

Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (VOC, CO, NOx, SOx, PM_{10}, and $PM_{2.5}$) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. While operation of the proposed program would not exceed any of SCAQMD's regional significance thresholds, construction emissions would exceed SCAQMD's daily thresholds during construction for VOC and NOx. Therefore, the proposed program's contribution to air quality impacts during construction activities, specifically for VOC and NOx emissions, would be cumulatively considerable, resulting in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

AIR-1: The following measures shall be incorporated to minimize emissions of NOx and VOC associated with construction activities for the proposed facilities:

- Construction activities shall require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) to the extent feasible. Under conditions where it is determined that 2010 model year or newer diesel trucks are not readily available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use trucks that meet USEPA 2007 model year NOx emissions requirements.
- Off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 3 emissions standards at a minimum and Tier 4 where available. Under conditions where it is determined that equipment meeting Tier 4 emission standards are not readily available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use USEPA Tier 3 equipment.

AIR-2: For each individual FMP project, IEUA shall require by contract specifications that:

- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use to avoid excessive idling.
- Construction operations shall minimize use of diesel-powered generators and rely on the electricity infrastructure where feasible.
- Construction trucks shall be routed away from congested streets or sensitive receptor areas where feasible.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Combined Project Categories

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation measures AIR-1 and AIR-2 would reduce VOC and NOx emissions through the use of construction equipment that emits less criteria pollutants and direct construction trucks away from congested intersections. Although these measures would reduce

VOC and NOx emissions, the resulting emissions are still expected to exceed the SCAQMD thresholds for VOC and NOx.

Cumulative Measures

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation Measures AIR-1 and AIR-2 would reduce VOC and NOx emissions; however, the proposed facilities' contribution to cumulative impacts related to cumulative emissions of VOC and NOx would be cumulatively considerable.

Cumulative Increase of Criteria Pollutant

Impact 3.3-3: The proposed program could result in a cumulatively considerable net increase of a criteria pollutant.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The project site is located within the SCAB, which is considered the cumulative study area for air quality. Because the SCAB is currently classified as nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, cumulative development consisting of the project along with other reasonably foreseeable future projects in the SCAB as a whole could violate an air quality standard or contribute to an existing or projected air quality violation.

Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (VOC, CO, NOx, SOx, PM_{10}, and $PM_{2.5}$) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. The proposed facility improvement projects in Category 1 could generate regional construction emissions exceeding SCAQMD's daily thresholds for NOx, resulting in a potentially significant cumulative impact.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Implementation of facility improvements within all of the Project Categories could exceed the SCAQMD significance thresholds for VOC and NOx emissions. Therefore, the combination of facilities within each of the three project categories would result in a cumulatively considerable net increase of VOC and NOx criteria pollutants for which the project region is in nonattainment.

Thus, the implementation of the proposed program could result in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Impacts would be the same as the Combined Project Categories. The proposed program's contribution to cumulative impacts on air quality is cumulatively considerable, and therefore, a significant cumulative impact would occur.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Combined Project Categories

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation Measures AIR-1 and AIR-2 would reduce VOC and NOx emissions through the use of construction equipment that emits less criteria pollutants and direct construction trucks away from congested intersections. Although these measures would reduce VOC and NOx emissions, the resulting emissions are still expected to exceed the SCAQMD thresholds for VOC and NOx.

Cumulative Measures

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation Measures AIR-1 and AIR-2 would reduce VOC and NOx emissions; however, the proposed facilities' contribution to cumulative impacts related to cumulative emissions of VOC and NOx would be cumulatively considerable.

Sensitive Receptors

Impact 3.3-4: The proposed program could result in significant and cumulatively considerable effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.

Project Impact Analysis

Construction of the project components in the proposed program could potentially expose sensitive receptors located near the project area boundaries to localized air quality impacts from criteria pollutants and TACs from on-site sources during project construction. During project operation, the primary source of emissions would be generated from minimal worker trips for periodic inspection and maintenance visits of the IEUA facilities along with periodic chemical delivery trips to the new or upgraded treatment facilities, which would not generate substantial levels of pollutant emissions. Separate discussions are provided below analyzing the potential for sensitive receptors to be exposed to these pollutant sources.

Project Category 1: Treatment Facility Upgrades

Localized Construction Air Quality Impacts – Criteria Air Pollutants

During construction of the proposed projects within the project area, nearby sensitive receptors located offsite from each of the various regional plant construction sites could be exposed to significant adverse localized air quality impacts. Although the treatment facilities in Project Category 1 are larger than five acres, it is assumed in the model that construction would not occur on more than one acre on any given day of construction, including demolition and restoration of the RP-2. The 1-acre of construction per day assumption is used because the LST threshold for 1-acre is more stringent than the 2-acre and 5-acre LST threshold and impacts would be considered worst case. The nearest sensitive receptor to any treatment plant undergoing facility improvements is the residential community within the Rancho Monte Vista Mobile Home Park located approximately 420 feet west of CCWRF in the City of Chino (SRA 33).

The daily onsite construction emissions generated by Project Category 1 were evaluated against SCAQMD's LSTs for a one-acre site in SRA 33 as a screening-level analysis to determine whether the emissions would cause or contribute to adverse localized air quality impacts. **Table 3.3-14** identifies the daily-localized on-site emissions that are estimated to occur during the proposed program's worst-case construction scenario for Project Category 1. The analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). As shown in Table 3.3-14, the proposed treatment facility upgrades in Project Category 1 would not exceed any of SCAQMD's applicable LSTs, and impacts to sensitive receptors would be less than significant.

TABLE 3.3-14
PROJECT CATEGORY 1 LOCALIZED DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)			
Project Component	**NOx**	**CO**	**PM10**	**PM2.5**
Demolition of RP-2	44.75	22.42	4.82	2.42
Restoration of RP-2	84.94	42.58	10.68	5.37
Site Preparation and Earthwork	44.59	23.21	5.28	3.08
Piping and Forming Concrete	58.20	36.72	3.68	2.90
Site Finishing	35.86	20.49	2.20	1.67
Total	**268.34**	**145.42**	**26.66**	**15.43**
LST for 1-acre site in SRA 33 with 420 feet receptor distance	*334*	*5,691*	*103*	*32*
Significant Impact?	No	No	No	No

Localized Operational Air Quality Impacts – Criteria Air Pollutants

Operational LSTs, like construction LSTs are only associated with the onsite emission of NOx, CO, PM_{10} and $PM_{2.5}$. As shown in Table 3.3-7, the minimal emissions associated with these criteria pollutants are generated from the mobile (offsite) emissions resulting from chemical deliveries, maintenance visits, or employees traveling to and from the facilities. Since the operational emissions from the project are negligible, impacts to sensitive receptors would be less than significant.

Localized Construction Air Quality Impacts – Toxic Air Contaminants

Intermittent construction activities occurring throughout the project area associated with the proposed project would result in short-term emissions of diesel PM, which is a TAC. During construction of each individual project within the project area, the exhaust of off-road heavy-duty diesel equipment would emit diesel PM during general construction activities, such as site preparation (e.g., excavation, grading, and clearing); paving; installation of utilities, materials transport and handling; building/structure construction; and other miscellaneous activities. Similar to the localized air quality analysis for construction, the short-term emissions of diesel PM associated with each project would only affect its own remote group of existing sensitive receptors that are located nearby. SCAQMD has not adopted a methodology for analyzing such impacts and has not recommended that health risk assessments be completed for construction-related emissions of TACs.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., the potential exposure to TACs to be compared to applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be

based on a 70-year exposure period; however, such assessments should be limited to the period or duration of activities associated with each of the individual project occurring under the proposed program.

The construction period for any of the IEUA projects that would occur in the project area would be finite and less than the 70-year period used for risk determination. Because off-road heavy-duty diesel equipment would be used only temporarily at each construction site, the construction activities associated with the individual projects would not expose sensitive receptors to substantial emissions of TACs. This impact would be less than significant.

Localized Operational Air Quality Impacts – Toxic Air Contaminants

The proposed project would not introduce any new stationary sources of TACs, such as diesel-fueled pumps or generators. The operation of the pump stations and treatment facilities would be powered by electricity, and thus would not emit any TAC emissions. Therefore, the project would not expose surrounding sensitive receptors to TAC emissions. Impacts would be less than significant.

CO Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Projects may worsen air quality if they increase the percentage of vehicles in cold start modes by two percent or more; significantly increase traffic volumes (by five percent or more) over existing volumes; or worsen traffic flow, defined for signalized intersections as increasing average delay at intersections operating at Level of Service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F. While construction-related traffic on the local roadways would occur during construction of each project, the net increase of construction worker vehicle trips to the existing daily traffic volumes on the local roadways would be relatively small and would not result in CO hotspots. Additionally, the construction-related vehicle trips would only occur in the short-term, and would cease once construction activities for a project has been completed. During operation of the projects, only minimal emissions would be generated from vehicle trips by worker staff for periodic inspection and maintenance purposes. In addition, chemical and material deliveries to the proposed new or upgraded treatment facilities in the project area would also only occur on a periodic basis each month.

For Project Category 1, it has been estimated that construction activity would produce up to 145 pounds per day of CO emissions, which is approximately 26 percent of the SCAQMD threshold of 550 pounds per day. Since construction-related traffic would not substantially increase CO concentrations in the project area, CO hotspot impacts to sensitive receptors would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Localized Construction Air Quality Impacts – Criteria Air Pollutants

Although the construction of the proposed pipelines in Project Category 2 would disturb a total area larger than five acres (i.e., area disturbed for the 220,000 linear feet of pipeline), it is assumed in the model that construction would not occur on more than one acre on any given day of construction. Thus, the daily onsite construction emissions generated by Project Category 2

were evaluated against SCAQMD's LSTs for a one-acre site as a screening-level analysis to determine whether the emissions would cause or contribute to adverse localized air quality impacts.

The pipelines in Project Category 2 would be constructed over the entirety of the IEUA service, and the reservoirs and pump stations do not have exact precise locations for their construction. Since the project components would be constructed throughout the IEUA service area, the maximum localized daily emissions will be compared to the SCAQMD LSTs for SRAs 32, 33 and 34. The nearest off-site sensitive receptors are assumed to be 82 feet or less for the project components in Category 2. While there may be some components that are further from the receptors, the majority has at least one segment of pipeline that would be within 82 feet of sensitive receptors and using 82 feet for all project components is a conservative analysis. Therefore, the LSTs for a one-acre site in SRAs 32, 33 and 34 for a receptor distance of 82 feet is used to evaluate the potential localized air quality impacts associated with each proposed project's peak day construction emissions.

Table 3.3-11 identifies the daily-localized on-site emissions that are estimated to occur during the proposed program's worst-case construction scenario for each project component in Project Category 2. The analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). As shown in Table 3.3-11, the proposed pipelines, reservoirs and pump stations in Project Category 2 would exceed SCAQMD's applicable LSTs for PM_{10} and $PM_{2.5}$. Therefore, criteria air pollutant impacts to sensitive receptors would be potentially significant.

TABLE 3.3-11
PROJECT CATEGORY 2 LOCALIZED DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)			
Project Component	**NOx**	**CO**	**PM10**	**PM2.5**
Pipelines				
Excavation and Shoring	41.84	29.61	2.90	2.17
Pipe Installation	35.75	20.76	2.66	1.64
Street Restoration	2.26	3.13	0.53	0.24
Maximum Daily Emissions	**79.85**	**53.5**	**6.09**	**4.05**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	No	No	**Yes**	**Yes**
Reservoirs				
Site Prep and Earthwork	28.49	14.82	3.49	2.36
Reservoir Construction	23.17	15.51	1.78	1.38
Architectural Coating	2.44	2.62	0.35	0.24
Maximum Daily Emissions	**54.1**	**32.95**	**5.62**	**3.98**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	No	No	**Yes**	**Yes**
Pump Stations				
Site Prep and Piping	22.26	14.61	1.49	1.23
Building Construction	13.27	10.78	1.04	0.81
Equipment Installation	26.42	18.69	1.79	1.55
Maximum Daily Emissions	**61.95**	**44.08**	**4.32**	**3.59**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	No	No	**Yes**	**Yes**
Combined Project Components				
Pipelines	79.85	53.5	6.09	4.05
Reservoirs	54.1	32.95	5.62	3.98
Pump Stations	61.95	44.08	4.32	3.59
Maximum Daily Emissions	**195.9**	**130.53**	**16.03**	**11.62**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	**Yes**	No	**Yes**	**Yes**

Localized Operational Air Quality Impacts – Criteria Air Pollutants
Impacts would be the same as Project Category 1.

Localized Construction Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1.

Localized Operational Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1.

CO Hotspots
Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Localized Construction Air Quality Impacts – Criteria Air Pollutants
Although the construction of the proposed recharge basins in Project Category 3 would disturb an area larger than five acres, it is assumed in the model that construction would not occur on more than one acre on any given day of construction. Thus, the daily onsite construction emissions generated by Project Category 3 were evaluated against SCAQMD's LSTs for a one-acre site as a screening-level analysis to determine whether the emissions would cause or contribute to adverse localized air quality impacts.

The basins and wells in Project Category 3 do not have established locations for their construction. Since the project components would be constructed throughout the IEUA service area, the maximum localized daily emissions will be compared to the SCAQMD LSTs for SRAs 32, 33 and 34. The nearest off-site sensitive receptors are assumed to be 82 feet or less for the project components in Category 3. While there may be some components that are further from the receptors, using 82 feet as the receptor distance for all project components is a conservative analysis. Therefore, the LSTs for a one-acre site in SRAs 32, 33 and 34 for a receptor distance of 82 feet is used to evaluate the potential localized air quality impacts associated with each proposed project's peak day construction emissions.

Table 3.3-12 identifies the daily-localized on-site emissions that are estimated to occur during the proposed program's worst-case construction scenario for each project component in Project Category 3. The analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). As shown in Table 3.3-12, the proposed basins and wells in Project Category 3 would exceed SCAQMD's applicable LSTs for NOx, PM_{10} and $PM_{2.5}$. Therefore, criteria pollutant impacts to sensitive receptors would be potentially significant.

TABLE 3.3-12
PROJECT CATEGORY 3 LOCALIZED DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)			
Project Component	**NOx**	**CO**	**PM10**	**PM2.5**
Recharge Basins				
Excavation	159.77	87.63	16.37	8.25
Grading and Site Improvement	31.16	15.38	1.96	1.49
Maximum Daily Emissions	**190.93**	**103.01**	**18.33**	**9.74**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	**Yes**	No	**Yes**	**Yes**
Extraction Wells				
Well Drilling	20.02	12.33	1.11	0.99
Well Development	16.63	11.22	1.11	1.01
Maximum Daily Emissions	**36.65**	**23.55**	**2.22**	**2**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	No	No	No	No
Combined Basins and Wells				
Recharge Basins	190.93	103.01	18.33	9.74
Extraction Wells	36.65	23.55	2.22	2
Maximum Daily Emissions	**227.58**	**126.56**	**20.55**	**11.74**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	**Yes**	No	**Yes**	**Yes**

Localized Operational Air Quality Impacts – Criteria Air Pollutants
Impacts would be the same as Project Category 1 and 2.

Localized Construction Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1 and 2.

Localized Operational Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1 and 2.

CO Hotspots
Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Localized Construction Air Quality Impacts – Criteria Air Pollutants

Construction of the combination of Project Categories 1, 2 and 3 assumes that all construction phases of each project component would be constructed simultaneously. For the purposes of analyzing localized air quality impacts to sensitive receptors, the following analysis assumes that all project components are simultaneously being constructed in the same vicinity and exposing the same sensitive receptors. Although the construction of the all project categories would disturb an area larger than five acres, it is assumed in the model that construction would not occur on more than one acre on any given day of construction because the LST for one-acre is more stringent than the 3-acre and 5-acre thresholds and represents a worst-case analysis. Thus, the daily onsite construction emissions generated by all project categories were evaluated against SCAQMD's LSTs for a one-acre site at the nearest sensitive receptor to a treatment facility improvement which is 422 feet as a screening-level analysis to determine whether the emissions would cause or contribute to adverse localized air quality impacts. The maximum localized daily emissions will be compared to the SCAQMD LSTs for SRAs 32, 33 because the nearest receptor to an existing treatment facility is located in SRAs 32, 33.

In addition to the above analysis, an evaluation of the combination of Project Categories 2 and 3 was conducted that assumes all construction phases of each project component would be constructed simultaneously. Since these project components could be constructed throughout the IEUA service area, the maximum localized daily emissions of both of these project categories will be compared to the SCAQMD LSTs for SRAs 32, 33 and 34. The nearest off-site sensitive receptors are assumed to be 82 feet or less for this evaluation While there may be some components that are further from the receptors, using 82 feet as the receptor distance for this evaluation is also considered a conservative analysis. Therefore, the LSTs for a one-acre site in SRAs 32, 33 and 34 for a receptor distance of 82 feet is used to evaluate the potential localized air quality impacts associated with each facilities' peak day construction emissions in Project Categories 2 and 3.

Table 3.3-13 identifies the daily-localized on-site emissions that are estimated to occur during the proposed program's worst-case construction scenario for the implementation of all project categories. The analysis below assumes that construction activities would comply with all SCAQMD requirements (i.e., Rule 403 to suppress dust emissions through watering, soil stabilizers, and other measures, and the modeling included a dust emissions reduction of up to 55 percent which is watering two times per day). As shown in Table 3.3-13, the proposed projects under Scenario 1 (all three project categories) would exceed SCAQMD's applicable LSTs for NOx and $PM_{2.5}$ and under Scenario 2 (Project Categories 2 and 3) would exceed SCAQMD's applicable LSTs for NOx, PM_{10} and $PM_{2.5}$. Therefore, criteria pollutant impacts to sensitive receptors would be potentially significant.

TABLE 3.3-13
COMBINED PROJECT CATEGORIES LOCALIZED DAILY CONSTRUCTION EMISSIONS

	Maximum Daily Emissions (lbs/day)			
Project Category	**NOx**	**CO**	**PM10**	**PM2.5**
Scenario 1				
Category 1	268.34	145.42	26.66	15.43
Category 2	195.90	130.53	16.03	11.62
Category 3	227.58	126.56	20.55	11.74
Maximum Daily Emissions	**691.82**	**402.51**	**63.24**	**38.79**
LST for 1-acre site in SRA 32/33 with 420 feet receptor distance	*334*	*5,691*	*103*	*32*
Significant Impact?	**Yes**	No	No	**Yes**
Scenario 2				
Category 2	195.90	130.53	16.03	11.62
Category 3	227.58	126.56	20.55	11.74
Maximum Daily Emissions	**423.48**	**257.09**	**36.58**	**23.36**
LST for 1-acre site in SRA 32/33 with 82 feet receptor distance	*118*	*863*	*5*	*4*
LST for 1-acre site in SRA 34 with 82 feet receptor distance	*118*	*667*	*4*	*3*
Significant Impact?	**Yes**	No	**Yes**	**Yes**

Localized Operational Air Quality Impacts – Criteria Air Pollutants
Impacts would be the same as Project Category 1, 2 and 3.

Localized Construction Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1, 2 and 3.

Localized Operational Air Quality Impacts – Toxic Air Contaminants
Impacts would be the same as Project Category 1, 2 and 3.

CO Hotspots
Impacts would be the same as Project Category 1, 2 and 3.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Because the SCAB is currently classified as a state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, cumulative development consisting of the project along with other reasonably foreseeable future projects in the SCAB as a whole could expose sensitive receptors to substantial pollutant concentrations. Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (VOC, CO, NOx, SOx, PM_{10}, and $PM_{2.5}$) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of

these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.

Implementation of all Project Categories (Scenario 1) could exceed the SCAQMD localized significance thresholds for NOx and $PM_{2.5}$ emissions, and implementation of Project Categories 2 and 3 could exceed the SCAQMD localized significance thresholds for NOx, PM_{10}, and $PM_{2.5}$ emissions. Therefore, the proposed program could result in a cumulatively considerable net increase of the criteria pollutants for which the region is in nonattainment, resulting in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures AIR-1 and AIR-2 are required.

AIR-3: Unpaved roads on the project site used for any vehicular travel are required to be watered by water trucks at least four times per eight hour workday or otherwise sufficient to reduce fugitive dust (PM_{10} and $PM_{2.5}$) emissions consistent with Rule 403.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3 are required.

Combined Project Categories

Implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. Implementation of Mitigation Measures AIR-1 and AIR-2 would reduce NOx emissions; however to reduce the emissions to below the SCAQMD significance threshold, emissions would be required to be reduced by approximately 690 percent. The implementation of Mitigation Measures AIR-1 and AIR-2 would not be able to reduce emissions to that extent and the resulting emissions would continue to exceed the SCAQMD significance thresholds for NOx. The implementation of Mitigation Measure AIR-3 would include additional water above and beyond the watering that was assumed within the modeling and compliant with Rule 403 (i.e., two time per day and reducing emissions by 55 percent). Mitigation Measure AIR-3 includes an additional watering of two times per day for a total of four times per day. This additional watering would provide an additional dust emissions reduction of approximately 14 percent (from 55 percent to 69 percent reduction). Based on the PM10 and PM2.5 emissions illustrated in Table 3.3-13, the combined PM2.5 emissions under Scenario 1 would require a reduction of 21 percent (38.79/32.0) to reduce the PM2.5 emissions to less than significant. The additional two times of watering per day would reduce the emissions by an additional 14 percent; therefore, PM2.5 emissions would remain significant under Scenario 1.

Cumulative Measures

Implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3 are required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3 would reduce the proposed facilities' generation of NOx, PM10 and PM2.5; however, the program's contribution to cumulative NOx, PM10 and PM2.5 emissions remains cumulatively considerable.

Odors

Impact 3.3-5: The proposed program could result in significant and cumulatively considerable effects from the creation of objectionable odors affecting a substantial number of people.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding.

Construction activities would be required for the installation of proposed improvement upgrades at the existing treatment plant facilities. During the construction phases for each of the improvements, exhaust from construction equipment may produce discernible odors typical of most construction sites. Such odors would be a temporary source of nuisance to adjacent uses, but since they are temporary and intermittent in nature, exhaust odors from construction equipment would not be considered a significant environmental impact.

Operation of the proposed project components in Project Category 1 would include improvements to liquid and solid treatment systems, sludge systems, headworks, dewatering treatment, and dosing facilities. Wastewater treatment facilities typically produce gases from decomposing organic matter in wastewater which generate foul gas odors. The proposed treatment facility upgrades, particularly at RP 1, would be located within residential communities that could be significantly impacted by fugitive odors from the proposed facilities. Therefore, objectionable odor impacts affecting a substantial number of people would be potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction-related odor impacts would be the same as Project Category 1.

Operation of the proposed project components in Project Category 2 would include the installation of new pipelines, pump stations, reservoir tanks, and lift stations. Operation of these conveyance systems and ancillary facilities would not result in the development of a typical land use that results in nuisance odors. Therefore, impacts associated with objectionable odors during operation would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Construction-related odor impacts would be the same as Project Category 1 and 2.

Operation of the proposed project components in Project Category 3 would include the installation of groundwater recharge basins and wells. Operation of these facilities would not result in the development of a typical land use that results in nuisance odors. Therefore, impacts associated with objectionable odors during operation would be less than significant.

Combined Project Categories

Project Categories 1, 2 and 3 propose upgrades and construction of new wastewater treatment, conveyance, and groundwater recharge facilities. According to the SCAQMD *CEQA Air Quality Handbook*, wastewater treatment facilities are land uses that are the source of objectionable odors and associated with odor complaints. The treatment facilities are located in residential areas where a substantial number of people could be affected by fugitive odors escaping the boundary of the treatment facilities. Therefore, the proposed upgrades to the treatment facilities could result in potentially significant odor impacts.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative growth would add residential and commercial developments to the IEUA service area. The proposed treatment facility upgrades could result in potentially significant impacts regarding the production of increased objectionable odors in the area. Population growth in the service area could result in an increased number of people affected by the objectionable odors produced by the proposed FMP projects. Therefore, treatment facility upgrades could result in potentially significant odor impacts to future cumulative development. The implementation of the treatment facility upgrades could contribute to cumulative odors, resulting in cumulatively considerable impacts. The program's impact would be cumulatively significant.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

AIR-4: Prior to the construction upgrades at each treatment facility, IEUA would be required to prepare an Odor Impact Minimization Plan (OIMP), pursuant to Title 14, California Code of Regulations Section 17863.4. The OIMP provides operational protocols covering the implementation of the odor control system including during varied meteorological conditions. The OIMP would include complaint response protocol, operating procedures, and an odor monitoring program. A complaint response protocol would be implemented to receive complaints, investigate the source, and implement changes to minimize the odors.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

Implementation of Mitigation Measure AIR-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AIR-4 would reduce odor impacts associated with the proposed treatment facilities by preparing and implementing an Odor Minimization Plan that includes a complaint response protocol and implementation of changes to minimize odors, if needed.

Cumulative Measures

Implementation of Mitigation Measure AIR-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure AIR-4 would reduce the proposed treatment facilities' contribution to cumulative odor impacts to less than cumulatively considerable by preparing and implementing an Odor Minimization Plan that includes a complaint response protocol and implementation of changes to minimize odors, if needed.

Greenhouse Gas Emissions

Impact 3.3-6: The proposed program would result in less than significant and less than cumulatively considerable effects associated with greenhouse gas emissions because the program would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Impacts would be the same as Combined Project Categories.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Combined Project Categories.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Combined Project Categories.

Combined Project Categories

As noted above, the increased concentration of GHGs in the atmosphere has been linked to global warming, which can lead to climate change. Construction and operation of the proposed project would incrementally contribute to GHG emissions along with past, present and future activities. As such, impacts of GHG emissions are analyzed here on a cumulative basis.

The proposed project would generate GHG emissions from a variety of sources. First, GHG emissions would be generated during construction of the proposed projects in the project area. Once fully operational, the projects' operations would generate direct GHG emissions from

mobile sources (i.e., worker commute trips, periodic facility maintenance visits and routine chemical deliveries). Indirect source emissions associated with the proposed projects would be generated from electrical consumption to power the proposed pump stations, pipelines, injection/production wells, and water treatment facilities. **Table 3.3-14** presents the summary of the estimated operational and amortized construction GHG emissions of all combined Project Categories.

TABLE 3.13-4
ESTIMATED OPERATIONAL AND CONSTRUCTION GHG EMISSIONS FOR PROGRAM

Emission Source	CO_2e Emissions (MT/yr.)
Construction	
Annual Construction Emissions	6,842
Total Construction Emissions (20 years)	136,855
Amortized Construction Emissions (30 years)	4,562
Operations	
Project Category 1	38
Project Category 2	10
Project Category 3	7
Subtotal	55
Total GHG Emissions	**4,617**
Significance Threshold	*10,000*
Exceed Significance Threshold?	No

CO_2e= carbon dioxide equivalent; MT/yr = metric tons per year.

SOURCE: ESA, 2016.

As shown in Table 3.3-14, out of the total CO_2e emissions generated by the proposed program, approximately 98 percent of the GHG emissions were attributed to construction of the projects within the program. Overall, because a net decrease in energy consumption would occur under the project when compared to existing baseline conditions with respect to water treatment, conveyance, collection, discharge, and distribution in the service area, a reduction in GHG emissions associated with energy use would also occur due to the project. Given that the primary source of GHG emissions attributed to the proposed projects would be from construction over the next 20 years of buildout, it is anticipated that the annual GHG emissions for an individual project would not exceed 10,000 MT/year of CO_2e. As such, the FMP projects would not generate, either directly or indirectly, substantial GHG emissions and impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

As noted above, the increased concentration of GHGs in the atmosphere has been linked to global warming, which can lead to climate change. Construction and operation of the proposed project would incrementally contribute to GHG emissions along with past, present and future activities. As such, impacts of GHG emissions are analyzed here on a cumulative basis. See Combined

Project Categories impact analysis. The implementation of the proposed program would result in a less than cumulatively considerable impact associated with the generation of GHG emissions.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Conflict with Plan, Policy, or Regulation that Reduces Greenhouse Gas Emissions

Impact 3.3-7: The proposed program would result in less than significant and less than cumulatively considerable effects on a greenhouse gas plan because the program would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Consistency with AB 32

As discussed in Impact 3.3-6, the GHG emissions generated by the construction and operation of the proposed program would not exceed the SCAQMD's recommended threshold of 10,000 $MTCO_2e$ /year for non-industrial projects. The primary source of GHG emissions generated by program implementation would occur during construction, which would be temporary in nature. Additionally, as the program is not a land use project, GHG emissions associated with mobile sources would only occur from periodic vehicle trips by workers for inspection and maintenance purposes, which would not generate substantial emissions. The annual GHG emissions associated with the operation of the facility improvements and pump stations would also generate GHG emissions during the operation of the plan. Consequently, the implementation of the program

would not generate substantial amounts of GHG emissions that would hinder the State's ability to achieve AB 32's goal of achieving 1990 levels of GHG emissions by 2020, and this impact would be less than significant.

Consistency with County of San Bernardino GHG Reduction Plan

As discussed previously, the County adopted its GHG Reduction Plan in 2014. The Plan identifies existing wastewater treatment GHG emissions in the County and estimates that unmitigated emissions would increase by 11 percent by the year 2020. Total wastewater GHG emissions represent 0.5 percent of the total GHG emissions in the County. The Reduction Plan includes the following three wastewater measures: methane capture produced during wastewater treatment processes (Wastewater-1), upgrade and replace wastewater treatment and pumping equipment with more energy efficient equipment (Wastewater-2), and increased use of recycled and treated wastewater for non-potable water demand (Wastewater-3).

IEUA, which serves the cities of Chino, Chino Hills, Fontana, Rancho Cucamonga, Montclair, Upland, and Ontario, already captures 100% of generated methane and combusts 25% of this methane to generate electricity, so the proposed program is consistent with reduction measure Wastewater-1. In addition, the proposed treatment facility upgrades included in the FMP are consistent with reduction measures Wastewater-2 and Wastewater-3. Therefore, the proposed program would not conflict with the County's GHG Reduction Plan, and this impact would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Implementation of all project categories would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Implementation of cumulative development could result in the generation of GHG emissions. Cumulative development could exceed the GHG thresholds and could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Because the proposed facilities associated with the project categories would be consistent with all relevant GHG reduction plans and policies, the project's contribution to cumulative GHG reduction plans and policies impacts would be less than cumulatively considerable. Therefore, the project's cumulative impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

3.3.4 References

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3.4 Biological Resources

This section describes the environmental setting for biological resources, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to a level of less than significant.

3.4.1 Environmental Setting

Methods

This section includes a broad overview of the biological resources in the IEUA service area in the West San Bernardino Valley, and those that occur adjacent to the IEUA service area. Common biological resources within the IEUA service area are discussed, but the focus will be on sensitive biological resources that are regulated by federal, state, and local agencies including vegetation communities, sensitive habitats, and special-status plants and animals. Data provided in this section was obtained from the following sources:

- IEUA Optimum Basin Management Program PEIR (IEUA, 2000);
- IEUA Draft Subsequent Environmental Impact Report for the Peace II Project (IEUA, 2010);
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) Online Occurrence Records (CDFW, 2016);
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS, 2016);
- United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) Information for Planning and Conservation (USFWS, 2016a);
- USFWS National Wetland Inventory Online Mapper (USFWS, 2016b);
- USFWS Online Mapper of Critical Habitat for Threatened and Endangered Species (USFWS, 2016c);
- Western Regional Climate Center (WRCC) Cooperative Climatological Data Summary for the NOAA Fontana Kaiser, California Station 043120 (WRCC, 2016); and
- eBird Bird Survey Checklists for the Prado Regional Park Hotspot Map (eBird, 2016).
- San Bernardino County Museum Website (San Bernardino County Museum, 2016).

Regional Setting

The region of the IEUA service area is characterized by the highly urbanized San Bernardino Valley and Los Angeles Basin, which are separated from the Mojave Desert to the north by the San Gabriel and San Bernardino Mountains. The region is within the Santa Ana River Watershed, which is a relatively arid watershed defined by the Santa Ana River that spans approximately 100 miles from the San Bernardino Mountains to the Pacific Ocean. The Mediterranean climate

in the region is dry, with mild winters and hot summers in the valleys, and light snow and warm summers in the highest mountain elevations.

Local Setting

Locally, the IEUA service area is largely urbanized and with some agriculture and few remaining natural areas. Prado Basin is located at the southern tip of the IEUA service area. This basin behind Prado Dam supports the largest riparian woodland in Southern California (Warner and Hendrix, 1984) and is home to a wide array of sensitive plants and animals. The Prado Basin riparian woodland is sustained by surface flows, rising groundwater and periodically by surface water stored behind Prado Dam in Riverside County, just outside the southern boundary of the IEUA service area.

Undeveloped areas of the northern part of the IEUA service area include alluvial fan habitats that support sensitive natural communities unique to the region. Prior to urban development, high Santa Ana winds through the Cajon Pass deposited sand into the central and eastern portions of the IEUA service area where it accumulates to form the Delhi Sand Dunes. These dunes are no longer mobile and a unique soil type, Delhi Sands, evolved on the dunes. The sand dunes have largely been developed, but small fragmented remnants remain and provide habitat for locally unique species. Chino Hills State Park is located in the southwestern section of the IEUA service area, adjacent to the Prado Basin, and provides a refuge for native natural communities that are contiguous with other open space, providing habitat linkage and wildlife movement corridors.

Habitat Types

The following vegetation communities and local variations of these communities occur in the IEUA service area:

- Coastal Sage Scrub
- Alluvial Fan Sage Scrub
- Chaparral
- Non-native Grassland
- Riparian and Deciduous Woodlands
- Riparian Scrub
- Aquatic and Semi-aquatic Wetlands

The characteristics of these communities and their variations are described below in the description of four natural areas within the IEUA service area: Prado Reservoir, San Gabriel Mountain foothills and alluvial fans, Delhi sand dunes, and Chino Hills State Park.

Prado Basin

The Prado Basin comprises 9,741 acres south of the City of Chino, and approximately 4,000 acres of this area is classified as riparian woodland. Riparian woodland in this area typically includes dense stands of black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), mulefat

(*Baccharis salicifolia*), and Fremont's cottonwood (*Populus fremontii*); western sycamore (*Platanus racemosa*) occurs less frequently. Upland areas of Prado Basin are generally characterized as coastal sage scrub communities supporting shrubs less than 4 feet tall, such as black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California buckwheat (*Eriogonum fasciculatum*), and California sagebrush (*Artemisia californica*). Riparian scrub communities occur where the upland habitat intergrades with the riparian woodland in floodplain areas. Aquatic and semi-aquatic communities occur in permanent streams, artificial duck ponds, and intermittently filled reservoirs and streams within the Prado Basin. Aquatic species found in this area include cattails (*Typha* spp.) and other bulrushes and sedges (*Cyperaceae* family). Approximately 2,600 acres in the northern reaches of the Prado Basin Reservoir occur in the IEUA service area; the majority of the reservoir occurs south of the IEUA service area in Riverside County.

San Gabriel Mountain Foothills and Alluvial Fans

Sediment deposits at the northern boundary of the IEUA service area form alluvial fans in the floodplains of creeks exiting the San Gabriel Mountains from San Antonio Creek on the west to Lytle Creek on the east, which comprise the intervening drainages at the base of the San Gabriel Mountains. A locally unique vegetation community occurs on these alluvial fans called Riversidean Alluvial Fan Sage Scrub, which is a variation of a coastal sage scrub community shaped by infrequent but severe flooding events. Plants found in this community include a mixture of chaparral species that are typically found in the steeper areas of the mountains such as scalebroom (*Lepidospartum squamatum*) and yerba santa (*Eriodictyon californicum*), mixed with coastal sage scrub species such as California buckwheat, white sage, California sagebrush, Acton brittlebush (*Encelia actoni*), and California croton (*Croton californicus*). A variety of annual wildflowers and non-native grasses also occur in this community.

Delhi Sand Dunes

Delhi Sand Dunes occur as fragmented and isolated remnants within the central portions of the IEUA service area. Vegetation in the Delhi Sand Dunes typically includes sparse shrub cover including species such as California buckwheat, brittlebush (*Encelia farinosa*), Californai croton, and black sage; and a variety of annual wildflowers such as California goldfields (*Lasthenia californica*), ragweed (*Ambrosia acanthicarpa*), branching phacelia (*Phacelia ramosissima*), and Menzies' fiddleneck (*Amsinckia menziesii*).

Chino Hills State Park

Chino Hills State Park is located in the southwestern corner of the IEUA service area and has large expanses of non-native grasslands that are dominated by non-native species such as brome grasses (*Bromus* spp.), red-stemmed stork's bill (*Erodium cicutarium*), and Mediterranean grass (*Schismus arabicus*); native grasses such as purple needle grass (*Stipa pulchra*) and giant wild rye (*Leymus condensatus*) are interspersed among the non-native species. Coastal sage scrub and mixed chaparral occur on hillsides and slopes. Coastal sage scrub is dominated by California sagebrush, California buckwheat, and purple sage (*Salvia leucophylla*). Mixed chaparral typically includes a co-dominance of toyon (*Heteromeles arbutifolia*) and laurel sumac (*Malosma larina*)

that forms a dense blanket of shrub cover. Creeks in the state park, such as Chino Creek, are typically lined with sensitive riparian woodland communities such as Sycamore-Alder Riparian Woodland dominated by western sycamore and willow species, with an understory of mulefat; and California Walnut Woodland that is dominated by California black walnut (*Juglans californica*) and coast live oak (*Quercus agrifolia*) with an understory of non-native grasses.

Common Wildlife

Common wildlife species that occur in the IEUA service area are described below by species group. The species referenced below do not represent a comprehensive list of all species that may occur in the IEUA service area.

Amphibians

Common amphibians native to the IEUA service area include arboreal salamander (*Aneides lugubris*), Pacific treefrog (*Hyla regilla*), California treefrog (*Hyla cadaverina*), and western toad (*Bufo boreas*).

Reptiles

Common reptiles native to the IEUA service area include lizards such as common side-blotched lizard (*Uta stanisburiana*), southern alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*), and western whiptail (*Cnemidophorus tigris*). Snakes native to the IEUA service area include, but are not limited to, California whipsnake (*Masticophis lateralis*), coachwhip (*Masticophis flagellum*), common kingsnake (*Lampropeltis getula*), gopher snake (*Pituophis catenifer*), long-nosed snake (*Rhinocheilus lecontei*), night snake (*Hypsiglena torquata*), ring-necked snake (*Diadophis punctatus*), western rattlesnake (*Crotalus viridis*), western blind snake (*Leptotyphlops humilis*), and western patch-nosed snake (*Salvadora hexalepis*).

Birds

Over 230 bird species have been documented within the IEUA service area. A high number of bird species have been documented at Prado Regional Park, which is part of the Prado Basin. Waterfowl, shorebirds, songbirds, and raptors use the Basin for breeding, foraging, roosting, as migratory stopover, and/or nesting. Some of the most abundant species observed are American coot (*Fulica americana*), California gull (*Larus californicus*), double-crested cormorant (*Phalacrocorax auritus*), red-winged blackbird (*Agelaius phoeniceus*), white-faced ibis (*Plegadis chihi*), Bonaparte's gull (*Chroicocephalus philadelphia*), ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Anas clypeata*), ring-billed gull (*Larus delawarensis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), tree swallow (*Tachycineta bicolor*), violet-green swallow (*Tachycineta thalassina*), norther rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), great-tailed grackle (*Quiscalus mexicanus*), American wigeon (*Anas americana*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Setophaga coronata*), brown-headed cowbird (*Molothrus ater*), song sparrow (*Melospiza melodia*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), mallard (*Anas platyrhynchos*), white-throated

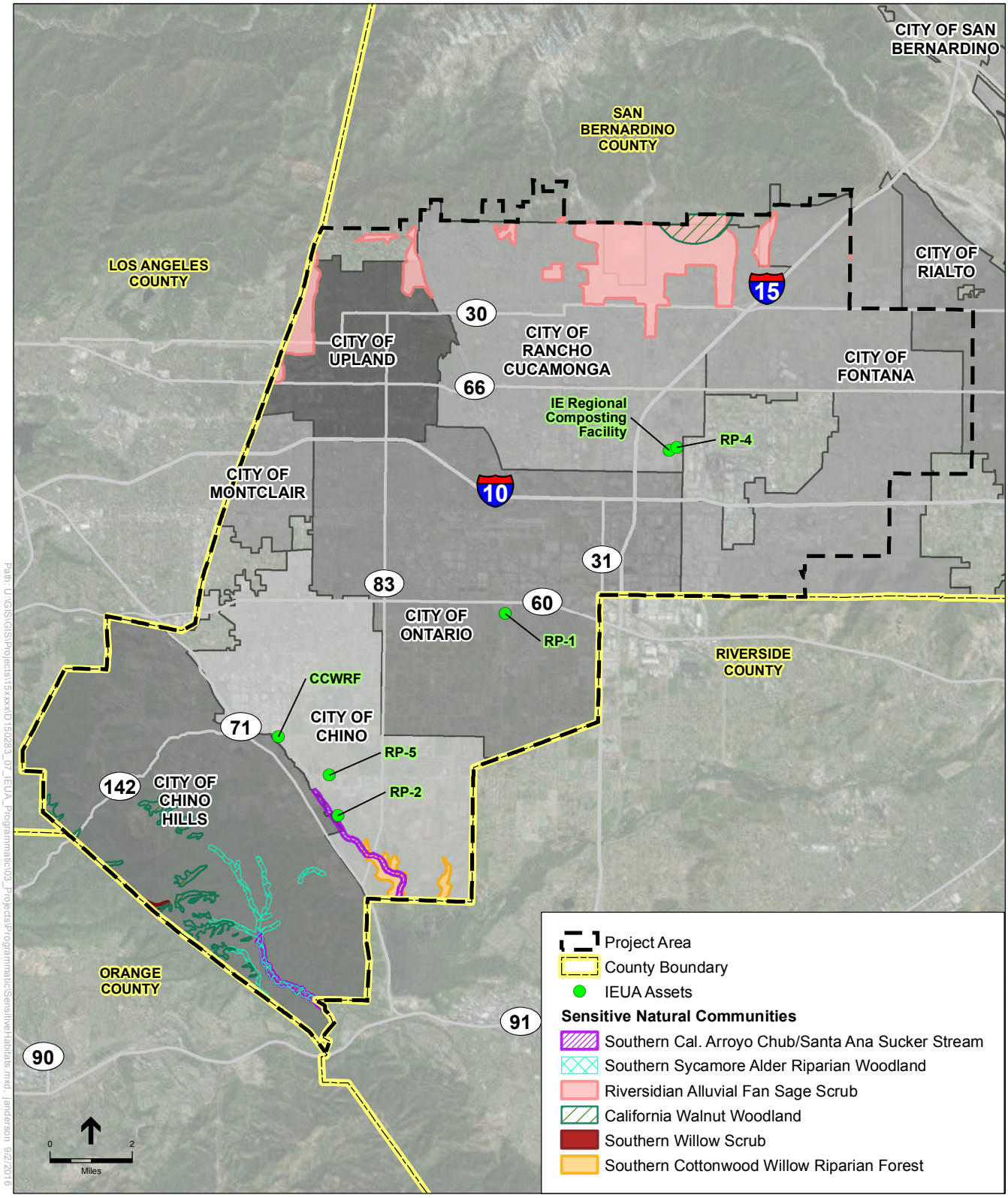
swift (*Aeronautes saxatalis*), American goldfinch (*Spinus tristis*), house sparrow (*Passer domesticus*), common yellowthroat (*Geothlypis trichas*), turkey vulture (*Cathartes aura*), least sandpiper (*Calidris minutilla*), rock pigeon (*Colomba livia*), Brewer's blackbird (*Euphagus cyanocephalus*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), bushtit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), downy woodpecker (*Picoides pubescens*), acorn woodpecker (*Melanerpes formicivorus*), Nuttal's woodpecker (*Picoides nuttallii*), great blue heron (*Ardea herodias*), northern mockingbird (*Mimus polyglottos*), western bluebird (*Sialia mexicana*), vermillion flycatcher (*Pyrocephalus rubinus*), Say's phoebe (*Sayornis saya*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Eurasian collared-dove (*Streptopelia decaocto*), great egret (*Ardea alba*), Canada goose (*Branta canadensis*), marsh wren (*Cistothorus palustris*), and lesser goldfinch (*Spinus psaltria*). Numerous other common bird species have been observed in the IEUA service area.

Mammals

Common mammals that occur in the IEUA service area include Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus auduboni*), brush rabbit (*Sylvilagus bachmani*), blacktail jackrabbit (*Lepus californicus*), California mole (*Scapaus latimanus*), gray shrew (*Notiosorex crawfordi*), little brown bat (*Myotis* spp.), big brown bat (*Eptesicus fuscus*), western pipestrel (*Pipistrellus hesperus*), Mexican freetail bat (*Tadarida brasiliensis*), Botta's pocket gopher (*Thomomys bottae*), dusky-footed wood rat (*Neotoma fuscipes*), desert wood rat (*Neotoma epida*), deer mouse (*Peromyscus maniculatus*), California ground squirrel (*Spermophilus beecheyi*), Merriam's chipmunk (*Eutamias merriami*), western grey squirrel (*Sciuris griseus*), coyote (*Canis latrans*), gray fox (*Urocyon cinerioargenteus*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and mule deer (*Odocoileus hemionus*).

Sensitive Natural Communities

According to the CNDDB, six natural communities of special management concern occur within the IEUA service area, including Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Sycamore Alder Riparian Woodland, Riversidean Alluvial Fan Sage Scrub, California Walnut Woodland, Southern Willow Scrub, and Southern Cottonwood-Willow Riparian Forest. These communities are depicted in **Figure 3.4-1** and they are described below in **Table 3.4-1.**



SOURCE: ESRI; County of San Bernardino; CA Department of Fish and Wildlife

IEUA Facilities Master Plan PEIR. 150283.07

Figure 3.4-1

CDFW Sensitive Natural Communities

TABLE 3.4-1
SENSITIVE NATURAL COMMUNITIES WITHIN THE IEUA SERVICE AREA AND IMMEDIATE VICINITY[1]

Community Name	CNDDB Element Rank: Global/State[2]	Community Description	Location Within IEUA service area
California Walnut Woodland	G2/S2.1	An open tree canopy woodland that is dominated by California black walnut and often associated with coast live oak and interior live oak (*Quercus wislizeni*) near streams. The open canopy allows development of a grassy understory typically comprised of non-native grasses.	A total of 763 acres of this community occurs in Chino Hills State Park, in the southwestern corner of the IEUA service area.
Riversidean Alluvial Fan Sage Scrub	G1/S1.1	An open scrub habitat restricted to alluvial floodplains in Southern California that experience infrequent but severe flood events. This community consists of drought tolerant soft-leaved shrubs, but includes larger perennial species typically found in chaparral communities. Scalebroom, California buckwheat, and California sagebrush are typical of this community. This community includes three growth stages (pioneer, intermediate, and mature) which occur in sequence following flood events. Pioneer communities have minimal vegetation, and are contrasted by mature communities that form a dense shrub community similar to chaparral.	A total of 5,681 acres of this community occurs in the alluvial floodplains along the northern border of the IEUA service area.
Southern California Arroyo Chub/Santa Ana Sucker Stream	GNR/SNR	Southern California slow-flowing streams with sandy substrate that fluctuate between large winter storm flows and low summer flows that is suitable habitat for arroyo chub and Santa Ana sucker.	A total of 446 acres of this community occurs in the streams of the southwestern portion of the IEUA service area that are tributaries of the Santa Ana River.
Southern Cottonwood Willow Riparian Forest	G3/S3.2	Tall, open, broadleafed winter-deciduous riparian forests dominated by *Populus* species, and several tree willows. Similar to Central Coast Cottonwood-Sycamore Riparian Forest, although apparently with less coast live oak or *Alnus* species. Understories usually are dominated by shrubby willows.	A total of 472 acres of this community occurs in the Prado Basin Reservoir in the southern boundary of the IEUA service area.
Southern Sycamore Alder Riparian Woodland	G4/S4	A tall deciduous streamside woodland that is dominated by western sycamore and occasional white alder (*Alnus rhombifolia*). These woodlands seldom form closed canopies and may appear as trees scattered in a shrub thicket. This community is typically associated with rocky streambeds that are subject to high intensity flooding.	A total of 788 acres of this community occurs in Chino Hills State Park surrounding streams and drainages that are tributaries of the Santa Ana River.

Community Name	CNDDB Element Rank: Global/State[2]	Community Description	Location Within IEUA service area
Southern Willow Scrub	G3/S2.1	Dense, broadleaved, winter-deciduous stands of trees near stream channels and dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis silicifolia*).	A total of 37 acres of this community is found in a small section of the Chino Hills State Park in the southwestern corner of the IEUA service area.

1 For the purposes of this table, “immediate vicinity” means within 500 feet of the IEUA service area.

[2] Species and vegetation alliances with state ranks of S1, S2, or S3 are considered to be critically imperiled, imperiled, or vulnerable to extinction or extirpation, respectively; and thus considered by CDFW to be rare or sensitive.

CNDDB Element Ranking

Global Ranking
G1 = Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.
G2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres.
G3 = 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres.
G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
GNR = Not ranked

State Ranking
S1 = Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres
S2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
S3 = 21-80 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres
S4 = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.
SNR = Not ranked.

State Threat
.1 = very threatened
.2 = threatened

Special-Status Species

Special-status species are those plants and animals that, because of their rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special-status species" in this report, following a convention that has developed in practice but has no official sanction. More specifically, special-status species include:

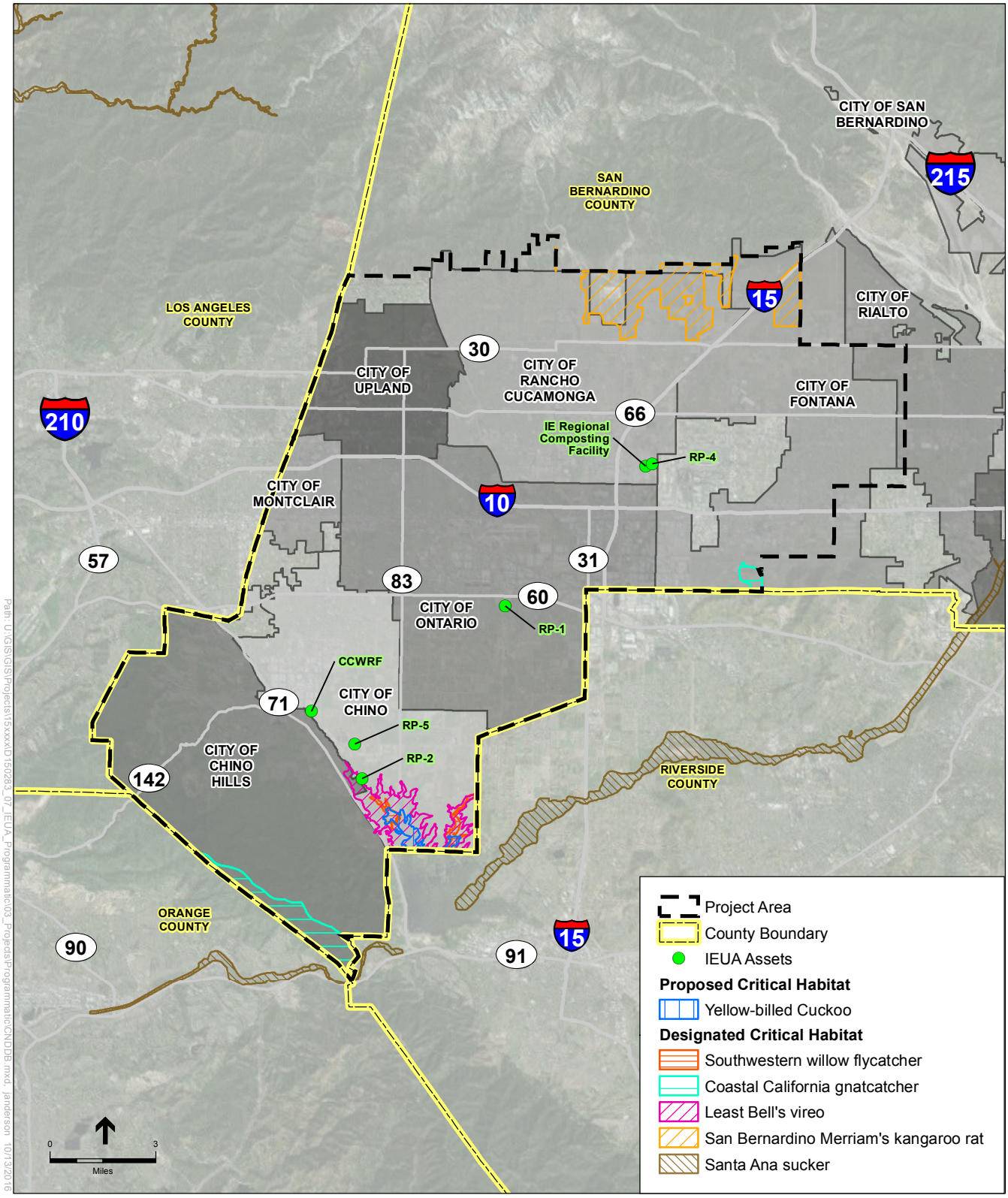
- Plants or animals listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]).
- Plants or animals that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR 40, February 28, 1996);
- Plants or animals listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 California Code of Regulations [CCR] 670.5);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
- Plants that meet the definitions of rare and endangered under CEQA (*CEQA Guidelines*, Section 15380);
- Plants considered under the CNPS to be "rare, threatened or endangered in California" (Lists 1A, 1B, and 2 in CNPS 2008);
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in CNPS 2008), which may be included as special-status species on the basis of local significance or recent biological information; and
- Animals fully protected in California (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).
- Plants or animals covered by a locally or state adopted species conservation plan, including sensitive plants and animals and narrow endemic plants that have reasonable potential to occur on-site.

A query of the CNDDB and CNPS online database for special-status plants and wildlife was conducted in April 2016 within the following United States Geological Survey 7.5 minute Quadrangles that encompass the IEUA service area and adjacent lands: Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, San Bernardino North, San Bernardino South, San Dimas, and Yorba Linda. In addition, a query of the USFWS ECOS Information for Planning and Conservation was conducted in April 2016 for federally protected plants and animals known to occur within the IEUA service area. According to the database queries, a total of 58 special-status plants and 63 special-status wildlife species occur within the region of the IEUA service area. Of the total 58 special-status plant species, there are seven plant species that are designated threatened and/or endangered by the USFWS and/or CDFW. The seven plant species include: marsh sandwort (Arenaria paludicola), Nevin's barberry (Berberis nevinii), thread-leaved brodiaea (Brodiaea filifolia), salt marsh bird's-beak (Chloropyron maritimum ssp. maritimum), slender-horned spineflower (Dodecahema leptoceras), Santa Ana River woolystar (Eriastrum densifolium ssp. sanctorum), and Gambel's water cress (Nasturtium gambelii). Of the 63 special-status wildlife species, there are 12 wildlife species that are designated threatened and/or endangered by the USFWS and/or CDFW. The 12 wildlife species include: arroyo toad (Anaxyrus californicus), Swainson's hawk (Buteo swainsoni), Santa Ana sucker (Catostomus santaanae), southern rubber boa (Charina umbratica), western yellow-billed cuckoo (Coccyzus americanus occidentalis), San Bernardino kangaroo rat (Dipodomys merriami parvus), Stephen's kangaroo rat (Dipodomys stephensi), willow flycatcher (Empidonax trailli extimus), coastal California gnatcatcher (Polioptila californica californica), southern mountain yellow-legged frog (Rana muscosa), Delhi Sands flower-loving fly (Rhaphiomidas terminates abdominalis), least Bell's vireo (Vireo bellii pusillus). The CNDDB, USFWS, and CNPS species occurrence lists are included in **Appendix D**.

Critical Habitat

The USFWS designates Critical Habitat, which is a specific geographic area, or areas that contain features essential for the conservation of a federally threatened or endangered species, and that may require special management and protection to ensure its continued availability and ecological function. Critical Habitat may include an area that is not currently occupied by the species, but is deemed essential for its conservation. Designated and Proposed Critical Habitat units within the IEUA service area are shown in **Figure 3.4-2.**

Designated Critical Habitat for southwestern willow flycatcher (*Empidonax traillii extimus*) and least Bell's vireo (*Vireo bellii pusillus*), and Proposed Critical Habitat for western yellow-billed cuckoo (*Coccyzus americanus*) occurs along the southern edge of the IEUA service area in the riparian forest surrounding the Prado Basin. Designated Critical Habitat for coastal California gnatcatcher (*Polioptila californica californica*) occurs in the coastal sage scrub found in Chino Hills State Park at the southwestern edge of the IEUA service area and in a small section of the coastal sage scrub habitat in the Jurupa Hills along the eastern portion of the IEUA service area. Designated Critical Habitat for San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) occurs in portions of the Riversidean alluvial fan sage scrub found along the northern boundary of the IEUA service area.



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SOURCE: ESRI; County of San Bernardino; CA Department of Fish and Wildlife

IEUA Facilities Master Plan PEIR. 150283.07

Figure 3.4-2

USFWS Critical Habitat

Habitat Conservation Plans/Natural Communities Conservation Plans

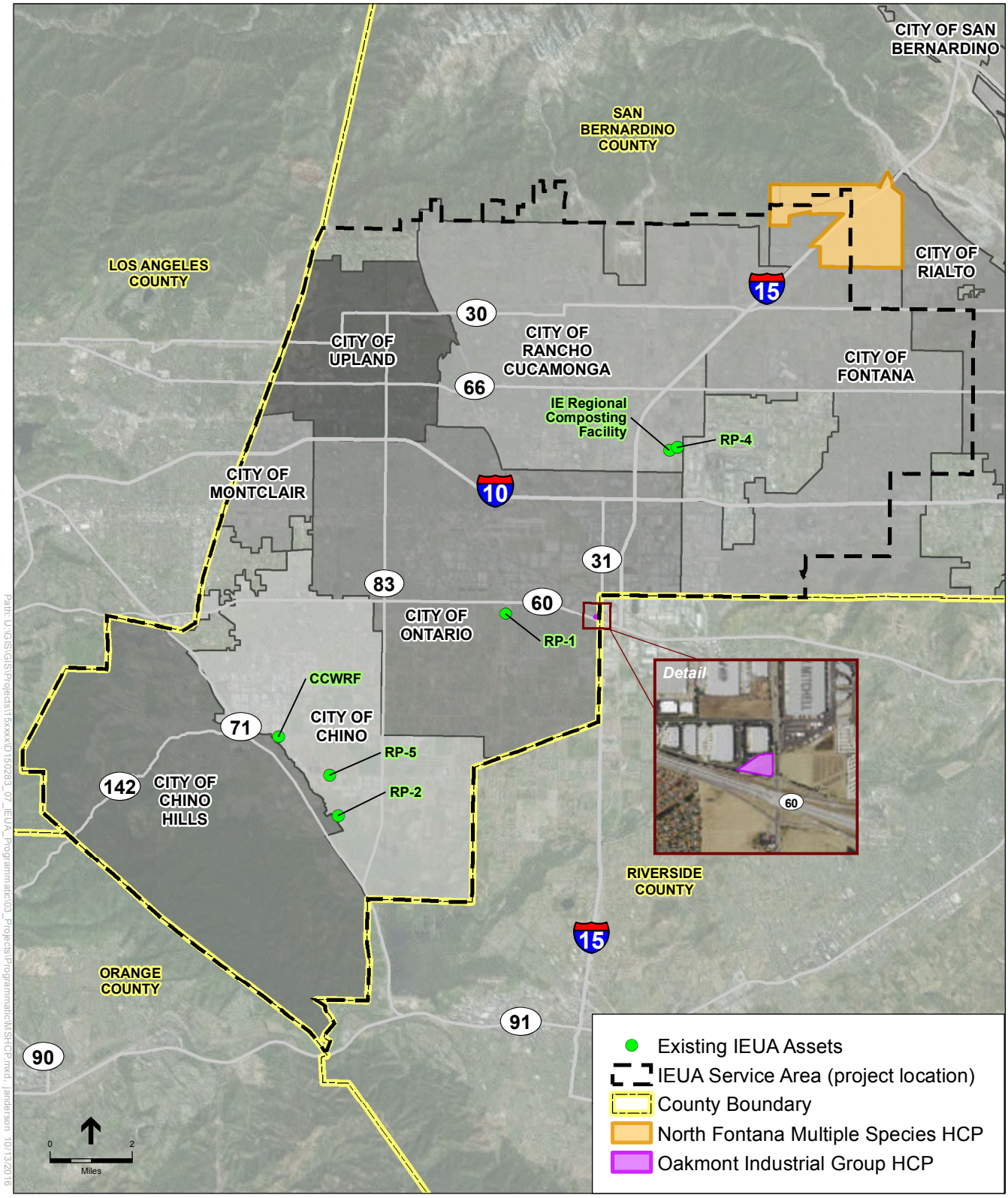
Within the IEUA service area, there are two habitat conservation plans (HCPs) that preserve sensitive wildlife species. The Oakmont Industrial Group HCP is located northwest of Milliken Avenue and Greystone Drive in the City of Ontario This HCP includes the preservation of habitat for the Delhi Sands Flowering Loving Fly. The North Fontana Multiple Species HCP is located in north Fontana and includes the preservation of habitat for the San Bernardino kangaroo rat and the California gnatcatcher (**Figure 3.4-3**).

Wildlife Movement

Wildlife movement occurs through areas of habitat linkages and movement corridors. Habitat linkages are contiguous areas of open space that connect two larger habitat areas. Linkages provide for both diffusion and dispersal for a variety of species within the landscape. In addition, linkages can serve as primary habitat for some smaller species. Corridors are linear linkages between two or more habitat patches. Corridors provide for movement and dispersal, but do not necessarily include habitat capable of supporting all life history requirements of a species.

Wildlife movement corridors and habitat linkages are critical for the survivorship of ecological systems for several reasons. Corridors and linkages can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor use and wildlife movement patterns varies among species.

Chino Hills State Park is a known wildlife movement corridor for numerous species such as coastal California gnatcatcher, western pond turtle (*Actinemys marmorata*), coast range newt (*Taricha torosa torosa*), bobcat (*Lynx rufus*), and mountain lion (*Puma concolor*) as well as numerous other species. This state park provides a linkage to the Santa Ana River and the Cleveland Forest to the south. The Santa Ana River and its tributaries, including the Prado Basin Reservoir, provide linkage between the San Bernardino Mountains and all open space between there and the Pacific Ocean, which is important for fish species such as Santa Ana Sucker and arroyo chub as well as numerous terrestrial wildlife species. Neo-tropical migratory birds use the Prado Basin Reservoir and other riparian forests associated with the Santa Ana River and the Chino Hills State Park. Upwards of 230 species of waterfowl, shorebirds, songbirds, and raptors are known to occur in the Prado Basin, many of which are migratory species. The foothills of the San Gabriel Mountains and the drainages that flow out of the mountains are also import areas for wildlife movement, as the drainages provide linkage between the mountains and the Santa Ana River to the south.



SOURCE: ESRI; County of San Bernardino

IEUA Facilities Master PEIR . 150283.07

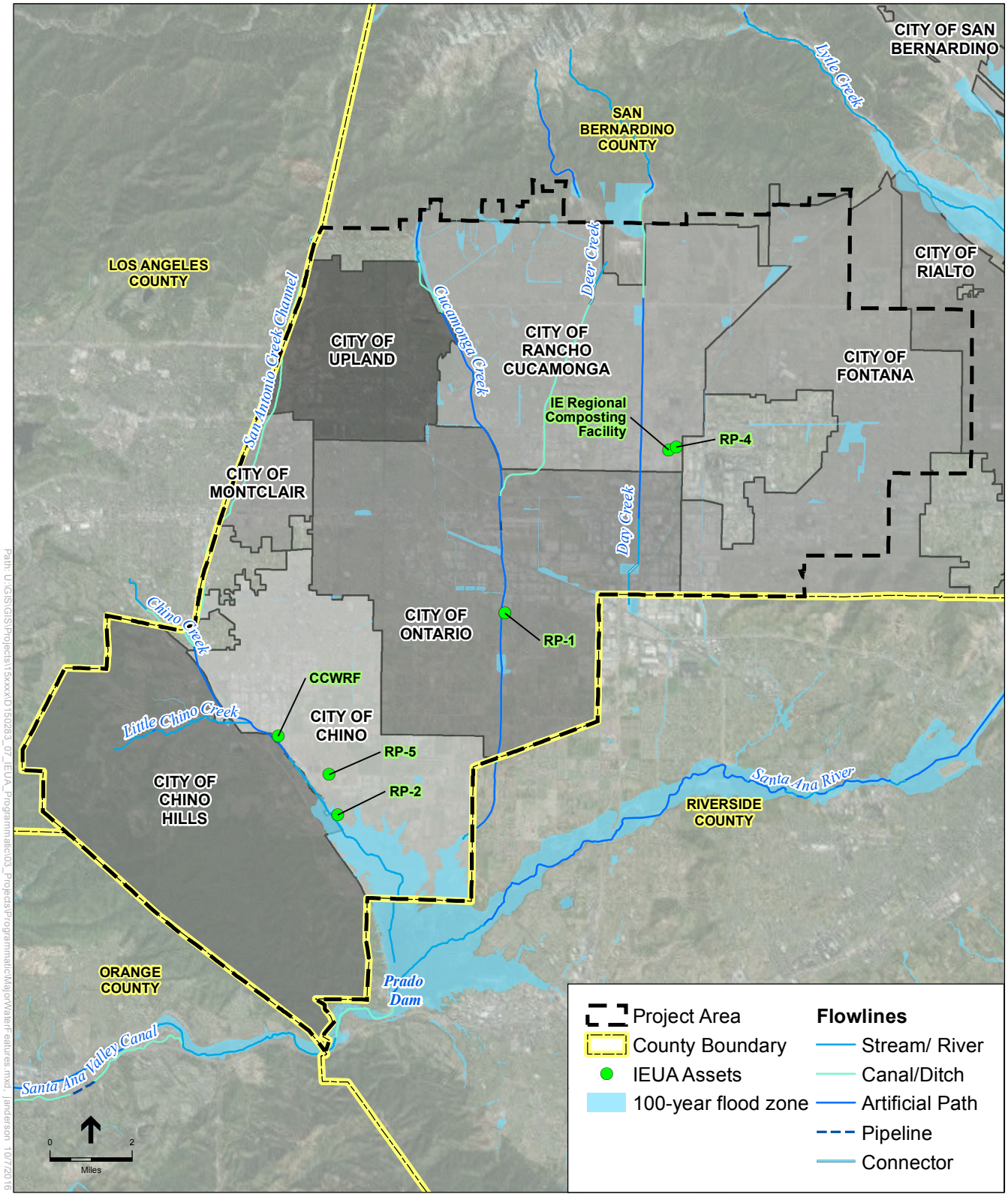
Figure 3.4-3
Habitat Conservation Plan Locations

Jurisdictional Resources

Wetlands and permanent and intermittent drainages, creeks, and streams identified as waters of the U.S. are generally subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) under Section 404 and Section 401, respectively, of the Federal Clean Water Act. Waters of the U.S. are defined as those susceptible to interstate commerce and are called "traditional navigable waters"; which includes bodies of water that have a connection to the seas and their tributaries, those subject to the ebb and flow of the tide, and interstate wetlands. Wetlands are defined as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil condition; generally including swamps, marshes, bogs, and similar areas.

Streambeds are subject to regulation by the CDFW under Section 1602 of the California Fish and Game Code. A stream is defined under these regulations as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This definition includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW jurisdiction typically extends to the edge of the riparian vegetation canopy.

The Santa Ana River is a known water of the U.S. because it flows into the Pacific Ocean, and all of the creeks and drainages that are tributary to the Santa Ana River fall under the jurisdiction of the USACE and CDFW. Cucamonga, Deer, Day, San Antonio, and Chino Creeks are the major drainages in the IEUA service area and flow south into the Prado Basin and the Santa Ana River and are shown in **Figure 3.4-4**. The Prado Basin is also a wetland under the jurisdiction of USACE and CDFW jurisdiction would extend to the edge of the riparian forest associated with the reservoir.



Path: U:\GIS\GIS\Projects\15xxxx\D150283_07_IEUA_Programmatic\03_Projects\ProgrammaticMajorWaterFeatures.mxd, janderson 10/7/2016

SOURCE: ESRI; County of San Bernardino; U.S. Fish and Wildlife Service; FEMA; USGS, 2016

IEUA Facilities Master Plan PEIR. 150283.07

Figure 3.4-4

Major Water Features

3.4.2 Regulatory Framework

The regulatory framework is discussed as it pertains to the management and conservation of biological resources, and the permitting process for proposed development projects in and adjacent to areas with significant biological resources.

Federal

Federal Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) have responsibility for administration of the federal ESA. The ESA provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere. The federal ESA has four major components: 1) provisions are made for listing species, 2) requirements for federal agency consultation with USFWS or NMFS, 3) prohibitions against "taking" of listed species, and 4) the provisions for permits that allow incidental "take" of listed species for otherwise lawful activities. "Take", as defined in the federal ESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The ESA also requires the preparation of recovery plans and the designation of critical habitat for listed species.

The Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations CFR Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MTBA.

Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the USACE which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the Clean Water Act (CWA), the USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term "waters" includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR.

The USACE and U.S. Environmental Protection Agency (USEPA) issued a set of guidance documents detailing the process for determining CWA jurisdiction following the U.S. Supreme Court's decision in *Rapanos v. United States* and *Carabell v. United States* (herein referred to simply as "Rapanos"). The USEPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court's decision in Rapanos that addresses the jurisdiction over

waters of the United States under the Clean Water Act. The complete set of guidance documents were used to collect relevant data for evaluation by the USEPA and the USACE to determine CWA jurisdiction over a project site and to complete the "significant nexus test" as detailed in the guidelines and the USACE-approved Jurisdictional Determination Form.

State

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the main provisions of the federal ESA and is administered by the California Department of Fish and Game (CDFG). Unlike its federal counterpart, CESA applies the take prohibitions to not only listed threatened and endangered species, but also to state candidate species for listing. Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFG maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife, which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

Clean Water Act Section 401/Porter-Cologne Act

The State of California regulates water quality related to discharge of dredge or fill material into waters of the State pursuant to Section 401 of the CWA. Section 401 compliance is a federal mandate regulated by the State. The local Regional Water Quality Control Boards (RWQCB) have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. In addition, the RWQCBs regulate water quality for all waters of the State, which may also include isolated wetlands, as defined by the California Porter-Cologne Water Quality Control Act (Porter Cologne; Ca. Water Code, Div. 7, Section 13000 et seq.). The RWQCB regulates discharges that can affect water quality of both waters of the U.S. and waters of the State. If there is no significant nexus to a traditional navigable water body and thus no USACE jurisdiction over waters of the U.S., then the RWQCB regulates water quality of waters of the State through a Waste Discharge Permit, as required to comply with the Porter-Cologne Water Quality Control Act when a Section 401 water quality certification would not apply..

Section 1602 Lake and Streambed Alteration Agreement

Jurisdictional authority of the CDFG over the bed, bank, or channel of a river, stream, or lake is established under Section 1600 et. seq. of the California Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The California Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream, or lake resulting in a substantial effect on a fish or wildlife resource without notifying the CDFG and completing the Streambed Alteration Agreement process.

California Department of Fish and Game Codes

All birds, and raptors specifically, and their nests, eggs and parts thereof are protected under Sections 3503.5 of the California Fish and Game Code. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) is considered a violation of this code. Additionally Section 3513 of the Fish and Game Code prohibits the take or possession of any migratory non-game bird listed by the MBTA. The CDFG has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (California Fish & Game Code Section 1802). The CDFG, as a trustee agency under *CEQA Guidelines* Section 15386, provides expertise in reviewing and commenting on environmental documents and makes and regulates protocols regarding potential negative impacts to biological resources held in California.

Non-Listed Species Management and Conservation Concerns

Species of Special Concern is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection, but signifies that these species are recognized as declining by CDFW.

The CNPS has developed an inventory of California's sensitive plant species. This inventory summarizes information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition the CNPS provides an inventory of plant communities that are considered natural communities of special concern by the state and federal resource agencies, academic institutions, and various conservation groups. The determination of the level of significance of impacts on plant species and natural communities is based on the number and size of remaining occurrences as well as recognized threats.

Natural communities of special concern are those that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife. Natural communities of special concern are not afforded legal protection unless they are designated critical habitat for federally listed threatened or endangered species, support formally listed species, or are jurisdictional wetland habitats.

Local

The IEUA service area encompasses unincorporated county land and seven incorporated cities. Each of these jurisdictions has its own independent General Plan and municipal code that pertain to biological resources. The County of San Bernardino and City of Upland have tree removal permits, the City of Fontana, City of Chino Hills, and the City of Rancho Cucamonga contain tree preservation ordinances. The cities of Montclair and Chino do not have ordinances protecting trees.

3.4.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the level of significance of impacts to biological resources are based on Appendix G of the *CEQA Guidelines*. The proposed program would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
- 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;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Impacts Discussion

Effect on Species

Impact 3.4-1: The proposed program could have significant and cumulatively considerable effects on species because the program could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed facility upgrades would occur within the boundaries of the existing facilities that are mostly devoid of natural habitat. However, the treatment plant upgrades could be located in or adjacent to areas where habitat has emerged that could support special status plant or wildlife species. Therefore, the proposed upgrades within this category could have a significant impact on plant or wildlife species identified as a candidate, sensitive, or special-status species.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines are anticipated to be located within existing roadway rights-of-way and are not expected to substantially impact any plant or wildlife species identified as a candidate, sensitive, or special-status species. However, ancillary facilities adjacent to pipelines such as reservoir tanks, pump stations, lift stations, diversion structures, and discharge structures within drainages could be located in undeveloped areas that could contain sensitive species. As discussed in Section 3.4.1, there are 58 special-status plant species and 63 special-status wildlife species that are known to be present within the IEUA service area. The sensitive vegetation communities within the IEUA service area that provide suitable habitat for the listed and other special-status species are California Walnut Woodland, Riversidean Alluvial Fan Sage Scrub, Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub.

In addition to direct impacts from construction of ancillary facilities, the FMP would implement dry weather flow diversions within five creeks listed in Table 2-9 and shown in Figure 2-11: Cucamonga Creek, Day Creek, Chino Creek, San Sevaine Creek, and Lower Deer Creek. Each of these creeks is a concrete-lined flood control channel that conveys urban runoff to the Prado Basin and Santa Ana River. The existing channels provide little to no habitat value since they are concrete-lined channels. Diverting the dry weather flows from these drainages would not affect in-channel habitat values. However, the flows eventually reach Prado Basin that supports dense riparian forests supported in part by surface runoff contributed by these creeks. The reduction of up to 3,500 AFY of surface water would reduce the total flow to the Prado Basin. The habitat within Prado Basin is supported by surface water inflows, groundwater upwelling, and detention by the Prado Dam. Groundwater levels are managed by the Chino Basin Watermaster with the objectives of optimizing groundwater storage capacity while maintaining groundwater levels within the basin to continue supporting habitat that in turn supports sensitive species such as least Bells vireo. According to the most recent Santa Ana River Watermaster Report, baseflow into the Prado Basin in 2014-2015 totaled approximately 64,000 AF. Five years earlier during a wetter year (2009-2010), baseflows reaching Prado Dam totaled approximately 103,000 AFY. The proposed dry weather diversions would constitute no more than 3-5 percent of the total flow into Prado Basin. Although some riparian habitat could be modified where the channel concrete lining ends and the water enters the greater Prado Basin, the overall effect to the forest would be minimal. Impacts to the health of the riparian forest at Prado Basin from the proposed dry weather diversions would be less than significant.

Direct project impacts to species listed as a candidate, sensitive, or special-status species by local, state, and federal agencies should be avoided to the greatest extent feasible; however, it is acknowledged that future projects may not be able to avoid these species. Project-related impacts that result in the direct take of a special-status species may be considered a significant impact. The presence/absence of a special-status species on a project site and the potential to impact a special-status species must be determined prior to project construction. If projects within the IEUA Service Area result in the direct take or loss of suitable habitat for any of the 58 special-status plant species and 63 special-status wildlife species that have the potential to occur in the IEUA Service Area, project-level mitigation will be required. Project impacts to special-status species listed as threatened or endangered by CDFW and/or USFWS may also require agency

consultation and/or take permits. The implementation of improvements within Project Category 2 could result in significant impacts to plant and wildlife species identified as a candidate, sensitive, or special-status species.

Project Category 3: Groundwater Recharge and Extraction

The proposed recharge basins and ancillary facilities adjacent to pipelines could be located in areas that are currently undeveloped and contain habitat that support candidate, sensitive, or special-status plant and animal species. Potential sensitive species impacts associated with improvements in this project category could be significant.

Combined Project Categories

There could be improvements within the project categories that could be located in areas that are currently undeveloped and could contain habitat that support candidate, sensitive, or special-status plant and animal species. Therefore, potential impacts to these sensitive species could be significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Cumulative development within the cities and County areas that are in the IEUA service area include infill and conversion of open undeveloped land to urban and rural development. This future cumulative development has the potential to reduce the availability of suitable habitat for special-status species, including suitable foraging habitat for raptor species. Additionally, the conversion of open undeveloped land has the potential to reduce the size, extent, and/or quality of existing wildlife movement corridors, due to habitat fragmentation of undeveloped open space areas within the IEUA service area.

The reduction of flow into Prado Basin resulting from the proposed dry weather diversions would contribute to a cumulative reduction in future flows reaching Prado Basin. Numerous projects are currently being planned to divert water currently discharged into the Santa Ana River from the cities of Rialto, San Bernardino, and Riverside to meet water recycling objectives. In addition, Low Impact Development ordnances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in dry weather surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bells vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub. To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, regional organizations such as the Santa Ana Watershed Project Authority (SAWPA) have developed local partnerships to address cumulative impacts to habitat within Prado Basin. The Chino Basin Watermaster groundwater management and monitoring efforts include provisions to maintain groundwater levels sufficient to avoid adversely affecting existing habitat that relies on groundwater. In addition, regional Habitat Conservation Plans (HCP) are being developed including the Upper Santa Ana River HCP that will develop projects to protect sensitive species and achieve regional habitat conservation objectives. While IEUA's dry weather diversions would contribute minimally to the cumulative effect, IEUA would

continue to participate in regional planning efforts to mitigate habitat deterioration including participating in arundo removal and other invasive species control efforts.

The loss of potentially suitable habitat for special-status species as a result of cumulative development would primarily result from the total conversion of undeveloped land to urban and rural development. This potential conversion by cumulative development is considered a potential significant impact on special-status species. Since the proposed project would also result in potential significant impacts on special-status species, the project's contribution is considered cumulatively considerable, and therefore, would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

The following mitigation measures are required to reduce potential impacts to sensitive plant and/or wildlife species.

BIO-1: Construction of the proposed improvements should avoid, where possible, special status natural communities and other vegetation communities that provide suitable habitat for a special-status species known to occur within the IEUA Service Area. If construction within potentially suitable habitat must occur, a presence/absence survey of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species, including listed species, are determined to occupy any portion of a project site, avoidance and minimization measures such as temporary fencing, inspection of trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspection of pipes, culverts, and similar construction material for entrapped wildlife, and the prohibition of chemical uses shall be incorporated into the construction phase of the proposed improvement to avoid direct or incidental take of a listed species to the greatest extent feasible.

BIO-2: If direct or incidental take of a listed species is unavoidable, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation but shall include the following or comparable mitigation: restoration of habitat to comparable value as existed prior to disturbance; compensation for take or habitat loss through conserving suitable habitat in perpetuity off site; or participating in a habitat mitigation bank approved by the resource agency(ies). At a minimum IEUA will provide compensation at a 1:1 ratio for direct or indirect loss of habitat that supports

listed species, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis.

BIO-3a: Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

BIO-3b: Construction of proposed improvements within the IEUA Service Area shall avoid special-status natural communities, unless deemed essential by the Agency. If a proposed improvement must be installed and result in a loss of a special-status natural community that is not occupied by a special-status species, compensatory habitat-based mitigation consisting of onsite preservation of habitat, restoration of similar habitat, or purchase of off-site credits from an approved mitigation bank shall be implemented. At a minimum IEUA will provide compensation at a 0.5:1 ratio for loss of habitat, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis.

BIO-4: The proposed improvement projects within the IEUA Service Area shall avoid, if possible, construction within the general nesting season of February 1 through August 31 for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures BIO-1 through BIO-4 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures BIO-1 through BIO-4 is required.

Combined Project Categories

Implementation of Mitigation Measures BIO-1 through BIO-4 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-1 through BIO-4 would reduce potential impacts to sensitive plant and wildlife species to less than significant through avoidance, minimization, and compensation.

Cumulative Measures

Implementation of Mitigation Measures BIO-1 through BIO-4 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-1 through BIO-4 would reduce the proposed treatment facilities' contribution to cumulative impacts to sensitive plant and wildlife species to less than cumulatively considerable through avoidance, minimization, and compensation.

Riparian Habitat

Impact 3.4-2: The proposed program could have significant and cumulatively considerable effects on habitat because the program could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed facility upgrades would occur within the boundaries of the existing facilities. Within the existing boundaries of these facilities, the area is devoid of riparian habitat or other sensitive natural community habitat and contain above ground and below ground structural improvements. The implementation of the upgrades would not have a substantial adverse effect on any riparian habitat or other sensitive natural community habitat. Therefore, the implementation of the upgrades and improvements within Project Category 1 would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

The IEUA service area contains riparian habitat areas and special-status natural communities. The riparian habitat within the IEUA service area provides suitable habitat for a number of special-status plant and wildlife species known to occur in the region. There are six special-status natural communities within the IEUA service area including California Walnut Woodland, Riversidean Alluvial Fan Sage Scrub, Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub.

The proposed pipelines are anticipated to be located within existing roadway rights-of-way and are not expected to substantially impact any existing natural communities. However, ancillary facilities adjacent to pipelines such as reservoir tanks, pump stations, lift stations and discharge locations at drainages could be located in areas that could contain special-status natural communities. The presence of riparian habitat and/or a special-status natural community on a site proposed for ancillary facilities must be evaluated prior to project approval. Any project-related impacts to riparian habitat and/or a special-status natural community are considered a significant impact.

Project Category 3: Groundwater Recharge and Extraction

The proposed recharge basins and ancillary facilities adjacent to pipelines could be located in areas that are currently undeveloped and contain riparian habitat areas and special-status natural communities. Potential impacts to riparian habitat areas and special-status natural communities associated with improvements in this project category could be significant.

Combined Project Categories

There could be improvements within the project categories that could be located in areas that are currently undeveloped and could contain riparian habitat areas and special-status natural communities. Therefore, potential impacts to these habitats and communities could be significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Implementation of cumulative development within the IEUA service area could result in potential impacts to riparian habitat and special status natural communities. Cumulative development could encroach into areas adjacent to existing drainages and creeks that could contain riparian habitat. In addition, cumulative development could result in potential impacts on riparian habitat. In addition, dry weather flow diversions could contribute to a reduction of surface water reaching the riparian forest in Prado Basin as discussed above. Since development in accordance with the IEUA FMP could result in potential impacts on riparian habitat and/or special-status natural communities, the project's contribution to cumulative impacts would be considerable and would represent a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures BIO-1 and BIO-3 is required.

BIO-5: Any future project that must discharge fill into a channel or otherwise alter a streambed shall be mitigated. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. For jurisdictional waters without any riparian or wetland habitat IEUA will mitigate at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A revegetation plan using native riparian vegetation common to the project area shall be prepared and reviewed and approved by the appropriate regulatory agencies. The Agency shall also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Santa Ana Regional Water Quality Control Board and CDFW) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. The regulatory agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures BIO-1, BIO-3, and BIO-5 is required.

Combined Project Categories

Implementation of Mitigation Measures BIO-1, BIO-3, and BIO-5 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-1, BIO-3 and BIO-5 would reduce potential impacts to riparian habitat areas and special-status natural communities to less than significant through avoidance, minimization, and compensation.

Cumulative Measures

Implementation of Mitigation Measures BIO-1, BIO-3, and BIO-5 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-1, BIO-3 and BIO-5 would reduce the proposed treatment facilities' contribution to cumulative impacts to riparian habitat areas and special-status natural

communities to less than cumulatively considerable through avoidance, minimization, and compensation.

Federally Protected Wetlands

Impact 3.4-3: The proposed program could have significant and cumulatively considerable effects on wetlands because the program could 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.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed facility upgrades would occur within the boundaries of the existing facilities. Within the existing boundaries of these facilities, the area is devoid of federally protected wetlands as defined by Section 404 of the Clean Water Act. The implementation of the upgrades would not have a substantial adverse effect on any wetlands. Therefore, the implementation of the upgrades and improvements within Project Category 1 would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines are anticipated to be located within existing roadway rights-of-way and are not expected to impact any wetlands. However, ancillary facilities adjacent to pipelines such as reservoir tanks, pump stations, lift stations and discharge locations at drainages could be located in areas that could contain wetlands. The presence of wetlands on a site proposed for ancillary facilities must be evaluated prior to project approval. Any project-related impacts to wetlands are considered a significant impact.

Development of improvements within the IEUA service area, particularly in undeveloped areas, could result in the loss of jurisdictional wetland habitat, which includes seasonal or permanent wetlands that are considered waters of the U.S. or intermittent/permanent water bodies. Proposed improvements that encroach into riparian areas may result in the significant disturbance and/or fill of potentially jurisdictional wetlands. Any project-related improvements that result in the significant alteration or fill of a federally protected wetland are considered a significant impact. Additionally, special-status species associated with wetlands may be impacted as a result of project impacts to protected wetlands. Project-specific agency (i.e., CDFW, RWQCB, and/or USACE) coordination and/or regulatory permitting would be required to reduce project impacts to wetland habitat.

Project Category 3: Groundwater Recharge and Extraction

The proposed recharge basins and ancillary facilities adjacent to pipelines could be located in areas that are currently undeveloped and contain wetland habitat areas. Potential impacts to wetland habitat areas associated with improvements in this project category could be significant.

Combined Project Categories

There could be improvements within the project categories that could be located in areas that are currently undeveloped and could contain wetland habitat areas. Therefore, potential impacts to wetlands could be significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The conversion of undeveloped areas to cumulative development, within the IEUA service area may increase effects on protected wetland habitats. Cumulative development that encroaches into wetland habitat areas or indirectly impacts wetland habitat through the increase of upstream urban runoff could result in a significant impact. In addition, dry weather flow diversions could contribute to a reduction of surface water reaching the riparian forest in Prado Basin as discussed above. Since the development in accordance with the IEUA FMP could increase impacts on wetland habitats, the project's contribution to potential impacts on wetland habitat is cumulatively considerable. Thus, the proposed project would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measures BIO-5 and BIO-6 is required.

BIO-6: Best Management Practices (BMPs) shall be incorporated into the design and construction phase of the project to ensure that no pollutants or silt drain into a federal or state protected jurisdiction area, including wetlands and riparian areas. Project design features (BMPs) to fulfill this mitigation requirement shall be clearly identified as part of project engineering plans prior to initiating construction.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measures BIO-5 and BIO-6 is required.

Combined Project Categories
Implementation of Mitigation Measures BIO-5 and BIO-6 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-5 and BIO-6 would reduce wetland impacts through compensation and implementation of construction and operational best management practices to control stormwater pollutants from exiting a proposed facility site.

Cumulative Measures

Implementation of Mitigation Measures BIO-5 and BIO-6 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures BIO-5 and BIO-6 would reduce the proposed treatment facilities' contribution to cumulative wetland impacts to less than cumulatively considerable through compensation and implementation of construction and operational best management practices to control stormwater pollutants from exiting a proposed facility site.

Wildlife Corridors and Nursery Sites

Impact 3.4-4: The proposed program could have significant and cumulatively considerable effects on the movement of species because the program could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Implementation of the proposed treatment facility upgrades would occur within the boundaries of the existing treatment facilities. Each of the treatment facilities are fenced and include trees and vegetation that could provide suitable nesting habitat for birds covered under the Migratory Bird Treaty Act (MBTA). With the presence of existing trees, construction activities could result in potential significant impacts to migratory and nesting bird species.

Because each facility is fenced and there are no streams or channels within the facilities, the proposed upgrades would not impact the movement of native resident or migratory fish.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines are anticipated to be located underground and within existing roadway rights-of-way. Therefore, the proposed pipelines would result in a less than significant impact on the movement of native resident or migratory fish or wildlife species or impede the use of migratory wildlife corridors or native wildlife nursery sites.

Ancillary facilities adjacent to pipelines such as reservoir tanks, pump stations, lift stations and discharge locations at drainages could be located in areas that provide for the movement of resident or migratory fish, in areas of established wildlife corridors, or wildlife nursery sites. These potential sites could include trees and vegetation that provide suitable nesting habitat for birds covered under the MBTA. Therefore, the implementation of these ancillary facilities could result in potential significant impacts to nesting birds.

Project Category 3: Groundwater Recharge and Extraction

The proposed recharge basins and ancillary facilities adjacent to pipelines could be located in areas that are currently undeveloped and could contain a wildlife corridor or trees and vegetation

that could provide suitable habitat for birds covered under the MBTA. Improvements under this category could result in potential significant impacts to wildlife corridors and nesting birds.

Combined Project Categories

There could be improvements within the project categories that could be located in areas that are currently undeveloped and could contain a wildlife corridor or trees and vegetation that could provide suitable habitat for birds covered under the MBTA. Improvements under the project categories could result in potential significant impacts to wildlife corridors and nesting birds.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Implementation of cumulative development within the IEUA service area could be located in areas that are currently undeveloped and could contain a wildlife corridor or trees and vegetation that could provide suitable habitat for birds covered under the MBTA. Cumulative development could result in potential significant cumulative impacts to wildlife corridors and nesting birds. Since development in accordance with the IEUA FMP could result in potential impacts to wildlife corridors and nesting birds, the project's contribution to cumulative impacts would be considerable and would represent a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
Implementation of Mitigation Measure BIO-4 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure BIO-4 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure BIO-4 is required.

BIO-7: Construction of a proposed project shall avoid, where possible, a wildlife corridor; however, if the wildlife corridor cannot be avoided, such as a discharge location within a drainage channel or creek, construction activities shall use best management practices such as placing temporary fencing to protect wildlife and plant species from construction activities, inspecting trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspecting pipes, culverts, or similar construction material for entrapped wildlife, and prohibiting the use of rodenticides, herbicides, insecticides or other chemicals that could potentially harm migratory species.

BIO-8: Once construction is completed, restore the impacted wildlife corridor area to its original vegetation and in accordance with any regulatory permitting, if applicable.

Combined Project Categories

Implementation of Mitigation Measures BIO-4, BIO-7, and BIO-8 is required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

Implementation of Mitigation Measures BIO-4, BIO-7, and BIO-8 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure BIO-4 would reduce impacts on wildlife nests and movement of fish and wildlife species to less than significant through the avoidance of the nesting season for construction activities or provision of a construction buffer from active nests. The implementation of Mitigation Measures BIO-7 and BIO-8 would avoid or minimize impacts to wildlife corridors to less than significant.

Local Policies or Ordinances Protecting Biological Resources

Impact 3.4-5: The proposed program could have significant and cumulatively considerable effects on biological resources because the program could have conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The facilities upgrades are proposed for the existing treatment facilities that are located in the cities of Chino, Ontario, and Rancho Cucamonga. The City of Chino does not have an ordinance protecting biological resources such as a tree preservation ordinance; however the cities of Ontario and Rancho Cucamonga have tree preservation policies. Therefore, future implementation of improvements within the existing treatment facilities located in the cities of Ontario and Rancho Cucamonga could conflict with the local policies or ordinances protecting biological resources. As a result, a potential significant impact on biological resources could occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of pipelines and ancillary facilities within the cities of Upland, Ontario, Fontana, Chino Hills, and Rancho Cucamonga and the County of San Bernardino could conflict with the local policies or ordinances protecting biological resources. As a result, a potential significant impact on biological resources could occur. The cities of Montclair and Chino do not have local policies or ordinances protecting biological resources.

Project Category 3: Groundwater Recharge and Extraction

Implementation of recharge and extraction facilities within the cities of Upland, Ontario, Fontana, Chino Hills, and Rancho Cucamonga and the County of San Bernardino could conflict with the local policies or ordinances protecting biological resources. As a result, a potential significant impact on biological resources could occur. The cities of Montclair and Chino do not have local policies or ordinances protecting biological resources.

Combined Project Categories

There could be improvements within the project categories that could conflict with the local policies or ordinances protecting biological resources. As a result, a potential significant impact on biological resources could occur.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Implementation of cumulative development within the IEUA service area could be located in areas that are currently protected by local policies or ordinances within the cities of Upland, Ontario, Fontana, Chino Hills, and Rancho Cucamonga and the County of San Bernardino. Therefore, cumulative development could result in potential significant cumulative impacts on biological resources protected by local policies or ordinances. Since development in accordance with the IEUA FMP could result in potential impacts impact to biological resources protected by local policies or ordinances, the project's contribution to cumulative impacts would be considerable and would represent a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

BIO-9: Prior to construction activities to provide treatment facilities upgrades, the IEUA shall comply with the local policies and ordinances to protect biological resources.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure BIO-9 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure BIO-9 is required.

Combined Project Categories

Implementation of Mitigation Measure BIO-9 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure BIO-9 would reduce impacts to biological resources protected by local policies or ordinances through compliance with the local regulations.

Cumulative Measures

Implementation of Mitigation Measure BIO-9 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure BIO-9 would reduce the proposed treatment facilities' contribution to cumulative biological resources impacts to less than cumulatively considerable through compliance with the local regulations that protect biological resources.

Conservation Plans

Impact 3.4-6: The proposed program could have significant and cumulatively considerable effects on a conservation plan because the program could have conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The implementation of the proposed upgrades at the treatment facilities would not conflict with an adopted habitat or natural community conservation plan because the existing treatment facilities are not included within a habitat or natural community conservation plan.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines and ancillary facilities may be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas would conflict with the provisions of the HCPs and would represent a potential significant impact.

Project Category 3: Groundwater Recharge and Extraction

Groundwater recharge and extraction facilities may be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas would conflict with the provisions of the HCPs and would represent a potential significant impact.

Combined Project Categories

There could be improvements within the project categories that could be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas would conflict with the provisions of the HCPs and would represent a potential significant impact.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Implementation of cumulative development within the IEUA service area could be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, cumulative development within these HCP areas would conflict with the provisions of the HCPs and would represent a potential significant impact. Since development in accordance with the IEUA FMP could result in potential impacts impact to existing HCPs, the project's contribution to cumulative impacts would be considerable and would represent a significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

BIO-10: IEUA shall avoid constructing facilities within existing habitat conservation plan areas such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana, unless avoidance is not feasible and the habitat conservation plans allow the construction of the proposed facility. IEUA shall follow the mitigation procedures outlined in such HCPs to bring the project in compliance with the HCP.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure BIO-10 is required.

Combined Project Categories

Implementation of Mitigation Measure BIO-10 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure BIO-10 would reduce potential impacts to existing habitat conservation plan (HCP) areas to less than significance through either avoidance or compliance with HCP permitted activities.

Cumulative Measures

Implementation of Mitigation Measure BIO-10 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure BIO-10 would reduce the proposed treatment facilities' contribution to

cumulative HCP impacts to less than cumulatively considerable through either avoidance or compliance with HCP permitted activities.

3.4.4 References

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3.5 Cultural Resources

This section describes the environmental setting for cultural and paleontological resources, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to less than significant, if necessary.

Cultural resources are defined as prehistoric and historic sites, structures, districts, and landscapes, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or any other reason. Under CEQA, paleontological resources, although not associated with past human activity, are commonly grouped within cultural resources. For analysis purposes, cultural resources may be categorized into four groups: archaeological resources; historic resources, including architectural/engineering resources; contemporary Native American resources; and paleontological resources.

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric-era (before European contact) or historic-era (after European contact). The majority of such places in California are associated with either Native American or Euro-American occupation of the area. The most frequently encountered prehistoric or historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and rock art sites. Historic-era archeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic resources include standing structures, infrastructure, and landscapes of historic or aesthetic significance that are generally 50 years of age or older. In California, historic resources considered for protection tend to focus on architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930), although there has been recent attention paid to WWII and Post War era facilities. Earlier historic resources are often associated with archaeological deposits of the same age. Some resources, however, may have achieved significance within the past 50 years if they meet the criteria for exceptional significance.

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values. These locations are sometimes hard to define and traditional culture often prohibits Native Americans from sharing these locations with the public.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular

invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

3.5.1 Environmental Setting

Natural Setting

The IEUA service area is located in southern California within the west end of the San Bernardino Valley in San Bernardino County that lies just east of Los Angeles County, northeast of Orange County, and north and west of Riverside County. Its 242-square-mile service area includes the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills; Rancho Cucamonga; and the unincorporated areas of San Bernardino County. The service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet above mean sea level (amsl) adjacent to the San Gabriel Foothills to approximately 500 feet (amsl) near Prado Dam. The service area is bordered to the north by the San Gabriel Mountains; to the east by the Rialto-Colton Basin, the Jurupa Mountains and the Riverside County/San Bernardino County boundary; to the south by the Prado Flood Control Basin; and to the west by the Chino Hills, Puente Hills and the Pomona and Claremont Basins. All proposed projects would be located inside the IEUA service area boundaries.

Paleoenvironment

The IEUA service area is located in the northern portion of the Peninsular Ranges Province, which is bounded on the north by the Transverse Ranges Province, to the northeast by the Colorado Desert Province, and on the west by the Pacific Ocean (Jenkins, 1980:40-41; Harms, 1996:150). The Peninsular Ranges Province extends southward to the southern tip of Baja California (Jahns, 1954; Harms, 1996:150).

Geologically, the service area lies within the Santa Ana River Basin portion of the San Bernardino Valley (Woodford et al. 1971:3422). This structurally depressed trough is filled with sediments dating from the Miocene through Recent ages (Clarke, 1978-1979:15). The San Bernardino Valley is one of the many tectonically controlled valleys within the valley and ridge systems found within a portion of the Perris Block and in the northern portion of the Peninsular Ranges Province. The Perris Block was defined by English (1926) as a region between the San Jacinto and Elsinore-Chino fault zones. The block is bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley and Palomar Mountains (*ibid*.). This structural block contains a series of alternating ridges and valleys and is considered to have been active since Pliocene time (Woodford et al. 1971:3421). Soils within the Chino Basin area are comprised of Quaternary Alluvium, a sandy, silty alluvium with few pebbles or rocks (Schmid and Offermann, 2008). The major surface water features include the Santa Ana River, San Antonio Creek, Cucamonga Creek,

Day Canyon Creek, Dry Creek, Deer Creek, and Chino Creek (see Figure 3.4-4). All of these creeks begin at the San Gabriel Mountains and traverse through the Chino Basin in the cities of Upland, Ontario, Rancho Cucamonga, Montclair, and Chino to the Santa Ana River.

Prehistoric Setting

The chronology of southern California is typically divided into three general time periods: the Early Holocene (11,000 to 8,000 before present [B.P.]), the Middle Holocene (8,000 to 4,000 B.P.), and the Late Holocene (4,000 B.P. to A.D. 1769). Within this general timeframe, the archaeology of southern California is typically described in terms of cultural "complexes." A complex is a specific archaeological manifestation of a general mode of life, characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture.

While it is not certain when humans first came to California, their presence in southern California by about 11,000 Before Present (B.P.) has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 11,100 and 10,950 B.P. (Byrd and Raab, 2007). During the Early Holocene, the climate of southern California became warmer and more arid and the human population, residing mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources.

The primary Early Holocene (11,000 to 8,000 B.P.) cultural complex in southern California is the San Dieguito Complex, which dates between approximately 10,000 and 8,000 B.P. The people of the San Dieguito Complex inhabited the chaparral zones of southwestern California, exploiting the plant and animal resources of these ecological zones (Warren, 1967). Leaf-shaped and large-stemmed projectile points, scraping tools, and crescentics are typical of San Dieguito Complex material culture.

During the Middle Holocene (8,000 to 4,000 B.P.), there is evidence for the processing of acorns for food and a shift toward a more generalized economy. Around 7,000 B.P., millingstone cultures appeared, characterized by the collection and processing of plant foods, particularly acorns, and the hunting of a wider variety of game animals (Byrd and Raab, 2007; Wallace, 1955). A number of Middle Holocene sites are located in the San Bernardino Mountains and Cajon Pass north of the service area, including the Sayles Complex and the Crowder Canyon sites (Brock et al. 1986).

During the Late Holocene (4,000 B.P. to A.D. 1769), native populations of southern California were becoming less mobile and populations began to gather in small sedentary villages with satellite resource-gathering camps. Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab, 2007). Around 1,000 B.P., an episode of sustained drought, known as the Medieval Climatic Anomaly, occurred. While this climatic event did not appear to reduce the human population, it did lead to a change in subsistence strategies in response to the substantial stress on resources. Although the intensity of trade had already been increasing through the Late Holocene, it reached its zenith in

later phases, with asphaltum (tar), seashells, and steatite being traded from southern California to the Great Basin. Major technological changes appeared as well, particularly with the advent of the bow and arrow, which largely replaced the use of the dart and atlatl. Small projectile points, ceramics, including Tizon brownware pottery, and obsidian from Obsidian Butte (Imperial County), are all representative artifacts of the latest phase of the Late Holocene.

Ethnographic Setting

The IEUA service area lies in an area where the traditional territories of two Native American groups overlap: the Serrano of the San Bernardino Mountains and the Gabrielino of the San Gabriel Valley. Reid (1968:8-9) suggests that the Native Americans of the present day San Bernardino area were probably Serrano, and Strong (1929:7-9, 275) claims that they were Gabrielino. In any case, there also occurred a late influx of Cahuilla during the 19th century (Bean, 1978).

The Serrano Indians traditional territory is centered at the San Bernardino Mountains, but also includes the southern rim of the Mojave Desert, extending from Victorville eastward to Twentynine Palms area. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander." The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978a). The following ethnographic discussion of the Serrano people is based on these sources.

Prior to European contact, the Serrano were primarily gatherers and hunters, and occasional fishers, who settled mostly where flowing water emerged from the mountains. They were loosely organized into exogamous clans, led by hereditary heads, and the clans, in turn, were affiliated with one of two exogamous moieties. The exact nature of the clans, their structure, function, and number are not known, except that each clan was the largest autonomous political and landholding unit, the core of which was the patrilineage. There was no pan-tribal political union among the clans.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until 1819, when a mission *assistencia* was established on the edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serranos in the San Bernardino Mountains were removed to the nearby missions. At present, most Serrano descendants are found on the San Manuel and the Morongo Indian Reservations, where they participate in ceremonial and political affairs with other Native American groups on an inter-reservation basis.

The Gabrielino, a Takic-speaking people, are considered to be the most populous and most powerful ethnic nationality in aboriginal southern California (Bean and Smith 1978b:538). The Gabrielino's territory was centered in the Los Angeles Basin, reaching from San Clemente Island to the present-day San Bernardino-Riverside area and south into southern Orange County, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. Unfortunately, most Gabrielino cultural practices had declined long before systematic ethnographic studies were instituted. As a result, knowledge about them and their lifeways is

meager. Today, the leading ethnographic sources on Gabrielino culture are Bean and Smith (1978b) and McCawley (1996).

Whatever the linguistic affiliation, Native Americans in the San Bernardino area exhibited similar social organization and resource procurement strategies. Villages were based on clan or lineage groups. Their home/base sites are marked by midden deposits, often with bedrock mortar features. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, such as boulder slicks, at the locations of the resources.

Historic Setting

The historic period in San Bernardino County began with the Spanish occupation and construction of the Mission San Gabriel Arcangel, located northeast of present day Los Angeles. The Mexican Period (A.D. 1821 to 1848), the period marked by the Mexican-American independence from Spain, follows the Spanish Period. In 1846, the United States declared war on Mexico. After two years, Mexico signed the Treaty of Guadalupe Hidalgo thereby relinquishing the area that would become the modern southwestern states of Texas, New Mexico, Arizona, and California. The American Period began in 1848 and continues to the present.

The Chino Basin area, along with the rest of Alta California, was claimed by Spain in the late 18th century, and the first European explorers traveled through the San Bernardino area as early as the 1770s. For more than half a century afterwards, however, the arid inland region of the remote province received little attention from the Spanish colonizers, who concentrated their efforts in the coastal regions. Following the establishment of Mission San Gabriel in 1771, the Chino area became one of the Mission's 24 principal cattle ranches, known as Rancho Santa Ana del Chino at least by 1834 (Gunther, 1984:111), but no Europeans are known to have settled in the area until the late 1830s.

After Mexico gained independence from Spain in 1821, the new authorities in Alta California began to dismantle the mission system in 1834 through the process of secularization. During the next 12 years, former mission ranchos throughout Alta California were surrendered to the Mexican government, and subsequently divided and granted to various prominent citizens of the province. In 1841, Rancho Santa Ana del Chino was granted to Antonio Maria Lugo, an influential figure in the pueblo of Los Angeles at the time. Between that year and 1856, Lugo's son-in-law Isaac Williams, a Yankee-turned *ranchero*, acquired all interest in the 13,000-acre rancho, and developed it into a prosperous agricultural empire. In addition to cattle raising, Williams' ranch also boasted wheat fields, vineyards, fruit orchards, a flour mill, and a soap factory (Schuiling, 1984:34).

The American annexation of Alta California in 1848 brought waves of American immigrants into the once sparsely populated territory. In the 1880s, spurred by the completion of the Southern Pacific Railroad and the competing Santa Fe Railroad, a land boom swept through much of southern California. A large number of towns, surrounded by irrigated farmland, were laid out in the San Bernardino Valley before the end of the 19th century.

Chino and Chino Hills

The original town-site of Chino was laid out in 1887 by Richard Gird, who had purchased the former Williams ranch in 1881 (Schuiling, 1984:84). In the meantime, Gird built up a herd of 200 dairy cows on the ranch, and thus started the Chino area's long history as the dairy center of southern California (*ibid.*). Around the turn of the century, however, the area was better known for the cultivation of sugar beets and the industrial production of sugar (Slawson, 1998:8-9).

In the wake of the financial failure of Gird's enterprises in the 1890s, the Chino ranch was gradually subdivided into smaller farms and ranches. During the post-WWII years, with the metropolis of Los Angeles embarking on a rapid expansion, displaced dairy farmers flocked into the Chino area in the 1940s-1950s, greatly contributing to the establishment of milk as the leading agricultural product in both San Bernardino and Riverside Counties (Martino et al. 2011). However, in recent decades the Chino Basin has lost many of its dairies and other agricultural enterprises to the ever-increasing demand for residential housing. Suburban growth continued into the contemporary-period with the development of comprehensive residential communities at Chino Hills replete with recreational and leisure lifestyle amenities including golf courses, country clubs, and regional parks. Chino Hills was incorporated as a City in 1991.

Fontana

Used primarily as cattle ranches, the Fontana area saw little development until the mid-19th century. After the arrival of the Southern Pacific Railway around 1875 and the competing Atchison, Topeka and Santa Fe Railway around 1885, a phenomenal land boom swept through much of southern California, ushering in a number of new settlements in the San Bernardino Valley. In 1881, George Chaffey, a Canadian-born engineer, created the agricultural colony of Etiwanda, where he first put into practice his influential concept of a "mutual water company," with equitable water rights affixed to each parcel of land (Martino et al. 2011). In 1887, the Semi-Tropic Land and Water Company laid out in present-day Fontana a townsite named Rosena. However, with the subsequent collapse of the land boom and the company, the town existed only on paper until 1913, when it was re-subdivided under the name of Fontana (Cataldo, 2002).

Due to its favorable climate, the western San Bernardino Valley soon became known for the cultivation of citrus fruits, olives, and grapes. The vineyards and the wineries, in particular, figured prominently in the region's social and economic identity. During the Second World War, the Kaiser Steel Mill was established in Fontana, bringing about significant changes in the region's agrarian landscape. As other industrial establishments moved into the area after Kaiser, Fontana soon became a center of heavy industry. In more recent years, however, residential and commercial development has been the driving force behind the rapid urban expansion in the western San Bernardino Valley. Since the closure of the Kaiser Steel Mill in 1983, both Fontana and Etiwanda, the latter now a part of the City of Rancho Cucamonga, have increasingly taken on the characteristics of "bedroom communities."(Cataldo, 2002).

Montclair

In 1897, a "Township of Marquette" was founded within the borders of the modern city of Montclair. In 1900, a 1,000 acres tract of land was surveyed and named "Monte Vista". A small

settlement to the south of Monte Vista was established in 1907 and named "Narod". Throughout the first half of the 20th century, the settlement was largely devoted to citrus orchards. The Monte Vista tract experienced growth in residential development after the Second World War, and the tract was incorporated as the city of Monte Vista on April 25, 1956. Due to conflict with the Post Office, which refused to open an office in Monte Vista due to a name conflict with a community in Northern California, the city was renamed Montclair on April 8, 1958(Cataldo, 2002).

Ontario

In 1881, the Chaffey brothers, George and William, purchased the land (which at that time also included the present-day city of Upland) and the water rights to it (Ontario City Library 2014). They created the main thoroughfare of Euclid Avenue (California Highway 83). The new "Model Colony" (called so because it offered the perfect balance between agriculture and the urban comforts of schools, churches, and commerce) was originally conceived as a dry town, early deeds containing clauses forbidding the manufacture or sale of alcoholic beverages within the town. The two named the town "Ontario" in honor of the province of Ontario in Canada, where they were born. Ontario attracted farmers (primarily citrus) and agriculture was vital to the early economy of Ontario. Ontario was incorporated as a city in 1891 and remains today one of the Inland Empire's largest "bedroom communities" (Ontario City Library, 2014).

Rancho Cucamonga

For the bulk of the Spanish-Mexican period in California history, the entire San Bernardino Valley, including the Rancho Cucamonga area, was considered a part of the land holdings of Mission San Gabriel (Emick, 2015). In the 1830s-1840s, during secularization of the mission system, the Mexican authorities in Alta California made a number of large land grants of former mission properties in the Valley. Among them was Rancho Cucamonga, granted to Tiburcio Tapia in 1839. As elsewhere in southern California, cattle raising was the most prevalent economic activity on this and other nearby land grants, until the influx of American settlers eventually brought an end to this much-romanticized lifestyle in the second half of the 19th century (Emick, 2011).

The town of Alta Loma first originated in the early 1880s as two separate but adjacent colonies: Hermosa, founded in 1881, and the Iowa Tract, founded in 1883 (Emick, 2011). In 1887, the two colonies merged under the name of Ioamosa. By the end of the decade, the young community had established an economy—and with it a cultural landscape—that was characterized by expansive citrus groves complemented by orchards of other fruit trees and vineyards, typical of the western San Bernardino Valley in the late 19th and early 20th centuries (Emick, 2011).

In 1913, while the Pacific Electric Railway was building a line through the area, residents of Ioamosa decided to choose a new name, Alta Loma, for the station, and thereby for the town. During World War II, the Kaiser Steel Mill was established in the neighboring town of Fontana, which brought about significant changes in the region's agrarian landscape (Emick, 2011). In more recent years, residential and commercial development has been the driving force behind the rapid urban expansion of the western San Bernardino Valley. In 1977, the formerly separate communities of Etiwanda, Cucamonga, and Alta Loma united to incorporate as the City of

Rancho Cucamonga (Emick, 2011). Since then, Rancho Cucamonga has continued to be one of the fastest-growing cities in the Inland Empire.

Upland

Upland originally was an irrigation colony established by George and William Chaffey as the original northern part of Chaffee's Ontario Model Colony, and was known as "North Upland" or "Magnolia" after a local hotel (Clucas, 2009). However, by 1902, the name "Upland" was used to refer to the entire area of North Ontario. When founded, it was a small rural town based on agriculture, specifically citrus fruits and grapes. A trolley line in the broad, tree-lined median of Euclid Avenue formerly connected Upland to the Southern Pacific Railroad line in Ontario. The trolley was pulled from Ontario to Upland by a mule, which then climbed aboard an attached trailer for the ride back down. The City of Upland was incorporated in 1906, and present-day Upland maintains many of the same features, most specifically Euclid Avenue (the north-south, tree-lined street that runs through town) as well as many of the older, adobe and ranch-style houses (Clucas, 2009).

Identification of Resources

Archaeological and Built Environment Resources

A review of General Plan EIRs within the IEUA service area provides the basis for cultural resources data. Portions of the IEUA service area have been subject to cultural resources pedestrian and/or reconnaissance surveys. The records at the Archaeological Information Center at San Bernardino County Museum (SBCM) indicate hundreds of known prehistoric archaeological resources in the IEUA service area. The records indicate prehistoric sites, including villages, temporary camp sites, rock shelters, milling stations, lithic scatters, quarry sites, pottery scatters, middens, mortars, metates, cemeteries, cremation sites, petroglyphs, and pictographs, among other resource types (City of Chino, 2010).

The IEUA service area contains several designated historic districts, eligible historic districts, and hundreds of recorded historic properties individually eligible for listing on the National Register of Historic Places (NRHP). Only a portion of these recorded properties are listed on the NRHP. Resources listed in or eligible for the NRHP are also eligible for listing in the California Register of Historic Resources (CRHR). General historical resource types include historic roads, trails, bridges, buildings, and structures. There are six California Historical Landmarks (CHL) within the IEUA service area (OHP, 2016):

- No. 191 Yorba-Slaughter Adobe – 17127 Pomona-Rincon Rd., Chino
- No. 360 Tapia Adobe - 8916 Foothill Blvd, Rancho Cucamonga
- No. 490 Cucamonga Rancho Winery – 8916 Foothill Blvd., Rancho Cucamonga
- No. 942 Site of the Rancho Chino Adobe of Isaac Williams – Chino Fire Station No. 2, 4440 Eucalyptus Ave., Chino
- No.950 United States Rabbit Experimental Station – Josephine Knoph Senior Citizen Center of Fontana, 8384 Cypress Ave. at Seville Ave, Fontana
- No. 1028 Madonna of the Trail – 1100 Block of North Euclid Ave, Upland

Paleontological Resources

A review of General Plan EIRs for San Bernardino County and the cities within the IEUA service area were reviewed for information regarding paleontological background and sensitivity. Hundreds of paleontological localities are recorded within the IEUA service area. These fossil localities are known to occur in Chino Hills. In most of the City of Chino Hills, two formations are present. The older of the two is the Monterey Formation, which is middle Miocene in age. The Sycamore Canyon Formation is late Miocene in age. Pleistocene Epoch Quaternary Older Alluvium is mapped at the surface in the vicinity of the ancestral Santa Ana River and its tributaries. However, results of paleontological monitoring of development projects have found these sediments more widely distributed in the city, particularly in canyons. Thus far, all results indicate a late Pleistocene age of about 50 thousand to 12 thousand years for fossils from the Older Alluvium in the City (City of Chino Hills, 2015).

Known paleontological resources in the City consist of Miocene and Pleistocene fossils. Miocene fossils represent the period when Chino Hills was ocean floor and include many kinds of marine life and leaves from terrestrial plants that were washed into the ocean by streams and rivers. The Miocene marine fossils include marine mammals of 8 types, boney fishes of 41 types, cartilaginous fishes of 4 types, marine invertebrates of 18 types, and marine plants of 10 types. Miocene land plants of 32 types are represented along with freshwater snails. Pleistocene terrestrial mammals are represented by 8 types. Altogether, more than 2,860 specific fossil remains have been documented by past paleontological investigations, in various parts of the City. Based on the numerous fossil findings in Chino Hills, the entire City is considered sensitive for paleontological resources (City of Chino Hills, 2015).

The single most scientifically significant fossil is the Chino Hills Dolphin, Atocetus anguloi, recovered during construction excavations for Vellano in Soquel Canyon. This dolphin is a new and previously unknown species and has no living relatives. It was recovered from the latest Miocene (circa 9 million years ago) Sycamore Canyon Formation. The skeleton represents an adult individual, and includes the cranium, mandible, vertebrae, ribs, and some bones of the pectoral flipper. It has distinctive features of the skull and teeth that are unlike any other dolphin (City of Chino Hills, 2015).

In the central portion of the IEUA service area, the City of Ontario, geologic maps indicate that the area is situated on surface exposures of recent alluvium. These sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. However, these recent sediments overlie sediments of older Pleistocene sediments with high potential to contain paleontological resources. Older Pleistocene alluvial sediments have yielded significant fossils of extinct plants and animals elsewhere in the Inland Empire. These older sediments, often found at depths of 10 feet or more below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. Significant vertebrate fossils from this age include Ice Age mammals such as camels, mammoths, mastodons, and ground sloths (City of Ontario, 2009).

In the northern portion of the IEUA service area, the City of Rancho Cucamonga consists of surficial sedimentary or metamorphic rocks that are unlikely to contain significant vertebrate

fossils; however, there may be significant paleontological resources at deeper depths in older Quaternary alluvial sediments (City of Rancho Cucamonga, 2010).

Sediments in the Fontana area may overlie older Pleistocene alluvium that may have high potential to yield significant fossil remains. Fossils recovered from these older Pleistocene sediments have included mammoths, mastodons, ground sloths, dire wolves, saber-toothed cats, large and small horses, large and small camels, and bison (City of Fontana, 2015).

Native American Consultation

The IEUA initiated Native American consultation pursuant to California PRC Section 21080.3.1, as amended by Assembly Bill 52 (AB 52). Consultation is required with Native American groups who are traditionally and culturally affiliated with the geographic area of the proposed program, and who have requested such consultation in writing. The IEUA mailed letters to the Morongo Band of Mission Indians and the Gabrieleño Band of Mission Indians – Kizh Nation on July 7, 2016 inviting them to consult regarding potential impacts to tribal cultural resources. Consultation between the IEUA and tribes is currently ongoing.

3.5.2 Regulatory Framework

Numerous laws and regulations require federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate 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; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance.

Federal

National Historic Preservation Act

Cultural resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 300101 et seq.), and the implementing regulations, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), the NHPA (54 U.S.C. 306108) requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. Under the NHPA, properties of traditional religious and cultural importance to a Tribe are eligible for inclusion in the NRHP (54 U.S.C. 302706). Also under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register of Historic Places (National Register) was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (Code of Federal Regulations [CFR] 36 Section 60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. In the context of the project, which does not involve any historical-period structures, the following National Register criteria are given as the basis for evaluating archaeological resources.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

State

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. 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 State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

California Register of Historical Resources

The California Register of Historical Resources (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." (California Public Resources Code § 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (California Public Resources Code § 5024.1[b]). 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.

To be eligible for the California Register, a prehistoric or historical-period property must be significant at the local, State, and/or federal level under one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- 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
- 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.

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; and,
- 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 (Those properties identified as eligible for listing in the National Register of Historic Places, the California Register, and/or a local jurisdiction register);
- Individual historical resources;

- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
2. It is associated with an individual or group having a profound influence on the history of California; or
3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type within the local geographic region (city or county);
2. It is associated with an individual or group having a profound influence on the history of the local area; or

3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

Under CEQA (Public Resources Code [PRC] Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. State CEQA Guidelines Section 15064.5 defines a historical resource as: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Public Resources Code (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. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

As described by PRC Section 21084.1 and Section 15064.5 of the State CEQA Guidelines, should a project cause a substantial adverse change (defined as 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) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (State CEQA Guidelines Sections 15064.5(b)(1) and 15064.5(b)(4)).

Archaeological resources are defined in CEQA Section 21083.2, which states that a "unique" archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- 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.

Unique archaeological resources as defined in Section 21083.2 may require reasonable efforts to preserve resources in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required. Additionally, the State CEQA Guidelines state 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 (State CEQA Guidelines Section 15064.5(c)(4)).

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires in the event human remains are discovered that all ground disturbances must cease and the County Coroner must be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin by the Coroner, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

California Public Resources Code Section 21080.3.1

California PRC Section 21080.3.1, as amended by Assembly Bill (AB) 52, requires lead agencies to consider the effects of projects on tribal cultural resources and to conduct consultation with federally and non-federally recognized Native American Tribes early in the environmental planning process and applies specifically to projects for which a Notice of Preparation (NOP) or a notice of Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The goal is to include California Tribes in determining whether a project may result in a significant impact to tribal cultural resources that may be undocumented or known only to the Tribe and its members and specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074 (a)(1)).

Prior to determining whether a Negative Declaration, MND, or Environmental Impact Report (EIR) is prepared for a project, the lead agency must consult with California Native American Tribes, defined as those identified on the contact list maintained by the California NAHC, who are traditionally and culturally affiliated with the geographic area of the proposed project, and who have requested such consultation in writing. Consultation may include:

- The type of environmental review necessary
- The significance of tribal cultural resources
- The significance of the project's impacts on the tribal cultural resources
- Project alternatives or the appropriate measures for preservation
- Recommended mitigation measures

Consultation should be initiated by a lead agency within 14 days of determining that an application for a project is complete or that a decision by a public agency to undertake a project (PRC Section 21080.3.1(d) and (e)). The lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American Tribes that have requested notice. At minimum, notice should consist of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American Tribe has 30 days to request consultation pursuant to this section. The lead agency shall begin the consultation process within 30 days of receiving a California Native American Tribe's request for consultation. According to PRC Section 21080.3.2(b), consultation is considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

Paleontological Resources

Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

Local

The IEUA service area encompasses unincorporated county land and seven incorporated cities. Each of these jurisdictions has its own independent General Plan and municipal code that pertain to cultural and historic resources.

3.5.3 Impacts and Mitigation Measures

Significance Criteria

Based on Appendix G of the CEQA Guidelines, cultural resources impacts would be considered significant if the program would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

- Disturb any human remains, including those interred outside of formal cemeteries.

Method of Analysis

CEQA provides that a project may cause a significant environmental effect where the project could result in a substantial adverse change in the significance of a historical resource (Public Resources Code, Section 21084.1). CEQA Guidelines Section 15064.5 defines a "substantial adverse change" in the significance of a historical resource to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be "materially impaired" (CEQA Guidelines Section 15064.5[b][1]).

CEQA Guidelines Section 15064.5(b)(2), defines "materially impaired" for purposes of the definition of "substantial adverse change" as follows:

The significance of a historical resource is materially impaired when a project:

- 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; or
- 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 an 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
- 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 as determined by a lead agency for purposes of CEQA.

In accordance with CEQA Guidelines Section 15064.5(b)(3), 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 *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* is considered to have mitigated impacts to historic resources to less than significant.

Historical Resources

Impact 3.5-1: The proposed program could have significant and cumulatively considerable effects on historical resources because the program could cause a substantial adverse change in the significance of a historical resource.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

RP-2 would be demolished as part of the treatment facility upgrades, and it is the only treatment facility that currently contains historic-age structures. There is a potential for implementation of facility upgrades at each of the treatment facilities and demolition of RP-2 to impact historical resources since the FMP would be implemented over the next 25 years. The potential impact to the significance of a historical resource is considered significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Since the proposed project is at the programmatic level, specific project locations and design elements of the conveyance systems and ancillary facilities have yet to be finalized. Thus, impacts to specific historical resources are speculative. Future development occurring under the FMP could adversely affect historic resources within the IEUA service area. The potential impact to a historical resource is considered significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Since the proposed project is at the programmatic level, specific project locations and design elements have yet to be finalized. Thus, impacts to specific historical resources are speculative. Future development occurring under the FMP could adversely affect historic resources within the IEUA service area. The potential impact to a historical resource is considered significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial, and industrial development. As the service area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains a significant archaeological and historical record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to disturb known or unknown cultural resources, including archaeological sites, historic-era built resources, and resources of traditional and cultural significance to Native American tribes.

The potential construction impacts of the project, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact on cultural resources. Therefore, the project's cumulative effects to historic built resources would be cumulatively considerable and cumulative impacts would be significant and unavoidable.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

CUL-1: Prior to development involving ground disturbance, IEUA shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology to conduct a study of the project area(s) for all project components that involve ground disturbance. The archaeologist shall conduct a cultural resources inventory designed to identify potentially significant resources. The cultural resources inventory would consist of: a cultural resources records search to be conducted at the South Central Coastal Information Center located at California State University Fullerton; consultation with the NAHC and with interested Native Americans identified by the NAHC; a field survey where deemed appropriate by the archaeologist; and recordation of all identified archaeological resources located on a project site on California Department of Parks and Recreation 523 Site Record forms. The archaeologist shall provide recommendations regarding resource significance and additional work for those resources that may be affected by a project.

CUL-2: Development involving ground disturbance and containing structures 50 years old or older shall be subject to a historic built environment survey, and potentially historic structures shall be evaluated for their potential historic significance, prior to IEUA's approval of project plans. The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior's Standards for Architectural History. If potentially significant resources are encountered during the survey, a treatment plan shall be prepared prior to demolition or substantial alteration of such resources identified.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures CUL-1 and CUL-2 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures CUL-1 and CUL-2 is required.

Combined Project Categories

Implementation of Mitigation Measures CUL-1 and CUL-2 is required.

Significance Determination after Mitigation: Significant and Unavoidable. Surveys of structures 50 years of age or older have not been done and the details of any treatment plan are unknown; therefore, it is possible that the treatment plan may be insufficient to reduce the impacts of the loss of a historic resource to less than significant. In addition, the IEUA does not have any policies that prevent the IEUA Board of Directors to approve demolition of a historic resource that is found to be significant. As such, the impact would remain significant and unavoidable after implementation of Mitigation Measures CUL-1 and CUL-2.

Cumulative Measures

Implementation of Mitigation Measures CUL-1 and CUL-2 is required.

Significance Determination after Mitigation: Significant and Unavoidable. Surveys of structures 50 years of age or older have not been one and the details of any treatment plan are unknown; therefore, it is possible that the treatment plan may be insufficient to reduce the impacts of the loss of a historic resource to less than significant. In addition, the IEUA does not have any policies that prevent the IEUA Board of Directors to approve demolition of a historic resource that is found to be significant. As such, the impact would remain significant and unavoidable after implementation of Mitigation Measures CUL-1 and CUL-2.

Archaeological Resources

Impact 3.5-2: The proposed program could have significant and cumulatively considerable effects on archaeological resources because the program could have cause a substantial change in the significance of an archeological resource.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Given the number and type of archaeological resources in the project area, as well as the presence of Cucamonga Creek, Chino Creek and other natural water sources, and the area's long period of historic use, the project area is considered highly sensitive for the presence of archaeological resources. Previously unknown and unrecorded archaeological resources may be unearthed during excavation and grading activities for individual projects. This can occur in already developed areas, as older buildings are known to have been built on top of or within archaeological deposits. Although much of the project area is already heavily developed, potentially significant buried archaeological resources could still exist within the project area, beneath and between structures and roads. If previously undiscovered artifacts or remains are uncovered during excavation or construction, significant impacts could occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Since the proposed project is at the programmatic level, specific project locations and design elements have yet to be finalized. Thus, impacts to specific archaeological resources are speculative. Future development occurring under the FMP could adversely affect archaeological resources within the IEUA service area. The potential impact to the significance of an archaeological resource is considered significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The project vicinity contains a significant archaeological record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to disturb known or unknown cultural resources, including archaeological sites, and resources of traditional and cultural significance to Native American tribes.

The potential construction impacts of the project, in combination with other projects in the area, could contribute to a cumulatively significant impact on cultural resources.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
Implementation of Mitigation Measure CUL-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure CUL-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure CUL-1 is required.

Combined Project Categories
Implementation of Mitigation Measure CUL-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure CUL-1 would ensure a study is conducted to identify any potentially significant archaeological resources. The study would outline measures to reduce or avoid impacts to potentially significant archaeological resources. Therefore, with implementation of Mitigation Measure CUL-1, project implementation would result in a less-than-significant impact involving an adverse change in the significance of an archaeological resource.

Cumulative Measures

Implementation of Mitigation Measure CUL-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure CUL-1 would ensure that the proposed facilities' contribution to cumulative impacts on archaeological resources would be reduced to less than cumulatively considerable by avoiding an adverse change in the significance of an archaeological resource.

Paleontological Resources

Impact 3.5-3: The proposed program could have significant and cumulatively considerable effects on paleontological resources because the program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The General Plans for the cities and unincorporated portions within the IEUA service area indicate that some portions of the IEUA service area are highly sensitive for paleontological resources. Since the proposed project is at the programmatic level, specific project design elements have yet to be finalized. Impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique paleontological resources are uncovered during excavation or construction, significant impacts could occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Since the proposed project is at the programmatic level, specific project locations and design elements have yet to be finalized. Thus, impacts to specific paleontological resources are speculative. Future development occurring under the FMP could adversely affect potentially unique paleontological resources within the IEUA service area. The potential impact to the significance of a paleontological resource is considered significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

As the service area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains a significant paleontological and geological record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown paleontological resource sites or sites with unique geologic features.

The potential construction impacts of the project, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact on paleontological and geological resources. Therefore, the project's cumulative effects to paleontological resources would be cumulatively considerable and cumulative impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

CUL-3: For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure CUL-3 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure CUL-3 is required.

Combined Project Categories
Implementation of Mitigation Measure CUL-3 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure CUL-3 would require a site-specific study to identify potentially significant paleontological resources. Additional studies would minimize potential impacts to paleontological resources.

Cumulative Measures

Implementation of Mitigation Measure CUL-3 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure CUL-3 would ensure that the proposed facilities' contribution to cumulative paleontological resources impacts would be reduced to less than cumulatively considerable by requiring a site-specific study to identify known paleontological resources and/or the potential for unknown paleontological resources.

Human Remains

Impact 3.5-4: The proposed program could have significant and cumulatively considerable effects on human remains because the program could disturb human remains.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Each upgrade would be located within an existing treatment facility. The facilities are not part of a formal cemetery. The ground has been previously disturbed by construction of existing land uses. Thus, human remains are not expected to be encountered during construction of the proposed upgrades. However, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be inadvertently damaged, which could result in a significant impact. Implementation of the proposed project would comply with provisions of state law regarding discovery of human remains, including PRC Section 5097.98 and Health and Safety Code Section 7050.5.

If human remains are encountered, IEUA or its contractor shall halt work in the vicinity (within 100 feet) of the find and contact the San Bernardino County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98. The NAHC will designate an MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, OCWD shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials. Adherence to applicable regulations and implementing guidelines related to the inadvertent discovery of human remains would result in less than significant impacts.

Project Category 2: Conveyance Systems and Ancillary Facilities

Since the proposed project is at the programmatic level, specific project locations and design elements have yet to be finalized. Similar to Project Category 1, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be inadvertently damaged; however, compliance with state law provisions is required and potential impacts to human remains would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Human remains are not expected to be encountered during construction of the proposed project; however, inadvertent discovery of unknown human remains could result in significant impacts. The project would subject to state law regarding discovery of human remains, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. If human remains are encountered, IEUA or its contractor shall halt work in the vicinity (within 100 feet) of the find and contact the San Bernardino County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC will be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98. The NAHC will designate an MLD for the remains per

PRC Section 5097.98. Until the landowner has conferred with the MLD, OCWD shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials. Adherence to applicable regulations and implementing guidelines related to the inadvertent discovery of human remains would result in less than significant impacts.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial, and industrial development. As the service area continues to develop, it is possible, but unlikely, that construction activities could impact unknown human remains. However, since the treatment of human resources is governed by Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, the cumulative potential to impact human remains would be less than significant. Therefore, the implementation of the project would result in less than cumulatively considerable impacts to human remains.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

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3.6 Geology, Soils, and Mineral Resources

This section describes the geology, soils, and mineral resources within the IEUA service area, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to less than significant.

3.6.1 Environmental Setting

Regional Geology

According to the California Geologic Survey (CGS) Division of the California Department of Conservation (DOC), the IEUA service area lies within the Transverse Ranges geomorphic province, which is characterized by an east-west trending series of steep mountain ranges and valleys. The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands. Its eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. Intense north-south compression is squeezing the Transverse Ranges. As a result, this is one of the most rapidly rising regions on earth. Great thicknesses of Cenozoic petroleum-rich sedimentary rocks have been folded and faulted, making this one of the important oil producing areas in the United States (DOC, 2002).

Quaternary alluvial deposits and recent soils comprise the majority of the stratigraphy of the County. Other strata may include Tertiary marine and non-marine non-sedimentary and volcanic units; Mesozoic marine sedimentary; metasedimentary, metavolcanic and plutonic rocks, Paleozoic sedimentary and metasedimentary units; and Precambrian igneous and metamorphic rocks (IEUA, 2000).

Topography

The IEUA service area is located in southern California within the west end of San Bernardino Valley; just east of Los Angeles County, northeast of Orange County, and north of the Riverside County boundary lines. There are three primary physiographic regions within San Bernardino County: the Valley, Mountain, and Desert regions. The IEUA service area lies within the Valley Region which consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana Valley and Chino Hills.

The service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The service area is bordered to the north by the San Gabriel Mountains; to the east by the Rialto-Colton Basin, the Jurupa Mountains and the Riverside County/San Bernardino County boundary; to the south by the Prado Flood Control Basin; and to the west by the Chino Hills, Puente Hills and the Pomona and Claremont Basins (IEUA, 2000).

Seismic Hazards

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and the Cucamonga faults and close proximity to other major faults make the Valley Region of the County have a greater risk for populations and structures to be exposed to potential geological hazards (County of San Bernardino, 2007b).

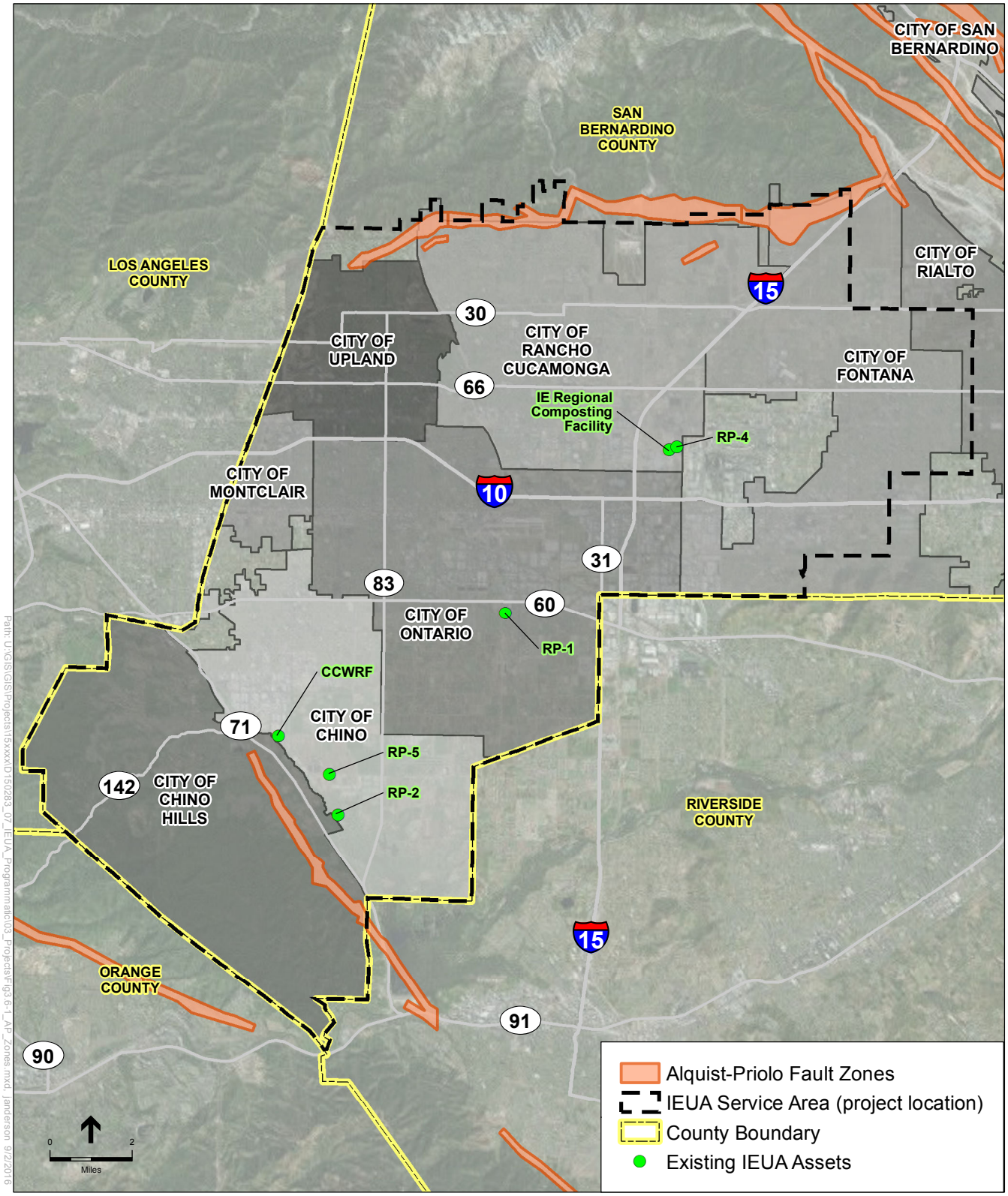
There are three active faults (Elsinore [Chino Fault] Fault Zone, Red Hill-Etiwanda Avenue Fault Zone, and Sierra Madre Fault Zone) within the IEUA service area. There are additional active or potentially active faults outside of the IEUA area and within or near the County with the potential to create a magnitude earthquake of 3.7 or greater up to approximately magnitude 7.5-8.0. There is also an extensive history of large, damaging earthquakes occurring within the County ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). In addition to strong ground shaking from earthquakes on faults located within the region, large earthquakes on faults near the County boundaries also have and will impact property within the County. Many of the other potential geologic hazards in the region are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, and seismically induced landslides. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by earthquakes up to several tens of kilometers from a site (County of San Bernardino, 2007b).

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults, or even along different strands of the same fault. Ground rupture is considered more likely along active faults. Site locations for the proposed projects within the FMP may be within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act (DOC, 2010). Alquist-Priolo Earthquake Fault Zones and active faults within the IEUA service area are shown on **Figure 3.6-1**.

Ground Shaking

According to the DOC's Earthquake Shaking Potential for California map (DOC, 2008), the IEUA service area is within an area subject to high frequency shaking potential. High frequency shaking areas are in regions near major, active faults and will on average experience stronger earthquake shaking more frequently. This intense shaking can damage strong, modern buildings (DOC, 2008). Ground shaking intensity varies depending on the overall earthquake magnitude, distance to the fault, focus of earthquake energy, and type of geologic materials underlying an area. The Modified Mercalli Intensity (MMI) scale is commonly used to express earthquake effects due to ground shaking because it expresses ground shaking relative to actual physical effects observed by people during a seismic event. MMI values range from I (earthquake not felt) through a scale of increasing intensities to XII (nearly total damage). Earthquakes on the various active and potentially active fault systems within and near the Chino Basin can produce a wide range of ground shaking intensities.



Path: U:\GIS\GIS\Projects\15xxxx\D150283_07_IEUA_ProgramMatc\03_Projects\Fig3.6-1_AP_Zones.mxd, janderson 9/2/2016

SOURCE: ESRI; County of San Bernardino; California Department of Conservation, 2001

IEUA Facilities Master Plan PEIR . 150283.07

Figure 3.6-1

Alquist-Priolo Fault Zones

Liquefaction and Landslide Hazards

Soil liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. During liquefaction, soils lose strength and ground failure may occur. Secondary ground failures associated with liquefaction include lateral spreading or flowing of stream banks or fills, sand boils, and subsidence. Areas characterized by water-saturated, cohesionless, and granular soils are most susceptible to liquefaction and usually at depths of less than 50 feet, especially in areas with a shallow water table. The groundwater table can fluctuate greatly in association with groundwater recharge activities, both natural and artificial. During years of high groundwater recharge, the groundwater table could potentially be shallow enough to present a liquefaction hazard in the areas of the existing recharge basins. Portions of the service area are within liquefiable zones as discussed in the General Plans for the cities and County.

Landslides are the down-slope displacement of rock, soils and debris. The susceptibility of land (slope) failure is dependent on slope and geological formations and influenced by levels of rainfall, excavation, or seismic activities. Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. The southwestern portion of the Chino Basin is located within landslide hazard zones, as defined in the Seismic Hazard Zones map for the County (DOC, 2015). Landslides and mudflow hazards exist throughout the County, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other causes. Specifically, Chino Hills is underlain by landslide-prone marine rocks, presenting the greatest potential slope stability problem in the service area (County of San Bernardino, 2007a).

Soils

Soils within the Valley Region generally include deep well-drained sands, sandy loams, silty loams on level alluvial basins and fans; and shallow to deep, well to excessively drained, sandy loams on foothills and upland areas (IEUA, 2000). The soils present within the service area vary slightly in physical properties but share similar characteristics. Soils within the southwestern portion of San Bernardino County (including the Chino Basin) are presented in **Table 3.6-1** below.

Subsidence

Subsidence of the ground surface can occur under static conditions (i.e., due to consolidation settlement from overlying load or long-term groundwater extraction) but can also be accelerated and accentuated by earthquakes and tectonic activity. Subsidence of loose, unconsolidated soils generally occurs slowly, but can cause significant structural damage.

TABLE 3.6-1
SOILS WITHIN SOUTHWESTERN SAN BERNARDINO COUNTY

Soil Type	Acres
Alo clay, 15 to 30 percent slopes	3.2
Calleguas clay loam, 50 to 75 percent slopes, eroded	10.5
Soper gravelly loam, 30 to 50 percent slopes	31.8
Alo clay, 30 to 50 percent slopes, warm MAAT, MLRA 20	956.0
Chino silt loam	7,840.2
Chualar clay loam, 0 to 2 percent slopes	871.0
Chualar clay loam, 2 to 9 percent slopes	2,706.2
Chualar clay loam, 9 to 15 percent slopes	1,132.7
Cieneba sandy loam, 9 to 15 percent slopes	430.7
Cieneba-Friant sandy loams complex	1,124.9
Cieneba-Rock outcrop complex, 30 to 50 percent slopes, MLRA 20	16,535.3
Crafton-Rock outcrop complex, eroded	761.3
Delhi fine sand	22,344.7
Fontana clay loam, 15 to 30 percent slopes	2,067.3
Fontana clay loam, 30 to 50 percent slopes	9,715.9
Friant-Rock outcrop complex	1,309.7
Garretson very fine sandy loam, 2 to 9 percent slopes	479.3
Gaviota-Rock outcrop complex	5,248.7
Quarries and Pits soils	872.1
Grangeville fine sandy loam	7,763.9
Grangeville fine sandy loam, saline-alkali	1,155.1
Greenfield sandy loam, 2 to 9 percent slopes	7,651.3
Greenfield fine sandy loam, 9 to 15 percent slopes	630.7

SOURCE: NRCS, 2016

San Bernardino County has undergone tectonic activity, including the uplifting of the San Bernardino Mountains in relation to the Valley Region. This activity has raised some portions of the Earth's crust, while others have subsided. This tectonic subsidence is of concern during very large earthquakes. Furthermore, subsidence caused by groundwater withdrawal is of concern to alluvial valleys of San Bernardino County. The entire alluvial valley area in southwestern San Bernardino County, primarily the Chino area, has experienced subsidence from groundwater withdrawal. Subsidence from 0.8 to 5.8 feet is possible in these areas (County of San Bernardino, 2007a).

Erosion

Soil erosion is the detachment and movement of soil materials through natural processes or human activities. Natural processes include water, landslide, fire, flood, and wind. Man-made causes could include irresponsible grading and other construction practices, use of off-road

vehicles, and other indiscriminate disruptions of soil. Wind is the primary cause of erosion in San Bernardino County. In the Valley Region, especially at the base of mountains and foothills like Chino Hills and northern Rancho Cucamonga, wind is more severe, and therefore, erosion is more prevalent. According to the San Bernardino County General Plan, severe erosion can be a problem anywhere in the County, especially when precipitation and/or wind combine with uncovered soil (County of San Bernardino, 2007a).

Expansive Soils

Expansive soils contain significant amounts of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from building and structure foundations or underground utilities, and can result in structural distress and/or damage. Often, grading, site preparations, and backfill operations associated with subsurface structures can eliminate the potential for expansion. Linear extensibility and plasticity are used to describe the shrink-swell potential of soils. If linear extensibility is greater than 3 percent (classified as Moderate potential), shrinking and swelling can cause damage to buildings, roads, and other structures (NRCS, 2014). Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency but are not typically expansive. However, soils within clay-rich units with moderate to high shrink-swell potential are located throughout the IEUA service area.

Mineral Resources

Minerals are naturally occurring chemical elements or compounds, or groups of elements or compounds that were not formed by organisms. Naturally occurring concentrations of minerals in the earth's crust are known as mineral deposits. Mineral resources are mineral deposits from which the economic extraction of a commodity (such as gold or copper) is currently potentially feasible. In addition to metallic minerals, materials used for construction (e.g., sand and aggregate), industrial and chemical processes (e.g., salt), and fuel (e.g., crude oil) are considered mineral resources in California.

In accordance with the Surface Mining and Reclamation Act of 1975 (discussed below in Section 3.6.2), the California Department of Conservation, Division of Mines and Geology, currently known as the California Geological Survey (CGS), has mapped nonfuel mineral resources of the State to show where economically significant mineral deposits are either present or likely to occur based on the best available scientific data. These resources have been mapped using the California Mineral Land Classification System, which includes the following four Mineral Resource Zones (MRZs) (DOC, 1995a):

MRZ-1. Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2. Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

MRZ-3. Areas containing mineral deposits, the significance of which cannot be evaluated.

MRZ-4. Areas where available information is inadequate for assignment to any other zone.

The DOC identifies large areas of the Chino Basin as MRZ-3 with localized areas designated as MRZ-1 and MRZ-2. MRZ-3 designations are in the cities of Chino and most portions of Ontario. Most of the MRZ-3 areas contain construction aggregate deposits, the significance of which cannot be evaluated from preliminary data. MRZ-2 areas are located within the cities of Upland, Montclair, Rancho Cucamonga, and some northern portions of Fontana. MRZ-1 designations occur in southern areas of Chino and in the City of Chino Hills (DOC 1995b; DOC 2007).

3.6.2 Regulatory Framework

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act became law in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy[1] across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Surface fault rupture is not necessarily restricted to an Alquist-Priolo Zone. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches.

The service area includes four cities that fall within an Alquist-Priolo Earthquake Fault Zone: Upland, Fontana, Chino Hills, and Rancho Cucamonga.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) was adopted to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as "zones of required investigation", where regional (that is, not site-specific) information suggests that the probability of a hazard requiring mitigation is adequate to warrant a site-specific investigation. The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical investigation, that appropriate

[1] Title 14 of the California Code of Regulations (CCR), §3601(e), defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year.

mitigation measures have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed mitigation measures. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in CGS Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board (CGS, 2008). The service area includes seismic hazard zones susceptible to liquefaction and landslides.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The 2013 CBC is based on the 2012 International Building Code published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction, and the American Concrete Institute. ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The building department of every city, county, or city and county is required to enforce all the provisions of the CBC, and is authorized to issue a construction permit for the erection, construction, reconstruction, installation, moving or alteration of any building or structure.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), including excavation, grading, and fills (Section 1804). The CBC requires geotechnical investigations be conducted prior to construction unless waived by the designated building official (which could occur when satisfactory data from adjacent areas demonstrates an investigation is not necessary). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Previously, the Thresholds of Significance in Appendix G of the CEQA Guidelines stated that expansive soil would be characterized as defined in Table 18-1-B of the 1994 Uniform Building Code. However, that table is no longer used and the current CBC definition is as follows:

> **1803.5.3 Expansive Soil**. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1,2 and 3 shall not be required if the test prescribed in Item 4 is conducted:
>
> 1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318

2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422
4. Expansion index greater than 20, determined in accordance with ASTM D 4829

The CBC also includes earthquake design requirements that take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications for individual projects are then determined according to the SDC.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (Chapter 9, Division 2, Section 2710 et seq. of the Public Resources Code) requires the State Mining and Geology Board to adopt state policies for reclaiming mined lands and conserving mineral resources. Title 24 of the California Code of Regulations, Division 2, Chapter 8, Subchapter 1 contains these policies.

In accordance with SMARA, the State has established the California Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels.

Local

California Government Code section 53091(d) specifies that “Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.” Consequently, many of the facilities included in the FMP are exempt from certain local ordinances. However, the local building agencies of the cities of Chino Hills, Chino, Montclair, Upland Ontario, Rancho Cucamonga, and Fontana retain authority to issue construction permits in compliance with the California Building Code.

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan elements that pertain to geology, soils and mineral resources.

3.6.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to geology, soils and minerals are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to geology, soils, and minerals if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on-site or offsite landslide, lateral spreading, subsidence (i.e., settlement), liquefaction, or collapse;
- 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;
- Have soils incapable of adequately supporting the use of septic tanks or alternative reclaimed water disposal systems where sewers are not available for the disposal of reclaimed water;
- 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; or
- 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.

Impacts Discussion

Earthquakes

Impact 3.6-1: The proposed program could have significant and cumulatively considerable potential to expose people or structures to adverse geologic effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction or landslides.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Fault Rupture

The nearest fault delineated on the Alquist-Priolo Earthquake Fault Zoning Map to the existing treatment facilities is the Elsinore Fault Zone (Chino Fault), which crosses the IEUA service area and is located approximately 0.75 mile west of the Carbon Canyon Water Reclamation Facility (CCWRF). Additionally, a portion of the Red Hill-Etiwanda Avenue Fault is designated as an Alquist-Priolo Fault Zone within the IEUA service area. This segment of the fault is within the northeastern portion of Rancho Cucamonga, and is located approximately 4 miles north of both the IERCF and RP-4. Furthermore, a segment of the Sierra Madre Fault Zone, Cucamonga Section, designated as an Alquist-Priolo Fault Zone, passes through the northwestern portion of Rancho Cucamonga and northern portion of Upland within the IEUA service area. However, none of the proposed treatment facilities would be within the boundaries of these designated Alquist-Priolo Earthquake Fault Zones, so no fault rupture is expected, and no impact would occur. Therefore, the risk of the project exposing people or structures to loss, injury, or death involving rupture of an active earthquake fault would be unlikely, and therefore, no impact would occur.

Seismic Ground Shaking

The IEUA service area lies within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the projects. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of related systems. Most of the proposed facilities are non-habitable; however, the treatment plants would require full time employees on-site. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of on-site workers.

The structural elements of the project would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional

Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. In addition, the pipelines would be constructed according to industry standards using American Water Works Association (AWWA) guidelines. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to less than significant.

Liquefaction

Based on a review of the General Plan EIRs for Ontario and Rancho Cucamonga, the existing RP-1, RP-4, and IECRF is not located within a liquefaction zone. Therefore, facility upgrades at RP-1 would not result in the exposure of structures to substantial adverse effects involving liquefaction. No impact would occur. RP-2 would be demolished and would not expose new structures to the risks associated with liquefaction. No impact would occur. The remaining treatment facilities would be located within potentially liquefiable soils. Therefore, adverse effects involving liquefaction could be potentially significant.

Landslide

Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. Landslides and mudflow hazards exist throughout the IEUA service area on steep hillsides and in creek and streambed areas. Though some areas are susceptible to landslides, all treatment facilities are located on flat terrain that would have very low susceptibility to landslides. Therefore, no impacts related to landslides are expected to occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Fault Rupture

As mentioned in Project Category 1, the Elsinore, Red Hill, and Sierra Madre Faults are classified as historically active faults. Because not all proposed projects location are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Facilities operated within these zones could expose structures to potential substantial adverse effects; therefore, impacts would be potentially significant.

Seismic Ground Shaking

The IEUA service area lies within a region that is seismically active and will likely experience a large regional earthquake within the operational life of the FMP. In the event of an earthquake in Southern California, some seismic ground shaking will be experienced in the project areas. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, the duration of shaking, and the nature of the geologic materials in which the conveyance systems and ancillary facilities would be constructed. Intense groundshaking and high ground accelerations would affect the entire area around the associated pipelines and ancillary facilities. The primary and secondary effects of groundshaking could damage structural foundations, distort or break pipelines and other water conveyance structures, and cause structural failure.

The structural elements of the project would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to

comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. In addition, the pipelines would be constructed according to industry standards using AWWA guidelines. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to less than significant.

Liquefaction

The location of all conveyance systems and ancillary facilities is unknown. As described in the Setting above, there are areas within the IEUA service area with high potential for liquefaction. The pipelines and/or ancillary facilities located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, adverse effects involving liquefaction would be potentially significant.

Landslide

The location of proposed conveyance systems and ancillary facilities is unknown. Landslides and mudflow hazards exist throughout the IEUA service area on steep hillsides and in creek and streambed areas. Therefore, there is a potential for those facilities to be constructed in areas susceptible to landslides. Impacts would be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Fault Rupture

Impacts would be the same as Project Category 2.

Seismic Ground Shaking

Impacts would be the same as Project Category 2.

Liquefaction

Impacts would be the same as Project Category 2.

Landslide

Impacts would be the same as Project Category 2.

Combined Project Categories

Project Categories 1, 2, and 3 propose upgrades and construction of new treatment, conveyance, and groundwater recharge facilities. Most of the proposed facilities are non-habitable; however, the treatment plants would require full time employees on-site. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking, liquefaction, and landslides could potentially threaten the safety of on-site workers, which is considered a potentially significant impact. Additionally, fault rupture, seismic ground shaking, liquefaction, and landslides could impact the operation of upgraded and newly constructed conveyance and

groundwater recharge facilities. The improvements within the project categories could result in potentially significant impacts.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development may experience significant impacts related to fault rupture, strong seismic shaking, liquefaction, and landslides within the IEUA service area. The proposed FMP projects could result in potential significant impacts associated with strong seismic ground shaking, liquefaction and landslides. Since the project could result in potential significant impacts related to fault rupture, liquefaction, and landslides, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would result in a cumulatively considerable impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

To reduce the potential impacts from liquefaction and landslide hazards the following mitigation measures are required:

GEO-1: Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measures GEO-1 is required.

GEO-2: If an improvement is proposed within a designated Alquist-Priolo Fault Zone, the improvement shall be relocated, if possible. If relocation is not possible, the improvement shall be designed in accordance with the CBC or a project specific geotechnical study.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures GEO-1 and GEO-2 is required.

Combined Project Categories

Implementation of Mitigation Measures GEO-1 and GEO-2 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 would require a design-level geotechnical investigation to identify potential seismic hazards. The geotechnical investigation would recommend site-specific design criteria based on the initial findings. These recommendations would reduce risk from seismic hazards to less than significant. The implementation of Mitigation measure GEO-2 would relocate improvements within a designated Alquist-Priolo Fault Zone. If relocation is not possible, then the improvement would be designed in accordance with the CBC or project-specific geotechnical investigation to reduce potential seismic impacts to less than significant.

Cumulative Measures

Implementation of Mitigation Measures GEO-1 and GEO-2 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 and GEO-2 would ensure that the proposed facilities' contribution to cumulative seismic impacts would be reduced to less than cumulatively considerable by identifying potential seismic hazards with a geotechnical investigation and relocating improvements within Alquist-Priolo faults zones, or designing improvements in accordance with CBC.

Soil Erosion or Topsoil Loss

Impact 3.6-2: The proposed program would have less than significant and less than cumulatively considerable effects from soil erosion or the loss of topsoil.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction activities for proposed projects such as excavation and grading could result in soil erosion during rain or high wind events. Such construction activities would need to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. (See Chapter 3.3, Air Quality for information about SCAQMD Rule 403.) Compliance with SCAQMD Rule 403 would ensure that construction activities generating wind-induced soil erosion are below SCAQMD significance thresholds as stated and discussed in more detail in Chapter 3.3, Air Quality. For a discussion of potential impacts associated with waterborne erosion, please see Chapter 3.8, Hydrology and Water Quality.

To prevent erosion associated with runoff from construction sites for each proposed project, the IEUA would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the requirements of the statewide Construction General Permit (CGP) (SWRCB Water Quality Order 2009-0009-DWQ). (See Chapter 3.8 Hydrology and Water Quality for a detailed explanation of the CGP.) The SWPPP would identify best management practices (BMPs) to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. Compliance with the CGP, required SWPPP, and

identified BMPs would ensure soil erosion and loss of topsoil impacts would be reduced to less than significant.

Should an individual proposed project result in disturbance of less than one acre during construction activities, then the CGP would not apply to the particular project. Instead, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (SARWQCB, 2016) that includes each of the seven cities within the IEUA service area as co-permittees, shall include erosion and sediment control BMPs for the construction site. (See Chapter 3.8 Hydrology and Water Quality for a more detailed explanation of the MS4 Permit.) Adherence to these conditions would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

All Project Categories would need to comply with (SCAQMD) Rule 403 for dust control, SWPPP in accordance with the requirements of the statewide CGP; and/or BMPs specified by the San Bernardino County (and the seven cities within the IEUA service area) MS4 Permit. Additionally, procedures mentioned above would also reduce the potential loss of topsoil and substantial soil erosion during construction. Compliance with these permits and guidelines during implementation of all proposed construction and upgrades of facilities would minimize potential soil erosion during high wind or rain events and minimize loss of topsoil. Impacts would be considered less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development has the potential to experience substantial soil runoff and wind erosion impacts within the IEUA service area; however, each project would be required to comply with the CGP and/or the MS4 Permit. Therefore, cumulative development would not result in a significant loss of topsoil or soil erosion. Because the proposed FMP projects would not result in substantial soil erosion or the loss of topsoil, the project's contribution to cumulative impacts associated with soil erosion or topsoil loss would be less than cumulatively considerable. Therefore, the project would result in a less than cumulatively considerable impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Unstable Geologic Location

Impact 3.6-3: The proposed program could have significant and cumulatively considerable instability effects because the program could be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed program and potentially result in on-or off-site landslide, subsidence, or collapse.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Non-seismically-induced geologic hazards such as landslides, lateral spreading, settlement, and slope failure can be caused by unstable soils. The existing treatment facilities are located in areas of relatively flat terrain that would have very low susceptibility to landslides. Therefore, no impacts related to landslides are expected to occur.

The IEUA service area has experienced historic subsidence caused by groundwater withdrawal. This subsidence can cause collapse of structures. The subsidence primarily occurs in the City of Chino, where the treatment facilities RP-2, RP-5, and the CCWRF are located. Subsidence from 0.8 to 5.8 feet is possible throughout these project areas. Construction and operation of the proposed facilities would not cause subsidence; rather, proposed facilities could be exposed to subsidence and collapse risk due to the historic subsidence within the treatment facility locations. Subsidence and collapse could damage the proposed facilities and affect the safety of on-site employees. Impacts could be potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

The locations of some of the proposed conveyance systems and ancillary facilities are unknown. As mentioned above, the IEUA service area has experienced historic subsidence; therefore, proposed systems and facilities could be located in areas with a potential for subsidence and collapse. Portions of the IEUA service area have designated landslide potential; therefore, soils in the project areas could be unconsolidated and could be prone to damage from landslides. Impacts could be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Some portions of the IEUA service area have unstable soils; specifically, the Valley Region of the County is known to experience subsidence caused by groundwater withdrawal. Additionally, some areas within the IEUA service area are susceptible to landslides. Because some of the proposed project locations such as wells are not known at this time; proposed projects could potentially be located on an unstable geologic unit and result in an on-or-offsite landslide, subsidence, or collapse. Impacts could be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development may experience significant impacts associated with unstable geologic conditions such as landslides, subsidence, or collapse within the IEUA service area. The proposed FMP projects could also result in potential significant impacts associated with unstable soils. Therefore, the project's contribution to cumulative impacts associated with unstable soils would be cumulatively considerable. Therefore, the project would result in a potentially cumulative significant impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
Implementation of Mitigation Measures GEO-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measures GEO-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measures GEO-1 is required.

Combined Project Categories
Implementation of Mitigation Measures GEO-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 would require a design-level geotechnical investigation to identify potential unstable soils. The geotechnical investigation would recommend site-specific design criteria based on the initial findings. Therefore, the proposed project would not expose people or structures to potential substantial adverse effects involving unstable geologic units or soils. Impacts would be less than significant.

Cumulative Measures

Implementation of Mitigation Measure GEO-1 is required

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 would ensure that the proposed facilities' contribution to cumulative impacts from development on unstable soils would be reduced to less than cumulatively considerable by implementing recommendations from a design-level geotechnical investigation to reduce the risk of collapse.

Expansive Soil

Impact 3.6-4: The proposed program could have significant and cumulatively considerable effects on species because the program could be located on expansive soils as defined in 24 CCR 1803.5.3 of the California Building Code (2013), or corrosive soils creating substantial risks to life or property.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

When expansive soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from structure foundations or underground utilities, and can result in structural distress and/or damage. Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency. As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. Therefore, the project facilities would be located in areas of low soil expansion potential. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. The presence of expansive soils at the existing treatment facility sites could decrease the structural stability of the proposed project facilities, which could result in structural or operational failure of these facilities and or threaten the health and safety of on-site workers. Such impacts are considered potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Proposed pipelines would be installed belowground; soils with expansive characteristics could exert pressure on the pipelines during times of saturation, potentially threatening pipeline stability. Similar to Project Category 1 facilities, the foundation of the ancillary facilities could also be damaged by expansive soils. Identified soil types within the IEUA service area do not

have expansive soil characteristics since they do not have a large amount of clay; however, specific sites could have undetected expansive characteristics. Therefore, impacts associated with expansive soils could be significant.

Project Category 3: Groundwater Recharge and Extraction

Proposed recharge basins and wells could saturate soils and create expansive soil characteristics that did not exist previously. Additionally, ancillary facilities could also be damaged by expansive soils. Specific sites could have undetected expansive characteristics; therefore, impacts associated with expansive soils could be potentially significant.

Combined Project Categories

Soils throughout the IEUA service do not typically exhibit expansive soil characteristics; therefore, most of the proposed project facilities would be located in areas of low soil expansion potential. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. Combined project categories could result in potentially significant impacts.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development may experience significant impacts associated with expansive soils within the IEUA service area. The proposed FMP projects could result in potential significant impacts associated with expansive soils. Consequently, the project's contribution to cumulative impacts to expansive soils would be cumulatively considerable. Therefore, the project would result in a potentially cumulative significant impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
Implementation of Mitigation Measure GEO-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure GEO-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure GEO-1 is required.

Combined Project Categories
Implementation of Mitigation Measure GEO-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 would require a design-level geotechnical investigation to identify

potential unstable soils. The geotechnical investigation would recommend site-specific design criteria based on the initial findings. Therefore, the proposed project would not expose people or structures to potential substantial adverse effects involving unstable geologic units or soils. Impacts would be less than significant.

Cumulative Measures

Implementation of Mitigation Measure GEO-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure GEO-1 would ensure that the proposed facilities' contribution to cumulative impacts from development on expansive soils would be reduced to less than cumulatively considerable by implementing recommendations from a design-level geotechnical investigation to reduce the risk of structural damage or collapse from expansive soils.

Wastewater Disposal Systems

Impact 3.6-5: The proposed program would have no impact and no contribution to cumulative impacts on 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 because the program does not include the use of septic tanks or alternative waste water disposal systems.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Implementation of proposed upgrades would not include facilities that would require the use of septic systems. The majority of facilities would be upgrades to existing infrastructure, wells, pipelines, and other water conveyance facilities that do not require septic systems. There is no planned use of on-site septic systems for the proposed project facilities. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Impacts would be the same as Project Categories 1, 2, and 3.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

Although most future cumulative development is anticipated to use traditional wastewater disposal systems (i.e., sewer pipelines), there may be some future cumulative development that includes septic tanks or alternative waste water disposal systems. The future development that may use septic systems may experience significant impacts associated with soils that are not capable of supporting the use of septic tanks. Because the proposed FMP projects would not result in impacts associated with soils that are not capable of supporting the use of septic tanks, the project's contribution to cumulative soil impacts would not be cumulatively considerable. Therefore, the project would result in no cumulative impact.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Loss of Known Mineral Resources

Impact 3.6-6: The proposed program would have a less than significant and less than cumulatively considerable impacts on mineral resources because the program would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would be constructed within existing IEUA treatment facilities. Regionally significant mineral resources are not known to occur within the existing treatment facilities. Therefore, the proposed upgrades would not prevent the future availability of a known regionally-significant mineral resource to be obtained in other portions of the County. No impact would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of the proposed conveyance facilities would be located within existing rights-of-way that would not include areas actively being excavated or prevent areas from being accessed for future extraction of mineral resources. The proposed ancillary facilities such as pump stations would not be large enough to interfere with the exploitation of mineral resources. Therefore, implementation of improvements within Project Category 2 would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Proposed recharge basins, which could have the largest footprint of any of the proposed IEUA facilities, would not include any ancillary facility that would be large enough to interfere with the exploration of future mineral resources. Additionally if a recharge basin were to be implemented within a mineral resource zone, it would not prohibit the future extraction of mineral resources after the life span of the recharge basin. Therefore, implementation of the proposed facilities would not result in the loss of availability of mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Combined Project Categories

Based on the discussions above, individual proposed projects would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state, and therefore, the combined projects impact would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could be located in areas known to contain regionally significant mineral resources that would be of value to the region and the residents of the state. Therefore, cumulative development could result in significant mineral impacts. Because the proposed FMP projects would result in less than significant impacts to regionally-significant mineral resources,

the project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed projects' cumulative impact on mineral resources is less than significant.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Loss of Mineral Resource Recovery Site

Impact 3.6-7: The proposed program would have a less than significant and less than cumulatively considerable impacts to locally important mineral resources because the program would either not include facilities large enough to interfere with locally important mineral resources recovery sites delineated on a local general plan, specific plan or other land use plan or prohibit the future extraction of locally important mineral resources.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Based on the review of the City of Chino, Ontario, and Rancho Cucamonga General Plans, none of the proposed treatment facility sites are located within mineral resources recovery sites that contain locally important minerals. Therefore, the proposed upgrades would have no impacts related to the loss of locally important mineral resources.

Project Category 2: Conveyance Systems and Ancillary Facilities

Based on review of all City General Plans, the City of Rancho Cucamonga, Ontario, and northern portions of Upland contain locally important mineral resources. Furthermore, Fontana contains

deposits of sand and gravel; however there are no known deposits of precious gemstones, ores, or unique or rare minerals in the planning area, and no active sand and gravel mining operations in the City limits. The proposed pipeline alignments would run within rights-of-way and thus would not pass through any areas containing locally important mineral resource recovery sites. Though some of the locations of the ancillary facilities are determined at this time, the facilities would not be large enough to interfere with locally important mineral resources recovery sites. Impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Proposed recharge basins, which could have the largest footprint of any of the proposed IEUA facilities, would not include any ancillary facility that would be large enough to interfere with the exploration of future mineral resources. Because locations of some proposed recharge basins have not yet determined, the basins have the potential to result in the interim loss of locally important mineral resources recovery sites in the City of Rancho Cucamonga and Ontario. However, the interim loss of locally important mineral resources would not prohibit the future extraction of mineral resources after the life span of the recharge basin. Therefore, implementation of the proposed facilities would not result in the loss of availability of locally important mineral resources. Impacts would be less than significant.

Combined Project Categories

Impacts would be the same as Project Categories 2 and 3.

Significance Determination before Mitigation: Less than significant.

Cumulative Impact Analysis

Future cumulative development could be located in areas known to contain locally important mineral resources. Therefore, cumulative development could result in significant mineral impacts. Because the proposed FMP projects would result in less than significant impacts to locally important mineral resources, the project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed projects' cumulative impact on locally important mineral resources is less than significant.

Significance Determination before Mitigation: Less than significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

3.6.4 References –Geology, Soils, Seismicity and Minerals

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3.7 Hazards and Hazardous Materials

This section describes and evaluates issues related to hazards and hazardous materials within the IEUA service area. Discussed are the physical and regulatory settings, the baseline for determining environmental impacts, the criteria used for determining the significance of environmental impacts, and potential impacts and appropriate mitigation measures associated with implementation of the FMP, if necessary.

Definition of Hazardous Materials

The term "hazardous materials" refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases). The term "hazardous material" is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.[1]

In some cases, past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials can cause health hazards when released to the soil, groundwater, or air. Individuals are typically exposed to hazardous materials through inhalation or bodily contact. Exposure can come as a result of an accidental release during transportation, storage, or handling of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from previous spills or leaks.

3.7.1 Environmental Setting

IEUA Service Area

This section describes the existing conditions of the program area with respect to hazards and hazardous materials. It discusses the potential to encounter hazardous materials in soil and/or groundwater in the IEUA service area, potential fire hazards, and potential hazards related to proximity to schools and airports.

Hazardous Building Materials

Hazardous materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs), may be contained in building materials and released during demolition activities. The likelihood of hazardous materials in building components can be generally assessed based on the age of the buildings, as these materials were phased out of use during the 1970s and 1980's. Some of the structures to be demolished at RP-2 were constructed

[1] State of California Health and Safety Code Chapter 6.95, Section 25501(p).

between 1967 and 1980 and may therefore contain hazardous building materials. The proposed demolition would occur for the entire regional plant, including the solids handling facilities, the RP-2 Lift Station, and the RP-2 liquid treatment facilities that were abandoned after RP-5 was placed into service. An assessment of the hazardous materials content of the facilities to be demolished has not been performed.

Asbestos Potential

Asbestos is a naturally-occurring fibrous material that was used as a fireproofing and insulating agent in building construction before such uses were banned by the U.S. Environmental Protection Agency (U.S. EPA) in the 1970's, although some nonfriable[2] use of asbestos in roofing materials still exists. The presence of asbestos can be found in such materials as ducting insulation, wallboard, shingles, ceiling tiles, floor tiles, insulation, plaster, floor backing, and many other building materials. ACMs are considered both a hazardous air pollutant and a human health hazard. The risk to human health is from inhalation of airborne asbestos, which commonly occurs when ACMs are disturbed during demolition and renovation activities. Based on the age of the buildings at the RP-2, there is a potential for ACMs.

Lead Potential

Lead and lead compounds can be found in many types of paint. In 1978, the Consumer Product Safety Commission set the allowable lead levels in paint at 0.06 percent by weight in a dry film of newly applied paint. Lead dust is of special concern, because the smaller particles are more easily absorbed by the body. Common methods of paint removal, such as sanding, scraping, and burning, create excessive amounts of dust. Lead based paints are considered likely present in buildings constructed prior to 1960, and potentially present in buildings built prior to 1978. Since structures at RP-2 were built prior to the federal regulations banning the use of lead based paints, LBP could be present.

PCBs Potential

PCBs are organic oils that were formerly placed in many types of electrical equipment, such as transformers and capacitors, primarily as electrical insulators. They may also be found in hydraulic fluid used for hoists, elevators, etc. Years after widespread and commonplace installation, it was discovered that exposure to PCBs may cause various health effects and that PCBs are highly persistent in the environment. The EPA has listed these substances as carcinogens. PCBs were banned from use in electrical capacitors, electrical transformers, vacuum pumps, and gas turbines in 1979. Electrical equipment at RP-2 may contain PCBs.

Household Hazardous Materials

Household hazardous waste is generated at a place of residence, as defined in Section 25218.1 (e) of the California Health and Safety Code. Examples of common household hazardous wastes include antifreeze, household batteries, compressed gas cylinders, television/computer monitors, consumer electronic devices, home-generated sharps (e.g., needles, syringes, and lancets), oil-based paints, latex paints, motor oil, used oil filters, rodent poison, asbestos, gasoline, fluorescent

[2] Nonfriable asbestos refers to ACMs that contain asbestos fibers in a solid matrix that does not allow for them to be easily released.

lamps, partially used aerosol containers, and weed killers (CIWMB, 2002). A household hazardous waste collection facility is commonly operated by local public agencies or their contractors for the purposes of collecting, handling, treating, storing, recycling, or disposing of household hazardous wastes (Health and Safety Code Section 2518.1 (f)). A household hazardous waste collection facility may also accept wastes from small businesses that are conditionally exempt generators, defined as a small business that generates no more than 100 kilograms of hazardous waste per month.

The Valley region of San Bernardino County has multiple hazardous waste collection centers for permanent household hazardous waste located in the City of Chino, Upland, Ontario, and Rancho Cucamonga. Most facilities accept items such as lawn and garden care products, paint and paint-related products, automotive fluids and batteries, beauty products and medicines, household cleaners, electronic waste, and other common household hazardous wastes (SBCFD, 2016).

Hazardous Materials in Soil and Groundwater

Human activities have caused a variety of contamination within the IEUA service area. Historically, most cities within the region contained agricultural lands that utilized pesticides which may have contaminated soils throughout the IEUA service area. Furthermore, airports, gas stations, landfills, and other industrial facilities have resulted in contamination of groundwater. Groundwater plumes exist throughout the IEUA service area but are primarily concentrated around southern Ontario and Chino (SWRCB, 2016).

To assess the potential for contamination in soil and groundwater within the service area, an environmental database review was conducted to identify environmental cases,[3] permitted hazardous materials uses,[4] and spill sites[5]. California Government Code Section 65962.5 requires state and local agencies to compile and update, at least annually, lists of hazardous waste sites and facilities. While Government Code Section 65962.5 makes reference to a "list", commonly referred to as the Cortese List, this information is currently available from the following online data resources (California Environmental Protection Agency [CalEPA], 2016):

- State Water Resources Control Board (SWRCB) GeoTracker database, and
- California Department of Toxic Substances Control (DTSC) EnviroStor database.

Further, The Chino Basin Watermaster maintains a comprehensive database that includes water quality data and produces State of the Basin Reports that summarize the most current water quality in the Chino Basin. The 2014 State of the Basin Report was consulted in order to assess potential contamination of groundwater within the IEUA service area (Chino Basin Watermaster, 2014).

[3] Environmental cases are those sites that are suspected of releasing hazardous substances or have had cause for hazardous substances investigations and are identified on regulatory agency lists.

[4] Permitted hazardous materials uses are facilities that use hazardous materials or handle hazardous wastes that operate under appropriate permits and comply with current hazardous materials and hazardous waste regulations.

[5] Spill sites are locations where a spill has been reported to the State or federal regulatory agencies. Such spills do not always involve a release of hazardous materials.

Information regarding the potential presence of subsurface contamination within the IEUA service area is discussed below. Identified sites include the following types of environmental cases:

EnviroStor Certified/Operation & Maintenance – These are former industrial manufacturing facilities. Following environmental cleanup, residual contamination remains in soil and/or groundwater. The DTSC has determined that contamination is not a threat to human health or the environment if undisturbed; however, land use restrictions apply to any subsurface excavation.

EnviroStor DTSC Sites – The DTSC oversees cleanup at facilities with a variety of environmental concerns. It also identifies facilities for further investigation based on their past or present uses, which could have caused hazardous materials releases.

GeoTracker LUST Cleanup Sites – Leaking Underground Storage Tank (LUST) sites are typically listed as a result of a release of petroleum hydrocarbons such as diesel, gasoline, motor oil and waste oil. A few sites are listed because of releases of dry cleaning solvents. Open cases may be in the site assessment phase to investigate the extent of known releases or undergoing active remediation of groundwater contamination.

Table 3.7-1 shows the hazardous waste site type and number of hazardous waste sites found within the IEUA service area.

TABLE 3.7-1
LISTED SITES WITHIN THE IEUA SERVICE AREA

Hazardous Waste Site Type	Number of Sites
EnviroStor DTSC Cleanup Sites	99
GeoTracker LUST Cleanup Sites	23
EnviroStor Cleanup Program Sites	26
EnviroStor Land Disposal Sites	8
Geo Tracker DTSC Hazardous Waste Permit Sites	15
Total	171 sites

SOURCE: EnviroStor, GeoTracker,2016

Below is a list and brief description of hazardous materials release sites in the IEUA service area that have affected soil and/or groundwater. Figure 3.8-2 shows the location of contamination plumes resulting from past industrial activities in the service area (Chino Basin Watermaster, 2013).

Active Sites

Chino Airport

The Chino Airport is located at 7000 Merrill Avenue in the city of Chino. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the Regional Water Quality Control Board (RWQCB) since 1990. This site is not on the national priorities list. From the early 1940s until 1948, the airport was used for flight training and aircraft storage. Since

then, activities at this site included modification of military aircraft, crop dusting, aircraft engine-repair, painting, striping and washing, dispensing of fire-retardant chemicals and general aircraft maintenance. The primary chemicals of concern in the groundwater at the site are trichloroethene, 1, 2, 3-trichloropropane, cis-1,2-dichloroethene, 1, 2-dichlorothethane, and 1,1-dichloroethene. Offsite plume characterization field activities were initiated in 2007.The depth of groundwater ranged from 25 to 50 feet below ground surface (bgs), with the depth to water decreasing toward the south. Since the 2007 investigation, nine groundwater monitoring wells were installed to keep testing. Groundwater is pumped in this area by production wells and used for agricultural supply, industrial supply and municipal water supply. The drinking water supply is of primary concern (SWRCB, 2015a).

GE Engine Services Test Cell Facility

The GE Engine Services is located at 2264 E. Avion Place in the city of Ontario. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the DTSC and RWQCB since 2013, but is not listed on the National Priorities List. General Electric (GE) has operated a jet engine facility at this site from 1956 to the present where both commercial and military engines are tested. About 6,000 gallons of hazardous waste were disposed of in dry wells. There is an estimated 600 cubic yards of waste and contaminated spill on the site. Results of preliminary investigation in 1987 indicated the presence of 111,-trichlorethane (TCA), tetrachlorethene (PCE), chloroform, naphthalene, 2-methylnaphthalene, and volatile aromatics (xylene, toluene, ethylbenzene) in soils near the dry wells. As a result, chemical contaminants affected the groundwater, and a plume extends in a southwesterly direction to Grove Avenue. Concentrations of volatile organic compounds (VOCs) in shallow soils in areas at the site have reached acceptable closure levels. In April 2015, RWQCB stated that soil is no longer a source of the releases to groundwater. DTSC will proceed with the Land Use Covenant (LUC) to complete the site soil vapor remediation (DTSC, 2007a).

GE Flatiron Facility

The GE Flatiron is located at 234 Main Street in Ontario. The site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the RWQCB. The site is listed as an Open Cleanup Program Site undergoing remediation. This flatiron facility operated from 1927 to 1982. Since 1982, the property has been owned by Ontario Business Park and has been occupied by commercial and light industrial uses. Soil and groundwater beneath the facility has been contaminated. The depth of groundwater beneath the site is from 200 to 380 feet. The contaminants present in the groundwater are TCE, PCE, and chromium (Cr). The groundwater contaminate plume extended over 1/2- mile in width and approximately 1.5 miles in length in the southwesterly direction along the groundwater flow path. The contaminants present in soil are: PCE, TCE, Cr, total xylenes, toluene, ethylbenzene, 1, 1, 1- trichloroethene, and 1, 1,2-trichloroethane. In December of 2009, a total of 2,406 pounds of VOCs (primarily TCE) and 769 pounds of chromium were removed and treated (SWRCB, 2015b).

Kaiser Steel Site

The Kaiser Steel site is located at 9400 Cherry Avenue in Fontana. Site assessments have been ongoing since 2012 by the RWQCB and the DTSC. This site is not on the national priorities list. Kaiser Steel is the result of merging four different Kaiser Steel Sites. The original Kaiser Steel

Mill was located on approximately 1,200 acres in Fontana. The facility was a former integrated steel production plant that the Kaiser Steel Corporation owned and operated from approximately 1942 to 1983. Following shutdown, portions of the original Kaiser property were sold or otherwise transferred. The Department became aware of the potential presence of hazardous waste in 1985, when asbestos and liquids from a benzol production area were released during demolition of onsite structures. The asbestos was removed and is no longer of concern. In August 1988, and January 1989, Preliminary Assessment/Site Inspection Reports (PA/SI) were completed in an effort to identify areas of contamination. Of the 32 areas investigated, 12 were identified as requiring no further action and 20 were recommended for remedial investigation. Through further testing, constituents of concern detected at the sites included metals, petroleum, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHS), radioactive isotopes, and VOCs such as benzene and toluene. The past uses of the sites that caused groundwater contamination include: hazardous waste treatment, landfill and construction, metal plating and manufacturing, sewage and waste treatment, sewage treatment ponds, and wastewater ponds. Groundwater contamination is currently being monitored (DTSC, 2007b).

Milliken Sanitary Landfill (MSL)

The Milliken Landfill is located at 2050 South Milliken Avenue in Ontario and has been undergoing monitoring as of 2014 by the RWQCB. The MSL is owned and operated by the County of San Bernardino Solid Waste Management Division. The total area of the MSL is 196 acres of which 140 acres were used for waste disposal. MSL has an estimated in-place volume of 25 million cubic yards of solid waste and cover material. MSL was operated as a Class III Sanitary Landfill from 1956 to March 1999. The landfill is undergoing corrective action, however recent monitoring has shown decreases of contaminant levels in soil and no statistical anomalies were identified for metals or VOCs. The majority of the monitoring wells have become dry and over the last two years, increasing trends are noted for most inorganics in samples. As of 2014, VOCs remain below state water drinking standards (SWRCB, 2015c).

Algar Manufacturing Company Inc.

The Algar Manufacturing Company, a Cleanup Program Site, is located at 724 Bon View in Ontario and has been under investigation by the RWQCB since 2000. In 1981, the City of Ontario inspectors conducted an inspection of the property in response to a complaint about heavy accumulation of oil throughout the interior of the buildings. Several building alteration and additions which were completed without proper permits, including oil tanks installed below the floor of one building. In 1992 a site investigation selected soil samples for volatile organic compounds VOCs and TPH. The highest concentration of tetrachloroethylene (24,000,000 parts per billion (ppb)) was detected in a soil samples collected from 25 feet bgs. Groundwater contamination levels remain above the drinking water supply standard (SWRCB, 2015d).

Upland Landfill

The Upland landfill is located off Campus Avenue between 14th and 15th street in Upland and has been under investigation by the RWQCB since 1982. The inactive landfill is located on the site of a former gravel quarry. The landfill is bisected by the West Cucamonga storm drain which is now lined with concrete where surface runoff empties into the drain. Ponding was evident for 6 to 8

years. VOCs, PCE, TCE and chlorides have been suspected of contaminating the groundwater that is used for multiple uses including drinking water and other domestic uses (SWRCB, 2015e).

Foss Brothers Dairy

The Foss Brothers Dairy is located at 6641 Riverside Drive in Chino and is the closest active site to IEUA assets located in the Chino area. The Dairy consists of a retail commercial dairy market and parking areas. In March 2003, a 500-gallon underground gasoline storage tank was removed from the site. Soil sampling after tank removal identified a significant release of petroleum hydrocarbons from the tank system. The primary contaminate of concern is gasoline. Traces of these hydrocarbons affect the aquifer used for drinking water supply (SWRCB, 2015f).

Van Hofwegen Dairy

The Van Hofwegen Dairy is located fairly close to the Foss Brothers Dairy at 15913 S. Mountain Avenue in Chino. The RWQCB has been remediating the site since 2006. May of 1999 was when petroleum hydrocarbons were first detected in the soil and groundwater at the site. Primary contaminants of concern are gasoline, MTBE, TBA, and other fuel oxygenates that effect the aquifer used for the drinking water supply (SWRCB, 2015g).

South Archibald TCE Plume

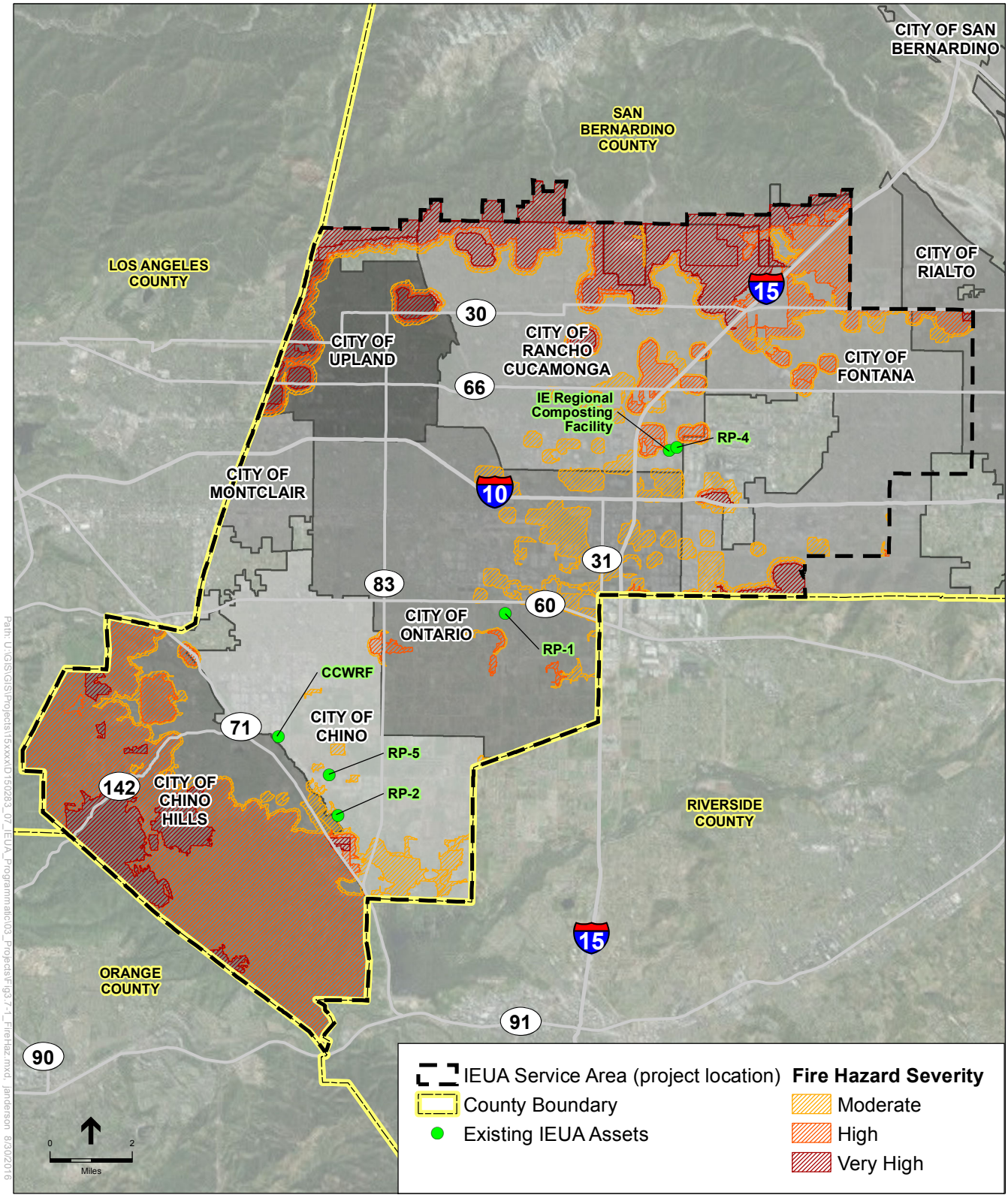
The South Archibald TCE Plume is located south of the Ontario Airport between E. Riverside Drive and S. Archibald Avenue in Ontario. This plume of groundwater is contaminated by VOCs, Nitrates and TCE SWRCB, 2015h).

Sensitive Receptors

Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors throughout the IEUA service area and there is the potential for many sensitive receptors to be within 0.25 miles of existing and proposed IEUA assets.

Wildland Fire Hazards

California Department of Forestry and Fire Protection (CAL FIRE) maps the Fire Hazard Severity Zones (FHSZ) for the cities within the IEUA service area. The FHSZ are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history (CAL FIRE, 2007). The IEUA service area contains moderate, high, and very high fire severity zones shown on **Figure 3.7-1** shows the fire hazard severity zones (FHSZ)within the IEUA service area (CAL FIRE, 2008).



SOURCE: ESRI; County of San Bernardino; CalFire

IEUA Facilities Master Plan PEIR . 150283.07

Figure 3.7-1

Fire Hazard Severity Zones

Airports

There are three public airports within the IEUA service area, including the Chino Airport, the LA/Ontario International Airport, and the Cable Airport, listed in **Table 3.7-2** below.

TABLE 3.7-2
AIRPORTS WITHIN THE IEUA SERVICE AREA

Airport	Address
Chino Airport (CNO)	7000 Merrill Avenue Chino, CA 91710
LA/Ontario International Airport (ONT)	2500 East Airport Drive Ontario, CA 91761
Cable Airport (CCB)	1749 West 13th Street Upland, CA 91786

SOURCE: Toll Free Airline, 2016

Schools

Based on a review of information on there are nine schools districts that are within the IEUA service area, there are 156 existing schools within the IEUA service area.

3.7.2 Regulatory Framework

Hazards and hazardous materials are subject to numerous federal, state, and local laws and regulations intended to protect health, safety, and the environment. The U.S. Environmental Protection Agency (USEPA), DTSC, RWQCB, and County of San Bernardino are the primary agencies enforcing these regulations. Local regulatory agencies enforce many federal and State regulations through the Certified Unified Program Agency (CUPA) program. The San Bernardino County Fire Department is the lead agency for the investigation and cleanup of leaking underground storage tank sites. The RWQCB is the lead agency for other groundwater cases. The DTSC can be the lead agency for cases with no groundwater issues and is the lead agency for investigation and remediation of the hazardous sites discussed above.

Federal

Federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (US DOT). Major federal laws and issue areas include the following statutes and regulations:

Resources Conservation and Recovery Act (RCRA) 42 USC 6901 et seq.

RCRA is the principal law governing the management and disposal of hazardous materials. RCRA is considered a “cradle to grave” statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. RCRA applies to this program because RCRA is used to define hazardous materials; offsite disposal facilities and the wastes each may accept are regulated under RCRA.

Emergency Planning and Community Right-to-Know Act (EPCRA from SARA Title III)

EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this program because contractors use hazardous materials (e.g., fuels, paints and thinners, solvents, etc.) would be required to prepare and implement written emergency response plans to properly manage hazardous materials and respond to accidental spills.

US DOT Hazardous Materials Transportation Act of 1975 (49 USC 5101)

US DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. The Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors will be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

The Federal Motor Carrier Safety Administration (49 CFR Part 383-397)

The Federal Motor Carrier Safety Administration, a part of the US DOT, issues regulations concerning highway transportation of hazardous materials, the hazardous materials endorsement for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials. This Act applies to this program because contractors would be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

Occupational Safety and Health Administration (OSHA; 29 USC 15)

OSHA is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling. OSHA applies to this program because contractors would be required to comply with its hazardous materials management and handling requirements that would reduce the possibility of spills.

Hazardous Materials Transport Act (49 USC 5101)

The U.S. Department of Transportation, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors would be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

Federal Regulation 49 Code of Federal Regulation Part 77

The Federal Aviation Administration (FAA) is the federal agency that identifies potential impacts related to air traffic and related safety hazards. The Federal Regulation 49 Code of Federal Regulation (CFR) Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for:

- Evaluating the effect of the proposed construction or alteration on operating procedures,
- Determining the potential hazardous effect of the proposed construction on air navigation,
- Identifying mitigating measures to enhance safe air navigation, and
- Charting of new objects.

FAA FAR Part 77 includes the establishment of imaginary surfaces (airspace that provides clearance of obstacles for runway operation) that allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing adverse impacts to the safe and efficient use of navigable airspace. The regulations identify three-dimensional imaginary surfaces through which no object should penetrate. Section 77.17 (Obstruction Standards) also states that an object would be an obstruction to air navigation if it is higher than 200 feet above ground level. Exceedance of 200 feet above ground level or the 100:1 imaginary surface requires notification to FAA (per FAR Part 77). An object that would be constructed or altered within the height restriction or imaginary surface area of the airport is not necessarily incompatible (ALUP, 2008), but would be subject to FAA notification and an FAA aeronautical study to determine whether the proposed structures would constitute a hazard to air navigation. This regulation would apply to the proposed program because the program area is within the SBIA Airport Influence Area.

State

The primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the Santa Ana RWQCB. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES)—California Accidental Release Prevention (CalARP) implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation) and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations promulgated thereunder:

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.)

The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes,

spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations.

California Accidental Release Prevention Program (CalARP)

The purpose of the CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures (CalOES, 2016).

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act)

The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including the California Environmental Protection Agency (CalEPA) and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 2550 et seq.

This code and the related regulations in 19 California Code of Regulations (CCR) 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local CUPA and to report releases to their CUPA and the State Office of Emergency Services. This code would apply to the program because the contractors would be required to prepare a HMBP that would provide procedures for the safe handling, storage, and transportation of hazardous materials.

California Division of Occupational Safety and Health (Cal/OSHA)

Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 25270, Aboveground Petroleum Storage Act

Health and Safety Code Sections 25270 to 25270.13 applies to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in "harmful quantities" into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.

Government Code Section 65962.5, Cortese List

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored and enacted the legislation). The list, or a site's presence on the list, has bearing on the local permitting process, as well on compliance with CEQA. The list is developed with input from the State Department of Health Services, State Water Resources Control Board, California Integrated Waste Management Board, and DTSC. At a minimum, at least annually, the DTSC Control shall submit to the Secretary for Environmental Protection a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
3. All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the Health and Safety Code
5. All sites included in the Abandoned Site Assessment Program.
6. All underground storage tanks for which an unauthorized release report is filed pursuant to Section 25295 of the Health and Safety Code.
7. All solid waste disposal facilities from which there is a migration of hazardous waste and for which a California regional water quality control board has notified the Department of Toxic Substances Control pursuant to subdivision (e) of Section 13273 of the Water Code.

8. All cease and desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharge of wastes that are hazardous materials.
9. All solid waste disposal facilities from which there is a known migration of hazardous waste.

The Secretary for Environmental Protection shall consolidate the information submitted pursuant to this section and distribute it in a timely fashion to each city and county in which sites on the lists are located. The Secretary shall distribute the information to any other person upon request. The Secretary may charge a reasonable fee to persons requesting the information, other than cities, counties, or cities and counties, to cover the cost of developing, maintaining, and reproducing and distributing the information. The Cortese List applies to this program because there are sites on the Cortese List within the IEUA service area.

Utility Notification Requirements

Title 8, Section1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig (DigAlert 2014). This requirement would apply to this program because any excavation would be required to identify underground utilities before excavation.

Local

Certified Unified Program Agency (CUPA)

In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Waste
- Hazardous Materials Business Plan
- California Accidental Release Prevention Program

- Underground Hazardous Materials Storage Tanks
- Aboveground Petroleum Storage Tanks / Spill Prevention Control & Countermeasure Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

In the County of San Bernardino, the Hazardous Materials Division of the San Bernardino County Fire Department is designated as the CUPA responsible for implementing the above-listed program elements. The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the CUPA. The contractors constructing the specific project and IEUA as the operator of the facility would be required to prepare and implement an HMBP.

San Bernardino County Emergency Operations Plan

The Emergency Management Program of San Bernardino County is governed and coordinated by the San Bernardino County Fire Department, Office of Emergency Services. The National Response Framework (NRF), National Incident Management System (NIMS), the Standardized Emergency Management System (SEMS) and the State of California Emergency Operations Plan provide planning and policy guidance to counties and local entities. These documents support the foundation for the County's Emergency Operations Plan (EOP), an all-hazard plan describing how the County will organize and respond to incidents. It is based on and compatible with the laws, regulations, plans, and policies listed above. The EOP describes how various agencies and organizations in the County will coordinate resources and activities with other Federal, State, County, local, and private-sector partners (County Fire Department Office of Emergency Services, 2013).

Multi-Jurisdictional Hazard Mitigation Plan (HMP)

The MJHMP is reviewed, monitored, and updated to reflect changing conditions and new information every five (5) years. The updated San Bernardino County Unincorporated Area MJHMP was approved by FEMA. The MJHMP presents updated information regarding hazards being faced by the County, the San Bernardino County Fire Protection District, the San Bernardino County Flood Control District, Big Bear Valley Recreation and Parks District, Bloomington Recreation and Parks District (Districts), and those Board-governed Special Districts administered by the San Bernardino County Special Districts Department. The Plan also presents mitigation measures to help reduce consequences from hazards, and outreach/education efforts within the unincorporated area of the County since 2005 (San Bernardino County, 2011).

San Bernardino County Fire Department

The Chino Basin receives fire and emergency response services from the San Bernardino County Fire Department (SBCFD). The SBCFD is responsible, on both the city and county level, for enforcing the State regulations governing hazardous waste generators, hazardous waste storage, and underground storage tanks, including inspections and enforcement. The SBCFD also regulates the use, storage, and disposal of hazardous materials in San Bernardino County by issuing permits,

monitoring regulatory compliance, investigating complaints, and other enforcement activities.

In addition to providing fire protection and emergency services, the SBCFD regulates the use and storage of hazardous materials for the County and provides emergency response in the event of accidental release of hazardous materials.

The SBCFD also administers the local Fire Code which incorporates articles of the Uniform Fire Code (UFC). The UFC is a model code setting construction standards for buildings and associated fixtures, in order to prevent or mitigate hazards resulting from fire or explosion. The SBCFD reviews technical aspects of hazardous waste site cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. The SBCFD is also responsible for providing technical assistance to public and private entities which seek to minimize the generation of hazardous waste.

Hazardous Materials Fire Code Requirements

As the CUPA, the SBCFD enforces the hazardous materials-related standards of the California Fire Code, including requirements for signage of hazardous materials storage areas, storage of flammable materials, secondary containment for storage containers, and separation of incompatible chemicals.

3.7.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact with respect to hazards or hazardous materials if the program would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 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.
- 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.
- 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.

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 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.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

Methodology

This analysis focuses on the potential to encounter hazardous substances in soil and groundwater during construction and is based on regulatory database searches. The analysis also addresses the potential for the FMP projects to release hazardous materials during construction and operation, interfere with an adopted emergency response plan or emergency evacuation plan, and create fire hazards. Each potential impact is assessed in terms of the applicable regulatory requirements, and mitigation measures are identified as appropriate.

Impacts Discussion

Routine Use

Impact 3.7-1: The proposed program would have less than significant and less than cumulatively considerable hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction activities would be required for the installation of proposed improvement upgrades at the existing treatment plant facilities. Construction activities required for implementation of the facilities would potentially involve drilling, trenching, excavation, grading, and other ground-disturbing activities. The anticipated construction activities described above would temporarily require the transport, use, and disposal of hazardous materials including gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials.

Accidental release of these materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. Impacts associated with accidental release, although likely localized, could potentially create a significant hazard to the public or the environment. IEUA is required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during construction of proposed facilities. Compliance with all applicable federal, State and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials would reduce potential impacts to the public or the environment related to the transport, use, or disposal of hazardous materials to less than significant.

Operation of the facilities at the Carbon Canyon Water Recycling Facility (CCWRF), RP-5, RP-4, RP-1, and the IERCF would require routine transport, storage, use, and disposal of hazardous materials for purposes of treatment of wastewater and solids (e.g., chlorine, sodium hypochlorite, hydrogen peroxide). The use of hazardous materials and substances during operation would be subject to the federal, state, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Framework. Compliance with these laws would minimize the potential impacts to the public or environment due to routine transport, storage, and use of hazardous materials. Impacts would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Accidental release of hazardous materials could occur during routine transport, disposal, or use associated with the proposed improvements and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. IEUA would be required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the transport, storage, and use of hazardous materials during construction and operation of all proposed facilities. Compliance with these laws would minimize the potential hazard to the public or environment due to routine transport, storage, and use of hazardous materials. Impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial uses. As the service area continues to develop, the addition of more development could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. All cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials. Since the proposed FMP projects would result in less than significant impacts related to the routine handling, use or disposal of hazardous materials, the projects' contributions to such impacts would be less than cumulatively considerable and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Accident Conditions

Impact 3.7-2: The proposed program would have less than significant and less than cumulatively considerable hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction

Construction activities associated with implementation of the proposed improvement upgrades at the existing treatment plant facilities could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. The construction activities would involve the use of adhesives, solvents, paints, thinners, and other chemicals. The proposed demolition of RP-2 and construction equipment necessary for facility upgrades (such as trucks, cranes, bulldozers, excavators) would require the use of fuels (gasoline or diesel) and lubricants (hydraulic fluids, oils and greases). Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. If not properly handled; however, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. IEUA is required to comply with all relevant and applicable federal, state and local laws and regulations that pertain to the accidental release of hazardous materials during construction of proposed facilities such as Health and Safety Code, Section 2550 et seq. Compliance with all applicable federal, state and local regulations would reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant.

Based on the age of some existing structures in RP-2, there is a potential for ACMs and LBPs to be present. The State of California defines LBP as those materials that contain 5,000 ppm lead. The

State of California also requires that if LBP with a lead concentration over 600 ppm is to be disturbed, then the individuals performing the work shall have the proper lead training and wear personal protective equipment. Without proper abatement procedures, demolition/removal could expose workers and/or the environment to ACMs and/or LBPs.

Affected structures would need appropriate abatement of identified asbestos prior to demolition. Federal and state regulations govern the demolition of structures where materials containing lead and asbestos are present. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal OSHA. These requirements include SCAQMD Rules and Regulations pertaining to asbestos abatement (including Rule 1403); Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from CCR Title 8; CFR Title 40, Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development (HUD). Asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services. In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos would be conducted according to Cal/OSHA standards. Adherence to existing regulations would ensure that potential impacts related to ACMs and LMPs would be less than significant.

The use of hazardous materials and substances during construction would be subject to the federal, state, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Framework. With compliance with these regulations, hazardous material impacts related to construction activities would be less than significant.

Operation

Operation of the proposed facilities would include the storage and use of chemicals. The storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Framework. The delivery and disposal of chemicals to and from the treatment facility sites would occur in full accordance with all applicable federal, state, and local regulations.

As noted in the Regulatory Framework, an HMBP must be prepared and implemented for the proposed facility upgrades as required by the County of San Bernardino CUPA. The HMBP would minimize hazards to human health and the environment from fires, explosions, or an accidental release of hazardous materials into air, soil, surface water, or groundwater. Compliance with all applicable federal, state and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public or the environment related to the transport, use, or disposal of hazardous materials to less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Construction impacts would be the same as Project Category 1.

Operation

Operation of the proposed conveyance and ancillary facilities would consist of facilities designed to store, transport and discharge recycled water. Therefore, hazardous materials would not be associated with the regular operation of the facilities. Therefore, operational impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Further, proposed recharge basins and expansions to existing recharge basins could create new standing pools of water. If algae growth develops or insects such as midges or mosquitoes use the water as a breeding area, standing pools of water could be considered a nuisance or a health threat to the surrounding community. Hatching midges can emerge in such tremendous numbers that they create nuisance problems. Midges often emerge simultaneously forming clouds of flying insects. IEUA would coordinate with the local vector control agencies as is currently the case, to ensure that insects do not become a nuisance or health hazard. Impacts would be potentially significant. The following mitigation measure shall be implemented to achieve adequate vector control with new or expanded recharge basins.

Combined Project Categories

Accidental release of hazardous materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. IEUA would be required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the transport, storage, and use of hazardous materials during construction and operation of all proposed facilities. Compliance with these laws would minimize the potential hazard to the public or environment due to accidental release. Potential hazard impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. All cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials. Since the proposed FMP projects would result in less than significant impacts related to accident conditions, the projects' contributions to such impacts would be less than cumulatively considerable and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

HAZ-6: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

~~No mitigation measures are required.~~

Implementation of Mitigation Measure HAZ-6 is required.

Significance Determination after Mitigation: Less than Significant.

Schools

Impact 3.7-3: The proposed program would have less than significant and less than cumulatively considerable impacts from emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

There are no schools within one-quarter mile of the CCWRF, RP-5, RP-2, RP-1, IERCF, and RP-4. Therefore, construction and operation of treatment facilities would not emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There would be no impacts.

Project Category 2: Conveyance Systems and Ancillary Facilities

Due to the potentially extensive nature of facilities associated with implementing the proposed pipelines and ancillary facilities, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials such as gasoline and diesel fuel. Additionally, IEUA is required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, state and local regulations would reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school. Impacts would be less than significant.

Operation of the proposed projects would consist of facilities designed to store, transport and discharge recycled water. Therefore, hazardous materials would not be associated with the regular operation of the facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. Therefore, there would be no operational impacts.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

It is possible for conveyance systems and un-sited groundwater recharge and ancillary facilities to be constructed within one quarter-mile of a school. Because construction activities would use limited quantities of hazardous materials and are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction, impacts would be less than significant. Furthermore, hazardous materials would not be associated with the regular operation of the facilities within one-quarter mile of a school. Therefore, there would be no operational impacts.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, emit hazardous emissions or handle

hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. All cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials. Since the proposed FMP projects would not result in potentially significant impacts related to releasing hazardous emissions or materials within one quarter-mile of a school, the projects' contributions to such impacts would be less than cumulatively considerable and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Hazardous Materials Site Listing

Impact 3.7-4: The proposed program could 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, could create significant and cumulatively considerable hazard impacts to the public or the environment.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The hazardous sites analysis undertaken for this program, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the IEUA service area, however there are no hazardous waste sites identified within or adjacent to the IEUA treatment facilities' sites. Therefore, construction and operation of treatment facilities' upgrades would not create a hazard to the public or environment. No impacts would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

The hazardous sites analysis undertaken for this project, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the IEUA service area. The proposed projects would include construction of pipelines and ancillary facilities throughout the IEUA service area. During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. The analysis of operational impacts associated with hazardous materials sites, mobilization of soil and groundwater contaminants, and groundwater quality can be found in *Chapter 3.8, Hydrology and Water Quality*. Impacts would be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of developments could be located on sites that are included on a list of hazardous materials sites and as a result, could create significant hazards to the public or the environment. Since the proposed FMP projects could be constructed on current hazardous material sites, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

HAZ-1: Prior to the initiation of any construction requiring ground-disturbing activities, IEUA shall complete a Phase I Environmental Site Assessments (ESA) for soil and groundwater contamination in the project areas. The recommendations set forth in the Phase I ESA shall be implemented to the satisfaction of applicable agencies before and during construction. If the Phase I ESA indicates the potential for hazardous concentrations of contamination within the construction zone, Phase II ESA studies shall be completed before construction begins. Phase II studies shall include soil and/or groundwater sampling and analysis for

anticipated contaminants. The Phase II sampling is intended to identify how to dispose of any potentially harmful material from excavations, and to determine if construction workers need specialized personal protective equipment.

HAZ-2: If the Phase II ESA determines that the site has contaminated soil and/or groundwater, a Soil and Groundwater Management Plan that specifies the method for handling and disposing of contaminated soil and groundwater prior to demolition, excavation, and construction activities shall be prepared and implemented. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information:

- Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling.
- Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils.
- Detailed control measures for use and storage of hazardous materials to prevent the release of pollutants to the environment, and emergency procedures for the containment and cleanup of accidental releases of hazardous materials to minimize the impacts of any such release. These procedures shall also include reporting requirements in the event of a reportable spill or other emergency incident. At a minimum, the IEUA or its contractor shall notify applicable agencies in accordance with guidance from the California Office of Emergency Services as well as the San Bernardino County Department of Public Health, Division of Environmental Health Services.
- Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method used to analyze groundwater for hazardous materials likely to be encountered at specific locations and the appropriate treatment and/or disposal methods.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measures HAZ-1 and HAZ-2 is required.

Combined Project Categories
Implementation of Mitigation Measures HAZ-1 and HAZ-2 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measures HAZ-1 and HAZ-2 would require site-specific studies to identify known hazardous materials risks or the potential for risk related to hazardous materials. These studies would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of Mitigation Measure HAZ-1 and HAZ-2 would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. Therefore, impacts to the public or the environment related to hazardous materials sites would be less than significant.

Cumulative Measures

Implementation of Mitigation Measures HAZ-1 and HAZ-2 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measures HAZ-1 and HAZ-2 would ensure that the proposed facilities' contribution to cumulative development on hazardous materials sites would be reduced to less than cumulatively considerable by requiring site-specific studies to identify known hazardous materials risks or the potential for risks related to hazardous materials and affected soils and groundwater. These studies would include recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of Mitigation Measure HAZ-1 and HAZ-2 would reduce potential impacts to construction workers and the public from exposure to unknown affected soils.

Airports

Impact 3.7-5: The proposed program could be located within an airport land use plan or within two miles of a public airport, public use airport, or private airstrip, which could result in significant and cumulatively considerable safety hazards for people residing or working in the project area.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The following three airports are located within IEUA's service area boundaries: the Chino Airport, the LA/Ontario International Airport, and the Cable Airport in Upland. There are no private airstrips located within the IEUA service area.

Chino Airport

The City of Chino Airport is located approximately 1.7 miles northeast of RP-2; 1.7 miles northeast of RP-5; and 2.6 miles southeast of CCWRF. RP-2 is located within the Chino Airport Safety Zone II, or Referral Area "B". This area is made up of a departure zone but does not fall within the runway protection zone (RPZ), which would put construction workers or operational employees at most risk. Furthermore, RP-5 and the CCWRF are located in the Chino Airport Safety Zone III, or Referral Area "C"; the threat of aircraft accidents in this area is below that of the other referral areas. The proposed facilities would be located within the Chino Airport land use planning area; however, all existing facilities are located in zones that do not substantially

expose short-term construction workers or long-term employees to risks. Impacts would be less than significant.

LA/Ontario International Airport

The City of Ontario International Airport is located approximately 1.7 miles north of RP-1 and not within any airport safety zones or flight paths. Improvements at RP-1 would not result in any safety hazards for people residing or working in the project area. Therefore, impacts would be less than significant.

Cable Airport

There are no Project Category 1 projects proposed near the Cable Airport. The existing treatment facilities and associated projects are located within the City of Chino, Ontario, and Rancho Cucamonga. The closest IEUA treatment facility is RP-1 located approximately 7.5 miles southeast in Ontario. No proposed projects within existing treatment facilities would be located within two miles of the Cable Airport, therefore there would be no impacts associated with safety hazards for people working at the treatment facilities.

Some proposed facility upgrades include the addition or expansion of solar panel use. Solar panels could create new sources of glare that could adversely impact airplane navigation.

No solar panels or reflective materials are proposed to be implemented at RP-2 as this facility will be demolished and relocated to RP-5. RP-5 and the CCWRF are located in Chino Airport Safety Zone III, or Referral Area "C". The threat of aircraft accidents in this area is below that of the other referral areas. These treatment facilities are not within a RPZ and implementation of proposed solar panels would not interfere with flight paths. The City of Ontario International Airport is located approximately 1.7 miles north of RP-1. RP-1 is not within any airport safety zones or flight paths. None of the facilities proposed would adversely affect airport operations in terms of flight patterns, safety, light, or navigation. As a result, impacts associated with safety hazards for people residing or working in the area are considered less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines are anticipated to be constructed below the ground surface within existing public rights-of-way, and no impacts would occur. Furthermore, all Project Category 2 facilities would be unmanned and therefore would not put any workers at risk. However, some ancillary facilities' locations have not yet been determined, and therefore, have the potential to be within an airport land use planning area. Ancillary facilities could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Some proposed projects' locations have not yet been determined, and therefore, have the potential to be within an airport land use plan, which in turn could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could be located within an airport land use plan which could result in a safety hazard for people residing or working in the project area. Since the proposed FMP projects could be constructed within an airport land use plan, impacts would be cumulatively considerable and therefore, would result in a potentially significant impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

HAZ-3: For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use plan. All design plans within an airport land use planning area shall be submitted to the appropriate airport management agencies for review and comment prior to implementation.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure HAZ-3 is required.

Combined Project Categories

Implementation of Mitigation Measure HAZ-3 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure HAZ-3 would ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area. Implementation of Mitigation Measure HAZ-3 would reduce potential impacts from development within an airport safety zone to less than significant.

Cumulative Measures

Implementation of Mitigation Measure HAZ-3 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure HAZ-3 would ensure that the proposed facilities' contribution to cumulative safety impacts from development within airport safety zones would be reduced to less than cumulatively considerable by requiring compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies.

Emergency Plans

Impact 3.7-7: The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and as a result could result in significant and cumulatively considerable emergency impacts.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed projects at treatment facilities would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within right-of-ways surrounding the existing treatment facilities, making the possibility of interfering with evacuation routes highly unlikely. During construction and demolition of RP-2, truck haul trips would transport construction and debris materials to and from project sites; however the proposed project would not impact the roadway in a way that would impede emergency evacuations. The truck trips would not require closure of any roadways and would only temporary slow traffic near the existing treatment facilities. All project facilities would be contained within the boundaries of the treatment facility sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities all consist of wastewater treatment, storage and discharge infrastructure which, during operation, would not interfere with traffic flows. However, aboveground facilities would require periodic maintenance. Maintenance activities would be random and require minimal trips that would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 2: Conveyance Systems and Ancillary Facilities

The construction of the pipelines and aboveground facility installations would require construction along or in public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. All proposed pipelines would be constructed within public rights-of-way. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts could be potentially significant.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 3: Groundwater Recharge and Extraction

The proposed groundwater recharge facilities and wells would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making the possibility of interfering with evacuation routes highly unlikely. Deepening existing basins and creation of new recharge basins along with drilling of wells would require additional truck haul trips to transport construction and debris materials to and from project sites; however, the proposed project would not impact the roadway in a way that would impede emergency evacuations. The truck trips would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of groundwater recharge and extraction infrastructure which, during operation, would not interfere with traffic flows. However, aboveground ancillary facilities and wells would require periodic maintenance and/or monitoring. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Combined Project Categories

Project Category 2 proposed pipelines would be constructed within public right-of-ways. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could impair implementation of or physically interfere with an adopted emergency response plans or emergency evacuation plans by constructing facilities within public rights-of-way. Since the proposed FMP pipelines would be constructed within public rights-of-way, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

HAZ-4: Prior to initiating construction of proposed facilities, IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access. 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. In addition, 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. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

Implementation of Mitigation Measure HAZ-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure HAZ-4 would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access. Therefore, potential significant impacts to emergency access would be reduced to less than significant.

Cumulative Measures

Implementation of Mitigation Measure HAZ-4 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure HAZ-4 would ensure that the proposed facilities' contribution to cumulative emergency access impacts would be reduced to less than cumulatively considerable by requiring the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access.

Wildland Fires

Impact 3.7-8: The proposed program could have significant and cumulatively considerable wildfire impact on people or structures due to the intermixing of urbanize areas with wildlands.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Proposed Project Category 1 projects would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose people or structures to wildfire risks. The proposed treatment facility construction would take place within the existing footprints of the treatment facilities. The facilities are located on built up land with some open space. CAL FIRE designates all areas immediately within or surrounding the IEUA treatment facilities as "Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ). RP-2 is surrounded by open space that may contain light fuels, but there are no wildlands designated on the project site where demolition would take place. Because all construction would take place within existing IEUA footprints not designated as VHFHSZs, construction impacts would be less than significant.

During operation, the proposed facilities would treat and transfer/distribute recycled water throughout the service area, and these facilities would not be constructed of flammable materials or involve any spark-producing activities. Operational impacts of the proposed plan facilities would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines and ancillary facilities would be constructed primarily within paved roadway rights-of-way and on disturbed open space. CAL FIRE designates most of the areas within the IEUA service area as Non-VHFHSZs but some VHFHSZs are in Chino Hills, Upland, Rancho Cucamonga, and Fontana, primarily around foothills containing wildlands near the boundaries of the IEUA service area. Because not all of the ancillary facilities' locations are determined at this time, there is a potential for facilities to be located within or near wildland areas with high fire risk. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose construction workers to wildfire risks. Impacts would be potentially significant.

During operation, the proposed facilities would distribute recycled and treated water throughout the service area, and these facilities would not be constructed of flammable materials or involve any spark-producing activities. Additionally, all ancillary facilities such as pump stations would be unmanned and would only require routine maintenance, therefore, no people would be exposed to a significant risk involving wildland fires. Operational impacts of the proposed plan facilities would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Some proposed projects' locations are not determined at this time, and therefore, there would be potential for facilities to be located within or near a wildland area with high fire risk. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Since there would be potential for FMP projects to be located within or adjacent to areas with high wildland fire risks, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

HAZ-5: During construction of facilities located in areas designated as Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure HAZ-5 is required.

Combined Project Categories

Implementation of Mitigation Measure HAZ-5 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure HAZ-5 would ensure implementation of fire hazard reduction measures during construction in areas designated as VHFHSZs to reduce the potential for wildfire impacts on people or structures to less than significant.

Cumulative Measures

Implementation of Mitigation Measure HAZ-5 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure HAZ-5 would ensure that the proposed facilities' contribution to cumulative impacts related to wildfires would be reduced to less than cumulatively considerable by implementing fire hazard reduction measures during construction in areas designated as VHFHSZs to reduce the potential for wildfire impacts on people or structures.

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3.8 Hydrology and Water Quality

This section describes local surface water and groundwater resources and discusses regional water quality issues, as well as applicable regulatory framework and potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to a level of less than significant.

3.8.1 Environmental Setting

The water supply agencies in the Chino Basin rely on imported and recycled water provided by IEUA in addition to groundwater from both the Chino Basin and other basins, and local surface water from various creeks originating from the San Gabriel Mountains.

Regional Hydrology

The IEUA service area is located within the Santa Ana River watershed, which drains from the steep-slopes of the San Bernardino Mountains to the valley floor of the Inland Empire, through the Prado Basin and on to Orange County and the Pacific Ocean. The primary waterway in the Santa Ana watershed is the Santa Ana River, which travels nearly 100 miles from its origins near Big Bear Lake to the Pacific Ocean. Historically, the Santa Ana River exhibited perennial flows from groundwater upwelling. However, groundwater levels have declined since the 1800s eliminating perennial flows in much of the upper river segments (DWR, 2013).

Currently, much of the Santa Ana River and its tributaries are ephemeral, carrying significant flows only during storms events that typically occur from November through March. Urban runoff also contributes to flow in many of the smaller drainages. Downstream of the City of San Bernardino to the City of Riverside, the Santa Ana River flows perennially due to the discharges from wastewater treatment plants serving the upper valley cities including Highland, San Bernardino, Rialto, and Colton. Groundwater and urban runoff enter the river as it flows past the City of Riverside. Downstream of Riverside, the river flows are increased by discharges from the City of Riverside and the City of Corona wastewater treatment plants and tributary drainage flow from the Elsinore Valley and San Gabriel Mountains. Figure 3.4-4 depicts the waterbodies and drainages in the program area.

Surface Water

The IEUA service area is located within the highly urbanized South Coast Hydrologic Region (HR) of the Santa Ana River Watershed that includes Chino Basin. The major surface water features within the South Coast HR include the Santa Ana River, San Antonio Creek, Cucamonga Creek, Day Canyon Creek, Dry Creek, Deer Creek, and Chino Creek (see Figure 3.4-4). All of these creeks begin at the San Gabriel Mountains and traverse through the Chino Basin in the cities of Upland, Ontario, Rancho Cucamonga, Montclair, and Chino to the Santa Ana River. With the exception of storm flows during periods of high precipitation, the Santa Ana River and the tributaries currently function as effluent dominated streams with perennial contributions from urban runoff (IEUA, 2010). The amount of water from these local surface supplies is variable and currently accounts for approximately 5 percent of the regional water supply (IEUA, 2015).

The Prado Flood Control Basin is located in the southwest corner of the Chino Groundwater Basin. The U.S. Army Corps of Engineers built Prado Dam in 1941 as a flood control facility and has subsequently modified its use to include water conservation up to a maximum pool height elevation. The Santa Ana Region Basin Plan (Basin Plan) designated Prado Basin as a man-made inland wetland. As described in the Basin Plan, surface (and subsurface) flow contributes to the wetland conditions behind the dam (Santa Ana RWQCB, 2008). Water held behind the dam is released gradually to allow Orange County Water District the ability to maximize groundwater recharge in Orange County.

Surface Water Allocation

The Santa Ana River Watermaster prepares an annual report required by the Stipulated Judgment (Judgment) in the case of Orange County Water District v. City of Chino, et al., Case No. 117628-County of Orange that became effective on October 1, 1970. The Judgment designated four public agencies to represent the Upper and Lower Areas and gave them the responsibility to meet the obligations set forth in the Judgment to implement the physical solution. Orange County Water District (OCWD) represents the Lower Area while Valley District, Western Municipal Water District (WMWD), and Inland Empire Utilities Agency (IEUA) represent the Upper Area. The Judgment obligates IEUA and WMWD to assure an average annual Adjusted Base Flow of 42,000 acre-feet at Prado Dam, subject to various stipulations. (Santa Ana River Watermaster, 2015).

Surface Water Quality

Surface water quality in the IEUA service is largely influenced by the urban and agricultural land uses of the region. Key sources of surface water contamination include landscape irrigation runoff conveying sediment, nutrients, pesticides, metals, oil and grease, and pathogens to receiving waters. Other dry-weather runoff from industrial activities can add organic compounds and petroleum hydrocarbons. The State Water Resources Control Board (SWRCB) has identified stream segments in region that are considered impaired under the Clean Water Act (CWA) in the State Section 303d list. A water body is placed on the State Section 303d list when the receiving water does not meet applicable water quality standards listed in the Basin Plan and determined not to be supporting the beneficial uses associated with the applicable water quality standard. Once placed on the State Section 303d list, the water body or segment is then subject to the development of a Total Maximum Daily Load (TMDL) allocation. **Table 3.8-1** lists the major streams on the Section 303d list within the IEUA service area.

TABLE 3.8-1
IMPAIRED WATER BODIES IN THE PROGRAM AREA

Waterbody	Impairments	TMDL Completion Date(s)
Chino Creek Reach 1B (Mill Creek confl to start of concrete lined channel)	Chemical Oxygen Demand (COD), Nutrients, Pathogens	2019, 2021
Chino Creek Reach 2 (Beginning of concrete channel to confl w San Antonio Creek)	Coliform Bacteria, pH	2021
Cucamonga Creek Reach 1 (Valley Reach)	Cadmium, Coliform Bacteria, Copper, Lead, Zinc	2021
San Antonio Creek	pH	2021

SOURCE: SWRCB, 2011

Groundwater

IEUA's service area covers about 70 percent of the Chino Groundwater Basin (IEUA, 2011). The Chino Groundwater Basin consists of approximately 235 square miles of the upper Santa Ana River watershed. The basin is bounded by the Cucamonga Basin and the San Gabriel Mountains to the north; the Rialto- Colton Basin to the northeast; the chain of Jurupa, Pedley, and La Sierra Hills to the southeast; the Temescal Basin to the south; the Chino and Puente Hills to the southwest; and the San Jose Hills and the Pomona and Claremont Basins to the northwest (Chino Basin Watermaster, 2015). As one of the largest groundwater basins in Southern California, the Chino Basin contains about 5,000,000 acre-ft (ac-ft) of water and has an unused storage capacity of about 1,000,000 acre-ft. Groundwater from the Chino Basin accounts for approximately 40 percent of regional water supplies (IEUA, 2016).

Groundwater is a key source of potable water for the Inland Empire. The Chino Groundwater Basin supplies groundwater for municipal and industrial use, including supplying impaired for treatment at the Chino Basin Desalter. The primary water-bearing formations of Chino Basin are Pleistocene and Holocene-age unconsolidated alluvial and lacustrine deposits that consist of compact gravels, sand, silt, and clay. These deposits are coarse and rich in gravel near mountains and hills, but become finer grained and better sorted toward the central parts of the valley (DWR, 2006). In general, groundwater flow mimics surface drainage patterns, from areas of high elevation in the north and east at the foot of the San Gabriel and Jurupa Mountains towards areas of discharge near the Santa Ana River within Prado Basin (Chino Basin Watermaster, 2015).

Recharge to the Chino Groundwater Basin is primarily accomplished by precipitation runoff from the surrounding mountains and hills, infiltration through the creeks and rivers within the alluvial plains, and recharge through basins located throughout the IEUA service area. Recharge to the Chino Basin occurs through the following sources:

- Infiltration of flow within unlined stream channels overlying the basin,

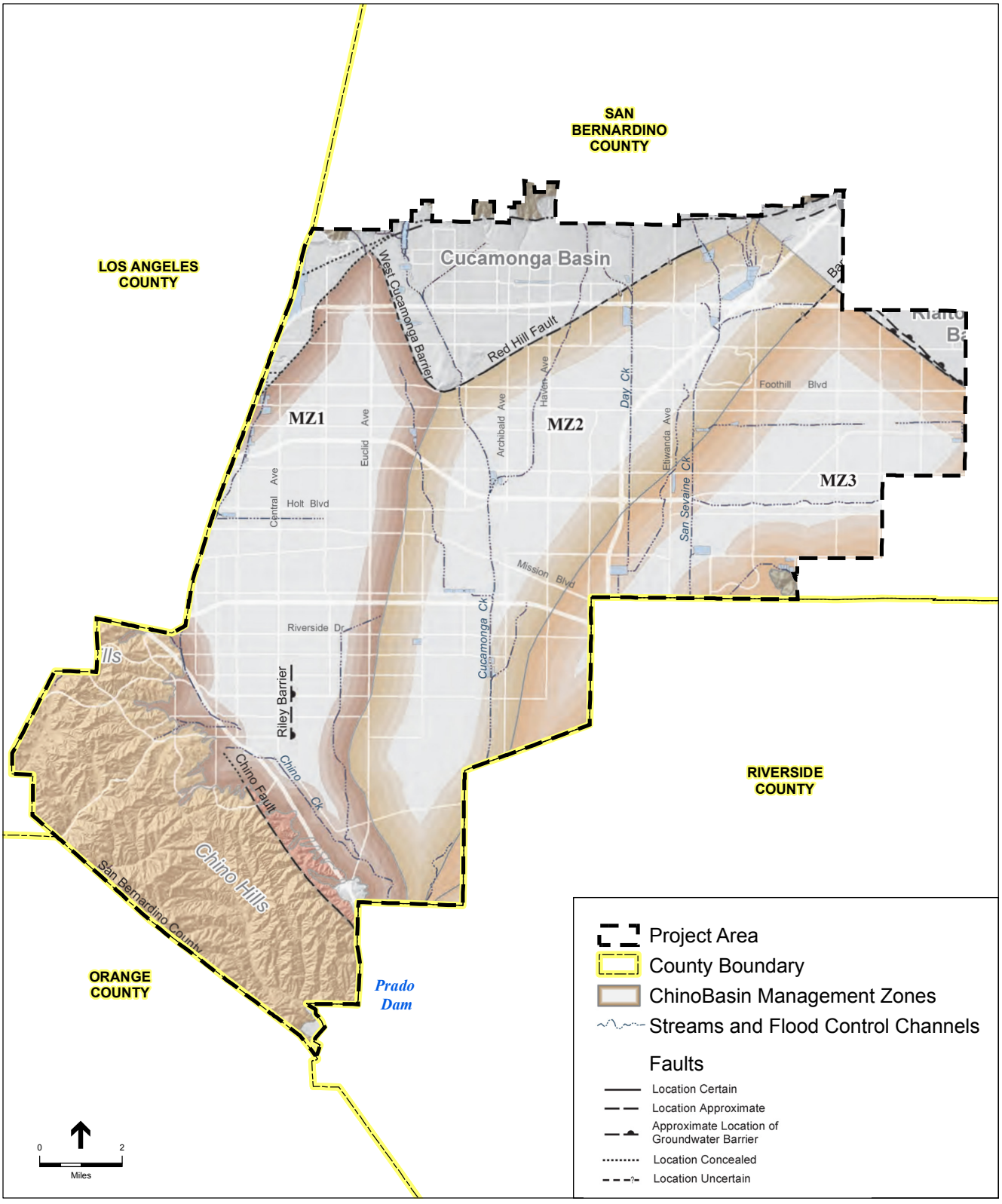
- Infiltration of stormwater flow and municipal wastewater discharges within the channel of the Santa Ana River,
- Underflow from the saturated sediments and fractures within the bounding mountains and hills,
- Artificial recharge of storm water, imported water, and recycled water at spreading grounds,
- Underflow from seepage across the bounding faults, including the Red Hill Fault (from Cucamonga Basin), the San Jose Fault (from the Claremont Heights and Pomona Basins), and the Rialto-Colton Fault (from the Rialto-Colton Basin);
- Intermittent underflow from the Temescal Basin; and deep percolation of precipitation and returns from uses, such as agriculture (Chino Basin Watermaster, 2015).

The Chino Basin is hydrologically subdivided into five groundwater-flow systems that act as separate and unique hydrologic units. Water resource management activities that occur in one unit will have limited impacts on the other units. For this reason, the five hydrologic units are called management zones (Chino Basin Watermaster, 2015). Management zones 1, 2, and 3 make up the Chino North Management Zone, while Management Zones 4 and 5 are outside of the IEUA service area. **Figure 3.8-1** shows each of the Management Zones. Each of the management zones is recharged naturally and through recharge basins operated to capture stormwater, recycled water, and imported water. Sources of water include direct percolation of precipitation, returns from irrigation, recharge of storm flows and imported water in spreading basins, and subsurface inflow from the Claremont Heights and Pomona Basin.

Groundwater outflow occurs through extraction and through rising into the Prado Basin where it contributes to the conservation pool behind Prado Dam. **Figure 3.8-2** shows general depth to groundwater in the IEUA service area.

The Chino Basin Watermaster was established in 1978 by a Superior Court Judgement which adjudicated the groundwater rights in the Chino Basin. The Judgement mandated that the Chino Basin Watermaster develop the Optimum Basin Management Plan (OBMP) which established management goals to address issues, needs and interests of water producers in the Chino Basin. Management of the Chino Basin is now guided by the "Peace II Agreement" which requires the Chino Basin Watermaster to update the OBMP every five years in order to effectively protect and enhance the safe yield of the Chino Basin through replenishment and recharge.

The Chino Basin Watermaster has assigned pumping rights within the Chino Basin to agricultural, industrial and municipal users (IEUA, 2016). The safe yield for the Chino Basin as designated by the Watermaster is 140,000 acre-ft per year (Chino Basin Watermaster, 2015). The safe yield assignment limits groundwater pumping for all of the overlying pumping rights.

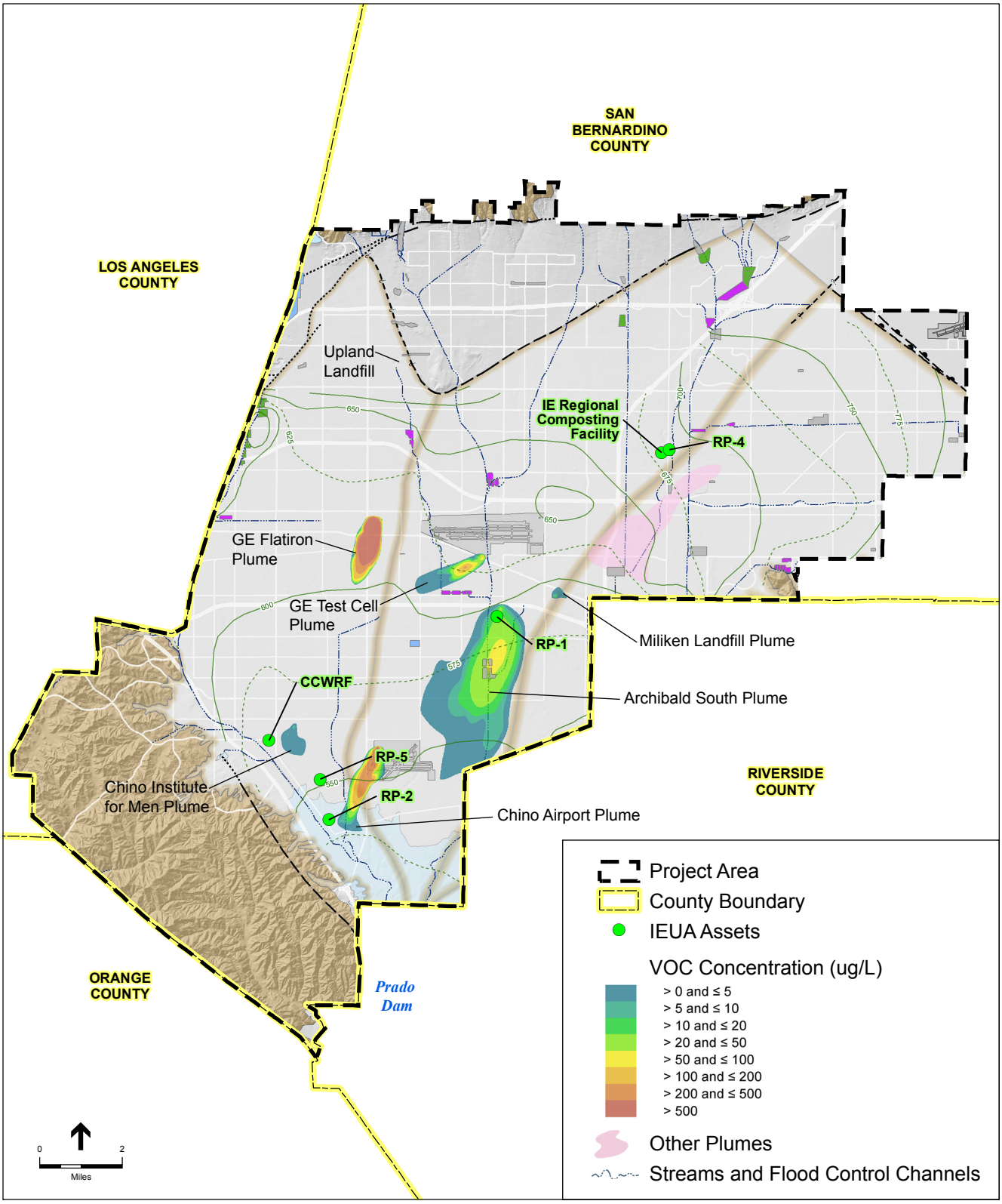


Source: Chino Basin Watermaster, 2015

IEUA Facilities Master Plan PEIR. 150283.07

Figure 3.8-1

Chino Basin Management Zones



Source: Chino Basin Watermaster, 2013

IEUA Facilities Master Plan PEIR. 150283.07

Figure 3.8-2

Groundwater Elevation, Groundwater Contamination Plumes, and Point-Sources of Concern

The IEUA service area overlies other groundwater basins besides the Chino Basin that provide potable water for local retail water agencies. These basins currently provide approximately 10 percent of the regional water supply: Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins. The Six Basins are comprised of the Ganesha, Live Oak, Pomona, Lower Claremont Heights, Upper Claremont Heights and Canyon Basin. The City of Upland, Cucamonga Valley Water District, Fontana Water Company, and San Antonio Water Company each include groundwater from these basins outside the Chino Basins as part of their water supply portfolio (IEUA, 2016). The IEUA *2011 Urban Water Management Plan* has forecasted that approximately 41,000 AFY will be pumped from these basins between 2010 and 2035. This forecast is consistent with historic productions levels (IEUA, 2011).

Groundwater Monitoring

Groundwater Level Monitoring

The Chino Basin Watermaster initiated a groundwater-level monitoring program as part of the implementation of the OBMP. Currently, the groundwater-level monitoring program consists of 1,000 wells. Water levels are measured by municipal water agencies, the California Department of Toxic Substances Control (DTSC), San Bernardino County, and various private consulting firms at approximately 800 of those wells. The remaining 200 wells are measured by the Chino Basin Watermaster once per month. These 200 wells are primarily located near existing agricultural areas (Chino Basin Watermaster, 2013b).

Groundwater Quality Monitoring

The program consists of four components (Chino Basin Watermaster, 2013b):

1. An Annual Key Well Water Quality Monitoring Program consisting of 111 wells, which are mostly privately-owned agricultural wells in the southern portion of Chino Basin that are otherwise not included in an established sampling program. Twenty of these wells are sampled every year, and the remaining wells are sampled once every three years. The wells sampled annually are for the continuous monitoring of areas of concern.
2. Annual sampling at nine multi-port monitoring wells placed between the Chino Desalter well fields and the Santa Ana River. Results of the annual sampling are used to analyze the effect of desalter pumping over time by comparing water quality of the native groundwater and the Santa Ana River.
3. Quarterly sampling at four near-river wells to characterize the interaction between the Santa Ana River and nearby groundwater. These shallow monitoring wells along the Santa Ana River consist of two former USGS National Water Quality Assessment Program (NAWQA) wells and two wells owned by the Santa Ana River Water Company.
4. A cooperative basin-wide data-collection effort known as the Chino Basin Data Collection (CBDC) program, which relies on municipal producers and other government agencies to supply groundwater-quality data on a cooperative basis. These sources include the Appropriators, Department of Toxic Substance Control (DTSC), Regional Water Quality Control Board (RWQCB), US Geological Survey (USGS), the Counties, and other cooperators.

All groundwater-quality data are checked by Watermaster staff and uploaded to a centralized database management system that can be accessed online (Chino Basin Watermaster, 2013b).

Groundwater Quality

Sources of contamination in the IEUA service area include leaky underground storage tanks and other discharges from industrial land uses. Some areas within the Chino Basin exceed standards for perchlorate and volatile organic chemicals (VOCs). Figure 3.8-2 shows the location of contamination plumes resulting from past industrial activities in the service area (Chino Basin Watermaster, 2013a). This contamination has lowered overall groundwater quality, and sometimes has required treatment and/or blending with higher quality imported water. Additionally, non-point source pollution including land application of fertilizers, infiltration from dairy and other agricultural operations and urban runoff has adversely impacted groundwater quality (IEUA, 2011). The groundwater in the Chino Basin has been particularly impacted by agriculture and high concentrations of dairy farms. Dairy farming was a predominant land use within the Chino and Ontario area from the 1940s through the 1990s (Chino Basin Watermaster, 2015). As a result of these overlying land uses, the Chino Basin groundwater has experienced high levels of nitrates and total dissolved solids (TDS) over a large area.

Total Dissolved Solids (TDS)

The primary drinking water standard for TDS is 500 mg/l and the secondary standard is 1,000 mg/l. The southern portion of the Chino Groundwater Basin exhibits average TDS levels above 500 mg/l (CDA, 2010). The current Basin Plan TDS objective for Subbasin Chino I is 280 mg/L. The RWQCB approved TDS water quality objectives for the Chino Basin in a 2004 Basin Plan Amendment that developed the amount of TDS that could exist before experiencing adverse effects on bodies of water within the Chino Basin.

Nitrate

The current Basin Plan nitrate objectives for Subbasin Chino I is 5 mg/L. Similar to TDS, areas with significant irrigated land use or dairy waste disposal histories overlie groundwater with elevated nitrate concentrations. The primary areas of nitrate degradation are the areas formerly or currently overlain by citrus in the northern parts of Management Zones 1, 2 and 3; and dairy areas in the southern parts of Management Zones 1, 2 and 3.

Nitrate concentrations in groundwater have increased slightly or remained relatively constant in northern parts of Management Zones 1, 2 and 3 over the period 1960 to the present. These are areas formerly occupied by citrus and vineyard land uses. Over the same period, nitrate concentrations have increased significantly in the southern parts of Management Zones 1, 2 and 3, and all of Management Zone 5. These are areas where land use has progressively converted from irrigated/non-irrigated agriculture to dairy uses.

Chino Desalters

The Chino Basin Desalter Authority (CDA) was formed in 2001 to produce, treat, and distribute treated potable water to cities and water agencies throughout the southern portion of Chino Basin. Chino Desalter I was constructed in 2000 and Desalter II in 2006 to address salinity concerns with groundwater in the Chino Basin. The treatment processes at the Chino I and Chino II

Desalters include Reverse Osmosis (RO) and Ion-Exchange (IX) for removal of nitrate and total dissolved solids (TDS). The Chino I Desalter also includes air stripping for removal of volatile organic chemicals (VOC). The desalters convert unusable groundwater that does not meet potable water standards into reliable potable water supply, provide hydraulic control over the lower Chino Basin and prevent migration of poor quality water into the Santa Ana River, and enhance groundwater yield for the Basin (IEUA, 2016).

The Chino Desalters produce 25,000 AFY of treated groundwater. The amount of water received by the IEUA member agencies (cities of Chino, Chino Hills, and Ontario) is approximately 50 percent of the total production from these facilities. The remaining water is sent to agencies within the Western Municipal Water District service area (IEUA, 2016). The treated groundwater from the desalters is very high in quality.

Imported Water

When IEUA was formed in 1950, water supply came exclusively from local groundwater and runoff from the San Gabriel Mountains. Imported water deliveries steadily increased to help meet growing water demands concurrent with population growth. Imported water is purchased by IEUA from Metropolitan Water District of Southern California (MWD) for wholesale distribution to the retail agencies within IEUA's service area. MWD distributes water from both the State Water Project (SWP) and from the Colorado River to its member agencies. However, IEUA only uses SWP water due to salinity concerns within the Chino Basin. SWP water has averaged 320 mg/l during the past 20 years. This supply of imported water for IEUA is consistent with the Basin Plan and regulatory requirements of the Santa Ana Regional Water Quality Control Board (IEUA, 2011).

Imported water meets approximately 25 to 30 percent of water demands within the IEUA service area. Imported purchases from MWD in recent decades have averaged about 70,000 AFY (IEUA, 2015). Additionally, the Chino Basin Watermaster has purchased a portion of this imported water from MWD through IEUA for replenishment water when pumping exceeds the safe yield of the basin (IEUA, 2011).

Over the last several years, imported water deliveries from Northern California have declined from a high of 78,872 acre-feet (AF) in 2009 to 59,047 AF in 2013. Additionally, MWD has not offered replenishment-rate water since 2011 and officially canceled the program at the end of 2013. MWD has indicated that they will replace those deliveries with some other program that will be developed in the future (Chino Basin Watermaster, 2013a).

MWD supplies about half the water used in southern California. Its two main sources of water are from northern California as part of the State Water Project (SWP) delivered via the California Aqueduct, and water from the Colorado River via the Colorado River Aqueduct (CRA). Water supplies from the SWP have significantly lower TDS levels than the Colorado River, averaging 320 mg/l during the past 20 years. IEUA only imports MWD water from the SWP in order to meet TDS objectives in Chino Basin. Other major water quality concerns include Perchlorate in the Colorado River and local groundwater supplies (IEUA, 2011).

Recycled Water

Since 1972, IEUA has produced recycled water at their regional wastewater treatments plants for reuse within their service area. Recycled water was initially delivered to large water member agencies specifically within the cities of Ontario and Chino but then expanded to other areas of Chino and the City of Chino Hills through Carbon Canyon Water Recycling Facility (CCWRF) distribution pipelines implemented in the early 1990s (IEUA, 2011).

Today, IEUA operates four regional recycled water plants (RPs) that produce disinfected and filtered tertiary treated recycled water in compliance with California's Title 22 regulations. During FY 2014- 15, the four RPs produced approximately 62,000 AF of recycled water. Based on recent wastewater projections that were calculated as part of the FMP, treated flows are expected to increase to over 85,000 AFY by 2040 (IEUA, 2016). With implementation of IEUA's Regional Recycled Water Program, recycled water will serve the service area's needs for landscape irrigation, industrial process water (direct use), and replenishment water for the Chino Basin in conjunction with local storm water and imported deliveries.

Stormwater

Stormwater comes primarily from surface water runoff from rain and snow originating in the San Gabriel Mountains and moving down through the Santa Ana Watershed. The Chino Basin has six main flood control channels spread throughout the region. Major flood control channels within the IEUA service area include: San Sevaine Creek, Day Creek, Deer Creek, Cucamonga and West Cucamonga Creek, and San Antonio Creek (See Figure 3.4-4). IEUA, Chino Basin Watermaster, and other agencies work closely with San Bernardino County Flood Control District to maximize stormwater capture and recharge into the Chino Groundwater Basin. Runoff not captured by detention basins flow into the Santa Ana River. During large storm events, large amounts of water can discharge into the ocean as well.

3.8.2 Regulatory Framework

Federal

Clean Water Act

The Clean Water Act (CWA) is administered in California by the USEPA, the SWRCB, and the RWQCBs. The CWA serves as the primary federal law protecting the quality of waters of the United States (U.S.), including lakes, rivers, and coastal wetlands. Waters of the U.S. are defined as "All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide."

CWA Section 303(d)

CWA Section 303(d) requires states to develop lists of water bodies that will not attain water quality standards after implementation of technology-based effluent limitations by point-source dischargers. These water bodies, referred to as "water quality limited segments," do not meet water quality standards even after discharges of wastes from point sources have been treated by the minimum required levels of pollution control technology. Section 303(d) requires states to

develop a total maximum daily load (TMDL) for each of the listed pollutants and water bodies. A TMDL is the amount of pollutant loading that the water body can receive and still meet water quality standards.

On October 11, 2011, the USEPA approved a revised list of water quality limited segments (herein referred to as the 303(d) list) prepared by the RWQCB. The following waterways within the immediate vicinity of the program area were identified on the 303(d) list: Chino Creek (Reach 1A, 1B, and 2), Cucamonga Creek (Reach 1), Prado Park Lake, San Antonio Creek, and Santa Ana River (Reach 3) (California EPA, 2011) (Figure 3.4-4).

CWA Section 402

CWA Section 402 regulates storm water discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the USEPA authorizes the SWRCB to oversee the NPDES program through the RWQCBs. The RWQCBs, under the guidance of the USEPA, issue NPDES permits to any construction project over one acre that are not covered by an individual NPDES permit.

National Pollutant Discharge Elimination System (NPDES) Program

The NPDES permit program is administered in the State of California by the SWRCB and RWQCBs under the authority of the USEPA to control water pollution by regulating point sources that discharge pollutants into Waters of the US. If discharges from industrial, municipal, and other facilities go directly to surface waters, those project applicants must obtain permits. An individual NPDES permit is specifically tailored to a discharge to waters of the US. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The Construction General Permit *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit) regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit

The Industrial General Permit (IGP) became effective July 1, 2015 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 Code of Federal Regulations Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP). San Bernardino County has prepared a CBRP.

The RWQCB issued an MS4 Permit (Waste Discharge Requirement Permit for the County of San Bernardino and Incorporated Cities of San Bernardino County, Order No. R8-2010-0036 NPDES

No. CAS618036) in February of 2010. The cities within the IEUA service area are included in this permit coverage. The permit requires the development of a site-specific water quality management plan (WQMP) for certain types of development, including new industrial development projects that create 10,000 square feet or more of impervious surface collectively over the project site or which add or replace 5,000 square feet of impervious surface on an existing developed site. This WQMP should be based on the model WQMP Guidance and Template, and must include site design (including, where feasible, Low Impact Development (LID) principles), source control and treatment control elements to reduce the discharge of pollutants into urban runoff.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was created to promote flood awareness and reduce flood losses of properties within Special Flood Hazard Areas. Drainage and related flooding hazards are managed in response to requirements established by the National Flood Insurance Act of 1986 and the Flood Disaster Protection Act of 1973, as amended. Requirements of the NFIP are included in the Building Code and through overall City and interagency programs for flood management. In implementing the NFIP, the Federal Emergency Management Agency (FEMA) requires that new construction in a flood hazard area meet minimum design standards to place occupied structures above flood hazard areas. FEMA identifies areas throughout the United States that are at risk for flooding. The FEMA Flood Insurance Rate Map identifies areas that have a 1-percent or greater (100-year flood area) of being inundated by a flood event in a given year (refer to Figure 3.4-4) (FEMA, 2016).

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. Under this act, the State must adopt water quality policies, plans, and objectives that protect the State's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB or State Board) and Regional Water Quality Control Boards (RWQCBs or Regional Boards) pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater and this authority serves as the basis for Waste Discharge Requirements issued to municipal sewage treatment facilities by the RWQCBs. The Porter-Cologne Water Quality Act is promulgated in the California Code of Regulations Title 22. Title 22 includes treatment and reuse requirements for recycled water projects throughout California.

Anti-Degradation Policy

The SWRCB's Anti-Degradation Policy, otherwise known as Resolution No. 68-16, sets specific restrictions for surface and groundwater that have higher than the required quality in order to avoid degradation of those water bodies (SWRCB, 2010). Requirements of this policy must be included within all Water Quality Control Plans throughout California (discussed below). Under this policy, actions that would lower the water quality in designated water bodies would only be allowed: if the action would provide a maximum benefit to the people of California, if it will not

unreasonably affect beneficial uses, and if it will not lower water quality below applicable standards (SWRCB, 2010).

Water Recycling Requirements

The Santa Ana RWQCB Basin Plan requires that a discharge permit be obtained for the use of recycled water. Water Recycling Requirements (WRR) are prepared on a case-by-case basis for reuse of Title 22 recycled water as well as for discharge of fully advanced treated water intended for groundwater recharge or injection. WRRs are generally issued to the wastewater treatment agency but also cover intended uses. Water recycling criteria are contained in sections 60301 through 60355 of Title 22 and prescribe recycled water quality and wastewater treatment requirements for the various types of allowed uses in accordance with the SWRCB, Division of Drinking Water (DDW) (formerly a part of the California Department of Public Health (CDPH)).

Water Recycling Policy and Salt and Nutrient Management Plans

In February 2009, the State Water Resources Control Board (SWRCB) adopted Resolution No. 2009-0011, which established a statewide Recycled Water Policy. Draft amendments to the Recycled Water Policy were released in May 2012, September 2012, October 2012 (SWRCB hearing change sheets), and January 2013. The Recycled Water Policy Amendment was adopted by the SWRCB on January 22, 2013. The Recycled Water Policy encourages increased use of recycled water and local storm water. It also requires local water and wastewater entities, together with local salt/nutrient contributing stakeholders to develop a Salt and Nutrient Management Plan (SNMP) for each groundwater basin and subbasin in California.

Sustainable Groundwater Management Act

In 2014, the California State Legislature approved a combination of bills that together formed the Sustainable Groundwater Management Act (SGMA). SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs) that must develop Groundwater Sustainability Plans (GSPs) for medium or high priority groundwater basins in California by 2022. The goal of the GSPs is to make groundwater basins sustainable by the year 2042. In San Bernardino County, the Valley District is forming a joint GSA with other groundwater management agencies in the region to begin preparing a GSP that will manage future groundwater extraction in the program area.

Recycled Water Groundwater Recharge Projects

On June 18, 2014, new regulations were adopted covering groundwater recharge for potable reuse with recycled water. The new regulations (CWC sections 13500-13529.4) outline permit requirements for recharging groundwater with recycled water for potable reuse in California. The regulations cover surface recharge and subsurface injection and transfer permitting responsibilities from the CDPH to the SWRCB Division of Drinking Water (DDW). The regulations include protocols to provide for source control, water quality control, retention time, emergency response planning, monitoring programs, operational plans, management plans, reporting requirements, and public review requirements.

California Water Code Section 1211

California Water Code section 1211 requires that: (1) the owner of any wastewater treatment plant obtain the approval of the SWRCB before making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes to the discharge or use of treated wastewater have the potential to decrease the flow in any portion of a watercourse and (2) the SWRCB review the proposed changes pursuant to the provisions of Water Code section 1700; In order to approve the proposed change, the State Water Board must determine that the proposed change will not operate to the injury of any legal user of the water involved.

Regional

Santa Ana Basin Plan

The SWRCB sets statewide policy and together with the RWQCBs implement state and federal laws and regulations. Each of the nine Regional Boards has adopted a Basin Plan. The Santa Ana Region Basin Plan covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The Basin Plan specifies water quality objectives for all surface waters within the Santa Ana watershed. Water quality objectives specified for the creeks and streams include total dissolved solids (TDS), hardness, chloride, sulfate, fluoride, sodium, and total inorganic nitrogen. Beneficial uses for surface water features in the IEUA service area are listed below in **Table 3.8-2**. Groundwater quality objectives for all groundwater basins address total coliform, chemical constituents, radioactivity, and taste and odor (Santa Ana RWQCB, 2016). Chino Basin-specific groundwater quality objectives addressed maximum benefit objectives for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The Basin Plan has developed water quality objectives for both surface water and groundwater resources within the Santa Ana watershed. Water quality objectives for all resources address nitrate, TDS, metals, total coliform, chemical constituents, radioactivity, and taste and odor (Santa Ana RWQCB, 2016). Chino Basin-specific groundwater quality objectives have been developed for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The *Water Quality Control Plan for the Santa Ana River Basin Region 8* (Basin Plan) provides the framework for the RWQCB's regulatory program (Santa Ana RWQCB, 2016). Specifically, it:

1. Sets forth surface and groundwater quality standards for the Santa Ana Region;
2. Identifies beneficial uses of water and discusses objectives that shall be maintained or attained to protect those uses;
3. Provides an overview of types of water quality issues, and discusses them in the context of potential threats to beneficial uses;
4. Denotes recommended or required control measures to address the aforementioned water quality issues;
5. Prohibits certain types of discharge in particular areas of the Region;

6. Summarizes relevant State Board and Regional Board planning and policy documents, and discusses other relevant water quality management plans adopted by federal, state, and regional agencies; and
7. Identifies past and present water quality monitoring programs, and discusses monitoring activities that could be implemented in future Basin Plan updates.

Overall, the Basin Plan functions as the regulatory authority for water quality standards established in local NPDES permits and other RWQCB decisions.

TABLE 3.8-2
BENEFICIAL USES IN THE PROGRAM AREA

	Inland Wetlands	Inland Surface Waters						Groundwater
Beneficial Uses	**Prado Basin**	**Deer Creek**	**San Antonio Creek**	**Day Creek**	**Cucamonga Creek**	**Chino Creek**	**Santa Ana River***	**Chino Basin**
Municipal and Domestic Supply (MUN)	--	I	X	X	--	--	--	X
Agricultural Supply (AGR)	--	--	X	--	--	--	X	X
Groundwater Recharge (GWR)	--	I	X	X	X	--	X	--
Industrial Service Supply (IND)	--	--	X	--	--	--	--	X
Industrial Process Supply (PROC)	--	--	X	X	--	--	--	X
Hydropower Generation (POW)	--	--	X	--	--	--	--	--
Contact Water Recreation (REC-1)	X	I	X	X	--	X	X	--
Non-contact Water Recreation (REC-2)	X	I	X	X	X	X	X	--
Commercial and Sportfishing (COMM)	--	--	--	--	X	--	--	--
Warm Freshwater Habitat (WARM)	X	--	--	--	--	X	X	--
Limited Water Freshwater Habitat (LVRM)	--	--	--	--	X	--	--	--
Cold Freshwater Habitat (COLD)	--	I	X	X	--	--	--	--
Wildlife Habitat (WILD)	X	I	X	X	X	X	X	--
Rare, Threatened, Endangered Species (RARE)	X	--	--	--	--	X	X	--
Spawning, Reproduction, and Development (SPWN)	--	--	--	--	--	--	X	--

X = Present or Potential Beneficial Use I = Intermittent Beneficial Use
*Refers to Reach 3 of Santa Ana River (Prado Dam north to Mission Blvd in Riverside)
SOURCE: Santa Ana Region RWQCB, 2016.

Local

County policies generally pertaining to hydrology and water quality have been included in the section below. Future projects under this PEIR will be analyzed at the program-level to assess the applicability of all local general plan and municipal code polices.

Chino Basin 2010 Recharge Master Plan Update

On December 21, 2007, the Court ordered the Chino Basin Watermaster to prepare a Recharge Master Plan Update (RMPU) for Chino Groundwater Basin. In coordination with the Chino Basin Water Conservation District, IEUA, and the Judgment parties, the 2010 RMPU was developed through a stakeholder process. The RMPU outlines recharge estimations, summaries of the projected water supply availability, and the physical means to accomplish those recharge projections. The sections include: safe yield, local stormwater management and mitigation of the loss of safe yield, integrated review of water supply plans, stormwater recharge enhancement opportunities, supplemental water recharge enhancement opportunities, regional stormwater and supplemental water recharge facilities, and supplemental water for replenishment (Chino Basin Watermaster, 2013a).

County of San Bernardino

The following goals and policies within the Circulation and Infrastructure Element of the County of San Bernardino General Plan regarding hydrology and water quality that would be applicable to all program activities within the IEUA service area (County of San Bernardino, 2007).

Goal CI.11: The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of the surface and groundwater pollution.

Policy CI 11.1: Apply federal and state water quality standards for surface and groundwater and wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project to safeguard public health.

Policy CI 11.10: Because the recharge of groundwater basins is vital to the supply of water in the County, and because these areas can function only when retained in open space, the County will consider retaining existing groundwater recharge and storm flow retention areas as open space lands.

Policy CI 11.11: Coordinate with all agencies providing water service and protection to achieve effective local and regional planning.

Goal CI.12: The County will ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

City General Plans and Municipal Codes

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan and municipal code that pertain to protection of hydrological resources.

3.8.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to hydrology and water quality are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- 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);
- Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-or off-site (refer to Impact 3.8-3);
- Substantially alter the existing drainage pattern of a 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(refer to Impact 3.8-3);
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff(refer to Impact 3.8-3);
- Otherwise substantially degrade water quality (refer to Impact 3.8-1);
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- 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;
- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

A discussion of the impacts and mitigation measures for the proposed program are presented below.

Impacts Discussion

Water Quality Standards and Waste Discharge Requirements

Impact 3.8-1: The proposed program would have less than significant and less the cumulatively considerable water quality impacts when compared to water quality standards or waste discharge requirements.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction

Construction of proposed FMP projects would require the use of heavy equipment and construction-related chemicals, such as fuels, oils, grease, solvents and paints that would be stored in limited quantities onsite. In the absence of proper controls, these construction activities could result in accidental spills or disposal of potentially harmful materials used during construction that could wash into and pollute surface waters or groundwater. Materials that could potentially contaminate the construction area from a spill or leak include diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids.

Because the proposed projects would be implemented incrementally over time, there would not be a single construction discharge permitting process. Instead, as construction of each proposed upgrade or facility is initiated, individual construction discharge permits would be acquired. Where the anticipated total disturbance for a facility would be greater than one acre, IEUA would be required to acquire coverage under the statewide Construction General Permit (CGP) (SWRCB Water Quality Order 2009-0009-DWQ) by complying with the CGP and preparing and implementing a SWPPP. The SWPPP would include BMPs to control erosion, sedimentation, and hazardous materials release from construction sites into surface waters. Compliance with the SWPPP BMPs and other conditions of the CGP and SWPPP would ensure impacts to water quality are less than significant.

If anticipated disturbance is less than one acre, the CGP would not apply to the facility construction. Instead, the facility would be required to comply with minimum BMPs as specified by the San Bernardino County MS4 Permit (RWQCB Order No. R8-2010-0036), which would implement BMPs to provide erosion control, sediment control, and waste management strategies for construction sites. Adherence to these conditions would ensure that potential water quality degradation associated with construction activities on sites less than one acres would be minimized to less than significant levels.

In the most southern portion of the IEUA service area and along stream channels, shallow groundwater may be present and could potentially interfere with construction activities, requiring groundwater dewatering in support of construction. If groundwater dewatering is determined to be necessary during construction, compliance with a SARWQCB Groundwater Dewatering General Permit would be required. Dewatering typically involves the extraction of shallow groundwater and subsequent discharge into nearby storm drains or other receiving bodies, in order to facilitate the construction of underground facilities, such as structural building foundations for treatment plant facilities. Compliance with the conditions of this general permit

would ensure that dewatering discharges would not elevate pollutant concentrations beyond existing water quality limitations, or otherwise affect beneficial use of receiving waters.

Compliance with these permits during construction of all facilities would minimize potential release of pollutants via storm water runoff from construction sites and reduce the potential for violation of water quality standards to less than significant levels.

Operation

The facilities would be located within the existing regional treatment plant footprint. The presence of new facilities at each project site may increase impervious surfaces that could increase stormwater runoff if uncontrolled. Each treatment plant would be subject to the General Industrial Stormwater Permit that requires facility designs to include structural controls to protect stormwater runoff quality. Based on IEUA standard practice, any increased runoff within each treatment plant would be captured onsite and delivered to the onsite wastewater treatment system for treatment. Standard practiceswould reduce potential impacts to runoff water to less than significant levels.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Construction impacts would be the same as Project Category 1.

Operation

The proposed pipelines and ancillary facilities would discharge tertiary-treated effluent treated to Title 22 levels into San Antonio Creek, Cucamonga Creek, Day Canyon Creek, Dry Creek, Deer Creek, and Chino Creek City Creeks to meet IEUA's downstream discharge obligations to the Santa Ana River and to sustain Prado Basin Riparian/Wetland Habitat. These discharges already require a NPDES discharge permit from the RWQCB and this permit may need to be modified as future expansion of WRFs proceeds in accordance with future growth within the IEUA service area. Discharge of the treated effluent into the creeks could adversely impact surface water quality due to introduction of TDS, nitrogen, or other constituents in the effluent. As noted in Table 3.8-2, Deer Creek has an Intermittent MUN designation. The MUN designation in the Basin Plan disallows discharge of treated wastewater unless approved by the DDW (formerly CDPH). As a result, the Intermittent MUN designation either would need to be amended to allow for the proposed discharge or DDW would need to allow the discharge through their authority provided in the Basin Plan. To obtain approval, DDW would likely require technical studies to evaluate the source water and proposed treatment technologies. Since the segments of Deer Creek are normally dry as reflected in the Intermittent designation, introduction of a perennial water source would not adversely affect existing surface water municipal uses. With DDW approval, impacts to municipal uses would be considered less than significant.

All tertiary treated effluent would be treated to Title 22 levels. The anticipated effluent quality would comply with the surface water quality objectives for San Antonio, Cucamonga, Day Canyon, Dry, Deer, and Chino Creeks. The NPDES discharge permit from the SARWQCB would outline discharge limits and operational requirements. Compliance with the NPDES permit would ensure that discharge to all creeks would meet surface water quality objectives. Impacts would be less than significant.

As described in Section 2.5.5, IEUA will install dry weather diversion structures in several creeks as listed in Table 2-9. The structures will capture urban runoff and divert the flow to the treatment plants. The dry weather flows are generated primarily by over-irrigation in urban areas. The proposed diversions would serve to improve surface water quality through the removal of low quality surface water that generally exhibits elevated levels of pathogens, nutrients, metals, and trash. As shown in Table 3.8-1, Chino Creek and Cucamonga Creek are both listed by the RWQCB as impaired water bodies due to elevated loads of pathogens, metals, and nutrients. Removing these low quality dry weather flows from the drainages in these impaired creeks will provide a regional water quality benefit and assist in achieving TMDL objectives for targeted contaminants. There would be no adverse impact to water quality resulting from dry weather diversions.

The FMP also includes a program to reduce septic system use in the service area. IEUA would expand the collection system to areas not currently served with wastewater collection facilities. Septic leach fields introduce nutrients to the ground that can migrate to the groundwater basin. The reduction of septic system use would improve groundwater quality through the reduction of infiltration from septic systems. There would be no adverse impact to water quality resulting from septic system diversions.

Project Category 3: Groundwater Recharge and Extraction

Construction

Construction impacts would be the same as Project Category 1 and 2.

Operation

Discharge of the treated effluent into proposed recharge basins and injection wells would comply with the DDW recycled water regulations contained in Title 22 of the CCR, subject to conditions imposed by the RWQCB pursuant to WRRs and WDRs. Compliance with NPDES discharge regulations with approval from the RWQCB would ensure that the proposed project would not result in significant impacts to surface or groundwater quality.

Combined Project Categories

Construction of proposed FMP projects could result in accidental spills or disposal of potentially harmful materials that could wash into and pollute surface waters or groundwater. Compliance with the CGP, SWPPP, or MS4 Permit would minimize potential release of pollutants via storm water runoff from construction sites and reduce the potential for violation of water quality standards and waste discharge requirements to less than significant levels.

During FMP project implementation, discharge of the treated effluent into creeks, proposed recharge basins, and injection wells would comply with the DDW recycled water regulations contained in Title 22 of the CCR, subject to conditions imposed by the RWQCB pursuant to WRRs and WDRs. Compliance with NPDES discharge regulations with approval from the SARWQCB would ensure that the proposed projects would not result in significant impacts to surface or groundwater quality during operation.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Concurrent construction of development within the IEUA service area could result in temporary impacts to surface hydrology and water quality. All other related projects would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and San Bernardino County MS4 Permits. Therefore, cumulative development would not result in a violation of water quality standards, waste discharge requirements, or otherwise substantially degrade water quality. Because the proposed FMP projects would not result in significant impacts, the project's contribution to cumulative impacts associated with violation of water quality standards, waste discharge requirements, or degradation of water quality would be less than cumulatively considerable. Therefore, the project would result in a less than cumulatively significant impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Groundwater Supplies and Recharge

Impact 3.8-2: The proposed program could have significant and cumulatively considerable groundwater impacts due to potentially depleting groundwater supplies or interfering with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facilities upgrades include expansion and construction of new facilities to increase capacity of wastewater treatment at the IEUA assets. Construction and operation of the proposed projects would have no direct effect on groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. No impact would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed upgrades and expansion of conveyance systems and ancillary facilities such as pump stations would aid in transporting recycled water treated to Title 22 standards to discharge locations, other IEUA assets, recharge basins, or injection wells. Construction and operation of the proposed projects would have no adverse effect on groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.

As part of the FMP, IEUA will install dry weather diversion structures in several creeks as listed in Table 2-9. The diversions would be installed in soft bottom channels that currently provide for some in-stream infiltration. The IRP assumes that dry weather diversions could total 3,500 AFY. This surface water currently is flowing to Prado Basin or is infiltrating into the ground. The diverted water would be conveyed to treatment facilities where it would augment recycled water production and be reused for landscape irrigation or groundwater recharge to the Chino North "Max Benefit" Groundwater Management Zone. By augmenting the groundwater basin, the diverted water would contribute to the regional water supplies. Dry weather diversions would not deplete groundwater supplies or substantially reduce annual surface water flows reaching Prado Basin. Impacts would be less than significant.

Furthermore, according to the 2014-2015 Annual Santa Ana River Watermaster Report, Prado Basin received a total of approximately 64,000 AFY of baseflow from its various tributaries in the 2014-2015 water year. Dry weather baseflows fluctuate annually; the Watermaster Report records baseflow over 100,000 AFY in the 2010-2011 water year. The reduction of up to 3,500 AFY from the downstream reaches would constitute approximately 5 percent of the total surface water flow reaching Prado Dam during a dry year. The Stipulated Judgement for the Santa Ana River obligates IEUA and WMWD to assure that 42,000 AFY of baseflow reach Prado Dam. The reduction in dry weather flows of 3,500 AFY would not conflict with this obligation. Impacts to downstream surface water flow obligations would be less than significant.

The FMP also includes a program to reduce septic system use in the service area. IEUA would expand the collection system to areas not currently served with wastewater collection facilities.

The program estimates that 10,000 single family homes currently on septic systems could be converted to wastewater collection systems. Assuming that the new collection systems would divert 100 gallons per day per converted household, a total of up to 1,120 AFY could be diverted from leach fields to the regional treatment plants. Much of the water discharged through septic systems is assumed to infiltrate into the ground, eventually reaching the groundwater basin. Therefore, the conversion of 10,000 homes to a centralized collection system could reduce groundwater reacharge by up to 1,120 AFY. The diverted wastewater would be treated at IEUA's treatment plants that produce recycled water, which is productively used for irrigation or groundwater recharge water. The diversion of leach field infiltration to a centralized recycled water system would be used to meet regional water demands and would not adversely affect groundwater supplies in the region.

Project Category 3: Groundwater Recharge and Extraction

Implementation of the groundwater recharge and extraction facilities would increase the reliability of replenishment water to the IEUA service area. The proposed recharge basins would be constructed on previously disturbed or undeveloped land and would increase the amount of recycled water and storm water that recharges the groundwater basin. Furthermore, recycled water used for irrigation is projected to decrease; therefore, increased amounts of recycled water would be injected into the basin via the proposed injection wells. The proposed projects would not increase the use of groundwater but rather accommodate future increases in demand for potable water sourced from groundwater.

As part of implementation of the OBMP, the Chino Basin Watermaster initiated an extensive groundwater-level monitoring program. Currently, groundwater levels are measured by municipal water agencies, DTSC, San Bernardino County, and various private consulting firms at approximately 800 of 1000 wells. Because IEUA, Chino Basin Watermaster, and all other local agencies and jurisdictions coordinate to implement this regional groundwater level monitoring system, it is unlikely that significant impacts associated with depletion of groundwater levels would occur.

In the event that groundwater levels increase in shallow aquifers due to increased recharge from recharge basins and injection locations, subsurface structures and utilities could become inundated, potentially compromising their functions. Impacts to subsurface structures are potentially significant. Additionally, there is the potential for groundwater levels to rise close to the ground surface during wet years. Potential extended periods of high groundwater could lead to increased liquefaction hazards and reduced percolation capacity. Impacts would be potentially significant.

Combined Project Categories

The implementation of all proposed FMP projects together would not increase the use of groundwater but rather accommodate future increases in demand for potable water sourced from groundwater. With concurrent groundwater level monitoring across the region, it is unlikely that there would be any depletion of groundwater. However, increased recharge could raise water levels in shallow aquifers and lead to subsurface structure inundation and liquefaction of soils. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

IEUA's service area encompasses a large area subject to cumulative water demands. In addition to the projects identified in the FMP, other projects initiated by local agencies could be introduced that would alter groundwater levels. Storm water retention projects initiated by the San Bernardino County Flood Control District may increase groundwater recharge throughout the IEUA service area, resulting in elevated water levels. In addition, increased use of recycled water or localized land use changes in the future could change water demand patterns throughout the IEUA service area, resulting in changing or unpredicted groundwater levels. These local actions would contribute to a cumulative impact.

IEUA's IRP identifies management actions required to achieve adequate water supply through 2040. The plan developed implementation strategies that would improve near-term and long-term groundwater management for the region. In addition, the IRP evaluates new growth, development, and water demand patterns within the IEUA service area. Management actions to ensure adequate groundwater supplies were evaluated based on various demand factors such as land development and community density. For example, as cumulative development within the IEUA service area occurs, the IRP shows that irrigable landscaped areas in developments are becoming increasingly smaller than traditional development and this trend leads to lower water use per housing unit. Management actions such as reducing landscape irrigation allows for increased amounts of recycled water to be used for groundwater recharge.

The IRP includes other management actions such as Low Impact Development (LID) and best management practices (BMPs). IEUA will be supporting LID systems as cumulative development within the IEUA service area occurs. The County of San Bernardino Stormwater Program defines LID BMPs as any stormwater control that uses on-site natural treatment processes to reduce or remove pollutants in runoff (SWRCB, 2011). LID would result in development that utilizes water conservations measures by reducing urban runoff and ultimately increasing the amount of stormwater that is captured and stored in the Chino Basin groundwater table. Practices and management actions such as these would assist in reducing demands of the IEUA's service area water supplies.

The FMP was designed to consider future scenarios where the Chino Basin is used for additional storage to provide a larger contribution to the regional water supply portfolio than is currently feasible, therefore the FMP proposed recharge projects provide a plan to manage the cumulative use of local resources for the benefit of the regional community. With implementation of water efficient management actions and continued groundwater level monitoring under the OBMP , Chino Basin groundwater levels should be stable because increased usematches increased recharge. The potential impacts associated with the proposed FMP projects would not have an incremental effect on groundwater that would be considered cumulatively considerable.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

HYDRO-1: Prior to installing new injection or extraction wells, IEUA and the Watermaster shall ensure that IEUA conduct groundwater modeling near the affected areas sufficient to estimate extraction and injection capacities at specific locations and to avoid impacts to neighboring production well operations.

HYDRO-2: IEUA shall continue to support monitoring of groundwater levels throughout the Chino Basin to identify areas of elevated groundwater levels. IEUA and the Watermaster shall ensure that, where necessary, future groundwater recharge projects are designed with groundwater monitoring capabilities sufficient to evaluate and minimize impacts of shallow groundwater on subsurface and surface infrastructure.

Combined Project Categories

Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 would ensure that IEUA monitors groundwater levels so that there is no net deficit in aquifer levels and implement measures to ensure groundwater levels do not impact subsurface structures.

Cumulative Measures

Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 would ensure that the proposed facilities' contribution to cumulative Chino Basin groundwater level impacts would be reduced to less than cumulatively considerable by complying with the Chino Basin groundwater level monitoring program.

Drainage Patterns

Impact 3.8-3: The proposed program could have significant and cumulatively considerable groundwater impacts due to potentially altering the existing drainage pattern of a site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, or flooding on-or off-site.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction

The proposed treatment plant facilities would not alter the course of a stream or river. The surface waters located adjacent to CCWRF and RP-1 are concrete-lined channels and thus have a set drainage pattern. Because the channels adjacent to the CCWRF and RP-1 are concrete-lined, no erosion or siltation would occur. The remaining IEUA assets are not adjacent to any streams or river channels, and therefore would not alter the drainage course of a stream or river. No impacts would occur.

Implementation of proposed FMP projects could alter existing drainage patterns at each project site in other ways. The construction of proposed facilities would require activities such as pavement breaking, ditching, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, or San Bernardino County MS4 Permit, as described previously, would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets. With implementation of such BMPs and compliance with conditions of required permits governing storm water runoff from construction sites, potential onsite and offsite flooding impacts would be reduced to less than significant levels and discharges from construction sites would not exceed the capacity of existing storm water drainage systems. Erosion or siltation from construction sites also would be minimized to less than significant levels.

Operation

During operation, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Operational impacts would be potentially significant.

Following demolition of RP-2, the project site would be highly disturbed and this could alter the existing drainage pattern of the site, including the alteration of the course of Chino Creek, which is adjacent to the treatment plant. This alteration could result in erosion or siltation during peak rain events. Impacts would be potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Impacts would be the same as Project Category 1.

Operation

The proposed project would discharge water into San Antonio Creek, Cucamonga Creek, Day Canyon Creek, Dry Creek, Deer Creek, and Chino Creek City Creeks. Since some creeks could

be dry at discharge locations, the addition of perennial water could alter the contours within the channels and result in minor sediment transport. In addition, the discharge of effluent to the creeks could promote scour or impede flood flows by reworking the stream bed. Furthermore, discharges to the creeks during high flow events could contribute to flood flows and exceed the capacity of the existing drainage systems. Impacts to alteration of and exceedance of capacity of existing drainage systems are potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Construction

Impacts would be the same as Project Category 1.

Operation

Impacts would be the same as Project Category 1.

Combined Project Categories

The proposed facilities would not alter the course of a stream or river. The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP and County MS4 Permit would minimize all construction impacts to less than significant levels.

The presence of all new facilities at each project sire could change permeable and impermeable surfaces and alter the direction and volume of overland flows. Additionally, Project Category 2 facilities that discharge into local creeks could alter contours within channels and result in sediment transport or contribute to impacts to sufficient drainage capacity. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Concurrent construction of cumulative development within the IEUA service area could result in temporary impacts to drainage patterns that may result in erosion, siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and San Bernardino County MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could experience significant impacts to local drainage systems after rapid development of structures. The proposed FMP projects could result in potential significant impacts associated with the alteration of drainage patterns that result in erosion, siltation, or flooding. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

HYDRO-3: **Implementation of a Grading and Drainage Plan**. Prior to construction of project facilities, the IEUA shall prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of San Bernardino and/or the city in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, best management practices, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.

HYDRO-4: Following the demolition of RP-2 facilities, IEUA shall implement a soil stability plan that ensures soil and wind erosion does not substantially occur at the RP-2 site. The soil stability plan shall provide best management practice (BMP) measures such as soil binders, hydroseeding, straw mulch or other measures to ensure the onsite soils do not erode off of the RP-2 site.

Project Category 2: Conveyance Systems and Ancillary Facilities

HYDRO-5: All creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the SBCFCD and USACE to ensure that they do not impede high flow capacity.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures HYDRO-3 is required.

Combined Project Categories

Implementation of Mitigation Measures HYDRO-3, HYDRO-4, and HYDRO-5 is required.

Significance Determination after Mitigation: Less than Significant. During project design, overland flows and drainage at each FMP project site would be assessed and drainage facilities designed such that no net increase in runoff would occur, in accordance with the San Bernardino County MS4 Permit. As required by Mitigation Measure HYDRO-3, a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increase in erosion or sedimentation would occur. This also would ensure no substantial increases in onsite or offsite flooding would occur and that the existing capacity of storm water drainage systems would not be exceeded. Impacts would be less than significant with mitigation.

Furthermore, installing velocity dissipaters at the point of discharge for Project Category 2 projects may be necessary to ensure that excessive scour does not occur, without impeding flood flows. Mitigation Measure HYDRO-4 would require that the discharge facilities be designed to avoid scour and flood impacts. Mitigation Measure HYDRO-4 would ensure that during high flow events, the pipelines would divert discharge to other discharge locations to avoid flooding. Implementation of Mitigation Measures HYDRO-3 and HYDRO-4 would ensure that impacts to drainages would be less than significant.

Cumulative Measures

Implementation of Mitigation Measures HYDRO-3, HYDRO-4, and HYDRO-5 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measures HYDRO-3, HYDRO-4, and HYDRO-5 would ensure that the proposed facilities' contribution to cumulative drainage pattern impacts would be less than cumulatively considerable.

Housing Placement: Flood Hazard Area

Impact 3.8-4: The proposed program would not impact or contribute to cumulative flooding impacts on housing because the program would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

RP-2 is located within a 100-year flood hazard area; however, this treatment plant would be demolished over time and would not expose people to substantial risk regarding flooding. Furthermore, no housing is proposed for the FMP projects, therefore, the proposed projects would not place any housing within a 100-year flood hazard area. No impacts would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

As shown in Figure 3.4-4, portions of the IEUA service area are within a 100-year flood zone. However, the proposed program involves the construction of treatment facilities, conveyance systems, and groundwater recharge facilities; no housing is proposed as part of the program, and the program facilities would not displace any existing housing such that replacement housing would be developed in a flood zone. There would be no impact related to the placement of housing within a 100-year flood zone.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

No housing is proposed as part of any of the proposed FMP projects, and proposed facilities would not displace any existing housing such that replacement housing would be developed in a

flood zone. There would be no impact related to the placement of housing within a 100-year flood zone.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

Future cumulative development could place housing within a 100-year flood hazard area. Because the proposed FMP projects do not propose housing, the project's contribution to cumulative impacts associated with placing housing within a 100-year flood hazard zone would not be cumulatively considerable. Therefore, the project would result in no cumulative impact.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Structures: Flood Hazard Area

Impact 3.8-5: The proposed program could have significant and cumulatively considerable flooding impacts on structures because the program could place within a 100-year flood hazard area structures that could impede or redirect flood flows.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

RP-2 is the only IEUA asset located within a 100-year flood zone (see Figure 3.4-4). However, RP-2 would be demolished over the next 20 years and therefore, the proposed projects located at that treatment plant would not place any structure within a 100-year flood hazard zone that could impede or redirect flows. All other treatment facilities upgrades would be implemented outside of a 100-year flood zone. There would be no impact.

Project Category 2: Conveyance Systems and Ancillary Facilities

As shown in Figure 3.4-4, portions of the IEUA are within 100-year flood zones. Not all of the proposed conveyance ancillary facilities locations are determined at this time; therefore, the proposed projects could construct a structure that could impede, or redirect flood flows within a 100-year flood zone. Impacts would be potentially significant.

Project Category 3: Groundwater Recharge and Extraction

The proposed recharge basins could be located within a 100-year flood zone. The recharge basins could impede and potentially redirect flood flows. However, the recharge basins would increase the capacity of stormwater percolation and reduce the velocity of downstream flows, thereby resulting in a less than significant environmental effect.

Impacts related to well housing and recharge basin ancillary facilities would have the same impacts as Project Category 2.

Combined Project Categories

Because not all locations of FMP facilities are determined at this time, there is the potential for a project to take place within a 100-year flood hazard zone and construct a structure that could impede or redirect flood flows. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development could occur within a 100-year flood hazard area and construct structures that impede or redirect flows. Because the proposed FMP projects could also be located within 100-year flood hazard zones and introduce new facilities that could impeded or redirect flows, the project's contribution to cumulative impacts would be cumulatively considerable. Therefore, the project would result in a potentially cumulative significant impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary FacilitiesProject Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure HYDRO-6 is required.

Combined Project Categories

Implementation of Mitigation Measure HYDRO-6 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure HYDRO-6 would ensure that all structures would not impede or redirect flood flows. Therefore, impacts related to the impediment or redirection of flood flows resulting

from the placement of structures within a 100-year flood hazard area would be less than significant.

Cumulative Measures

Implementation of Mitigation Measure HYDRO-6 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure HYDRO-6 would ensure that the proposed facilities' contribution to cumulative flood impacts would be reduced to less than cumulatively considerable by either relocating the improvement away from a 100-year flood zone or conducting a hydrology study to ensure that no substantial impediment or redirection of flood flows occur.

Flood Hazards: Levee or Dam Failure

Impact 3.8-6: The proposed program would have less than significant and less than cumulatively considerable exposure of 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.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

RP-5 and RP-2 are located upstream of Prado Dam and therefore could be exposed to surface runoff if Prado Dam were to fail. However, the flood hazardarea is a pre-existing condition within the project area and the placement of the proposed facilities in the inundation area would not exacerbate this condition (City of Chino, 2010). RP-2 would be demolished over the next 20 years; the structures on site would be non-habitable, and all structures would be removed within time; therefore, the proposed demolition would not expose people or structures to a significant risk of loss, injury, or death involving flooding. Furthermore, only a small portion of RP-5 is within a flood hazard zone. The aboveground facilities would be subject to the pertinent local jurisdiction's structural safety requirements and insurance programs should inundation occur. RP-5 would require regular staffing and thus may introduce people to potential effects ofsurface runoff if dam failure were to occur. However, the proposed facilities would not involve physical interference with or disturbance to Prado Dam, therefore the proposed facilities would not put employees at significant risk. Impacts would be less than significant.

All of IEUA assets are located outside of dam inundation zones, therefore flood impacts to those facilities and employees would not occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Not all proposed facility locations are determined at this time; therefore proposed facilities could be placed within the Prado Dam inundation zone. However, the proposed facilities would not involve physical interference with or disturbance to Prado Dam, therefore the proposed facilities would not put structures at significant risk. Furthermore, none of the proposed pipelines or ancillary facilities would be habitable; therefore no employees would be put at risk. Impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

All aboveground facilities would be subject to the pertinent local jurisdiction's structural safety requirements and insurance programs should inundation occur. The proposed facilities would not involve physical interference with or disturbance to Prado Dam, therefore the proposed facilities would not put employees or structures at significant risk. Impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could 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. Because the proposed FMP projects would not involve physical interference with or disturbance to Prado Dam and would not put employees or structures at significant risk, the project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the project would result in a less than cumulative significant impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Seiche, Tsunami or Mudflow

Impact 3.8-7: **The proposed program would have no impact and no contribution to cumulative impacts from the exposure of people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.**

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

In general, the proposed FMP projects would be located in relatively flat areas that would not be susceptible to mudflows. Furthermore, none of the proposed projects would be located near the coast. The IEUA service area is located 25 miles east of the Pacific Ocean; therefore impacts related to tsunamis would not result. None of the proposed facilities would be located adjacent to any large standing water bodies that could experience a seiche. No impacts related to inundation by mudflow, tsunami, or seiche would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Impacts would be the same as Project Category 1, 2, and 3.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

Future cumulative development could expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow. Because the proposed FMP projects would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow do not propose housing, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, the project would result in no cumulative impact.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

3.8.4 References

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3.9 Land Use and Planning

This section describes the environmental setting for land use, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed IEUA FMP, and mitigation measures to reduce those impacts to less than significant.

3.9.1 Environmental Setting

The IEUA service area is located in the Inland Empire region of Southern California, within southwestern San Bernardino County. San Bernardino County, with a land area of 20,106 square miles, is the largest County in the continental United States, containing vast undeveloped tracts of land that offer significant scenic vistas. The County consists of three distinct geographic regions: the Mountains; the Valley; and the Desert. These diverse geographies not only vary by terrain but also in visual character. The three areas, combined, encompass all the unincorporated lands within the County. The planning regions include the spheres of influence of the incorporated cities (County of San Bernardino, 2007a).

The IEUA service area supports approximately 75 percent of the County's population and is highly developed. The Valley Region includes the following incorporated cities: Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa. Unincorporated Communities within the Valley Region include the following: Bloomington, Crafton, Del Rosa, Devore, Mentone, Muscoy, San Antonio Heights, South Montclair, and Verdemont (County of San Bernardino, 2007a).

County of San Bernardino Land Use Designations

The County General Plan establishes 18 land use designations within 51,766 acres of the Valley Region. Nearly half, or 24,241 acres, of the Valley's 51,766 acres of unincorporated acreage is devoted to residential uses (County of San Bernardino, 2007a). Land use designations within the Valley Region of the General Plan are provided in **Table 3.9-1**.

Although San Bernardino County is the largest county in the contiguous United States, approximately 81 percent of the total, (10.5 million acres) are outside of the County jurisdiction. Approximately 6 million acres federal public lands managed by the Bureau of Land Management and 1.9 million acres are owned by the United States Department of Defense. Of the remaining 19 percent of the County's total land area, approximately 4 percent lies within 24 incorporated cities. Fifteen percent (about 1.9 million acres) is entirely under County jurisdiction. While the County influences a certain degree of development activity within these cities (primarily administrative buildings, criminal justice facilities, and certain limited infrastructure, including County-maintained roads and flood control facilities), the city councils of these 24 cities directly regulate land use and planning within these cities (County of San Bernardino, 2007b).

TABLE 3.9-1
COUNTY OF SAN BERNARDINO LAND USE DESIGNATIONS IN THE VALLEY REGION PLANNING AREA

Land Use Designation	Acres
Residential	24,241
Commercial	2,155
Industrial	5,155
Agriculture	938
Resource Conservation	1,769
Floodway	5,281
Specific Plan	1,600
Institutional	2,875
Planned Development	7,216
Other	536
TOTAL	**51,766**

SOURCE: County of San Bernardino, 2007a

City of Chino Land Use

The City of Chino has historically been known for its agricultural focus that aided in the City's economy. Between 1940 and 1960, the City became a regional center for dairies. The following two decades were a period of explosive population growth which led to a shift toward residential development (City of Chino, 2010).

Residential neighborhoods now characterize a majority of the northern portion of the City, while industrial uses characterize the southern and western portions. Land area devoted to agricultural production has been significantly reduced, although a significant amount of land in the southern portion of the City is still devoted to recreational/open space, some agriculture, and public uses such as the Chino Airport and California Institution for Men (City of Chino, 2010).

Land use designations for the City of Chino are identified in the Chino General Plan and included below in **Table 3.9-2**.

City of Chino Hills Land Use

The City of Chino Hills is known for its rural atmosphere and its 3,000 acres of open space, 43 parks, 39 miles of recreational trails, and community buildings. Historically, the City's primary land use was open space with some scattered rural residential ranches. Much of the natural habitat of the area is preserved within the City of Chino Hills State Park, which is now the largest State Park in California located amongst an urban setting. In the late 1970s, development pressures gradually started moving to the City. Residential development and communities were clustered and concentrated in order to protect as much open space as possible and most commercial development was placed along the State Route 71 corridor (City of Chino Hills, 2016).

TABLE 3.9-2
CITY OF CHINO LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	5,949
Open Space (including Agriculture)	6,134
Commercial	883
Industrial	3,082
Other (including Public; Public Schools; Mixed Use; Airport-Related; and Community Core)	1,695
TOTAL	**17,743**

SOURCE: City of Chino, 2010

According to the City of Chino Hills *General Plan, Land Use Element*, much of the land in the City designated for development has been built. The majority of vacant land that remains consists of hillside properties and natural resource areas. Future development of residential uses will depend on regional transit links along major arterials (City of Chino Hills, 2016).

Land use designations for the City of Chino Hills are identified in the Chino Hills General Plan and included below in **Table 3.9-3**.

TABLE 3.9-3
CITY OF CHINO HILLS LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	12,536
Commercial	1,403
Open Space	12,181
Institutional/Public Facility	633
Mixed Use	46
TOTAL	**26,799**[a]

* The City's total area, including properties with Land Use Designations and right-of-way, is 28,736 acres (or approximately 45 square miles). Public and private streets and State Route 71 are not provided with a Land Use Designation and are not included within the Total Acreages. In addition, public and private right-of-way occupies an additional 1,937 acres within the City's boundaries that are not included in the Total Acreage.

SOURCE: City of Chino Hills, 2015.

City of Fontana Land Use

The City of Fontana was a rural and diversified farming community in the early 1900s and throughout the century shifted into a population-dense manufacturing center. The City is known by its early steel mill operations during World War II and was the region's leading producer of

steel and steel-related products. The City's suburban location near Interstates 10, 15, and 210, along with the Union Pacific Railroad and other rail transportation corridors allow for a commuting option for citizens of surrounding areas (City of Fontana, 2016).

The City of Fontana is now a major Inland Empire hub of warehousing and distribution centers. Industrial and trucking-based land uses prosper and the City also contains a large portion of retailer and small businesses (City of Fontana, 2016). Warehouses, distribution centers, and heavy industrial uses are concentrated in the City's southern half adjacent to the Interstate 10 corridor.

Along with the commuter population, a range of residential land uses have developed within the City. Single and multi-family neighborhoods are located primarily within the center of the City along with commercial land uses. Newer residential units are being developed along the northern edge of the City and a large portion of the land is undeveloped as a mix of planned communities and job centers (City of Fontana, 2003).

Land use designations for the City of Fontana are identified in the Fontana General Plan and included below in **Table 3.9-4**.

TABLE 3.9-4
CITY OF FONTANA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	16,620
Commercial	2,440
Regional Mixed	761
Industrial	8,144
Public Facilities	1,056
Recreation Facilities	928
Public Utility Corridors	1,109
Open Space	1,568
Freeway	814
TOTAL	**33,440**

SOURCE: City of Fontana, 2003

City of Montclair Land Use

The City of Montclair was once a greenbelt of citrus groves located between the agricultural communities of Pomona and Ontario (City of Montclair, 2016). Currently, the City is primarily made up of residential land uses, intermixed with commercial development around Montclair Plaza, the Entertainment Plaza, and auto dealerships. The City contains very little open space and agriculture (City of Montclair, 1999).

The City is well known for its close proximity to private universities and colleges, including the prestigious Claremont Colleges, State universities, and several community colleges (City of

Montclair, 2016). These educational institutions made the area a prime location for residential development. Additionally, the City is near Interstate 10, which allows for commuter access from Los Angeles County and other portions of the Inland Empire.

Land use designations for the City of Montclair are identified in the Montclair General Plan and included below in **Table 3.9-5**.

TABLE 3.9-5
CITY OF MONTCLAIR LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	2,064
Senior Housing (S)	20
Office-Professional	20
Commercial	607
Business Park	230
Industrial Park	308
Limited Manufacturing	75
Public/ Quasi-Public	272
Neighborhood Park	49
Conservation Basin	82
Community Plan Area	160
Planned/Development Area	72
Medical Center	20
Freeway & Railroad Right-of-ways	159
TOTAL	**4,148**

SOURCE: City of Montclair, 1999

City of Ontario Land Use

Similar to other cities within the program area, the City of Ontario was first developed as an agricultural community, largely but not exclusively devoted to citrus. Since World War II, the city has become much more diversified and now reflects an industrial and manufacturing economy. The City is well provided with major transportation corridors including railroads and freeways, along with the well-known Ontario International Airport (City of Ontario, 2016). The primary land use within the City is residential, closely followed by industrial uses.

The area of the City located northwest of Interstate 10 is an older and more historic area that is characterized by residential and industrial land uses. The airport areas northeast of State Route 60 contain a large area of hospitality, industrial, warehousing, and distribution uses. The portion of the City south of State Route 60 is characterized by residential and planned-residential communities and retail oriented commercial centers (City of Ontario, 2010).

Land use designations for the City of Ontario are identified in the Fontana General Plan and included below in **Table 3.9-6**.

TABLE 3.9-6
CITY OF ONTARIO LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	13,408.31
Commercial	2,745.5
Industrial	8,923.75
Government/Institutions	909.35
Utilities	448.51
Urban Mixed	1,140.7
Transportation	2,361.34
Open Space/Parks	1,975.1
TOTAL	**31,912.56**

SOURCE: City of Ontario, 2010; San Bernardino Association of Governments, 2013.

City of Rancho Cucamonga Land Use

The City of Rancho Cucamonga is predominantly a residential community that is largely built-out. Commercial centers and industrial land uses are primarily clustered along Foothill Boulevard, Base Line Road, and several other major roadways. The northern edge of the City is dominated by open space and hillside terrain (Rancho Cucamonga, 2010).

The residential character of Rancho Cucamonga can be described as primarily low- density and consisting of high-quality, stable neighborhoods. Most residential uses located in the northern areas include large lot, detached homes. Commercial uses vary greatly, from regional shopping centers to smaller neighborhood retail stores. Industrial uses range from heavy industrial such as Tamco Steel and Mission Foods, to warehouses, distribution centers, and light industrial that include business parks and office uses. Most of the industrial uses are located south of Foothill Boulevard, with the heavy industrial uses located on both sides of I-15 (Rancho Cucamonga, 2010).

Land use designations for the City of Rancho Cucamonga identified in the Fontana General Plan and included below in **Table 3.9-7**.

TABLE 3.9-7
CITY OF RANCHO CUCAMONGA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	10,435
Commercial	660
Mixed Use	702
Industrial	3,203
Public Facilities	3,104
Schools	536
Parks	347
Open Space and Conservation	1,893
Vacant	5,671
TOTAL	**26,551**

SOURCE: City of Rancho Cucamonga, 2010

City of Upland Land Use

The City of Upland was once dominated by citrus groves. It is located at the foot of the San Gabriel Mountains and is known for preserving a small-town character while being a medium-sized city. The City is located directly east of the Los Angeles Metropolitan area and has attracted many commuters due to easy access to Interstate 10. The City's economic anchors are the downtown area, San Antonio Hospital, and Cable Airport. Planning efforts such as revitalizing the City's historic downtown area, protection of historic buildings, and strengthening of local business, support the integrity of the City's character. In recent years, the City developed planning efforts of becoming more economically diverse by shifting planned land uses from residential development to industrial and commercial uses (City of Upland, 2015).

Land use designations for the City of Upland identified in the Fontana General Plan and included below in **Table 3.9-8**.

TABLE 3.9-8
CITY OF UPLAND LAND USE DESIGNATION

Land Use Designations	Acres
Residential	5,797.01
Commercial	1442.09
Industrial	1,234.69
Government/Institutions	333.96
Transportation	327.2
Open Space/Parks	666.15
Utilities	179.39
TOTAL	**9,980.49**

SOURCE: City of Upland, 2015; San Bernardino Association of Governments, 2013.

3.9.2 Regulatory Framework

State

California Government Code Section 53091

California Government Code Section 53091 specifies that water supply facilities such as those associated with the proposed project, are exempt from zoning restrictions. Specifically, Section 53091 states (State of California Legislative Council, 2003):

> *(d) Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.*
>
> *(e) Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water.*

Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the federally mandated Metropolitan Planning Organization representing six counties: Los Angeles, Imperial, Orange, Riverside, San Bernardino, and Ventura. The SCAG Regional Comprehensive Plan addresses important regional issues such as housing, traffic/transportation, water, and air quality and serves as an advisory planning document to support and encourage local agencies in their planning efforts.

San Bernardino Associated Governments

San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.1 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies.

Airport Land Use Compatibility Plans

The California State Legislature enacted airport land use planning laws which are intended to:

- Provide for the orderly development of each public use airport in the State and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to Section 21669 and to prevent the creation of new noise and safety problems; and
- Protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

The general mechanism that the statutes provided for compliance with the airport planning laws is for counties to establish an airport land use compatibility plan (ALUCP). The purpose of an ACLUP is to effectively identify areas, located outside of the airport proper, which would be influenced by the future operations of the airport. Planning boundaries are established on the perimeters of these areas, which are plotted, by applying the specific operational criteria of the airport, to various planning models that have been primarily developed by the FAA.

There are several airports within San Bernardino County and 15 airport land use compatibility plans (ALUCP) for airports serving San Bernardino County. The three public airports within the program area include Chino Airport, the LA/Ontario International Airport, and the Cable Airport, all of which have ALUCPs (County of San Bernardino, 2016).

County of San Bernardino General Plan

The eight elements of the County of San Bernardino General Plan form a comprehensive set of planning policies. The Land Use (LU) Element designates the general distribution and intensity of land uses within the unincorporated area of the County. The Circulation and Infrastructure (CI) Element identifies the general location and extent of proposed transportation and infrastructure facilities and utilities. The Housing (H) Element is a comprehensive assessment of current and future housing needs for all segments of the County population, as well as a program for meeting those needs. The Open Space (OS) Element describes measures for the preservation of open space for the protection of natural resources, and for public health and safety. The Conservation (CO) Element addresses the conservation, development, and use of natural resources. The Safety (S) Element establishes policies to protect the community from risks associated with natural and

man-made hazards such as seismic, geologic, flooding, wildfire hazards, and air quality. The Noise (N) Element identifies major noise sources and contains policies intended to protect the community from exposure to excessive noise levels. The Economic Development (ED) Element establishes policies to encourage and guide economic development within the County (County of San Bernardino, 2007b).

There are 18 land use zoning districts that apply only to privately owned lands in the County and not to the lands controlled by other jurisdictions. Lands are also controlled by other local jurisdictions and by federal and state agencies. The building intensity standards specified for each County land use zoning district may be modified by provisions contained in the County Development Code, Title 8 of the County Code (County of San Bernardino, 2007b).

The following goals and policies related to land use compatibility within the Land Use Element of the County of San Bernardino General Plan may be applicable to program activities taking place within unincorporated County areas (County of San Bernardino, 2007).

Goal LU 1: The County will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

Policy LU 1.1: Develop a well-integrated mix of residential, commercial, industrial, and public uses that meet the social and economic needs of the residents in the three geographic regions of the County: Valley, Mountain, and Desert.

Policy LU 1.2: The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.

Programs

2. Establish special performance standards for industrial uses to control industrial odors, air pollution, noise pollution, vibrations, dust, hours of operation, exterior storage, and other nuisances.

Goal LU 4: The unincorporated communities within the County will be sufficiently served by industrial land uses.

Policy LU 4.1: Protect areas best suited for industrial activity by virtue of their location and other criteria from residential and other incompatible uses.

Goal LU 7: The distribution of land uses will be consistent with the maintenance of environmental quality, conservation of natural resources, and the preservation of open spaces.

Policy 7.2: Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.

Goal LU 8: Beneficial facilities, such as schools, parks, medical facilities, sheriff and fire stations, libraries, and other public uses, as well as potentially hazardous sites, will be equitably distributed throughout the County.

Goal LU 9: Development will be in a contiguous manner as much as possible to minimize environmental impacts, minimize public infrastructure and service costs, and further countywide economic development goals.

Goal LU 11: Promote mutually beneficial uses of land to address regional problems through coordination and cooperation among the County, the incorporated cities, Southern California Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), the various special districts and other local, state, and federal agencies.

Policy LU 11.1: Foster intergovernmental cooperation among federal, state, and local agencies on key land use decisions

Programs

1. Develop a procedure to assure that the County, the incorporated cities, and the various special districts refer major planning and land use proposals to all affected jurisdictions for review, comment, and recommendation.

Local

City of Chino General Plan

The Chino General Plan includes five specific plans and two master plans, which are incorporated by reference into the City of Chino General Plan: the Majestic Spectrum, East Chino, Eucalyptus Business Park, College Park, and The Preserve Specific Plans, as well as the Downtown Civic Center Master Plan and Central Avenue Specific Plan (City of Chino, 2010).

The Land Use Element of the City of Chino General Plan includes the following goals, objectives and policies regarding land use that may be applicable to program activities taking place within the city (City of Chino, 2010).

Goal LU-2: Foster the development of new industrial uses.

Objective LU-2.1: Designate appropriate areas for industrial uses in order to ensure the viability of industrial activities and prevent negative impacts on the health, safety, and welfare of residents.

Policy P1: Industrial development shall be subject to design principles and performance standards consistent with General Plan policies.

Policy P2: The City shall prevent encroachment of industrial lands by incompatible uses.

Goal LU-7: Locate new development to create a consolidated pattern of urbanization, maximizing the use of existing services and facilities.

Objective LU-7.1: Encourage new development at a rate that can be served by available and planned public infrastructure.

City of Chino Hills

Chino Hills currently has two adopted Specific Plans that govern land use development within their respective boundaries are incorporated by reference into the City of Chino General Plan: The Shoppes at Chino Hills and The Commons at Chino Hills.

The Land Use Element of the City of Chino General Plan includes the following goals and policies regarding land use that may be applicable to program activities taking place within the city (City of Chino Hills, 2015).

Goal LU-2: Balance Residential with Commercial, Business, and Public Land Uses

Policy LU-2.3: Ensure public land uses and utilities blend with surrounding development

Action LU-2.3.1: Require underground utilities for all new development.

Action LU-2.3.2: Locate and design public facilities to ensure visual and functional compatibility with adjacent residential and commercial land uses.

Action LU-2.3.3: Require all utilities to be designed and installed in a manner that minimizes visual and environmental impacts.

City of Fontana

The City of Fontana General Plan contains 27 specific plans and five community plans. The Land Use Element of the Fontana General Plan includes the following goals, policies, and actions regarding land use compatibility that may be applicable to program activities that take place in the City of Fontana (City of Fontana, 2003).

Goal 1: Land Use in our community is balanced between residential, commercial, industrial, open space and recreational land uses that are developed to high standards of quality and provide diverse economic, social, and cultural opportunities for our citizens and those who wish to invest here.

Goal 2: Quality of life in our community is supported by development that avoids negative impacts on residents and businesses and is compatible with, and enhances, our natural and built environment.

Policy 2: Regionally beneficial land uses such as transportation corridors, flood control systems, utility corridors, and recreational corridors shall be sensitively integrated into our community.

Policy 5: Multiple uses within utility easements shall emphasize open spaces but may accommodate more intensive uses to safely augment adjacent uses.

Action 5: Administer a utility coordination program with utility providers to consolidate disruptions of public rights-of-way.

Action 6: Coordinate with utility providers to determine which open space opportunities have potential and negotiate agreements accordingly.

City of Montclair

Over the years, the City has adopted numerous specific plans covering a variety of land uses, and sizes of property. Some of the larger ones include the Holt Boulevard Specific Plan, Mission Boulevard Parkway Place Specific Plan, North Montclair Specific Plan, Montclair East Specific Plan, and Town Center Specific Plan.

The Land Use Element of the City of Montclair General Plan includes the following policies regarding land use compatibility that may be applicable to program activities that take place in the City of Montclair (City of Montclair, 1999).

> **Goal LU-1.0.0:** To establish an effective balance of land use, circulation, transportation, and community design and housing patterns that will promote the optimum degree of health, safety, well-being, and beauty for all areas of the community, while maintaining a sound economic base.
>
> **Objective LU-1.1.0:** To encourage compatible land uses within the City.
>
> **Objective LU-1.6.0:** To continually improve as a place for industrial development by encouraging the development of modern, attractive plants and industrial parks which will not produce detrimental effects on surrounding properties while providing employment opportunities for the residents.
>
> **Objective LU-1.7.0**: To coordinate all aspects of City development in accordance with the General Plan, including land use (commercial, industrial, housing), population densities, public facilities, circulation, transportation, and utilities, based on public need.
>
> **Policy LU-1.1.3:** Coordinate all planning and development programs in the sphere of influence with adjoining cities and county agencies.
>
> **Policy LU-1.1.4:** Participate in and support the regional activities of the Southern California Associated Governments, the San Bernardino Associated Governments, City/County Planning Commissioners Conference, and other such agencies.
>
> **Policy LU-1.1.31:** Seek the development of manufacturing and a limited amount of warehousing type industries and provide the necessary land areas in locations which are adequately served by vehicular arterial, railroad lines, and all utilities.
>
> **Policy LU-1.1.33:** Promote the general visual improvement of industrial areas by encouraging professional architectural and landscape architectural design and the careful signing of industries so that these areas contribute to the betterment of the total community.

City of Ontario

The Land Use Element of the Ontario General Plan contains the following goals and polices related to land use compatibility that may be applicable to program activities that take place in the City of Ontario (City of Ontario, 2010).

> **Goal LU2:** Compatibility between a wide range of uses.

Policy LU2-1: Land Use Decisions. We minimize adverse impacts on adjacent properties when considering land use and zoning requests.

Policy LU2-5: Regulation of Uses. We regulate the location, concentration and operations of uses that have impacts on surrounding land uses.

Policy LU2-6: Infrastructure Compatibility. We require infrastructure to be aesthetically pleasing and in context with the community character.

Policy LU2-7: Inter-jurisdictional Coordination. We maintain an ongoing liaison with IEUA, LAWA, Caltrans, Public Utilities Commission, the railroads and other agencies to help minimize impacts and improve the operations and aesthetics of their facilities.

City of Rancho Cucamonga

The City of Rancho Cucamonga has five specific plans, including the Etiwanda North, Etiwanda, Foothill Boulevard, Industrial Area, and the Sub-Area 18 Specific Plans.

The Managing Land Use, Community Design and Historic Resources Element of the Rancho Cucamonga General Plan includes the following policies regarding land use compatibility that may be applicable to program activities that take place in the City of Rancho Cucamonga (City of Rancho Cucamonga, 2010).

Goal LU-9: Foster a cohesive, healthy community through appropriate patterns and scales of development, including complementary transitions between districts, neighborhoods, and land uses.

Local Municipal Codes and Zoning Regulations

The areas associated with the proposed program are located in multiple jurisdictions of San Bernardino County, which include seven cities. Each of these cities has its own municipal code and zoning regulations that pertain to land use development and compatibility.

3.9.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to Land Use and Planning are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to Land Use and Planning if it would:

- Physically divide an established community;
- 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 purposed of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

Impacts Discussion

The precise design, location and configuration of facilities associates with each FMP project have not yet been finalized and are subject to change. Proposed facilities include aboveground structures such as treatment plant expansions, pump stations, reservoir tanks, wellheads, and portions of recharge basins. Other facilities would be located underground, such as pipelines and injection and extraction wells. Land use impacts associated with underground structures would be short-term and would only occur during the construction phase of project implementation. Long-term land use impacts would be associated with aboveground structures.

Divide an Established Community

Impact 3.9-1: The proposed program would have no impact and would not contribute to cumulative community impacts from physically dividing an established community.

Project Impact Analysis

The project does not propose any action that could physically divide an established community. The physical division of an established community generally refers to the construction of features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area.

Project Category 1: Treatment Facility Upgrades

Proposed treatment facility upgrades would be within the boundaries of existing treatment facilities. There are no features of the treatment facility upgrades that would create a barrier or physically divide an established community. Aboveground facilities would be integrated into the existing urban/industrial character of the treatment plant. There would be no impact.

Project Category 2: Conveyance Systems and Ancillary Facilities

Proposed conveyance system pipelines and ancillary facilities are anticipated to be constructed primarily within existing public rights-of-way. Once linear pipelines are constructed, some ancillary facilities could be located aboveground within close proximity to the public rights-of-way. The exact locations of the ancillary facilities have not yet been determined; however, there are no features of these ancillary facilities, such as pump stations and reservoir tanks that would create a barrier or physically divide an established community. There would be no impact.

Project Category 3: Groundwater Recharge and Extraction

The exact locations of the proposed new groundwater recharge and extraction facilities have not been identified. However, there are no features of a groundwater recharge basins, wells, or ancillary facilities that would create a barrier or physically divide an established community. Therefore, implementation of the project would not have a potential to divide a community. There would be no impact.

Combined Project Categories

There are no features of FMP projects that would create a barrier or physically divide an established community. The only linear project features would be pipelines located underground, which once constructed, would have no aboveground effects on existing access. Aboveground facilities would be integrated into the landscape or within existing treatment facilities and would not be considered features with the potential to divide a community. There would be no impact.

Significance Determination before Mitigation: No impact.

Cumulative Impact Analysis

Future cumulative development could result in the division of established communities within the IEUA service area. The future cumulative division of communities could represent a significant cumulative impact. Because the proposed FMP improvements would not include features with the potential to divide a community, the FMP projects would not contribute to potential cumulative impacts on physical community division, and therefore, there would be no cumulative impact.

Significance Determination before Mitigation: No impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact 3.9-2: The proposed program would have a less than significant and less than cumulatively considerable environmental impacts associated with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Treatment facility upgrades would be located within existing treatment plants designated for this use. All facility upgrades would be consistent with the character of the existing facility and would not substantially alter the existing character of the facilities. As such, there would be no conflicts with land use designations or existing neighborhood land uses.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible and would not conflict with land use designations or be incompatible with neighboring land uses. In addition, underground pipelines, once constructed would not pose long-term incompatibility with land uses. Some pipelines and ancillary facilities may be installed across other designated land uses and IEUA could use existing structures for proposed ancillary facilities. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. IEUA would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. IEUA would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Therefore, impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

The exact locations of the proposed ancillary facilities, groundwater recharge basins, and well facilities have not yet been determined. Pursuant to Government Code 53091, building and zoning ordinances of a county or city do not apply to the location or construction of facilities for water treatment infrastructure given the importance of the facilities to support communities. Such facilities are also exempt from General Plan compliance pursuant to Government Code section 53095. IEUA would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. IEUA would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Therefore, impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development within the IEUA service area could conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, cumulative development within the IEUA service area could result in significant cumulative environmental effects due to land use incompatibilities and conflicts with land use plans, policies or regulations. Because the potential land use impacts associated with the implementation of the FMP projects would be less than significant, the project's contribution to cumulative land use impacts would be less than cumulatively considerable and thus a less than significant cumulative land use impact would occur.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Conflict with Conservation Plans

Impact 3.9-3: The proposed program could have significant and cumulatively considerable effects on a conservation plan because the program could have conflicts with an applicable habitat conservation plan or natural community conservation plan.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The implementation of the proposed upgrades at the treatment facilities would not conflict with an adopted habitat or natural community conservation plan because the existing treatment facilities are not included within a habitat or natural community conservation plan.

Project Category 2: Conveyance Systems and Ancillary Facilities

Pipelines and ancillary facilities may be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas could conflict with the provisions of the HCPs and could represent a potential significant impact.

Project Category 3: Groundwater Recharge and Extraction

Groundwater recharge and extraction facilities may be located in areas with existing HCPs such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas could conflict with the provisions of the HCPs and could represent a potential significant impact.

Combined Project Categories

There could be improvements within the project categories that could be located in areas with existing HCPs such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, improvements within these HCP areas could conflict with the provisions of the HCPs and would represent a potential significant impact.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Implementation of cumulative development within the IEUA service area could be located in areas with existing habitat conservation plans (HCPs) such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. Therefore, cumulative development within these HCP areas would conflict with the provisions of the HCPs and could represent a potential significant impact. Since development in accordance with the IEUA FMP could result in potential impacts impact to existing HCPs, the project's contribution to cumulative impacts would be considerable and would represent a significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure BIO-10 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure BIO-10 is required.

Combined Project Categories

Implementation of Mitigation Measure BIO-10 is required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

Implementation of Mitigation Measure BIO-10 is required.

Significance Determination after Mitigation: Less than Significant.

3.9.4 References

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3.10 Noise

This section provides background information on noise and vibration, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to a level of less than significant.

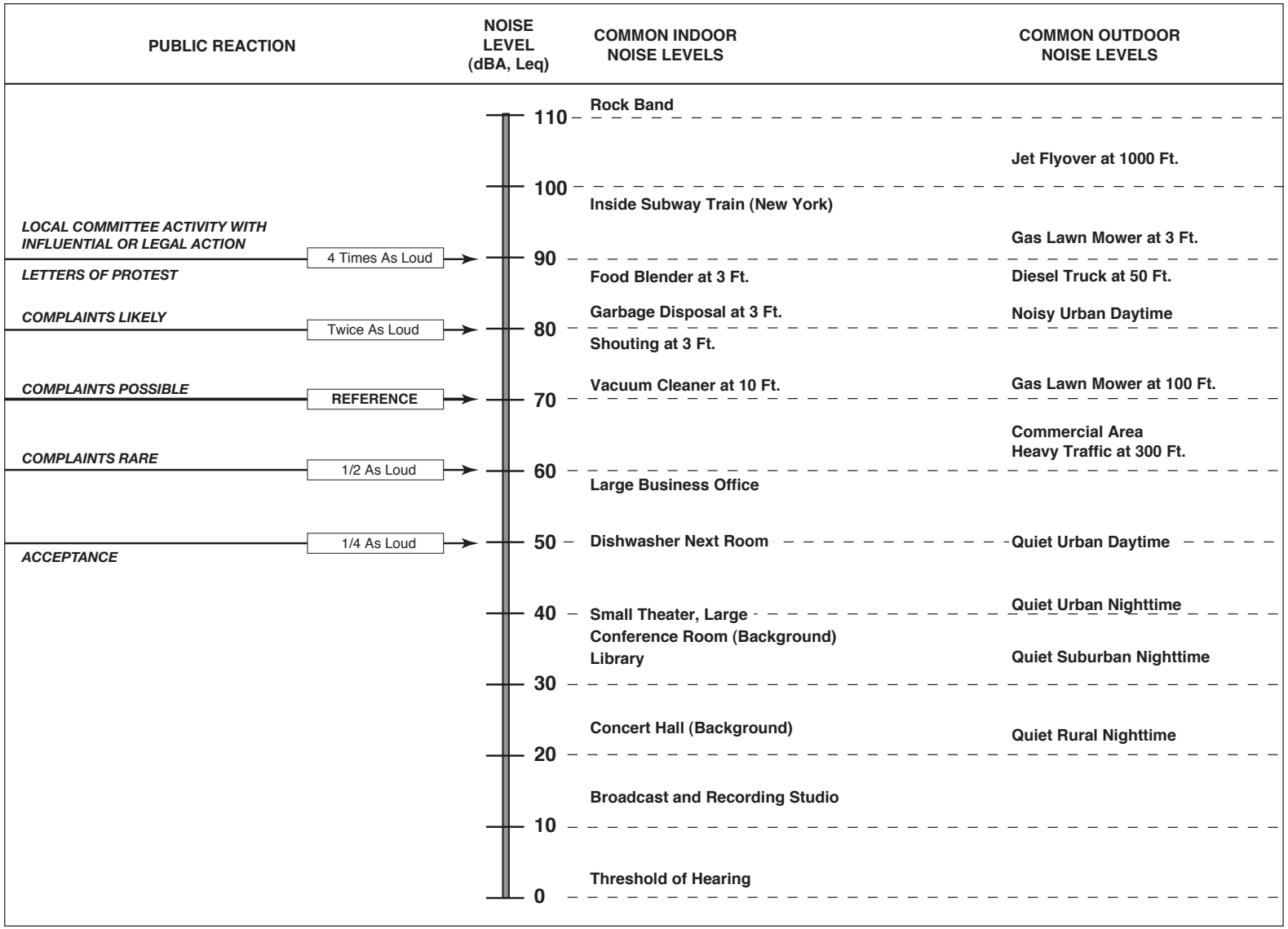
3.10.1 Environmental Setting

Environmental Noise Fundamentals

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.10-1**.



IEUA Facilities Master Plan PEIR . 150283.07

SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA.

Figure 3.10-1
Effects of Noise on People

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Figure 3.10-1 are representative of measured noise at a given instant in time, however, they rarely persist consistently over a long period of time. Rather, community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable.

The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

Lmax: The instantaneous maximum noise level for a specified period of time.

L50: The noise level that is equaled or exceeded 50 percent of the specified time period. The L50 represents the median sound level.

L90: The noise level that is equaled or exceeded 90 percent of the specified time period. The L90 is sometimes used to represent the background sound level.

Ldn/or DNL: 24-hour day and night A-weighted noise exposure level which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 PM and 7:00 AM is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: Similar to the Ldn, the Community Noise Equivalent Level (CNEL) adds a 5-dBA penalty during the evening hours between 7:00 PM and 10:00 PM in addition to a 10-dBA penalty between the hours of 10:00 PM and 7:00 AM

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA

for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2009).

Fundamentals of Vibration

As described in the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (FTA, 2006), ground-borne vibration can be a concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving and operating heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration sensitive equipment.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, day care centers, rest homes, and hospitals are generally more sensitive to noise than commercial and industrial land uses. There are numerous sensitive receptors throughout the IEUA service area and there is the potential for many sensitive receptors to be within 500 feet miles of existing and proposed IEUA assets.

3.10.2 Regulatory Framework

Federal

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use areas.[1] The guidance levels specified an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed program.

Federal Transit Authority Vibration Standards

The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in **Table 3.10-1.**

TABLE 3.10-1
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.

In addition, the FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. The vibration thresholds

[1] USEPA, EPA Identifies Noise Levels Affecting Health and Welfare. April 12, 1974.

associated with human annoyance for these three land-use categories are shown in **Table 3.10-2**. No thresholds have been adopted or recommended for commercial and office uses.

TABLE 3.10-2
GROUNDBORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB[d]	65 VdB[d]	65 VdB[d]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

a "Frequent Events" is defined as more than 70 vibration events of the same source per day.
b "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
c "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

SOURCE: FTA, 2006. Transit Noise and Vibration Impact Assessment. May.

State

Noise

The State of California does not have statewide standards for environmental noise, but the California Department of Public Health (DPH) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure (**Table 3.10-3** below). The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land uses types is categorized into four general levels: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be "normally acceptable" for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be "clearly unacceptable."

TABLE 3.10-3
COMMUNITY NOISE EXPOSURE - LDN OR CNEL (DBA)

Land Use Category	50	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Home							
Residential – Multi-Family							
Transient Lodging – Motel/Hotel							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditorium, Concert Hall, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

SOURCE: State of California, Governor's Office of Planning and Research, 2003. *General Plan Guidelines*.

Vibration

There are no state vibration standards. Moreover, according to the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual*, there

are no official Caltrans standards for vibration.[2] However, this manual provides guidelines that can be used as screening tools for assessing the potential for adverse vibration effects related to structural damage and human perception. The manual is meant to provide practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. The vibration criteria established by Caltrans for assessing structural damage and human perception are shown in **Table 3.10-4**, and **Table 3.10-5**, respectively.

TABLE 3.10-4
CALTRANS VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

TABLE 3.10-5
CALTRANS VIBRATION ANNOYANCE POTENTIAL CRITERIA

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

NOTE: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

[2] Caltrans, 2013. Transportation and Construction Vibration Guidance Manual. September.

Local

Local noise control is addressed through implementation of general plan policies, including noise and land use compatibility guidelines, and through enforcement of noise ordinance standards. Noise ordinances regulate such sources as mechanical equipment and amplified sounds as well as prescribe noise limits in residential and commercial zones. Noise regulations of San Bernardino County, as well as the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga and Upland are summarized below.

San Bernardino County Development Code

Noise. Section 83.01.080 of the County of San Bernardino Development Code establishes standards concerning acceptable noise levels for both noise sensitive land uses and for noise generating land uses.

C. Noise standards for stationary noise sources.

1. **Noise standards.** The following describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties.

Table 83-2: Noise Standards for Stationary sources

Affected Land Uses (Receiving Noise)	7 a.m. – 10 p.m. Leq dB(A)	10 p.m. – 7 a.m. Leq dB(A)
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70
SOURCE: San Bernardino County Development Code, Table 83-2, February 2009.		

2. **Noise limit categories.** No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:
   a. The noise standard for the receiving land use as specified in Subsection B (Noise impacted areas), above, for a cumulative period of more than 30 minutes in any hour.
   b. The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.
   c. The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.
   d. The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.
   e. The noise standard plus 20 dB(A) for any period of time.

D. Noise standards for adjacent mobile noise sources. Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following **Table**.

Table 83-3: Noise Standards for adjacent mobile noise sources

Land Use		LDN (or CNEL) dB(A)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multi-family, duplex, mobile homes	45	60[3]
Commercial	Hotel, motel, transient housing	45	60[3]
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:
(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
(2) The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

SOURCE: San Bernardino County Development Code, Table 83-3, February 2009.

E. Increases in allowable noise levels. If the measured ambient level exceeds any of the first four noise limit categories in Subsection (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subsection (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

F. Reductions in allowable noise levels. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by 5 dB(A).

G. Exempt noise. The following sources of noise shall be exempt from the regulations of this Section:

1. Motor vehicles not under the control of the commercial or industrial use.

2. Emergency equipment, vehicles, and devices.

3. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

Vibration

A. Vibration standard. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line.

B. Vibration measurement. Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings shall be made at points of maximum vibration along any lot line next to a parcel within a residential, commercial and industrial land use zoning district.

C. Exempt vibrations. The following sources of vibration shall be exempt from the regulations of this Section.

1. Motor vehicles not under the control of the subject use.
2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

City of Chino Municipal Code

The following are policies within the Municipal Code of the City of Chino that may be applicable to program construction activities taking place within the City:

Chapter 9.40 Noise

9.40.030- Designated Noise Zones

The properties hereinafter described are assigned to the following noise zones:

- Noise Zone I: All single-, double- and multiple-family residential properties.
- Noise Zone II: All commercial properties.
- Noise Zone III: All manufacturing or industrial properties.

(Ord. 95-10 § 1 (part), 1995.)

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (seven a.m. to ten p.m.) than the night (ten p.m. to seven a.m.). The table below shows the acceptable levels at residential land uses during the daytime and nighttime.

Maximum Time of Exposure Metric	Noise Noise Level Not to Exceed	7 am -10 pm	10 pm -7am
30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA

9.40.060- Special Provisions

D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in Section 15.44.030 of this code, and provided the noise standard of sixty-five dBA plus the limits specified in Section 9.40.040(B) as measured on residential property and any vibration created does not endanger the public health, welfare and safety

City of Chino Hills Municipal Code

The following are policies within the Municipal Code of the City of Chino Hills that may be applicable to program construction activities taking place within the City:

16.48.020 - Noise

B. Noise Standards.

1. The Noise standards contained in Table N-1 “Noise /Land Use Compatibility Matrix" in the Noise Element of the General Plan shall apply to land uses Citywide and shall be used to define acceptable and unacceptable Noise levels.

2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any Noise on property owned, leased, occupied or otherwise controlled by such person, which causes the Noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

   a) The "Zone C" Noise standard for that receiving land use specified in Table N-1 of the General Plan Noise Element for a cumulative period of more than thirty (30) minutes in any hour; or

   b) The Noise standard plus 5 dBA for a cumulative period of more than five minutes in any hour; or

   c) The Noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or

d) The Noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or

e) The Noise standard plus 20 dBA for any period of time.

Table 7.1: Land Use/Noise Compatibility Matrix

Land Use Categories		CNEL	
Categories	**Compatible Uses**	**Interior**	**Exterior**
Residential	Single-Family, Duplex, Multiple-Family	45	65
	Mobile Homes		65
Commercial	Hotel, Motel, Transient, Lodging	45	65
	Commercial, Retail, Bank, Restaurant, Health clubs	55	
	Office Buildings, Research and Development, Professional Offices	50	
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	45	
	Gym (multi-purpose)	50	
	Manufacturing, Warehousing, Wholesale, Utilities	65	
Open Space	Parks		65
Institutional/ Public Facility	Hospital, Schools, Classrooms	45	65
	Churches, Libraries	45	
SOURCE: City of Chino Hills, Noise Element, 2015			

City of Fontana Municipal Code

The following are policies within the Municipal Code of the City of Fontana that may be applicable to program construction activities taking place within the City:

Sec. 30-259 – Performance Standards

(a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property:

(1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 65 db(A).

(2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 70 db(A).

(b) Noise measurements. Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared).

(c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

City of Montclair Municipal Code

The following are policies within the Municipal Code of the City of Montclair that may be applicable to program construction activities taking place within the City:

6.12.040 - Base ambient exterior noise levels.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Zone	Time	Decibels
Residential	10:00 p.m.—7:00 am.	45 dB(A)
Residential	7:00 a.m.—10:00 p.m.	55 dB(A)
Commercial	10:00 p.m.—7:00 a.m.	55 dB(A)
Zone	**Time**	**Decibels**
Commercial	7:00 a.m.—10:00 p.m.	65 dB(A)
Industrial	10:00 p.m.—7:00 am.	60 dB(A)
Industrial	7:00 a.m.—10:00 p.m.	70 dB(A)

6.12.050 - Maximum residential/ nonresidential noise levels.

It is unlawful for any person within any zone to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured on the exterior of the property, to exceed the base ambient noise level as adjusted below:

Noise Level	Maximum Duration Period
Exceeded Level (BANL)	30 minutes in any hour
5—9 dB(A)	above BANL 15 minutes in any hour
10—14 dB(A)	above BANL 5 minutes in any hour
15—16 dB(A)	above BANL 1 minute in any hour
16 dB(A) or greater above BANL	Not permitted

6.12.060 - Exemptions.

D. Noise sources associated with construction, repair, remodeling or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on any given day and provided that the Building Official determines that the public health and safety will not be impaired. Industrial or commercial construction or public improvements, not otherwise feasible except between these hours, may be approved on a limited, short-term basis, subject to the approval of the Director of Community Development.

(Ord. 99-791 Exhibit A (part); prior code § 5-4.07)

City of Ontario Municipal Code

The following are policies within the Municipal Code of the City of Ontario that may be applicable to program construction activities taking place within the City:

Sec. 5-29.04. Exterior noise standards

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		**Allowed Equivalent Noise Level, Leq. (2)**	
Noise Zone	**Type of Land Use**	**7 a.m. to 10 p.m.**	**10 p.m. to 7 a.m.**
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;

2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

   i. The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,

   ii. The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

   iii. The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

3. Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05.

(§ 2, Ord. 2888, eff. March 6, 2008)

City of Rancho Cucamonga Municipal Code

The following are policies within the Municipal Code of the City of Rancho Cucamonga that may be applicable to program construction activities taking place within the City:

Sec. 17.66.050. - Noise standards.

C. Exterior noise standards.

1. It shall be unlawful for any person at any location within the city to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:

   a. Basic noise level for a cumulative period of not more than 15 minutes in any one hour; or

   b. Basic noise level plus five dBA for a cumulative period of not more than ten minutes in any one hour; or

   c. Basic noise level plus 14 dBA for a cumulative period of not more than five minutes in any one hour; or

   d. Basic noise level plus 15 dBA at any time.

2. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.

3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement's location, designated land use, and for the time of day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the planning director for the purpose of establishing the existing ambient noise level at the measurement location.

D. Special Exclusions

4. Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities:

   a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.

   b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line.

F. Residential noise standards.

Table 17.66.050-1 Residential Noise Limits

Location of Measurement	Maximum Allowable	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m
Exterior	60 dBA	65dBA
Interior	45 dBA	50dBA

City of Upland Municipal Code

The following are policies within the Municipal Code of the City of Upland that may be applicable to program construction activities taking place within the City:

9.40.040 Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Decibels	Time	Zone Use
45 dB(A)	10:00 p.m.—7:00 a.m.	Residential
55 dB(A)	7:00 a.m.—10:00 p.m.	Residential

65 dB(A)	Anytime	Uses not specified
75 dB(A)	Anytime	Industrial and commercial

Actual decibel measurements exceeding the above levels at the times and within the zones corresponding thereto shall be employed as the base ambient noise level referred to in this chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels. (Prior code § 5400.500)

9.40.070 Maximum residential noise levels.

Exterior noise shall be measured on the exterior of any residential property, and no noise level shall exceed the following for the duration periods specified:

Noise Level Exceeded	Maximum Duration Period
Base ambient noise level (BANL)	30 minutes in any hour
5 dB(A) above BANL	15 minutes in any hour
10 dB(A) above BANL	5 minutes in any hour
15 dB(A) above BANL	1 minute in any hour
20 d(B)(A) above BANL	Not permitted

(Prior code § 5400.800)

3.10.3 Impacts and Mitigation Measures

Significance Criteria

Consistent with the CEQA *Guidelines* Appendix G, the proposed program would result in a significant impact on the environment if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project;
- For a project located with an airport land use plan, or where such a pan 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; or

- 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 (refer to impact 3.10-5).

Noise Criteria

The *CEQA Guidelines* do not define the levels at which permanent and temporary increases in ambient noise are considered "substantial." Therefore, with regard to determining whether the project would result in a permanent and/or temporary increase in ambient noise levels in the project vicinity, the significance of the proposed project's noise impacts can be determined by comparing estimated project-related noise levels to existing baseline (no-project) noise levels to assess the magnitude of increase in ambient noise levels. Generally speaking, the average healthy ear can barely perceive a noise level change of 3 dBA. A change from 3 to 5 dBA may be noticed by some individuals who are sensitive to changes in noise. A 5 dBA increase is readily noticeable, while the human ear perceives a 10 dBA increase as a doubling of sound. Thus, for the purpose of conducting a conservative analysis, an increase in the noise environment of 5 dBA or greater at an off-site sensitive receptor during project-related construction activities, which would be temporary and short-term, is considered to constitute a significant noise impact with regard to a temporary substantial increase in ambient noise levels.

With regard to determining noise impacts associated with permanent increases in ambient noise levels generated from project operations, some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}, as shown in **Table 3.10-6**.

TABLE 3.10-6
MEASURES OF SUBSTANTIAL INCREASE FOR NOISE EXPOSURE

Ambient Noise Level without Project (L_{dn})	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more

SOURCE: Federal Interagency Committee on Noise (FICON), 1992.

Based on the noise criteria presented in Table 3.10-6, the proposed program, would result in a significant operational noise impact if a mobile noise source (e.g., project-related traffic on local roadways) or stationary noise source (e.g., new treatment system, pump stations, etc.) associated with the program would result in increased noise levels of 1.5 dBA L_{dn} or more in an ambient noise

environment greater than 65 dBA L_{dn}; or increased noise of 3 dBA L_{dn} or more in an ambient noise environment between 60 and 65 dBA L_{dn}; or increased noise of 5 dBA L_{dn} or more in an ambient environment of less than 60 dBA L_{dn}. The FICON thresholds are representative of noise increases from long-term (e.g., permanent) noise sources that could adversely affect sensitive receptors. The rationale for the Table 3.10-6 criteria is that as ambient noise levels increase, a small increase in decibel levels is sufficient to cause significant annoyance. The quieter the ambient noise level is, the more the noise can increase (in decibels) before it causes significant annoyance. Although an increase in the ambient noise environment may be significant based on the thresholds, if there are no sensitive receptors located in the vicinity of a project-related noise source that would be adversely impacted, then the noise would be deemed less than significant.

Vibration Criteria

The *CEQA Guidelines* also do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines/recommendations by the FTA to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used in this analysis to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration would be considered significant if any of the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at a reinforced concrete, steel, or timber building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any buildings "extremely susceptible to vibration damage" (i.e., a historical building).

In terms of groundborne vibration impacts associated with human annoyance, this analysis uses the FTA's vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are an infrequent number of events per day. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations, 80 VdB at residences and buildings where people normally sleep, and 83 VdB at other institutional buildings (FTA, 2006). The 65 VdB threshold applies to typical land uses where vibration would interfere with interior operations, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. The 80 VdB threshold applies to all residential land uses and any buildings where people sleep, such as hotels and hospitals. The 83 VdB threshold applies to institutional land uses such as schools, churches, other institutions, and

quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Methodology

Implementation of the proposed program would result in the introduction of new noise sources in the program area where project-related facilities are developed. The primary sources of noise associated with the proposed program would be construction activities throughout the project area and the operation of machinery at the project facilities once they have been built. Additionally, increases in ambient noise levels in the noise environment would also occur from project-related traffic volumes generated during operation, such as truck trips associated with treatment facility operation. Aside from noise levels, groundborne vibration would also be generated during the construction of the project facilities occurring throughout the project area by various construction-related activities and equipment.

To estimate the approximate noise levels that would be generated from project construction activities, data published by the United States Environmental Protection Agency (USEPA) for general outdoor construction activities and data published by the FTA identifying typical noise levels for individual pieces of construction equipment are used. Additionally, groundborne vibration levels resulting from project-related construction activities are estimated by data published by the FTA in its *Transit Noise and Vibration Impact Assessment* document for individual pieces of construction equipment.

For the purpose of this analysis, a qualitative evaluation of potential noise and groundborne vibration impacts to the surrounding noise environment during construction of project-related facilities and components is conducted. A qualitative, rather than a quantitative, analysis for construction impacts is warranted for the following reasons:

(1) The construction time periods for each of the project components are not known specifically;

(2) The proposed locations of individual project components is subject to change, and therefore

(3) The proximity of the individual project components to many sensitive receptors is also uncertain and subject to change.

For operational impacts, this analysis includes a qualitative discussion of potential noise impacts and establishes noise performance standards for potential operational noise impacts that are identified. The analysis of operational noise impacts focuses on aboveground facilities, such as treatment facilities, pump stations, injection wells, and extraction wells. There would be no noise impacts associated with operation of underground pipelines.

Impacts Discussion

Exceedance of Established Noise Standards

Impact 3.10-1: The proposed program could have significant and cumulatively considerable impacts on the 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.

Project Impact Analysis

Implementation of the FMP would involve the installation of new treatment facilities, pipelines, pump stations, storage reservoirs, recharge basins, injection or extraction wells, and other ancillary facilities within the IEUA service area.

The construction noise impacts associated with each individual FMP project would be short-term in nature and limited to the period of time when construction activity is taking place for that particular upgrade or improvement. Construction activity noise levels at and near construction areas within the project area would fluctuate depending on the particular type, number, and duration of usage of various pieces of construction equipment. Development may require the use of heavy construction equipment for activities such as site preparation, grading and excavation, trenching, installation of piping and equipment, paving, and erection of structural elements and mechanical systems. Development activities could also involve the use of smaller power tools, generators, and other sources of noise. During each stage of development for each individual project, there would be a different mix of equipment operating and noise levels would vary based on the amount and type of equipment in operation and the location of the activity. Specific construction equipment lists, material lists, construction methods, construction schedules, and workforce details would be developed in the future as specific projects are planned and designed according to the management strategies in the FMP.

The USEPA has compiled data for outdoor noise levels for typical construction activities. These data are presented in **Table 3.10-7**. The noise levels shown in Table 3.10-7 represent composite noise levels associated with typical construction activities, which take into account both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA L_{eq} measured at 50 feet from the noise source to the receptor would reduce to 78 dBA L_{eq} at 100 feet from the source to the receptor, and reduce by another 6 dBA L_{eq} to 72 dBA L_{eq} at 200 feet from the source to the receptor. **Table 3.10-8** shows typical maximum and average noise levels produced by various types of construction equipment.

TABLE 3.10-7
TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, L_{eq})[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: USEPA, 1971.

The construction activities for each proposed FMP project could temporarily expose their respective existing off-site surrounding land uses to increased noise levels while construction activities are ongoing. As shown in Table 3.10-7, excavation activities can typically generate noise levels of 89 dBA L_{eq} at 50 feet from the construction noise source.

It should be noted that the construction noise impacts at existing off-site receptors would be dependent on various factors, including the amount of construction activity occurring on a given day, the distance between the construction activities and the off-site receptors, the presence of any existing structures that may act as noise barriers for the off-site receptors, and the existing ambient noise levels at the off-site receptor locations. Some of the construction activities associated with the proposed projects would also have relatively shorter durations and, consequently, less frequent noise impacts on nearby off-site uses. For instance, noise impacts from expansion of treatment facilities, would be of much longer duration than pipeline construction since the construction activities would physically progress along the length of the public right-of-way rather than remaining stationary at one location.

TABLE 3.10-8
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Maximum Noise Level (dBA, L_{max} at 50 feet)	Average Noise Level (dBA, L_{eq} at 50 feet)[a]
Air Compressor	80	76
Auger Drill Rig	85	78
Backhoe	80	76
Compactor	80	73
Concrete Mixer Truck	85	81
Concrete Pump Truck	82	75
Crane (Mobile)	85	77
Dozer	85	81
Drill Rig Truck	84	77
Dump Truck	84	80
Generator	82	79
Grader	85	81
Front End Loader	80	76
Jack Hammer	85	78
Paver	85	82
Pile –Driver (Impact)	101	94
Pile-Driver (Vibratory)	101	94
Pneumatic Tool	85	82
Scraper	85	81

[a] The average noise levels for the construction equipment at 50 feet were calculated from the maximum noise levels using the usage factors for each piece of equipment provided in the Federal Highway Administration's (FHWA) Roadway Construction Noise Model.

SOURCE: FHWA, 2006.

Project Category 1: Treatment Facility Upgrades

Construction

All treatment plant facility upgrades would be installed and implemented within the existing treatment plant footprints. Construction of the proposed improvements would occur intermittently over the next 20-25 years. The IEUA assets are located within a built-up environment and are surrounded by various sensitive receptors such as residents and parks. **Table 3.10-9** below shows each IEUA asset and the distance to the closest sensitive receptor.

TABLE 3.10-9
SENSITIVE RECEPTOR DISTANCE FROM IEUA ASSETS

IEUA Asset	Distance to Closest Sensitive Receptor
RP-1	850 feet
RP-2	2,270 feet
RP-4	4,480 feet
RP-5	1,690 feet
CCWRF	420 feet
IERCF	4,480 feet

SOURCE: Google Earth, 2016

The proposed facility upgrades' construction activities could expose existing land uses located in proximity to the proposed projects to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. The construction noise standards and/or regulations that would apply to each of the FMP projects would depend on the cities of Chino, Ontario, and Rancho Cucamonga. Figure 2-2 shows the locations of the IEUA assets in the project area. Noise during construction of treatment facilities may exceed local construction noise standards or violate local construction noise regulations.

Based on the information presented in Table 3.10-9, the closest sensitive receptor to the treatment plants are residents located 420 feet west of the Carbon Canyon Water Recycling Facility (CCWRF). This distance is far enough away that the residents would not be impacted by excessive noise, particularly since construction activities would occur during daylight hours. Furthermore, the remaining five treatment plants are located far enough away from sensitive receptors that no significant noise level impacts would occur during construction. As such, impacts would be less than significant.

Operation

Once construction of a proposed treatment facility upgrades has been completed, the surrounding off-site land uses would be exposed to operational noise levels generated by the new aboveground facilities. Treatment facilities have the potential to generate the most operational noise due to operation of heating, ventilating, and air conditioning (HVAC) equipment and other mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. However, the new facilities would be designed to meet acoustic performance criteria that would comply with the local ambient noise standards at the facility fence-line for a stationary noise source. Furthermore, sensitive receptors are located far enough away from the treatment facilities such that noise levels increases would not be experienced. Impacts would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Conveyance and ancillary facility construction activities would involve trenching for new pipelines and installation of any additional supporting infrastructure. Construction of the proposed projects would occur intermittently over the next 20-25 years.

Given the urbanized environment of the service area, many of the projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses. In most cases, the construction of conveyance infrastructure along existing public rights-of-way, existing off-site land uses may be located less than 50 feet from the construction activities. Thus, the proposed project's construction activities would expose existing land uses located in proximity to the pipelines and ancillary facilities like pump stations to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. Because not all locations of the projects are determined at this time, the construction noise standards and/or regulations that would apply to each of the projects would depend on the agency with jurisdiction over each project location. Noise during construction, depending upon the final location of facilities, may exceed local construction noise standards or violate local construction noise regulations. As a result, construction noise impacts would be potentially significant.

Operation

No long-term operational noise impacts from underground facilities such as pipelines are anticipated. The aboveground facilities have the potential to generate some operational noise due to operation of mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. Given the urbanized environment of the IEUA service area, many of the aboveground facilities could operate in proximity or adjacent to existing noise-sensitive land uses, such as residential uses, schools, hospitals, etc. The operation of these facilities could potentially expose the adjacent sensitive receptors to noise levels that exceed local established exterior noise standards. Noise-generating equipment such as new aboveground pump stations and other ancillary facilities would be designed to meet local nighttime ambient noise standards, such that local sensitive receptors would not experience increase in noise. Impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Construction

Impacts would be the same as Project Category 2.

Operation

Impacts would be the same as Project Category 2.

Combined Project Categories

Not all of the proposed projects' locations are determined at this time, therefore, depending on how close an actual receptor location is to a construction site, construction, and operation of proposed projects could expose people to noise levels in excess of standards established in the local general plan or noise ordinances. Impacts would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development could result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinances which could represent a significant impact. Because the proposed FMP improvements could result in excessive noise levels during construction, the project's contribution to cumulative impacts on generation of noise levels in excess of standards throughout the IEUA service area would be cumulatively considerable, and thus result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

NOISE-1: IEUA shall implement the following measures during construction:

- Include design measures where feasible to reduce the construction noise levels if necessary to comply with local noise ordinances. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site.
- Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals.
- Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.
- Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible, and require that these noise sources be muffled and enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances..
- Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications.
- If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the

campus. Efforts to limit construction activities to non-school days shall be encouraged.

- For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.

NOISE-2: IEUA shall require that all FMP-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable city or county noise level requirements at neighboring property lines.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures NOISE-1, NOISE-2, NOISE-3, and NOISE-4 is required.

NOISE-3: For construction activities during non-standard working hours or hours that are not exempt from compliance with applicable city or county noise ordinances (e.g., 24-hour well drilling), IEUA will secure a noise waiver from the appropriate jurisdiction if available.

NOISE-4: ~~Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible.~~

Prior to commencement of construction related to the FMP programs at a specific site for that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to the start of such activity.

Combined Project Categories

Implementation of Mitigation Measures NOISE-1, NOISE-2, NOISE-3, and NOISE-4 is required.

Significance Determination after Mitigation: Significant and Unavoidable after Mitigation.

Construction

To reduce the construction noise impacts associated with the FMP projects, Mitigation Measure NOISE-1 would be implemented, which would require all construction activities to be conducted in accordance with the applicable local noise regulations and standards, the implementation of noise reduction devices and techniques during construction activities, and advance notification of the surrounding noise-sensitive receptors to a construction site about upcoming construction activities and their hours of operation. This would serve to reduce the construction-related noise levels at nearby receptors to the maximum extent feasible. However, there may be circumstances where the construction activities for a particular FMP project are unable to comply with the local noise regulations and/or standards.

Furthermore, while the majority of the construction activities associated with the FMP projects would occur during daytime hours, the construction of the injection and extraction wells would require drilling that requires 24 hour activity. Since all of the jurisdictions in the IEUA service area (the majority of which exempts construction noise from regulation by established exterior noise standards) do not have provisions that would allow for nighttime construction activities, a noise waiver would need to be obtained for these activities. Thus, Mitigation Measure NOISE-3 would be implemented, which would require IEUA to obtain a noise waiver from the jurisdiction where the project is located. However, even with the issuance of a noise waiver, the increase in ambient noise levels at adjacent properties may still be substantial enough such that the nighttime exterior and/or interior noise standards for noise-sensitive uses (e.g., residential uses) in a particular jurisdiction may be exceeded.

To address this noise impact, Mitigation Measure NOISE-4 would be implemented, which would require injection and extraction wells to be located as far away from sensitive receptors as possible and that temporary noise barriers be erected where new wells are located in the immediate vicinity of sensitive receptors to the extent feasible. Nonetheless, despite the implementation of Mitigation Measures NOISE-4, it is anticipated that the noise levels from well drilling would still likely exceed the established local nighttime exterior noise levels for noise-sensitive land uses that are located adjacent to a well-drilling site, in particular residential uses. Thus, these noise impacts for Project Category 3 injection and extraction wells are considered to be significant and unavoidable.

Operation

To reduce the operational noise impacts of the FMP project's aboveground facilities on nearby or adjacent noise-sensitive receptors, Mitigation Measure NOISE-2 would be implemented, which requires operational noise levels of all new facilities to be in compliance with the noise standards in the local noise ordinances. Impacts would be considered less than significant with mitigation.

Cumulative Measures

Implementation of Mitigation Measures NOISE-1, NOISE-2, NOISE-3, and NOISE-4 is required.

Significance Determination after Mitigation: Significant and Unavoidable after Mitigation for Construction.

Exposure to Vibration Levels

Impact 3.10-2: The proposed program could have significant and cumulatively considerable impacts on persons and structures from ground-borne vibration or ground-borne noise levels.

Project Impact Analysis

Construction of the FMP projects would include activities such as grading, excavation, and drilling, which would have the potential to generate low levels of groundborne vibration. Persons residing and working in an area located in proximity to a construction site could be exposed to excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site.

The various PPV and RMS velocity (in VdB) levels for the types of construction equipment that could operate during the construction of the FMP projects are identified in **Table 3.10-10**. Based on the information presented in Table 3.10-10, vibration velocities could reach as high as approximately 1.518 inch-per-second PPV at 25 feet from the source activity when impact pile driving is used. This corresponds to a RMS velocity level (in VdB) of 112 VdB at 25 feet from the source activity.

Project Category 1: Treatment Facility Upgrades

Construction

Depending on how close a receptor location is to a construction site, and the type of building the receptor is (e.g., engineered concrete and masonry building, non-engineered timber and masonry building, historical building, etc.), the vibration levels at a receptor location could exceed the FTA's vibration thresholds for building damage and human annoyance. It is anticipated that construction of the proposed treatment facility upgrades would employ conventional techniques and the equipment to be used would typically not cause excessive ground-borne vibration.

TABLE 3.10-10
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Construction Equipment		PPV at 25 feet (inches/second)[a]	RMS at 25 feet (VDB)[b]
Pile Drive (Impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (Sonic)	Upper range	0.734	105
	Typical	0.170	93
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

SOURCE: FTA, 2006.

Based on the information presented in Table 3.10-9, the closest sensitive receptor to the treatment plants are residents located 420 feet west of the CCWRF. This distance is far enough way that the residents would not be impacted by vibration levels or ground-borne noise levels that would result in building damage or human annoyance. Furthermore, the remaining five treatment plants would be located far enough away from sensitive receptors such that no significant vibration impacts would be felt during construction. No impacts would occur.

Operation

Once constructed, the treatment plant facilities would not expose persons or structures to ground-borne vibration or ground-borne noise levels. No impacts would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction

Construction activities for the proposed conveyance systems, ancillary facilities, and groundwater recharge and extraction projects would have the potential to impact their respective nearby sensitive receptors. Given the urbanized environment of the project area, the potential exists for construction of a specific project to be located within 25 feet of an adjacent land use. Consequently, existing off-site receptors that are located immediately adjacent to a construction site could be exposed to excessive groundborne vibration levels. While it is anticipated that construction of the proposed projects would employ conventional techniques and the equipment to be used would typically not cause excessive ground-borne vibration, drilling would be required during the installation of injection and extraction wells. Additionally, the installation of pipelines could also require jack and bore construction, depending on the local geology and location of the FMP projects, which can result in vibration levels similar to well drilling operations. As shown in Table 3.10-10, drilling activities could generate peak vibration levels of 0.089 PPV and 87 RMS

at a distance of 25 feet. Where potential adjacent receptors are located less than 25 feet from a construction site that employs drilling, the vibration levels experienced by these receptors would be even greater.

As the specific locations for the proposed pump stations recharge basins, ancillary facilities, and injection and extraction wells are undetermined at this time, and given the short-term nature of construction events, it is anticipated that there would be an infrequent amount of vibration events per day at sensitive land use receptors resulting from project-related construction activities. However, depending on how close an actual receptor location is to a construction site, and the type of building the receptor, the vibration levels at a receptor location could exceed the FTA's vibration thresholds for building damage and human annoyance. As such, vibration impacts during construction associated with the proposed project on existing nearby receptors would be potentially significant.

Operation

Once constructed, the proposed facilities would not expose persons or structures to ground-borne vibration or ground-borne noise levels. No impacts would occur.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Not all of the proposed projects' locations are determined at this time, therefore, depending on how close an actual receptor location is to a construction site, and the type of building the receptor is, the vibration levels at a receptor location could exceed the FTA's vibration thresholds for building damage and human annoyance. As such, vibration impacts during construction associated with the proposed project on existing nearby receptors would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development could expose persons and structures to ground-borne vibration or ground-borne noise levels which would represent a significant environmental impact. Because the proposed FMP improvements could result in ground-borne vibration or ground-borne noise levels near sensitive receptors, the project's contribution to cumulative impacts on vibration would be cumulatively considerable, and thus result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

NOISE-5: IEUA shall require the construction contractor(s) to implement the following measure:

Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various FMP projects. Use of small rubber-tired bulldozers shall be encouraged within these areas during grading operations to reduce vibration effects.

NOISE-6: Where a FMP project would be constructed adjacent to an existing or potential historic building, IEUA shall require by contract specifications that a certified structural engineer be retained to submit evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building. Contract specifications shall be included in the construction documents for the applicable FMP project development.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measures NOISE-5 and NOISE-6 is required.

Combined Project Categories

Implementation of Mitigation Measures NOISE-5 and NOISE-6 is required.

Significance Determination after Mitigation: Less than Significant with Mitigation. Implementation of Mitigation Measure NOISE-5, which would discourage the use of construction equipment that generates high levels of vibration (i.e., large bulldozers, loaded trucks, drill rigs, and jackhammers) within specific distances from existing land uses that are located near active construction areas, would reduce the construction-related vibration levels experienced by these existing off-site land uses. Additionally, implementation of Mitigation Measure NOISE-6 would serve to ensure the safety of existing historic buildings by requiring a certified structural engineer to analyze and provide evidence that no structural damage would result at these buildings due to the project's construction activities. Although construction related vibration could be experienced for some specific locations, impacts would be limited in scope and scale and substantially avoided or minimized with implementation of the Mitigation Measures NOISE-5 and NOISE-6; therefore, vibration impacts would be less than significant with mitigation.

Cumulative Measures

Implementation of Mitigation Measures NOISE-5 and NOISE-6 is required.

Significance Determination after Mitigation: Less than Significant with Mitigation. Implementation of Mitigation Measures NOISE-5 and NOISE-6 would ensure that the proposed facilities' contribution to cumulative vibration impacts would be reduced to less than

cumulatively considerable by discouraging the use of construction equipment that generates high levels of vibration and requiring a certified structural engineer to analyze and provide that evidence that no structural damage would result at nearby buildings due to the project's construction activities.

Permanent Increase in Ambient Noise Levels

Impact 3.10-3: The proposed program could have a significant and cumulatively considerable permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Project Impact Analysis

As discussed under Impact 3.10-1, noise levels generated by operation of the FMP projects would result from the aboveground facilities, including treatment facilities, pump stations, and injection and extraction wells. Noise levels from the treatment facilities would stem from the operation of HVAC equipment and other mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. The noise levels generated from the project's aboveground facilities would vary depending on their size, intensity of equipment usage, and geographic location. Additionally, the operational noise impacts these aboveground facilities would have on nearby noise-sensitive receptors would also vary depending on the distance of the nearby receptors from the noise source and the existing ambient noise levels at the receptors. As discussed previously, with regard to determining noise impacts associated with permanent increases in ambient noise levels generated from project operations, the FICON noise criteria shown in Table 3.10-6 are used for the purpose of this analysis.

Project Category 1: Treatment Facility Upgrades

The proposed improvements to treatment facilities would comply with local noise standards during operations. As seen in Table 3.10-9, sensitive receptors are located far enough away from treatment plant facilities that no increases of operational noise would be experienced by the receptors. Thus, the project's operational noise would not increase ambient noise levels at nearby noise-sensitive receptors. No impact would occur.

Furthermore, the increase in traffic resulting from implementation of the proposed treatment facility upgrades would be minimal and consistent with existing traffic levels. Worker and delivery trips would primarily be generated by operation of the water treatment facilities. Due to the urban environment of the project area, the local roadway networks would be expected to consist of existing high traffic volumes that result in existing high traffic noise levels. With respect to traffic noise, it would generally require a doubling of traffic volumes on a roadway in order to increase the existing traffic noise levels by 3 dBA. As the traffic volumes generated by operation of the proposed treatment facilities would not result in a doubling of traffic volumes on the local roadways, the noise impacts associated with the project's operational traffic noise levels would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Since the preliminary siting of proposed aboveground facilities have not been finalized at this time and could be subject to change in the future, the existing ambient noise levels at potentially affected noise-sensitive receptors could not be determined at this time. Noise-generating facilities would be designed to avoid increases in ambient noise levels. Given that many of the aboveground FMP facilities would operate in the urbanized and developed areas in and around the IEUA service area, these facilities could be located in proximity to noise-sensitive land uses (e.g., residential uses, schools, hospitals, etc.). Given the acoustic design requirements to avoid increases in ambient noise levels; increased noise levels exceeding the FICON noise criteria would not be expected. Thus, the project's operational noise impact related to a permanent increase in ambient noise levels at nearby noise-sensitive receptors would be less than significant.

The traffic volumes associated with the projects would generally be minimal. Worker trips to the pump stations and injection and extraction wells would be required for inspection and maintenance purposes and these visits would only occur periodically throughout the month. These periodic trips are not expected to result in a doubling of traffic volumes on the local roadways; therefore the noise impacts associated with the project's operational traffic noise levels would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Since not all locations of proposed FMP projects are determined at this time, there is potential for facilities to be located in proximity to noise-sensitive land uses and expose these uses to increased noise levels exceeding the FICON noise criteria. Thus, the project's operational noise impact related to a permanent increase in ambient noise levels at nearby noise-sensitive receptors would be potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development could result in a substantial permanent increase in ambient noise levels within the IEUA service area, which would represent a significant environmental impact. Because the proposed FMP improvements could result in a permanent increase in ambient noise levels, the project's contribution to cumulative impacts on ambient noise levels would be cumulatively considerable, and thus result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure NOISE-2 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure NOISE-2 is required.

Combined Project Categories
Implementation of Mitigation Measure NOISE-2 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure NOISE-2 would reduce operational noise levels of the project's aboveground facilities by locating those facilities away from noise-sensitive receptor areas and installing proper acoustical shielding around the facilities. Therefore, operational noise impacts would be less than significant with mitigation.

Cumulative Measures

Implementation of Mitigation Measure NOISE-2 is required.

Significance Determination after Mitigation: Less than Significant. Implementation of Mitigation Measure NOISE-2 would ensure that the proposed facilities' contribution to cumulative noise impacts would be reduced to less than cumulatively considerable by locating facilities away from noise-sensitive receptors and installing proper acoustical shielding around the facilities.

Temporary Increase in Ambient Noise Levels

Impact 3.10-4: The proposed program could have a significant and cumulatively considerable temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project.

Project Impact Analysis

During implementation of the proposed projects, temporary or periodic increases in noise levels in and around the IEUA service area would result primarily from construction activities associated with the FMP projects. As discussed in Impact 3.10-1, the construction activities for each FMP project would expose their respective nearby existing uses to increased noise levels. Where a construction site associated with the proposed project is located within 25 feet of an existing noise-sensitive land use, the resulting construction noise levels at that existing land use could reach as high as 95 dBA L_{eq} during excavation activities, which would result in a substantial noise increase over existing ambient noise levels at that existing land use. Under conditions where the distance between a construction site and an existing noise-sensitive land use is closer than 25 feet, the construction noise levels experienced by the existing land use would be even greater. For the purposes of this PEIR, the criteria used to determine whether construction activities associated with the proposed project would result in a substantial temporary or periodic increase in ambient noise levels at off-site sensitive uses is a 5 dBA increase.

Project Category 1: Treatment Facility Upgrades

Table 3.10-9 shows that sensitive receptors are located far enough away from treatment plant facilities that no construction noise would be heard from the receptors. Thus, the project's construction noise would not temporary increase ambient noise levels at nearby noise-sensitive receptors. No impact would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

As existing sensitive land uses in and around the IEUA service area could potentially be located in proximity or adjacent to the future project sites, it is concluded in this analysis that the construction noise levels generated by the projects would result in a substantial temporary increase in ambient noise levels at those existing land uses. Impacts would be potentially significant.

In addition to noise levels generated at construction sites, construction-related traffic volumes on local roadways would also raise the ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Consequently, noise-sensitive land uses that front or are located in proximity to these roadways would be exposed to increased ambient noise levels. However, due to the urban environment of the project area, the local roadway networks would be expected to consist of existing high traffic volumes that result in existing high traffic noise levels. As the project's construction traffic for each project is not expected to result in a doubling of traffic volumes on a local roadway, the noise impacts associated with the project's construction traffic noise levels would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Because all locations of the proposed projects are not determined at this time, there is the potential for construction to result in a substantial temporary or periodic increase in ambient noise levels. Although the noise impact from the proposed project's construction traffic would be less than significant, the noise impact at off-site sensitive land uses located in proximity to the construction sites would remain potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development could result in a substantial temporary or periodic increase in ambient noise levels throughout the IEAU service area and this would represent a significant environmental impact. Because the proposed FMP improvements could result in temporary or periodic increases in ambient noise levels near the individual project areas, the project's contribution to cumulative impacts on temporary ambient noise levels would be cumulatively considerable, and thus result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measure NOISE-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measures NOISE-1, NOISE-3, and NOISE-4 is required.

Combined Project Categories
Implementation of Mitigation Measures NOISE-1, NOISE-3, and NOISE-4 is required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. Although implementation of Mitigation Measures NOISE-1 and NOISE-4 would reduce construction noise levels associated with the proposed projects to the maximum extent feasible, temporary increases in ambient noise due to construction activities of conveyance systems, recharge basins, and wells may be experienced over the course of the planning period. In addition, some activities may require nighttime construction. Despite the implementation of Mitigation Measures NOISE-1, NOISE-3, and NOISE-4, it is anticipated that the noise levels from construction could temporarily increase noise levels, in particular locations. Thus, temporary increases to ambient noise levels for Project Category 3 are considered to be significant and unavoidable.

Cumulative Measures

Implementation of Mitigation Measures NOISE-1, NOISE-3, and NOISE-4 is required.

Significance Determination after Mitigation: Significant and Unavoidable with Mitigation. The implementation of Mitigation Measures NOISE-1, NOISE-2, and NOISE-3 would reduce construction noise levels to the maximum extent feasible; however, the proposed facilities' contribution to cumulative noise impacts would be cumulatively considerable because of the project's contribution to all other construction taking place within the IEUA service area. Temporary noise levels could increase in particular locations despite implementation of mitigation measures. Impacts are considered to be significant and unavoidable.

Public Airport and Private Airstrip Noise

Impact 3.10-5: The proposed program would have a less than significant and less the cumulatively considerable noise level impacts on people residing or working within two miles of a public airport, public use airport, or private airstrip.

Project Impact Analysis

The following three airports are located within IEUA's service area boundaries: the Chino Airport, the LA/Ontario International Airport, and the Cable Airport in Upland. There are no private airstrips located within the IEUA service area.

Project Category 1: Treatment Facility Upgrades

Chino Airport

The City of Chino Airport is located approximately 1.7 miles southwest of RP-2; 1.7 miles west of RP-5; and 2.6 miles northwest of CCWRF. The City of Ontario International Airport is located approximately 1.7 miles north of RP-1. Furthermore, there are no treatment facilities that require full time employees within 2 miles of the Cable Airport.

All full-time employees would be at least a 1.5 miles away from the three airports. Employees may occasionally hear airplanes pass by overhead; however the employees would not be exposed to substantial, long-term airport-related noise. Therefore the proposed projects would not expose persons to excessive airport-related noise levels. Exposure to airport noise would be a less than significant impact.

Project Category 2: Conveyance Systems and Ancillary Facilities

Proposed pipelines, pump stations, recharge basins, or wells could be constructed and operated within 2 miles of an airport. There would be no habitable structures proposed for these facilities. Furthermore, maintenance and inspection of the proposed pipelines and ancillary facilities would be minimal during project operations. Therefore the proposed projects would not expose persons to excessive airport-related noise levels. Exposure to airport noise would be a less than significant impact.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Full-time employees would not be exposed to substantial, long-term airport-related noise. Furthermore, maintenance and inspection of the proposed non-habitable facilities would be minimal during project operations. Therefore the proposed projects would not expose persons to excessive airport-related noise levels. Exposure to airport noise would be a less than significant impact.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could expose people residing or working within two miles of a public airport, public use airport, or private airstrip to excessive noise levels within the IEUA service area. Because the proposed FMP improvements would not expose people to excessive noise levels regarding airport noise, the project's contribution to cumulative impacts on exposure of people to airport related noise would not be cumulatively considerable, and thus would result in no significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

3.10.4 References

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3.11 Population and Housing

This section examines the existing population and housing conditions for the affected cities and unincorporated areas of San Bernardino County that lie within the IEUA service area boundaries, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP and mitigation measures to reduce those impacts to less than significant.

3.11.1 Environmental Setting

Regional

The San Bernardino Valley and Chino Basin are part of the Inland Empire, an urban region distinct from the coastal urban centers and the more rural desert regions of Southern California. The Inland Empire is one of the fastest growing regions in the United States (San Bernardino, 2014). The 242-square-mile IEUA service area is a core portion of the Inland Empire and includes unincorporated areas of San Bernardino County, as well as the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills; City of Rancho Cucamonga (see Figure 2-2).

The Southern California Association of Governments (SCAG) forecasts three major growth indicators including population, households, and employment. These forecasts are provided in the regional transportation plans that are periodically updated by SCAG.

Population

According to the SCAG *Profile of San Bernardino County 2015,* the total population of San Bernardino has increased by 373,530 people from 2000 to 2014. During that 14 year period, the growth rate was 22 percent, which was higher than the SCAG Region rate of 12.3 percent. San Bernardino County contributed a total of 11.2 percent of the SCAG Region population.

SCAG and Department of Finance (DOF) population estimates are enumerated in **Table 3.11-1** for the cities within the IEUA service area and the entire County of San Bernardino beginning with the base year 2008 and SCAG forecasting 2020 and 2035. The 2015 population estimate for San Bernardino County is approximately 2,104,291 (DOF, 2015). SCAG updated the County of San Bernardino's population estimate in the 2016-2040 Regional Transportation Plan/Sustainable Communities Plan (RTP/SCS). These estimates were for the years 2012 and 2040. Based on the 2015 and 2040 population data, the persons within the County are forecast to increase by 29.8 percent over the next 25 years and is expected to have an estimated population of 2,731,300 people in the year 2040 (SCAG, 2016).

Housing

Along with the projected population increases, there will be a corresponding increase in the estimated number of dwelling units within the IEUA service area. According to the County of San Bernardino General Plan, the spatial distribution of residential construction continues to be skewed toward the Valley Region of the County (County of San Bernardino, 2014). **Table 3.11-2**

summarizes the expected dwelling units for the cities within the IEUA service area and the entire County. The housing estimates for 2008, 2020, and 2035 are derived from SCAG's 2012-2035 RTP/SCS and the housing estimates for 2012 and 2040 are based on SCAG's 2016-2040 RTP/SCS. The housing estimate for 2015 is from the California Department of Finance. As shown in Table 3.11-1, the County's housing will increase by 10.7 percent over the next 25 years and is expected to have an estimated housing of 854,300 dwelling units in the year 2040.

TABLE 3.11-1
POPULATION PROJECTIONS FOR THE IEUA SERVICE AREA

City	2008[a]	2012[b]	2015[c]	2020[a]	2035[a]	2040[b]	Population % Increase from 2015-2040 forecast
Chino	75,600	79,400	84,465	88,800	107,200	120,400	42.5%
Chino Hills	74,600	75,800	77,596	76,600	78,400	94,900	22.3%
Fontana	193,900	200,200	204,312	222,700	259,100	280,900	37.5%
Montclair	36,000	37,200	38,548	39,700	43,900	42,700	10.8%
Ontario	162,900	166,300	168,777	203,800	307,600	258,600	53.2%
Rancho Cucamonga	162,800	170,100	174,064	167,100	167,100	204,300	17.4%
Upland	72,600	74,700	75,787	76,700	80,200	81,700	7.8%
Total San Bernardino County	**2,016,000**	**2,068,000**	**2,104,291**	**2,268,000**	**2,750,000**	**2,731,300**	**29.8%**

[a] SOURCE: SCAG 2012
[a] SOURCE: SCAG 2016
[a] SOURCE: DOF, 2015

TABLE 3.11-2
HOUSING FORECAST (DWELLING UNITS)

City	2008[a]	2012[b]	2015[c]	2020[a]	2035[a]	2040[b]	Housing %Increase from2015 to 2040
Chino	20,100	21,000	18,635	24,600	29,200	34,000	19.7%
Chino Hills	22,900	23,000	26,197	24,000	25,600	28,300	8.0%
Fontana	48,600	49,600	51,580	57,500	66,700	74,000	43.5%
Montclair	9,300	9,600	9,722[d]	10,400	11,600	11,600	19.3%
Ontario	44,600	45,100	50,314	57,700	87,300	75,300	49.7%
Rancho Cucamonga	53,600	55,400	56,687	56,300	57,600	73,100	29.0%
Upland	25,400	25,900	28,060	28,300	31,300	28,900	3.0%
Total San Bernardino County	**606,000**	**615,300**	**771,715**	**698,000**	**847,000**	**854,300**	**10.7%**

[a] SOURCE: SCAG 2012
[a] SOURCE: SCAG 2016
[a] SOURCE: DOF, 2015
[d] SOURCE: US Census Bureau, 2014. Based on housing growth of 0.36% in 2012 and 2013 and 0.54% in 2014 to derive 2015 housing units.

Employment

In 2016, the California Employment Development Department (EDD) reported that the average annual unemployment rate in the San Bernardino County for 2015 was 59,800, or 6.5 percent (as compared to the statewide unemployment rate of 6.2 percent for 2015) (EDD, 2016a and 2016b). As shown in **Table 3.11-3**, the total employment within the cities located in the IEUA service area as well as the entire County reduced for some of the cities and the County between 2008 and 2012 due to the recession. As shown in Table 3.11-3, employment is projected to increase by 55.9 percent over the next 25 years within the County and is estimated to have total employment of 810,000 in the year 2040. As projected by the County of San Bernardino, the majority of the unincorporated County employment growth is expected to occur in the West Valley Region (County of San Bernardino, 2014).

TABLE 3.11-3
EMPLOYMENT FORECAST

City	2008[a]	2012[b]	2020[a]	2035[a]	2040[b]	Employment %Increase from2015 to 2040
Chino	48,500	42,600	53,500	67,700	50,600	18.8%
Chino Hills	9,300	11,500	10,500	12,900	18,600	61.7%
Fontana	47,600	47,000	53,700	70,800	70,800	50.6%
Montclair	16,500	16,500	17,000	18,400	19,000	15.2%
Ontario	114,300	103,300	142,900	214,400	175,400	69.8%
Rancho Cucamonga	62,500	69,900	63,900	68,300	104,600	49.6%
Upland	27,900	31,700	29,700	33,400	43,500	37.2%
Total San Bernardino County	**701,000**	**659,500**	**810,000**	**1,059,000**	**1,028,100**	**55.9%**

[a] SOURCE: SCAG 2012
[a] SOURCE: SCAG 2016

3.11.2 Regulatory Framework

State

Southern California Association of Governments

SCAG is a Joint Powers Agency established under California Government Code Section 6502 et seq. SCAG is designated as a Council of Governments, a Regional Transportation Planning Agency, and a Metropolitan Planning Organization for a six-county region that includes Ventura County. SCAG prepares a regional growth forecast for the region, which is used as a key guide for developing regional plans and strategies. The growth forecasts include recent trends in the region's growth of population, households and employment. The forecasts are periodically updated to account for modified trends (SCAG, 2016)

Local

County of San Bernardino

The Housing Element of the County of San Bernardino General Plan addresses the existing and projected housing needs of a city or county, including their share of the regional housing need. State law requires each local government agency to update their Housing Element every 5 years, and submit it to the State Department of Housing and Community Development for review. San Bernardino County's Housing Element was updated most recently in early 2014 for the 2013-2021 planning period. This policy guide analyzes the housing needs of the unincorporated areas of the County, and its primary focus is to ensure decent, safe, sanitary, and affordable housing for current and future residents in those areas.

City General Plans and Municipal Codes

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding population and housing. The population and housing growth estimated by SCAG were released to the local jurisdictions for their input prior to finalizing the growth estimates.

3.11.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the proposed program would have a significant impact on population and housing if it would:

- 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).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impacts Discussion

Population Growth

Impact 3.11-1: The proposed program would have less than significant and less than cumulatively considerable population growth inducement impacts.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Project Category 1 of the proposed FMP does not include construction of new homes or businesses that would result in a direct increase in population or create a substantial numbers of

jobs. Construction of the upgrades would require temporary employment. The temporary employment opportunities are expected to be filled by workers within the local economy. As identified previously, the unemployment rate within the County was an average of 6.2 percent (59,800 persons) in 2015. Given that there was an average of 59,800 unemployed persons within the County, it is reasonable to assume that there are available workers for the construction activities associated with the proposed FMP improvements. Because the majority of the work force is located in the Valley Region of the County, there would be an adequate number of workers within the Valley Region that could be available for construction jobs and could commute to the temporary construction jobs rather than relocate and induce growth in the area.

The FMP is designed to allow IEUA to continue to provide wastewater treatment and recycled water services in its service area and to meet forecasted demand and growth in the service area. The proposed FMP's improvements in the expansion of services are consistent with development anticipated by SCAG, the local general plans and expected population growth. Local cities have prepared CEQA documentation evaluating potential impacts of growth that could result from implementation of their General Plans. By providing public services to meet population expectations, IEUA lessens impacts to public services that could result from implementation of land use policies. However, IEUA has no control over land use designations or growth within its service area. Upgrading of public services to meet modern standards of efficiency, water supply reliability, and public health would occur irrespective of growth rates in the service area. Therefore, the implementation of the proposed facilities would result in less than significant impacts related to indirect inducement of population growth.

Operation of the proposed facilities would require an estimated 35 future new employees to operate the proposed facilities. These employees are expected to be drawn from existing population. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units. An increased demand of 35 new housing units is within the housing projections anticipated to accommodate the population growth expected to occur within the IEUA service area. This increase would be minimal and would not directly induce substantial population growth in the IEUA service area. Therefore, the implementation of the proposed facilities would result in less than significant impacts related to inducement of population growth.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as described above for Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as described above for Project Category 1.

Combined Project Categories

The proposed facilities would not be habitable and would not directly increase the population, and therefore, would not induce substantial population growth. Impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA FMP would contribute to the cumulative construction of public services and utilities by local jurisdictions within the IEUA service area and by other agencies within the greater Inland Empire region. The region is anticipating significant population growth. However, since IEUA has no control over land use designations or growth within its service area, the implementation of the FMP would not directly or indirectly induce population growth. Therefore, the proposed FMP's contribution to population growth inducement would be less than cumulatively considerable, and thus a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Displacement of Housing

Impact 3.11-2: The proposed program would have less than significant and less than cumulatively considerable housing not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed improvements to the treatment facilities do not include the demolition of any dwelling units. The improvements would be constructed within the existing treatment plant boundaries, and there are no existing dwelling units within the existing facilities. Therefore, the project would have no impact with regard to the displacement of existing housing units, nor would it necessitate the construction of replacement housing elsewhere.

Project Category 2: Conveyance Systems and Ancillary Facilities

The project includes the construction of pipelines within existing rights-of-way (ROWs) and ancillary facilities adjacent to the proposed pipelines. The implementation of pipelines and ancillary facilities could result in the removal of a limited amount existing housing units. Therefore, the proposed pipelines and ancillary facilities would have a less than significant impact with regard to the displacement of existing housing units. Given the amount of future housing forecast to be developed over the next 25 years, the propose Project would not necessitate the construction of replacement housing elsewhere.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as described above for Project Category 2.

Combined Project Categories

The combination of improvements proposed in Project Categories 1, 2, and 3 would not displace a substantial number of housing units or necessitate construction of housing elsewhere, therefore no impact would occur.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could result in displacement of housing necessitating the construction of replacement housing elsewhere. The future cumulative displacement of housing could represent a significant impact. Because the proposed FMP improvements would not displace a substantial amount of existing housing nor would the FMP replace housing elsewhere, project's contribution to cumulative impacts on housing displacement would be less than cumulatively considerable, and thus less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Displacement of People

Impact 3.11-3: The proposed program would have no impact and no contribution to cumulative impacts from the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

As noted above, the proposed FMP would not displace any housing; it also would not displace people or any other structures that are occupied by people. Therefore, the project would have no impact associated with the displacement of people or the construction of replacement housing.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as described above for Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as described above for Project Category 1.

Combined Project Categories

The combination of improvements proposed in Project Categories 1, 2, and 3 would not displace people or necessitate the construction of replacement housing elsewhere, therefore no impact would occur.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

Future cumulative development could result in displacement of housing and people necessitating the construction of replacement housing elsewhere. Because the proposed FMP projects would not displace existing housing or people, nor would the FMP replace housing elsewhere, the project would not contribute to cumulative impacts on displacement of people, and thus the project would have no cumulative impact.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

3.11.4 References

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3.12 Public Services

This section describes public services in the IEUA service area including law enforcement services, fire protection services, and schools, as well as applicable regulatory framework and potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to less than significant.

3.12.1 Environmental Setting

Fire/Emergency Protection Services

State

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California. In most cases, SRAs are protected directly by CAL FIRE. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the county under contract with CAL FIRE (CAL FIRE, 2016). However, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the County (CAL FIRE, 2012). CAL FIRE serves the IEUA service area with the Prado Station located at 14467 Central Avenue in Chino.

Local

San Bernardino County Fire Department

The San Bernardino County Fire Department (SBCFD) provides fire and emergency response services to more than 60 communities/cities and all unincorporated areas of the County. SBCFD's Office of Emergency Services (OES) serves as the Operational Area Lead Agency, coordinating the provision of emergency services with the 24 cities and towns in San Bernardino County (SBCFD, 2016a). The IEUA service area is located within the Valley Division (Division 1) of SBCFD's jurisdiction. The Valley Division serves 585 square miles and 210,800 residents, consists of two battalions with 250 fire suppression personnel, and 15 fire stations total. Stations within the IEUA service area are listed below in **Table 3.12-1** (SBCFD, 2016b).

TABLE 3.12-1
SAN BERNARDINO COUNTY VALLEY DIVISION FIRE STATIONS

Station Name	Station Number	Full Address
Fontana	79	5075 Coyote Canyon Rd, Fontana, CA, 92336
Fontana	78	7110 Citrus Ave, Fontana, CA, 92335
Fontana	73	14360 Arrow Blvd, Fontana, CA, 92335
Fontana	71	16980 Arrow Blvd, Fontana, CA, 92335
Fontana	72	15380 San Bernardino Ave, Fontana, CA, 92335
Fontana	74	11500 Live Oak Ave, Fontana, CA, 92335
Fontana	77	17459 Slover Ave, Fontana, CA, 92316

SOURCE: SBCFD, 2016b

The San Bernardino County Fire Chief's Association compiled a *Fire and Rescue Mutual Aid Operational Plan* to integrate their operational plan as part of the current State of California Fire and Rescue Emergency Plan. The plan provides for the systematic mobilization, organization, and operation of fire and rescue resources within each zone of the County to mitigate effects of emergencies and disasters. The plan provides updated fire and rescue service inventory of personnel, apparatus, and equipment amongst all local, regional, and state fire officials. The IEUA is within Zone 1, West Valley, and within a small portion of Zone 2, East Valley. The plan indicates what fire agencies participate in each zone and what specialized equipment they have (County of San Bernardino, 2013a). The participating Fire Agencies within a Mutual Aid Agreement include:

Zone 1

- Chino Valley Fire District
- San Bernardino County Fire Department
- Chino Institute for Men Fire Department
- Chino Institute for Woman Fire Department
- Montclair Fire Department
- Mt. Baldy Fire Department Ontario Fire Department
- Rancho Cucamonga Fire Protection District Upland Fire Department
- Ontario International Airport Fire Department

Zone 2

- Fontana Fire Department (Contract with San Bernardino County Fire Department)
- San Bernardino County Fire Department

Cities of Chino and Chino Hills

The Cities of Chino and Chino Hills are served by the Chino Valley Fire District (CVFD), which is located in the southwest region of San Bernardino County. The CVFD is not a City Department, but is a separate political agency with its own elected Board of Directors. The District's jurisdiction covers approximately 80 square miles in size and has an estimated population of 173,000. The Cities of Chino, Chino Hills, and surrounding unincorporated areas of San Bernardino County are served by the CVFD. In 2015, personnel responded to over 10,000 emergency incidents. CVFD is made up of 7 stations, one administration building, and one training center, as listed in **Table 3.12-2** (CVFD, 2016).

City of Fontana

Fire and emergency response services are provided to the City of Fontana from the Fontana Fire District (FFD). In July 2005, the San Bernardino County Board of Supervisors initiated the reorganization of its fire operations and filed an application with the San Bernardino Local Agency Formation Commission (LAFCO) to review and consider the reorganization of the SBCFD. The Fontana City Council proposed that a subsidiary fire district should be made for the City and that the Council would govern it. The City now contracts services to the SBCFD who serves Fontana's corporate limits and County areas within the City's sphere of influence. The

FFD staffs 33 employees and is comprised of 7 stations, as listed in Table 3.12-1 (City of Fontana, 2016a).

TABLE 3.12-2
CHINO VALLEY FIRE DISTRICT STATIONS AND FACILITIES

Fire Station/Facility	Address
Station 61	5078 Schaefer Avenue Chino, CA 91710
Station 62	5551 Butterfield Ranch Road Chino Hills, CA 91709
Station 63	7550 Kimball Ave Chino, CA 91710
Station 64	16231 Canon Lane Chino Hills, CA 91709
Station 65	12220 Ramona Avenue Chino, CA 91710
Station 66	13707 Peyton Avenue Chino Hills, CA 91709
Station 67	5980 Riverside Drive Chino, CA 91710
Administration Building	14011 City Center Drive Chino Hills, CA 91709
Training Center	5092 Schaefer Avenue Chino, CA 91710

SOURCE: CVFD, 2016

Cities of Montclair and Upland

Since the 1960's, the Montclair Fire Department has been participating in an "All Hazard" emergency aid system with surrounding communities through mutual-aid and automatic-aid agreements, such as the Consolidated Fire Agencies joint power agreement (JPA) known as CONFIRE. These aid agreements allow each fire agency to plan and prepare for large scale incidents that would otherwise deplete the local available emergency resources. In addition to the regionalization with the Upland Fire Department, the local aid agreements include the Chino Valley Fire District, Ontario Fire Department, Rancho Cucamonga Fire Protection District, San Bernardino County Fire Department, and the Los Angeles County Fire Department (City of Montclair, 2016a; City of Upland, 2016a).

While fire and emergency services for the City of Montclair are provided by the Montclair Fire Department (MFD), and fire services in the City of Upland are provided by the Upland Fire (UFD), CONFIRE is responsible for regional fire services including oversight of both MFD and UFD.

The departments serve 22 square miles with a population of approximately 111,000. The MFD and UFD staff includes 85 full time personnel. The MFD operates two (Station 151 and 152) out of the seven total fire stations, providing 7-days week/24-hours day/365-days a year "all hazard" emergency services to the community. MFD responded to 3,930 calls for service in 2013 and 4,532 in 2014 (City of Montclair, 2016a). The UFD provides basic life support services to its service area along with fire protection and prevention. There are three paramedic engines and one paramedic truck that is staffed and equipped to provide advanced life support services for medical response. The City of Upland also staffs a helicopter with a flight nurse. The UFD shares their

personnel with MFD, as mentioned above, and operates out of five fire stations (listed below in **Table 3.12-3**) within the IEUA service area (City of Upland, 2016a).

TABLE 3.12-3
MONTCLAIR AND UPLAND FIRE DEPARTMENT STATIONS

Fire Station	Address
Station 151 (MFD)	8901 Monte Vista Avenue Montclair, CA 91763
Station 152 (MFD)	10825 Monte Vista Avenue Montclair, CA 91762
Station 161 (MFD)	475 North Second Avenue Upland, CA 91785
Station 162 (UFD)	2046 North San Antonio Avenue Upland, CA 91784
Station 163 (UFD)	1350 North Benson Avenue Upland, CA 91786
Station 164 (UFD)	790 East Fifteenth Street Upland, CA 91786
Station 165 (UFD)	1257 Airport Drive Upland, CA 91786

SOURCE: City of Montclair, 2016a; City of Upland, 2016b

City of Ontario

The Ontario Fire Department (OFD) works out of eight stations (Stations 1 through 8, listed below in **Table 3.12-4**) and all stations are comprised of eight, 4-man paramedic engines companies, and two 4-man truck companies. The department responds to more than 15,000 calls per year and serves a city population of approximately 173,000 people (City of Ontario, 2016a). OFD employs 58 firefighter/paramedics and 66 firefighter/emergency medical technicians (EMTs). All eight fire engines are staffed with at least two firefighter/paramedics (City of Ontario, 2016b).

TABLE 3.12-4
ONTARIO FIRE DEPARTMENT FIRE STATIONS

Fire Station/Facility	Address
Station 1	425 East B Street Ontario, CA 91764
Station 2	544 West Francis Street Ontario, CA 91762
Station 3	1408 East Francis Street Ontario, CA 91761
Station 4	1005 North Mountain Avenue Ontario, CA 91761
Station 5	1530 East Fourth Street Ontario, CA 91764
Station 6	2931 East Philadelphia Avenue Ontario, CA 91761
Station 7	4901 East Vanderbilt Street Ontario, CA 91761
Station 8	3429 East Shelby Street Ontario, CA 91761

SOURCE: City of Ontario, 2016a

Rancho Cucamonga

The City of Rancho Cucamonga is served by the Rancho Cucamonga Fire Protection District (RCFPD). The RCFPD serves a 50 square mile area that serves nearly 170,000 residents. There are over 120 full-time and part-time RCFPD employees. All firefighters are cross-trained firefighter/paramedics and firefighter/EMTs (City of Rancho Cucamonga, 2016). The RCFPD operates out of seven stations, within its jurisdiction, as listed below in **Table 3.12-5** (RCFFA, 2016).

TABLE 3.12-5
RANCHO CUCAMONGA FIRE DEPARTMENT FIRE STATIONS

Fire Station/Facility	Address
Station 171	6627 Amethyst Street Rancho Cucamonga, CA 91737
Station 172	9612 San Bernardino Road Rancho Cucamonga, CA 91730
Station 173	12270 Fire House Court Rancho Cucamonga, CA 91739
Station 174	Jersey Boulevard Rancho Cucamonga, CA 91730
Station 175	11108 Banyan Street Rancho Cucamonga, CA 91737
Station 176	5840 East Avenue Rancho Cucamonga, CA 91739
Station 177	9270 Rancho Street Rancho Cucamonga, CA 91737

SOURCE: RCFFA, 2016

Police Protection

State

The California Highway Patrol (CHP) is a law enforcement agency created in 1929 to provide uniform traffic law enforcement for the state of California. The CHP has jurisdiction over all Interstates and State Routes in the IEUA service area including: I-10, I-15, SR-60, SR-71, SR-142, SR-210, SR-83, and SR-66. The IEUA service area is served by the Inland Division, which has two facilities in the area. The Inland Communications Center (ICC) is located at 13892 Victoria Street in Fontana, CA 92336, and is the fourth largest CHP communications center with a complement of nearly 70 employees including 56 Public Safety Dispatchers. ICC serves the citizens of one of the fastest expanding areas of California answering approximately 55,000 calls for service each month (CHP, 2016a). The Rancho Cucamonga Station is located at 9530 Pittsburgh Avenue in Rancho Cucamonga, CA 91730, and patrols over 250 square miles of freeways and unincorporated roadways in and around the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, Mt. Baldy, and San Antonio Heights (CHP, 2016b).

Local

San Bernardino County Sheriff's Department

The San Bernardino County Sheriff's Department (SBCSD), in collaboration with various cities and other agencies that have jurisdiction in the County, provides law enforcement services to the incorporated and the unincorporated communities in the County. Many cities have contracted

police protection services to the SBCSD, including Chino Hills and Rancho Cucamonga. The personnel of the SBCSD provide law enforcement services to the County's citizens through 21 patrol stations and 18 specific divisions.

City of Chino

The Chino Police Department (CPD), located at 5450 Walnut Avenue Chino, CA 91710, is comprised of more than 150 employees, both sworn and professional staff, and over 50 dedicated volunteers. CPD serves more than 85,000 residents within 30 square miles. The CPD handles over 8,000 calls for service each month and provides full service operations in various divisions, such as: Patrol, Traffic Enforcement, Criminal Investigations, Special Enforcement Team, School Resource Officer, Crime Analysis, Communications, and Crime Prevention, amongst many others (CPD, 2016). As mentioned above, some portions of Chino are also served by the Chino Hills Station in contract with the SBCSD.

City of Chino Hills

As mentioned above, the Chino Hills Police Department (CHPD) has been contracted with SBCSD since 1991. The city consists of approximately 46 square miles with a population of 76,000 people. The CHPD Station has 52 sworn personnel and 15 civilian personnel assigned. Deputies respond to over 36,000 calls for service per year in the city and have a large volunteer unit consisting of Citizens on Patrol, Explorer Post, and Reserve Deputy Sheriffs (SBCSD, 2016). The Chino Hills Station is located at 14077 Peyton Drive Chino Hills, CA 91709.

City of Fontana

The Fontana Police Department (FPD), located at 17005 Upland Avenue Fontana, CA 92335, currently staffs 188 sworn officers and serves approximately 42 square miles and over 200,000 people. The FPD works with SBCSD in a combined effort to provide protection services for the 300 square mile area that also includes Bloomington, Rialto, and Lytle Creek. FPD deputies also team with the surrounding agencies of Rialto Police, Rancho Cucamonga Police, and Riverside County Sheriff Department (City of Fontana, 2016b).

City of Montclair

The Montclair Police Department (MPD) serves a 5.5 square mile community of approximately 37,000 residents. MPD staffs 60 sworn officers that offer specialized assignments such as a Detective Bureau, Narcotics Investigations Task Force, Motor Officer Program, and Technical Services. In addition to MPD's sworn force, the MPD employs 50 full and part-time civilian support personnel and 18 volunteers. Lead by the Chief of Police, MPD comprises three divisions: Administrative, Support Services, and Field Services, and is located at 4870 Arrow Highway Montclair, CA 91763 (City of Montclair, 2016b).

City of Upland

The Upland Police Department (UPD) is comprised of three divisions and 70 sworn and professional personnel that work out of one station located at 1499 West Thirteenth Street Upland, CA 91786. UPD serves approximately 16 square miles and over 76,000 residents (United States Census Bureau, 2014). As mentioned above, some portions of Upland are also served by

the SBCSD Chino Hills Station. UPD works with neighboring cities to provide 24 hours a day/7 days a week protection services (City of Upland, 2016c).

City of Ontario

The Ontario Police Department (OPD) has three main service bureaus and employs 230 sworn police officers, 109 civilian personnel, and four K-9 units. OPD has one main station, located at 2500 South Archibald Avenue Ontario, CA 91761, and one substation at the Ontario Mills Mall, located at 1 Mills Circle Ontario, CA 91764. In addition to serving the City of Ontario, the OPD participates in mutual aid agreements with different public agencies to provide the optimum level of service during times of emergency. The OPD holds a mutual aid agreement with the SBCSD and various jurisdictions surrounding Ontario. The City of Ontario also participates in a statewide mutual aid program facilitated by the Governor's Office of Emergency Services (OES) (City of Ontario, 2009).

City of Rancho Cucamonga

As previously described, the Rancho Cucamonga Police Department (RCPD) contracts with the SBCSD to provide law enforcement services for the city. The SBCSD's 187 Sheriff's personnel serve Rancho Cucamonga citizens out of one main station, located at 10510 Civic Center Drive Rancho Cucamonga, CA 91730, and one sub-station in Victoria Gardens Shopping Center, located at 7743 Kew Avenue Rancho Cucamonga, CA 91739. The SBCSD serves a 38 square mile area with approximately 177,000 people. The RCPD also works in cooperation with the law enforcement agencies of neighboring cities and jurisdictions, as well as State and Federal agencies (City of Rancho Cucamonga, 2010).

Schools

Local

San Bernardino County Superintendent Schools

With a County-wide K-12 student population of approximately 410,696 students attending more than 480 schools, the San Bernardino County Superintendent of Schools (SBCSS) office, located at 601 North East Street San Bernardino, CA 92410, is a regional agency that provides vital and necessary service, leadership and advocacy to the eight K-12 districts in the County (Education Data Partnership, 2016).

The IEUA service area is made up of eight K-12 districts in total and has a student population of approximately 80,787 students that attend 156 schools (Education Data Partnership, 2016). **Table 3.12-6** shows the seven cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

TABLE 3.12-6
AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population
Chino & Chino Hills	Chino Valley Unified School District	35	29,937
Fontana	Fontana Unified School District	46	39,470
Upland	Upland Unified School District	15	11,380
Montclair & Ontario	Chaffey Joint Union High School District	12	24,598
	Mountain View School District	4	2,611
	Ontario-Montclair School District	33	22,521
Rancho Cucamonga	Central School District	7	4701
	Cucamonga School District	4	2,517
Total		**156**	**80,787**

SOURCE: Education Data Partnership, 2016.

3.12.2 Regulatory Setting

Local

San Bernardino County Emergency Operations Plan (EOP)

The Emergency Management Program of San Bernardino County is governed and coordinated by the San Bernardino County Fire Department, Office of Emergency Services. The National Response Framework (NRF), National Incident Management System (NIMS), the Standardized Emergency Management System (SEMS) and the State of California Emergency Operations Plan provide planning and policy guidance to counties and local entities. These documents support the foundation for the County's Emergency Operations Plan (EOP), an all-hazard plan describing how the County will organize and respond to incidents. It is based on and compatible with the laws, regulations, plans, and policies listed above. The EOP describes how various agencies and organizations in the County will coordinate resources and activities with other Federal, State, County, local, and private-sector partners (County of San Bernardino, 2013b).

Unit Strategic Fire Plan San Bernardino Unit

Population growth, prolonged drought, poor forest health, and an increase in bark beetle infestation have led public agencies including Cal Fire to collaborate on the Unit Strategic Fire Plan, which is a wildfire planning document that tiers under the 2010 California Strategic Fire Plan. In collaboration, public agencies formed the Mountain Area Safety Taskforce (MAST) which is a coalition of local, state and federal government agencies, private companies and volunteer organizations, in San Bernardino and Riverside counties partnering together to help prevent catastrophic wildfires, and to address the public safety concerns affiliated with the Wildland Urban Interface (CAL FIRE, 2014) .

San Bernardino County and Cities within IEUA Service Area

The County and each city have goals and policies related to police and fire protection services, parks and other public services. An overview of the similar goals and policies that are applicable to the proposed improvements within the IEUA service area are identified below.

- Provide an adequate level of emergency services to the community
- Maintain police and fire stations, equipment and staffing to respond to existing and future populations.
- Response to police and fire calls in a timely manner.
- Participate in mutual aid agreements with surrounding jurisdictions.
- Provide adequate amount of parkland.
- Provide adequate public facilities including Civic Centers, libraries, and recreational facilities.

School Districts within IEUA

Each of the school districts that serve the IEUA service area has various policies. An overview of similar policies that are applicable to the proposed improvements within the ISEA service area are identified below.

- Provide a maximum site enrollment at school facilities.
- Provide adequate school facilities to accommodate students and enhance student learning.
- Provide a safe environment for students and staff.

3.12.3 Impact Assessment

The proposed program's potential impacts were assessed using the California Environmental Quality Act (CEQA) Guidelines Appendix G Checklist. The following sections discuss the key issue areas identified in the CEQA Guidelines with respect to the proposed program's potential effects on public services.

Significance Criteria

For the purposes of this PEIR and consistency with Appendix G of the CEQA Guidelines, the program would have a significant impact on public services if the program would:

- Result in substantial adverse physical impacts associated with the provision of, or the 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 following public services:
  - Fire protection
  - Police protection

- Schools
- Parks
- Other public facilities

Methodology

Fire protection, police, schools, parks, and other public facility requirements are based on the number of residents and workers in a service area. Service demand is primarily tied to population, not building size or construction footprint. For example, because emergency calls typically make up the majority of responses provided by the police and fire departments, as the number of residents and workers increases, so does the number of emergency calls. Further, population growth could directly affect student generation rates for local schools and adequate park acreage to serve City parkland ratio goals. If there is an increased need for services, a determination of whether the increased need requires the construction of a facility to provide the services is made. If the construction of a facility is required, a determination of whether the construction of the new or altered facility could cause a significant effect is evaluated.

Impacts Discussion

Fire and Police Protection

Impact 3.12-1: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the provision of, or the need for, new or physically altered police or fire protection facilities, the construction of which could cause environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire and police services.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades do not include new fire departments, police stations or expansion of existing fire and police protection facilities. The facility upgrades would not directly induce substantial population growth in the IEUA service area. Approximately 35 new fulltime employees have been estimated to be required to operate facility components. This increase would be minimal and would not require new fire or police facilities to maintain response ratios, service ratios, or other measures of performance. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units. An increased demand of 35 new housing units is within the housing projections anticipated to accommodate the population growth expected to occur within the IEUA service area. Operational activities associated with the proposed treatment facility upgrades could require fire department service in the unlikely event of a hazardous materials emergency. However, the prior to the treatment plant upgrades, a Hazardous Materials Business Plan (HMBP) would be required. Updates to existing plans would be required that would be submitted and kept on file at the San Bernardino County Fire Department. Although the upgrades may result in an additional demand on fire protection services, the implementation of the HMBP would result in a nominal increase in service. The indirect increase in population and the use of hazardous materials associated with the proposed treatment plant upgrades would result in a nominal increase in police and fire services. As a

result, no new police or fire facility would be required. Therefore, no environmental effects would occur because construction of a new police or fire facility would not be required.

Project Category 2: Conveyance Systems and Ancillary Facilities

The implementation of the proposed pipelines and ancillary facilities would not result in a permanent increase in employees; however, construction activities would increase temporary employees. Employment opportunities associated with the construction activities would be temporary, are assumed to be filled by the local economy based on the available unemployed population, and is not forecast to result in the demand for housing.

Because the proposed improvements would not result in the permanent increase in residences or population, no increase in the need for new fire or police protection facilities would occur. As a result, no environmental effects would occur because construction of a new police or fire facility would not be required.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

The implementation of the proposed improvements associated with the project could result in the demand for police and fire services as discussed above; however, the increased demand is expected to be nominal. As a result, no new police or fire facility would be required. Therefore, no environmental effects would occur because construction of a new police or fire facility would not be required.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

The cumulative analysis for impacts to public services involves the projected growth of the IEUA service area. It is projected that the Inland Empire will experience substantial growth within the next 25 years, resulting on development of commercial, industrial, and residential land uses. As cumulative development occurs, the IEUA service area may experience substantial increases in the demand for fire and police protection services, including personnel, equipment, and/or facilities. Substantial increases in the demand for these services could result in the need for new police and fire facilities. Depending on the location of the new police and fire facilities, there could be significant impacts from the construction and operation of new facilities. Because the locations of new facilities are unknown, the impacts are speculative. However, for this analysis, it is assumed that cumulative development could result in significant environmental impacts from the construction and operation of new police or fire facilities. Because the proposed project would result in a nominal increase in demand for police and fire services, the project would contribute a less than cumulatively considerable need for new police and fire services. Therefore, the project's contribution to cumulative environmental effects associated with the construction of a new police or fire facility would be less than cumulatively considerable and thus less than cumulatively significant.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Schools

Impact 3.12-2: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the provision of, or the need for, new school facilities, the construction of which could cause environmental impacts, in order to maintain acceptable performance objectives for the school district.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would not directly induce substantial population growth in the IEUA service area. Approximately 35 new fulltime employees would be required to operate facility components. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units that could generate school-age children. This potential increase in students would be considered nominal and would not require new schools in order to maintain acceptable performance objectives. Because the project would not require the construction of new schools, no environmental effects from school construction would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1.

Combined Project Categories

As stated above, the proposed improvements could result in approximately 35 new fulltime employees. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units that could generate school-age children. This potential increase in students would be considered nominal and would not require new schools to maintain acceptable performance objectives. Because the project would not require the construction of new schools, no environmental effects from school construction would occur.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

The cumulative analysis for impacts to school services involves the projected growth within the school districts of the IEUA service area. The IEUA service area is expected to experience substantial growth within the next 25 years, resulting in development of commercial, industrial, and residential land uses. As cumulative development occurs, the school districts may experience substantial increases in the demand for additional school capacity. Substantial increases in the demand for schools could result in the need for new school facilities. Depending on the location of the new school facilities, there could be significant impacts from the construction and operation of new facilities. Because the proposed project would result in a nominal increase in school services (based on a future 35 new employees and homes), the project's contribution to cumulative environmental effects associated with the construction of new schools would be less than cumulatively considerable and thus less than cumulatively significant.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Parks and Other Public Facilities

Impact 3.12-3: The proposed program could have significant and cumulatively considerable physical impacts associated with the provision of, or the need for, new or physically altered parks and recreation facilities, the construction of which could cause environmental impacts, in order to maintain acceptable performance objectives for parks and recreation.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would not interfere with or have direct adverse impacts on parks because the proposed upgrades would occur within the existing treatment plants and the existing treatment plants do not include any park or recreation facilities. The proposed upgrades could indirectly increase the use of park facilities within the IEUA service area because the proposed upgrades could result in the need for approximately 35 new employees. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units. An increased demand of 35 new housing units are within the housing projections anticipated to accommodate the population growth expected to occur within the IEUA service area. This increase would be nominal in the context of the 25 year forecast for background population growth within the IEUA service area and would not trigger the need for new or altered parks and recreational facilities to maintain acceptable performance objectives. Because the project would not require the construction of new park and recreational facilities, no environmental effects from park and recreational facility construction would occur.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines are expected to occur within existing roadway rights-of-way, and therefore, would not impact existing park and recreational facilities and would not result in the demand for new park and recreational facilities. The proposed ancillary facilities could be located on parkland or within areas with active recreational uses. Depending on the area required for the ancillary facility, an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing park or recreational facility. It is assumed that the removal of a park or recreational facility could be a significant impact to the local community.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

The implementation of the proposed improvements associated with the project could result in the removal of an existing park or recreational facility that could require the construction of a new park or recreational facility. This potential impact could occur with the implementation of ancillary facilities associated with Project Category 2 and the facilities associated with Project Category 3. It is assumed that the removal of a park or recreational facility could be a significant impact to the community.

Significance Determination before Mitigation: Significant Impact.

Cumulative Impact Analysis

The cumulative analysis for impacts to public services involves the projected growth of the IEUA service area. It is projected that the Inland Empire will experience substantial growth within the next 25 years, which means development of commercial, industrial, and residential land uses. As cumulative development occurs, the IEUA service area may experience a substantial demand for parks and recreational facilities. This increased demand is expected to result in the need for new or altered parks and recreational facilities. The project's contribution to the reduction of parks and recreational facilities would be cumulatively considerable, and thus cumulatively significant.

Significance Determination before Mitigation: Significant Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

PS-1: If a proposed improvement results in the removal of park or recreational facilities, IEUA will either relocate the proposed improvement or coordinate with the local jurisdiction to develop replacement park or recreational facility capacity.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure PS-1 is required.

Combined Project Categories

Implementation of Mitigation Measure PS-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure PS-1 would ensure no loss of parkland or recreational facilities occur. By relocating proposed improvements or replacing parkland to an alternate location, impacts to recreational facilities would be reduced to less than significant levels.

Cumulative Measures

Implementation of Mitigation Measure PS-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure PS-1 would ensure that the proposed facilities' contribution to cumulative loss of parkland or recreational facilities would be reduced to less than cumulatively considerable by relocating proposed improvements or replacing parkland to an alternate location.

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3.13 Recreation

This section identifies existing recreational opportunities within the IEUA service area, as well as applicable regulatory framework and potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to less than significant.

3.13.1 Environmental Setting

Regional Setting

San Bernardino County provides a wide variety of recreational activities including hiking, biking, camping, fishing, swimming, horseback riding, and other entertainment. Recreational opportunities within the County are provided by federal, State and local agencies within San Bernardino County, as well as recreation departments within the cities of Upland, Montclair, Ontario, Rancho Cucamonga, Fontana, Chino, and Chino Hills (County of San Bernardino, 2007).

Federal Lands

Three national parks managed by the National Park Service are located within San Bernardino County and offer a variety of recreational opportunities to residents in the local area, including Death Valley National Park, Mojave National Preserve, and Joshua Tree National Park. None of these National Parks, however, lie within the IEUA service area.

Federal lands managed by the U.S. Forest Service including the Angeles and San Bernardino National Forests border the northern portion of the IEUA service area and offer a variety of recreational activities to local residents (County of San Bernardino, 2007). In addition, lands just south of the San Bernardino County line are managed by the BLM, just outside the IEUA service area (BLM, 2016). However, none of these National Forest or BLM lands lies within the IEUA service area.

California State Parks and Recreation Department

The California State Parks and Recreation Department helps to preserve the state's biological diversity, protect its natural and cultural resources, and create opportunities for outdoor recreation. The Department manages several public parks within San Bernardino County, but only one is included within the IEUA service area.

The Chino Hills State Park is located partially within the IEUA service area, off of SR-91 to Highway 71 North, and encompasses 12,452 acres consisting of oaks, sycamores, and rolling grassy hills that stretch approximately 31 miles from the Santa Ana Mountains to the Whittier Hills. Open year-round, the Chino Hills State Park allows for activities such as hiking, biking, horseback riding, and camping (County of San Bernardino, 2007).

San Bernardino County Regional Parks Department

The San Bernardino County Regional Parks Department manages and maintains nine regional parks throughout San Bernardino County totaling approximately 9,200 acres in diverse settings, including metropolitan areas, mountains, and deserts. Recreational opportunities found at these regional parks include lakes for fishing, sheltered group picnic facilities, RV and tent camping, and swim complexes with water slides, water play parks, and playgrounds (County of San Bernardino Regional Parks Department, 2016a). The following two regional parks are located within the IEUA service area.

The Cucamonga-Guasti Regional Park is located in the City of Ontario and provides 150 acres of outdoor recreation activities in an urban setting, with amenities including two lakes for fishing, a swim complex with water slides and a water play park, and picnic tables and group picnic shelters (County of San Bernardino Regional Parks Department, 2016b).

Prado Regional Park is located in the Chino Valley basin in the southern portion of the IEUA service area. The park offers opportunities for fishing, camping, hiking, biking, disc golf, and picnicking. The park also features a meeting room, two golf courses, an Olympic shooting range, and opportunities for horseback riding and archery (County of San Bernardino Regional Parks Department, 2016c).

City Recreation Departments

Chino

The Chino Community Services Department provides residents with a complete system of community and neighborhood parks, trails, facilities, and recreational opportunities (City of Chino, 2016a). The Community Services Commission acts in an advisory capacity to the City Council and the Community Services Department on issues regarding recreation, human services, parks, and open space (City of Chino, 2016b). The Neighborhood Activity Center, located at 5201 D Street, is designed to provide centralized recreation and Human Service programs for Chino residents (City of Chino, 2016c). In addition, there are 22 parks within the City of Chino (City of Chino, 2016d).

Chino Hills

The City of Chino Hills Recreation Division provides recreation activities to residents of the City of Chino Hills. The Parks and Recreation Commission is an advisory board to the City Council that consists of five members and advises the City Council on matters relating to acquisition, development, and maintenance of public parks, recreational facilities, and open space. There are approximately 44 parks and recreation facilities within the City of Chino Hills (City of Chino Hills, 2016a, b and c).

Fontana

The City of Fontana Community Services Department responds to the needs of the community through recreational, cultural, and other human services programs. The City of Fontana maintains over 40 parks, playgrounds, sports facilities, and other recreation facilitates in the community (City of Fontana, 2016a and b).

Montclair

The City of Montclair Human Services Department provides services for the recreation center, youth center, and senior center, and the Parks Division of the Public Works Department provides maintenance of the parks. The Civic Center is located at 5201 Benito Street and contains a City Hall, Council Chambers, Youth Center, Skate Park, Community Center, Gym, Senior Center, Recreation Center, Library, South Conference Room, Technology Center, and Alma Hofman Park (City of Montclair, 2016). The City Parks Division maintains 11 community and neighborhood parks that provide active and passive recreational opportunities such as ball fields, ball courts, playground equipment, picnic areas, and open grass areas.

Ontario

The City of Ontario Recreation and Community Services Department provides recreational, educational, and cultural activities to the community. The Recreation and Community Services Department provides services at community centers, parks and schools throughout the City of Ontario. The City provides 22 parks and 5 community centers support a variety of recreational opportunities to its residents (City of Ontario, 2016).

Rancho Cucamonga

The City of Rancho Cucamonga Park and Recreation Commission acts in an advisory capacity to the City Council with respect to park and recreation facilities and services. The City provides 29 parks, 9 recreation facilities, and 4 trails for various activities, including walking, running, biking, hiking, and horseback riding (City of Rancho Cucamonga, 2016a, b, c, and d).

Upland

The Community Services Department provides Upland citizens with quality services, recreational programs, and well maintained parks (City of Upland, 2016a). Within the Community Services Department, the Recreation Division provides recreational programs and community services and maintains first rate parks and recreational facilities. The Recreation Division is located at the Magnolia Recreation Center (City of Upland, 2016b and c). The City provides 13 parks, with amenities such as amphitheaters, ballfields, barbeque areas, dog parks, fitness trails, picnic tables, playgrounds, skate parks, etc. (City of Upland, 2016d).

3.13.2 Regulatory Framework

Federal

There are no federal policies or regulations pertaining to recreation that would be applicable to the FMP.

State

There are no state policies or regulations pertaining to recreation that would be applicable to the FMP.

Local

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding recreation.

County of San Bernardino General Plan

The following goals and policies within the Open Space Element of the County of San Bernardino General Plan regarding recreation may be applicable to all program activities within the IEUA service area (County of San Bernardino, 2007).

Goal OS 1: The County will provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.

Policy OS 1.4: Support the establishment of "urban open space areas" within urban areas, and seek to develop or retain these areas through cooperation with local cities. Where possible, these areas will be located along or near regional trail routes.

Policy OS 1.5: Strive to achieve a standard of 14.5 acres of undeveloped lands and/or trails per 1,000 population and 2.5 acres of developed regional park land per 1,000 populations. "Undeveloped lands" may include areas established to buffer regional parks from encroachment by incompatible uses.

Policy OS 1.9: Ensure that open space and recreation areas are both preserved and provided to contribute to the overall balance of land uses and quality of life.

Goal V/OS 1: Preserve open space lands within the Valley Region to the greatest extent possible to enhance the quality of life for the residents.

Policy V/OS 1.1: Develop a plan to obtain, develop, and maintain hiking trails and pedestrian walkways between communities and neighborhoods in the Valley area.

City of Chino

The following goals and policies within the Parks and Recreation Element of the City of Chino General Plan regarding recreation may be applicable to program activities that take place within Chino (City of Chino, 2010).

Goal PR-1: Maintain existing park and recreational areas and create new ones in and around the City.

Policy P1: The City shall achieve and maintain a standard of 3 acres of parks per 1,000 Chino residents. The following categories of parks shall be included in the park acreage totals: formative, neighborhood, and community parks, mini parks that are over one-half acre in size and that contain sufficient amenities, and regional parks under the City's jurisdiction.

Policy P6: The City shall ensure that the development of parks and recreational facilities and services keeps pace with development and growth in Chino.

City of Chino Hills

The following objective and policy within the Parks, Recreation, and Open Space Element of the City of Chino Hills General Plan regarding recreation that may be applicable to activities that take place within Chino Hills (City of Chino Hills, 2015).

Objective 2-1: Provide at least 5 acres of improved public park land per 1000 residents (minimum 5 acres in size useable).

Policy 2-1: Provide local park facilities and recreation areas that are appropriate for the individual neighborhoods and communities in which they are located and that reflect the needs and interests of the population they serve.

City of Fontana

The following goal and policy within the Parks, Recreation, and Trails Element of the City of Fontana General Plan regarding recreation may be applicable to activities taking place within Fontana (City of Fontana, 2003).

Goal 1.1: Our City's parks and recreation facilities meet the diverse needs of all segments of our population.

Policy 1: A wide variety of parks and recreation facilities, including regional, community, neighborhood and sub-neighborhood parks, shall continue to be provided throughout the City.

City of Montclair

The following goal and policies within the Land Use, Public Facilities, and Open Space Elements of the City of Montclair General Plan regarding recreation that may be applicable to activities taking place within Montclair (City of Montclair, 1999).

Goal OS-1.0.0: To protect and preserve open space resources in the community and maintain scenic, recreation or productive values.

Policy OS-1.1.1: Determine future park and recreation requirements and design facilities and programs to satisfy the needs within each service area.

Policy OS-1.1.5: Continue the program of land acquisition for park and open space in areas which are not presently served or where the need for additional facilities is indicated by future population growth and higher density.

Policy OS-1.1.10: Promote the utilization, where feasible, of the water retention basins, adjacent vacant parcels, and existing park channel rights-of-way in order to expand the existing park and open space areas.

City of Ontario

The following goal and policy within the Parks and Recreation Element of the City of Ontario General Plan regarding recreation that may be applicable to activities taking place within Ontario (City of Ontario, 2010).

Goal PR-1: A system of safe and accessible parks that meets the needs of the community.

Policy PR1-5: Acreage Standard. We strive to provide 5 acres of parkland (public and private) per 1,000 residents.

City of Rancho Cucamonga

The following goal and policies within the Community Services Element of the City of Rancho Cucamonga General Plan regarding recreation may be applicable to activities taking place within Rancho Cucamonga (City of Rancho Cucamonga, 2010).

Goal CS-1: Provide attractive, high-quality community services facilities that adequately meet the community's need.

Policy CS-1.1: Provide adequate park and recreational facilities that meet the City standard of 5.0 acres of parkland (including trails and special facilities) for every 1,000 persons.

Policy CS-1.6: Pursue and expand joint use of public lands that are available and suitable for recreational purposes, including school district properties and flood control district, water district, and other utility properties.

City of Upland

The following goal and policies within the Open Space and Conservation Element of the City of Upland General Plan regarding recreation may be applicable to activities taking place within Upland (City of Upland, 2015).

Goal OSC-3: Park lands that are environmentally and fiscally sustainable and meet the needs of residents of all ages and interests.

Policy OSC-3.3: New Parks and Recreational Facilities. Ensure that the provision of parks and recreational facilities and services keeps pace with population growth and changing recreational needs in Upland.

Policy OSC-3.8: Joint-Use Facilities. Combine new parks, where possible, with other compatible facilities such as schools, flood control, or water conservation areas.

3.13.3 Impacts and Mitigation Measures

Significance Criteria

The criteria used to determine the significance of impacts related to recreation are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to recreation if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated;
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical impact on the environment.

Methodology

This impact analysis considers the potential recreation impacts associated with the construction, operation, and maintenance of the proposed program.

Impacts Discussion

Increase Use of Recreational Facilities

Impact 3.13-1: The proposed program would have less than significant and less than cumulatively considerable park impacts from the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed facility upgrades would be placed within existing facilities and would not result in substantial adverse physical impacts to any neighborhood parks, regional parks, or other recreational facilities. The project would not substantially induce population growth, such as a residential housing project that would result in impacts to recreational facilities due to increased use. Approximately 35 new employees would be needed associated with the program to operate facility components. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units. An increased demand of 35 new housing units are well within the housing projections anticipated to accommodate the population growth expected to occur within the IEUA service area. This increase would be minimal relative to the 25 year forecast and would not increase the use of existing regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the implementation of the proposed facilities would minimally increase use of existing park and recreational facilities.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed conveyance systems and ancillary facilities may be located within parks. Construction and staging areas may result in the temporary closure of parks or portions of parks. However, several parks in the IEUA service area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to their expected visitorship qualities. Once in operation, the proposed facilities would not be habitable and would not directly increase the population, and therefore, would not generate additional recreational users to the project area. The proposed facilities would not 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. Impacts would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

The proposed facilities would not be habitable and would not directly increase the population, and therefore, would not generate additional recreational users to the project area. The proposed facilities would not result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Impacts would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could substantially increase the development of residential units and therefore substantially increase population within the IEUA. This increase in population could result in significant impacts on parks and recreational facilities due to increased use of neighborhood parks, regional parks, and other recreational facilities. Because the proposed FMP projects would not result in a direct increase in population, an increased use of parks or other recreational facilities would not occur. As described above, the project could result in an indirect increase in population due to the generation of approximately 35 employment opportunities; however, this increase in employees who could demand housing within the IEUA service area would result in nominal impacts on existing parks and recreational facilities. Therefore, the proposed project's contribution to cumulative impacts on parks and recreational facilities would be less than cumulatively considerable, and thus less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Recreational Facilities Physical Effect on Environment

Impact 3.13-2: The proposed program could have significant and cumulatively considerable impacts on recreational facilities thus require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed treatment facility upgrades would be located within existing treatment facilities. These existing facilities do not include any park or recreational facilities. Therefore, the improvements proposed within the existing treatment facilities would not impact existing parks or recreational facilities. Because the proposed improvements would not physically impact existing parks or recreational facilities, no new or expanded park or recreational facility would be required with the implementation of the proposed facilities. Therefore, no physical effect on the environment would occur related to new or expanded park or recreational facilities because the proposed improvements would not require new or expanded park or recreational facilities.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed pipelines and ancillary facilities would not include the construction of recreational facilities. The proposed pipelines are expected to occur within existing roadway rights-of-way, and therefore, would not impact existing park and recreational facilities. The proposed ancillary facilities could be located on parkland or within areas with active recreational uses. Depending on the area required for the ancillary facility, an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. It is assumed that the removal of a park or recreational facility could result in significant impact to the local community.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

The implementation of the proposed improvements could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. It is assumed that the removal of a park or recreational facility could result in significant impact to the community.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future growth in the IEUA could require the construction or expansion of park or recreational facilities to accommodate the increase in population (users) within the IEUA area. At this time, the specific environmental effects are not known. Although the effects are not known, this analysis assumes that the cumulative environmental impacts from the construction and operation of a new park or recreational facility could result in significant environmental effects. Because

the proposed project could also result in significant impacts from the construction and operation of a new park or recreational facility, the project's contribution to cumulative environmental effects would be cumulatively considerable and therefore cumulatively significant.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure PS-1 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure PS-1 is required.

Combined Project Categories

Implementation of Mitigation Measure PS-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure PS-1 would ensure no loss of parkland or recreational facilities occur. By relocating proposed improvements or replacing parkland to an alternate location, impacts to recreational facilities would be reduced to less than significant levels.

Cumulative Measures

Implementation of Mitigation Measure PS-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure PS-1 would ensure that the proposed facilities' contribution to cumulative loss of parkland or recreational facilities would be reduced to less than cumulatively considerable by relocating proposed improvements or replacing parkland to an alternate location.

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3.14 Traffic and Transportation

This section describes the existing traffic and transportation system, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed FMP, and mitigation measures to reduce those impacts to a level of less than significant.

3.14.1 Circulation System Setting

The IEUA service area is located in southern California within the west end of San Bernardino Valley, just east of Los Angeles County, northeast of Orange County, and north and west of Riverside County boundary lines. The service area consists of 242 square miles and includes the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills, Rancho Cucamonga, as well as areas of unincorporated San Bernardino County.

Freeways, arterial highways, and local streets serve as the dominant system of transportation within San Bernardino County and in the cities and communities within the county (County of San Bernardino, 2007a). In addition to automobile travel, other transportation systems within the county include mass transit (bus and passenger train systems), bicycle routes, rail service, pedestrian facilities networks and air transportation. The discussions in the following sections are generally focused on the regional transportation system but also include local transportation/circulation systems near proposed IEUA facilities. The traffic analysis focuses on the unincorporated County and the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland.

The County currently contains about 10,000 miles of roadways, which includes interstate freeways, U.S. highways, state highways and local roadways (County of San Bernardino, 2007b). The roadways described below (regional and local) are located within the Valley Region of the County and could be affected by commute trips by facilities workers (construction and operations) and truck trips (construction and operations) associated with the proposed project.

Regional Roadways

Interstate 15 (I-15) – I-15 extends north from the San Diego metropolitan area through the western portion of San Bernardino County and continues in a north-easterly direction to Las Vegas, Nevada and beyond.

Interstate 215 (I-215) – I-215 provides an alternative route to I-15 through San Bernardino County by splitting from I-15 near Devore and reconnecting with the I-15 south in Riverside County.

Interstate 10 (I-10) – I-10 travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Interstate 210 (I-210) – I-210 begins at an interchange with the Golden State Freeway (I-5) in Los Angeles County and continues east across the Valley region to its current terminus at an interchange with the I-10 in Redlands, California.

State Route 60 (SR-60) – SR-60 is an east-west route that extends across the IEUA service area.. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east.

State Route 83 (SR-83) – SR-83 is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between The Foothill Freeway (I-210), Foothill Boulevard (SR-66), the San Bernardino Freeway (I-10), the Pomona Freeway (SR-60) and the Chino Valley Freeway (SR-71).

State Route 71 (SR-71) – SR-71 travels southeast from the I-10/I-210 Interchange in San Dimas to the Riverside Freeway (SR-91) in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 66 (SR-66) – In San Bernardino County, SR-66 begins as Foothill Boulevard at the Los Angeles County line and is classified as a state highway (US 66/SR-66). It extends eastward through the cities of Upland, Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto.

Major Roadways

Valley – East/West Facilities

16th Street / Base Line Road – This primary two- to six-lane arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino and Highland.

4th Street – This four- to six-lane roadway is located in the City of Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside the City of Ontario as San Bernardino Avenue.

Arrow Route – This two- to four-lane roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana and ends in Rialto.

Edison Avenue – This four- to six-lane roadway begins just east of SR-71 in the city of Chino and extend eastward through the city of Ontario. It is classified as a primary arterial.

Grand Avenue – This four- to six-lane primary arterial extends from the boundary between the cities of Chino and Chino Hills westward through Chino Hills into Los Angeles County.

Highland Avenue – Highland Avenue passes through the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino and Highland. This two- to four-lane roadway originates as a secondary

arterial at Amethyst Street in the City of Rancho Cucamonga and continues east to Milliken Avenue.

Merrill Avenue / Mill Street –This two- to four-lane secondary arterial originates at Cherry Avenue in unincorporated San Bernardino County west of the City of Fontana.

San Bernardino Avenue / 4th Street – This two- to four-lane roadway extends across a large portion of San Bernardino County and travels through the cities of Montclair, Ontario (as 4th Street), Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto before ending in the City of Colton.

Valley Boulevard – This four-lane primary arterial runs parallel to I-10 to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and the Cities of Fontana and Rialto before terminating at Mount Vernon Avenue in the City of Colton.

Valley – North/South Facilities

Alder Avenue – Alder Avenue is a two- to four-lane north-south connector that provides access along the eastern boundary of the City of Fontana. This facility is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This four- to six-lane primary arterial extends from Hillside Road in the City of Rancho Cucamonga, through the City of Ontario and into Riverside County. This facility is a major north-south corridor across San Bernardino County that provides access to both I-210, I-10 and SR-60 as well as Ontario International Airport.

Central Avenue – This four- to six-lane roadway travels through the cities of Upland, unincorporated San Bernardino County, Montclair and Chino along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this facility provides a north-south connection between I-10, SR-60 and SR-71.

Cherry Avenue – This four- to six-lane roadway is located almost entirely within the City of Fontana with a portion travelling through unincorporated San Bernardino County. This roadway extends from north of I- 15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This facility provides a connection between I-210 and I-10 and access to The California Speedway.

Citrus Avenue – Citrus Avenue is a two- to four-lane roadway located in the City of Fontana that extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as a primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Etiwanda Avenue – Etiwanda Avenue is a four- to six-lane primary arterial located in the cities of Rancho Cucamonga, Ontario, Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Grove Avenue – This roadway is a four-lane secondary arterial that extends from Foothill Boulevard in the City of Upland south to the Chino Airport in the City of Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.

Haven Avenue – Haven Avenue is a four- to eight-lane primary arterial located in the City of Rancho Cucamonga and extending through the City of Ontario. This roadway provides direct access to I-210, I-10 and SR-60.

Monte Vista Avenue – Monte Vista Avenue is a four- to six-lane roadway that begins at SR-210 in Los Angeles County and travels south through the cities of Montclair and Chino. Between I-210 and I-10, this roadway is classified as a primary arterial.

Mountain Avenue – The northern terminus of this two- to six-lane roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and the cities of Upland and Ontario before ending at Edison Avenue in the City of Chino. This facility is classified as a primary arterial except for the segment between 19th Street and 16th Street, which is classified as a state highway (SR-30).

Sierra Avenue – Sierra Avenue is a two- to six-lane major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the extreme northern portion of the City of Fontana. It is a primary arterial and has interchanges with I-15, I-210 and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Public Transportation

The public transit agencies that serve the Valley Region of the County include Omnitrans, Foothill Transit Agency, and Valley Transportation Service, which is specifically dedicated to improving mobility for senior, disabled and low-income residents within San Bernardino Valley (SANBAG, 2016a). These public transit agencies provide bus services with a wide variety of bus routes across the county, as well as into adjacent jurisdictions. In addition to the local transit agencies, Greyhound offers regional and nationwide bus service to County residents with seven stations located throughout the county boundaries and offers connections to location such as Los Angeles, Las Vegas and Phoenix. SANBAG also operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Metrolink provides east-west passenger train service in the Valley Region, with both at-grade and grade-separated crossings of the tracks that are approximately midway between I-10 and I-210.

Bicycle and Pedestrian Transportation

The County's existing bicycle and pedestrian facilities are outlined in the Non-Motorized Transportation Plan (NMTP) prepared by SANBAG in 2015. The NMTP outlines the type of bicycle and pedestrian facilities that currently exist within the county, as well as includes planning efforts and recommendations for future facilities. In regards to bicycle facilities, the County includes three classes of bikeways: Class I (Shared Use Path or Bike Path), Class II (Designated Bike Lane), and Class III (Designated Bike Route). While there are numerous bikeways of all three classes across the County, the NMTP designates trails that bicyclists can

utilize, which includes the Pacific Electric Trail, Santa Ana River Trail, Flood Control Channels, Power Line Corridors, Cajon Pass Connector – Route 66 Heritage Trail, and Orange Blossom Rail Trail. In regards to pedestrian facilities, there are many designated trails and sidewalk systems that can be utilized by pedestrians within the County.

Truck Routes

Cities often develop a truck route plan, which designates truck routes to provide contractors with the preferred travel roadways to and from connecting local roadways. For example, the cities of Upland, Rancho Cucamonga, Fontana, Montclair, Ontario and Chino have such plans.

3.14.2 Regulatory Framework

State

California Department of Transportation

California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards, policies, and strategic plans that aim to do the following: 1) provide the safest transportation system for users and workers; 2) maximize transportation system performance and accessibility; 3) efficiently deliver quality transportation projects and services; 4) preserve and enhance California's resources and assets; and 5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of State highways for other than normal transportation purposes. Caltrans also reviews all requests from utility companies, developers, volunteers, nonprofit organizations, and others desiring to conduct various activities within the State Highway right-of-way.

The following Caltrans regulations apply to potential transportation and traffic impacts associated with the proposed project.

California Vehicle Code (CVC), division 15, chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Street and Highway Code Sections 660-711. Caltrans encroachment regulations would apply to construction of the proposed pipelines within and immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area. Caltrans requires that permits be obtained for transportation of oversized loads, certain materials, and construction-related traffic disturbance.

Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization for Imperial, Los Angeles, Orange, Riverside, Ventura and San Bernardino Counties. On April 7, 2016, SCAG adopted its 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS presents the

transportation vision for the SCAG region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. The 2016 RTP/SCS focuses on maintaining and improving the transportation system through a balanced approach and considers economic, environmental, public health, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth (SCAG, 2016).

San Bernardino Associated Governments

San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.1 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies. SANBAG administers Measure I, the half-cent transportation sales tax approved by county voters in 1989 (SANBAG, 2015).

San Bernardino County Congestion Management Program

The San Bernardino County Congestion Management Program (CMP) was created in June 1990 as a provision of Proposition 111 (SANBAG, 2016b). Under this proposition, urbanized areas with populations of more than 50,000 residents would be required to undertake a congestion management program that was adopted by a designated Congestion Management Agency (CMA); SANBAG is the designated CMA for San Bernardino County as appointed by the County Board of Supervisors.

The CMP's level of service (LOS) standard requires all designated CMP segments to operate at LOS E or better, with the exception of the following roadways within the project area, for which the standard is LOS F:

A. Freeways

- I-10 Westbound, Milliken Avenue to Central Avenue
- I-10 Westbound, Waterman Avenue to Eastbound SR-30
- I-10 Eastbound, Central Avenue to Milliken Avenue
- I-10 Eastbound, Northbound I-15 to Southbound I-15
- I-10 Eastbound, Southbound Waterman Avenue to California Street
- SR-60 Westbound, Milliken Avenue to Central Avenue
- SR-60 Eastbound, Central Avenue to Milliken Avenue
- I-215 Northbound, Inland Center Drive to SR-30 / Highland Avenue

B. Valley East/West Arterial Segments

- Foothill Boulevard between Mountain Avenue and Archibald Avenue

C. Valley North/South Arterial Segments

- Citrus Avenue between Slover Avenue and Valley Boulevard
- Cedar Avenue between Slover Avenue and Valley Boulevard
- Mountain View Avenue between Barton Road and Redlands Boulevard
- Mountain Avenue between Mission Boulevard and Holt Avenue

Southern California Regional Rail Authority

The Southern California Regional Rail Authority (SCCRA) is a regional Joint Powers Authority. Its purpose is to plan, design, construct, operate, and maintain regional commuter rail lines serving the counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCRRA consists of the five county transportation agencies identified above, including the San Bernardino Associated Governments. SCRRA operates on conventional railroad track and right-of-way (ROW), which are owned either by one of the county transportation agencies or by a private freight railroad company that has conveyed operating rights to SCRRA. The design, operation, and maintenance of the SCRRA system are governed by Federal Railroad Administration (FRA) regulations and California Public Utilities Commission (CPUC) General Orders (GOs) (SCRRA, 2014)

County and City Land Use Regulations and Ordinances

Local regulations and ordinances vary widely in the IEUA service area. Traffic-related policies included in General Plans typically concern traffic resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions to their General Plans that pertain to construction activities in or through their jurisdictional areas, such as assigning truck traffic routes or requiring the development of Traffic Control Plans.

3.14.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this EIR and consistent with Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on transportation and traffic if it would:

- Conflict with an applicable plan, ordinance or policy establishing measure 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; (see Impact 3.14-1 below)
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards and travel

demand measures, or other standards established by the county congestion management agency for designated road or highways; (see discussion immediately below)

- Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risk; (see discussion immediately below and see Impact 3.7-5 in Section 3.7, Hazards and Hazardous Materials)
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); (see Impact 3.14-2 below)
- Result in inadequate emergency access; or (see Impact 3.14-3 below)
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities. (see discussion immediately below)

The following discussion of environmental impacts is limited to those potential impacts that could result in some level of potentially significant environmental change, as defined by CEQA. The project would not cause substantial long-term/on-going effects because project facilities, once constructed, would only require maintenance activities similar to those that occur under existing conditions and the increase in employees due to the implementation of the FMP would result in only 35 new employees. The duration of the potential significant impacts would be limited to the period of time needed to construct the project. Therefore, level-of-service standards and a congestion management program, which are intended to monitor and address long-term traffic impacts resulting from future development, do not apply to temporary impacts associated with construction activities (bullet 2 above). In addition, because the project does not include an increase in air flights, there would not be an increase in air traffic. However, there could be FMP projects located within an airport safety zone that could result in safety risks as discussed in Impact 3.7-5 in Section 3.7, Hazards and Hazardous Materials (bullet 3 above). Also, implementation of the proposed master plan would not directly or indirectly eliminate existing or planned alternative transportation corridors or facilities (bicycle paths, lanes, bus turnouts, etc.), include changes in policies or programs that support alternative transportation, or construct facilities in locations in which future alternative transportation facilities are planned (bullet 6 above). Therefore, no impact would occur under these three categories, and these categories are not discussed further within this section.

Methodology

This section assesses the transportation impacts that could result from the implementation of IEUA Facilities Master Plans. Because of the geographic scale of the service area and the as-yet-undetermined locations of the projects, this impact assessment was conducted at a programmatic level. Assumptions regarding the types of equipment and vehicles, and the types of roads used for workers to commute to and from work sites and for trucks to haul materials were used to assess the overall significance of program impacts. It is assumed that supplemental project-level analysis of transportation-related impacts (e.g., traffic safety analysis of heavy vehicles travelling on, and turning onto and off of, local roads) would be required for site-specific facilities prior to commencement of construction activity.

Impacts Discussion

Traffic Increase

Impact 3.14-1: Implementation of the proposed program could have a significant and cumulatively considerable impact on 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.

The proposed program would construct and operate facilities identified in the FMP. Implementation of actions under this program would require the construction and maintenance of various facilities. Based on the typical sizing for such facilities, the proposed project may potentially introduce congestion and delays for traffic flow on area roadways. Increased traffic would be generated primarily by construction workers commuting to and from the facility work sites, and by trucks hauling materials and equipment to and from the sites. Construction equipment would be delivered to, and removed from, each site as needed; i.e., the movement of equipment would not occur on a daily basis.

The construction traffic impacts associated with each individual facility would be short-term in nature and limited to the period of time when construction activity is taking place for that particular facility. The primary off-site impacts resulting from the movement of construction trucks would include a short-term and intermittent lessening of roadway capacities due to the slower movements and larger turning radii of the trucks compared to passenger vehicles. Drivers could experience delays if they were travelling behind a heavy truck. The added traffic would be most apparent on local two-lane roadways. Although project-related traffic would be temporary, supplemental project-level analysis of potential site-specific impacts could determine that addition of project-generated traffic would be considered substantial in relation to traffic flow conditions on local roadways. The potential impacts resulting from the implementation of the FMP projects are described below by project category and the combination of all three project categories.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed construction activities within the treatment facilities primarily include upgrades, but there is one of the facilities that will be demolished. The treatment facilities include Regional Water Recycling Plant 1 (RP-1), RP-2, RP-4, RP-5, Carbon Canyon Water Recycling Facility (CCWRF), and Inland Empire Regional Composting Facility (IERCF).

The construction of the proposed treatment facility upgrades would require a maximum of 52 workers per day, generating about 104 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that a maximum of 20 haul trucks and up to 22 vendor trucks would be needed each day, generating up to 84 one-way truck trips per day. The proposed demolition of RP-2 is expected to occur over 20 years. For this analysis, it is assumed that a maximum of 10 percent of the demolition could occur in one year and specifically over a 15 day period. Therefore, up to 32 workers per day, generating about 64 one-way vehicle trips (assuming

each worker commuted in their own private vehicle). It is estimated that a maximum of 14 haul trucks and up to 2 vendor trucks would be needed each day, generating up to 32 one-way truck trips per day. The proposed restoration of RP-2 is expected to occur over a 30-day period. The restoration activities associated with RP-2 is assumed to required up to 16 workers per day, generating 32 one-way trips. There would be up to 103 haul trips for imported soil and up to 2 vendor trucks per day, generating 210 one-way trips.

The construction workers associated with the upgrades and demolition activities are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the treatment facilities. For this program-level assessment, this impact is considered potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Improvements to conveyance systems and ancillary facilities include but are not limited to: installation of new pipelines, rehabilitation of old pipelines, pump stations, lift stations, emergency generators, meters, electrical, system improvements, tanks, and discharge relocations. The proposed improvements to conveyance systems and ancillary facilities would be implemented throughout the entire IEUA service area.

The construction of the proposed conveyance systems and ancillary facilities would require a maximum of 74 workers per day, generating about 148 one-way vehicle trips (assuming each worker commuted in their own private vehicle. It is estimated that up to 3 haul trucks and 23 vendor trucks would be needed each day, generating up to 52 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors.

In addition to the increased traffic on area roadways, the installation of new pipelines and rehabilitation of old pipelines would temporarily reduce the capacity of roadways along the pipeline alignment(s) due to open-trenching within existing roadway ROWs and the resulting temporary lane closures on the affected roadways. The impact of the lane closures would vary based on the number of lanes needed to be closed (a function of pipeline diameter and trench width) and the width (number of lanes) of the affected roads. Multi-lane roads (four or more lanes) would be better able to accommodate two-way traffic than two-lane roadways. Two-lane roads would likely require active traffic control (flaggers) to allow alternate one-way traffic flow on the available road width, and could possibly require full road closure (with detour routing around the construction work zone). For this program-level assessment, this impact is considered potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Improvements associated with groundwater recharge and extraction facilities include: new and modified recharge basins, extraction wells and associated well housing, and groundwater

monitoring. Similar to conveyance systems, groundwater recharge and extraction improvements are proposed throughout the IEUA service area. The specific locations of future new extraction facilities are not currently known.

The construction of the groundwater recharge basins and extraction facilities would require a maximum of 54 workers, generating about 108 one-way vehicle trips (assuming each worker commuted in their own private vehicle. It is estimated that up to 201 haul trucks and 5 vendor trucks would be needed each day, generating up to 412 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors. For this program-level assessment, this impact is considered potentially significant.

Combined Project Categories

The implementation of improvements proposed in Project Categories 1, 2, and 3 could occur concurrently. Based on a conservative assumption that the maximum trips by project category occur concurrently, there would be a maximum of 360 one-way vehicle trips per day by construction workers and up to 548 one-way truck trips per day. As stated above, the construction workers are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the treatment facilities. For this program-level assessment, this combined impact is considered potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. This substantial increase from cumulative development is expected to result in significant cumulative impacts on the existing transportation systems. Because the construction activities associated with the FMP projects would increase construction traffic on the area roadways and potentially cause significant impacts, the FMP projects' contribution to cumulative impacts on roadways would be cumulatively considerable and a potential significant cumulative impact would occur.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

The following mitigation measure would be required to reduce potential impacts to traffic and transportation conditions:

TT-1: For projects that may affect traffic flow along existing roadways, IEUA shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans if necessary to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

Project Category 2: Conveyance Systems and Ancillary Facilities
Implementation of Mitigation Measures TT-1 is required.

Project Category 3: Groundwater Recharge and Extraction
Implementation of Mitigation Measure TT-1 is required.

Combined Project Categories
Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's potential construction traffic impacts to less than significant. Mitigation Measure TT-1would require all construction activities to be conducted in accordance with an approved construction traffic control plan, which would serve to reduce the construction-related traffic impacts to the maximum extent feasible. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Cumulative Measures

Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's contribution to potential construction traffic impacts to less than significant. The above measure would require all construction activities to be conducted in accordance with an approved construction traffic control plan, which would serve to

reduce the construction-related traffic impacts to the maximum extent feasible. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Hazards

Impact 3.14-2: Construction of the proposed program could have a significant and cumulatively considerable hazard impacts due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the treatment facility upgrades could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when project construction is completed. The potential conflicts between construction trucks and automobiles on local roadway are considered potentially significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the conveyance systems and ancillary facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when Project construction is completed. The potential conflicts between construction trucks and automobiles on local roadway are considered potentially significant.

Project Category 3: Groundwater Recharge and Extraction

Project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the groundwater recharge and extraction facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways that change to the mix of vehicles would stopped when Project construction is completed. The potential conflicts between construction trucks and automobiles on local roadway are considered potentially significant.

Combined Project Categories

The combination of proposed construction under Project Categories 1, 2, and 3 could exacerbate the traffic hazard impacts along roadways. These impacts could be considered potentially significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. This increase in cumulative traffic volumes could result in significant hazard impacts. Because the proposed construction activities associated with the FMP projects could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, potential conflicts between construction trucks and automobiles could result in significant traffic hazard impacts. Therefore, the project's contribution to cumulative traffic hazard impacts would be considered cumulatively considerable and result in a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

Implementation of Mitigation Measure TT-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure TT-1 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure TT-1 is required.

Combined Project Categories

Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Cumulative Measures

Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Emergency Access

Impact 3.14-3: The proposed program could have a significant and cumulatively considerable emergency access impact.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction trucks generated by the treatment facility upgrades would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Because the treatment facility upgrades would occur within the existing facilities, lane closures for the upgrades are not expected to be required. Therefore, access impacts to emergency vehicles are considered to be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction trucks generated by the conveyance systems and ancillary facilities would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access similar to Project Category 1.

Because the proposed pipelines and some of the ancillary facilities could require the closure of lanes during construction activities, potential access impacts on emergency vehicles could occur. These potential impacts are considered significant.

Project Category 3: Groundwater Recharge and Extraction

Construction trucks generated by the groundwater recharge and extraction facilities would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access similar to Project Category 1.

Because the proposed implementation of some of the recharge basins and/or extraction facilities could require the closure of lanes during construction activities, potential access impacts on emergency vehicles could occur. These potential impacts are considered significant.

Combined Project Categories

For reasons described above, the combination of improvements proposed in Project Categories 1, 2, and 3 would have similar less than significant impacts on emergency vehicle access from construction vehicles travelling on the roadways. However, the implementation of facilities that are part of Project Categories 2 and 3 could require the closure of lanes during construction activities. Lane closures could result in potential access impacts on emergency vehicles. These potential impacts are considered significant.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. Cumulative construction activities are expected to increase construction vehicles travelling on the roadways. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Cumulative construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access.

The implementation of some of the cumulative projects within the IEUA service area could result in lane closures during construction activities. Lane closures due to cumulative construction activities could result in potential access impacts on emergency vehicles. These potential cumulative impacts are considered significant. Because the construction activities associated with some of the FMP project could result in lane closures, the project's contribution to cumulative impacts on emergency access is considered cumulatively considerable and a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

Implementation of Mitigation Measure TT-1 is required.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure TT-1 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure TT-1 is required.

Combined Project Categories

Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's potential construction impacts on emergency access to less than significant. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

Cumulative Measures

Implementation of Mitigation Measure TT-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure TT-1 would reduce the project's cumulative contribution to potential construction impacts on emergency access to less than significant. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

3.14.4 References

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3.15 Utilities

This section discusses existing utilities in the IEUA service area and provides an analysis of potential impacts to utilities that would result from implementation of the proposed FMP and mitigation measures that can reduce potential impacts to less than significant.

3.15.1 Environmental Setting

Water Agencies

Inland Empire Utilities Agency

IEUA is a regional wholesale water distributor. Approximately 65 percent of IEUA's water is obtained locally from the groundwater, and 30 percent is purchased from Metropolitan Water District of Southern California (MWD) (County of San Bernardino, 2006). Of the local groundwater supplies, approximately 35 percent is utilized to support agricultural use and 65 percent is utilized to support municipal and industrial uses. IEUA provides wholesale imported water from MWD to seven retail agencies: the cities of Chino, Chino Hills, Ontario, and Upland; Cucamonga Valley Water District (CVWD), located in the City of Rancho Cucamonga; Fontana Water Company (FWC), located in the City of Fontana; and the Monte Vista Water District (MVWD), located in the City of Montclair. The IEUA has historically delivered up to approximately 60,000 acre-feet of imported water supplies to the local retail water supply agencies annually. IEUA serves approximately 830,000 people over 242 square miles in western San Bernardino County (County of San Bernardino, 2006).

Cucamonga Valley Water District

CVWD provides treated potable water and wastewater services to the City of Rancho Cucamonga, portions of the cities of Upland, Ontario and Fontana, and some unincorporated areas of San Bernardino County. It serves a population of over 190,000 customers with approximately 45,000 water connections to meet an average daily demand of approximately 50 million gallons per day (MGD) (CVWD, 2016).

Fontana Water Company

FWC serves the cities of Fontana, portions of Rialto and Rancho Cucamonga, and adjacent unincorporated territory in San Bernardino County. FWC serves a population of more than 209,000 within its 52-square miles service area. A portion of the water supply is purchased from CVWD, and water from the State Water Project is purchased from IEUA (FWC, 2016).

Monte Vista Water District

MVWD is a county water district that provides retail and wholesale water supply services to a population of over 130,000 within its 30-square mile service area. It serves the communities of Montclair, Chino Hills, portions of Chino, as well as the unincorporated areas lying between the cities of Pomona, Chino Hills, Chino and Ontario. MVWD provides water to meet an average daily demand of 17.9 MGD within its service area (MVWD, 2016).

City of Chino Hills Water Department

The City of Chino Hills Water Department has multiple sources of water supply: groundwater, MVWD, the Water Facilities Authority (WFA), Chino Desalter Authority (CDA), and IEUA, These five sources provide the City of Chino Hills with over 41 MGD capacity. Chino Hills' water system includes more than 200 miles of water lines and 21,000 individual water connections. This water supply serves Chino Hills and some portions of the City of Chino (City of Chino Hills, 2011).

City of Chino Utilities Department

The City of Chino Utilities Department provides water service to most of the City of Chino, with the exception to certain areas that are serviced by either the City of Chino Hills Water Department or MVWD, described above (City of Chino, 2016). ~~The City of Chino receives and distributes water from either MVWD or the Chino Hills Water Department described above (City of Chino, 2016).~~

City of Ontario Power and Water

The City of Ontario serves 13 billion gallons of water annually to the over 170,000 residents and 6,000 businesses. Ontario operates 24 active groundwater wells, 572 miles of potable and recycled water pipelines, and 12 water reservoirs that store 75 million gallons of water. Approximately 80 percent of Ontario's drinking water comes from local groundwater sources, including 17 percent of the total supply from two water treatment plants operated by the CDA. The remaining 20 percent of Ontario's water is imported surface water supplied through the SWP. Recycled water is provided for non-potable uses; more than 200 recycled water service connections have been completed, supplying nearly 10 percent of Ontario's total water demand (City of Ontario, 2016).

City of Upland Water Department

The City of Upland supplies over 75,000 residents. The City's water supplies includes groundwater from three groundwater basins, local surface water from San Antonio Creek, and imported water from Metropolitan Water District of Southern California (MWD) conveyed through Inland Empire Utilities Agency (IEUA) an MWD member agency to Water Facilities Authority (WFA). Local groundwater and surface water supplies are available directly to the City or through the City's shareholder ownership in two small water companies. Recycled water is provided by IEUA. Water demands are currently approximately 20,000 acre feet per year (afy) with a projected demand of 23,800 acre-feet by 2035 (City of Upland, 2016).

Wastewater

IEUA has constructed a Regional Sewerage System within its service area to collect, treat and dispose of wastewater delivered by contracting local agencies. As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and the City of Rancho Cucamonga (via the CVWD). The

contracting cities and water districts are responsible for wastewater collection within their individual service areas. A system of regional trunk and interceptor sewers that convey sewage to regional wastewater treatment plants is owned and operated by IEUA. IEUA's wastewater collection system is divided into two major service areas: the Northern Service Area and the Southern Service Area.

IEUA currently receives over 50 MGD of wastewater from its four operational wastewater treatment plants: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5) and Carbon Canyon Water Recycling Facility (CCWRF). Regional Water Recycling Plant No. 2 (RP-2) no longer operates its liquid treatment sections as of 2002, and a sixth regional plant, known as Regional Water Recycling Plant No. 3 (RP-3), is no longer in service. Recycled water from the plants is treated to Title 22 regulations set forth by the California Department of Health Services and distributed throughout the service area. IEUA currently delivers over 30,000 acre-feet per year (AFY) of recycled water for agriculture, municipal irrigation, industrial uses and groundwater replenishment. In addition to its water recycling plants, IEUA participates in the operation of two water desalter treatment plants in Chino. The Chino Basin Desalter Authority (CDA) oversees operation of these desalters. Each of the IEUA's operational treatment plants are described below (IEUA, 2016).

RP-1 is located at 2662 East Walnut Street in the City of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 million gallons per day. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, and solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 28 million gallons per day. RP-1 includes both liquid and solid treatment processes (IEUA, 2016).

RP-2 is located at 16400 El Prado Road in the City of Chino and has been in operation since 1960. The plant operated both liquids and solids treatment sections, until 2002, when RP-5 was constructed to handle the liquids treatment section portion of RP-2. Solids are removed from CCWRF and RP-5 and treated at RP-2. The solids treatment section begins with thickening the solids removed from the RP-5 and CCWRF primary and secondary clarification processes. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility (IERCF) in the City of Rancho Cucamonga for further treatment to produce Class A compost (IEUA, 2016).

RP-4 is located at 12811 6th Street in the City of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic wastewater treatment capacity to 14 million gallons per day. The plant serves areas of Fontana, Rancho Cucamonga, and San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD (IEUA, 2016).

RP-5 is located at 6063 Kimball Avenue, Building C in the City of Chino and has been in operation since 2004. The design hydraulic domestic wastewater treatment capacity is 16.3

million gallons per day, which includes 1.3 million gallons per day of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 9 MGD (IEUA, 2016).

CCWRF is located at14950 Telephone Avenue in the City of Chino and has been in operation since 1992. The design hydraulic domestic wastewater treatment capacity is 11.4 million gallons per day. The plant serves areas of Chino, Chino Hills, Montclair and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD (IEUA, 2016).

Chino I Desalter plant is located at 6905 Kimball Avenue in the City of Chino and commenced operation in 2001. The plant was expanded in 2005 from an 8.4 MGD facility to a 14 MGD facility. Groundwater is pumped from supply wells throughout the Chino Basin area to the Chino I Desalter. The treatment processes include reverse osmosis and ion-exchange for removal of nitrate and total dissolved solids. Approximately 2 MGD of brine, a byproduct of the reverse osmosis and ion exchange processes is transported by the Santa Ana River Inceptor (SARI line)to Orange County and is subsequently discharged to the ocean. The high-quality water is then pumped into the municipal water supply systems for the cities of Chino and Chino Hills, and into the Jurupa Community Services District water system (IEUA, 2016).

Chino II Desalter plant is located at 11202 Harrell Street in the City of Mira Loma and was initiated by the Chino Desalter Authority to provide water deliveries to the cities of Norco, Ontario, Jurupa Community Services District and Santa Ana River Water Company. The treatment processes include reverse osmosis and ion-exchange. The Chino II Desalter became operational in 2006 and was expanded in 2010. It produced an average of 10.6 MGD of drinking water in 2012 and a little more than 1 MGD of brine that is transported by the SARI line to Orange County and subsequently discharged to the ocean (IEUA, 2016).

Storm Water

Each of the cities within the IEUA service area, including Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, Rancho Cucamonga, maintain storm water drainage infrastructure within their respective city limits. San Bernardino County manages the storm drain system within the unincorporated areas of the IEUA service area and the regional stormwater runoff conveyance infrastructure.

Solid Waste Management

The California Department of Resources Recycling and Recovery (CalRecycle) maintains a Solid Waste Information System (SWIS) that lists disposal sites in San Bernardino County by disposal facility activity, regulatory status, and operational status. According to SWIS, there are two active Class III landfills[1] within a 20-mile radius of the Chino Basin that conduct solid waste disposal activities and accept construction and demolition material. These landfills are the El Sobrante and

[1] Class III landfills are only permitted to accept nonhazardous solid waste

Mid-Valley Sanitary Landfills. **Table 3.15-1** lists the closure dates, daily permitted capacities, and remaining permitted capacities of the local Class III solid waste landfills

Waste Management of Inland Empire is the local division of Waste Management, Inc. that provides collection, disposal, recycling, and environmental services to the Inland Empire. It serves over 220,000 residents and disposes over 17,000 tons of waste weekly in the Inland Empire. It operates the El Sobrante Landfill in Corona, which processes about 43 percent of the San Bernardino County's annual waste and can currently receive up to 70,000 tons of waste per week (Waste Management, 2013). The County of San Bernardino operates the Mid-Valley Sanitary Landfill in Rialto.

In addition to Waste Management Inc., Burrtec Waste Management Services provides solid waste disposal sites and other services such as: trash and recycling facilities; retail waste disposal containers; construction waste facilities including portable restrooms for wastewater; and other private facilities for customized services. Burrtec operates one landfill located in Salton City, CA, five material recovery facilities that sort and process recyclables, and two transfer stations which are approved facilities that accept commercial, residential, and industrial waste from internal and external sources. Three of five materials recovery facilities also operate as transfer stations (Burrtec, 2016a; b; c). Burrtec facilities in proximity to the IEUA service area may be utilized during project construction and operation in addition to the Mid-Valley and El Sobrante landfills; these include: the Agua Mansa Materials Recovery Facility (MRF)/ Transfer Station; the West Valley MRF/Transfer Stations; and the East Valley Transfer Recycling Facility, all located within 10 miles of the IEUA service area.

TABLE 3.15-1
LANDFILLS IN PROXIMITY TO THE IEUA

Facility Name	Address	Closure Date	Daily Permitted Capacity* (tons/day)	Remaining Permitted Capacity (cubic yards)
Mid-Valley Sanitary Landfill	2390 Alder Ave, Rialto, CA 92377	04/01/2033	7,500	67,520,000
El Sobrante Landfill	10910 Dawson Canyon Rd, Corona, CA 92883	01/01/2045	16,054	103,950,000

*Max permitted daily throughput

SOURCE: California Department of Resources Recycling and Recovery, *Solid Waste Information System (SWIS)*, 2013

Other Utilities

Southern California Edison (SCE) is the primary provider of electricity to the IEUA service area, except within a select area of the southeastern proximity of the City of Rancho Cucamonga, where the Rancho Cucamonga Municipal Utility is the electricity provider. Natural gas services in the IEUA service area are provided by the Southern California Gas Company.

IEUA's electricity usage for fiscal year 2013/2014 is approximately 88,000 MW/hour (IEUA, 2015). The sources include imported energy, cogeneration, solar, wind, fuel cell, and overall energy efficiency. IEUA's natural gas usage for fiscal year 2013/2014 is approximately 425,000 therms (IEUA, 2015).

IEUA is also served by various renewable energy sources. IEUA signed a Power Purchase Agreement (PPA) for 3.5 megawatts (MW) of solar energy across four Agency facilities. RP-1 currently has 0.83 MW of solar panels installed onsite. RP-4/IERCF currently has 1 MW of solar panels. CCWRF: Currently has a 625 kW solar array. RP-5 currently has a 1 MW solar array installed at the SW portion of the facility (10acres). IEUA also purchases 100 percent of the energy produced by a 1 MW wind turbine located at RP-4. IEUA's Solids Handling Facility at RP-5 diverts food waste regionally with the goal of producing enough digester gas to fuel two 1.5 MW cogeneration engines that provide power for operations at RP-5.

3.15.2 Regulatory Framework

Federal

Clean Water Act

The Federal Water Pollution Control Act or Clean Water Act (CWA) serves to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA was created in 1972, and then amended in 1977, and again in 1987 when the NPDES program was created. NPDES requires a permit for discharge of pollutants from industrial sources and publicly owned treatment works into navigable waters. The discharge must meet applicable requirements, which are outlined in the CWA and which reflect the need to meet federal effluent limitations and state water quality standards.

Section 303 (d) of the CWA states that each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301 (b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The state shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such water (see Section 3.9, *Hydrology and Water Quality*, of this EIR).

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. EPA has delegated the enforcement responsibility to the State of California.

Title 40 of the Code of Federal Regulations Part 503

The federal biosolids regulations are contained in Title 40 of the Code of Federal Regulations Part 503 (40 CFR Part 503) as Standards for the Use or Disposal of Sewage Sludge. Known as

the Part 503 Rule, or Part 503, these regulations govern the use and disposal of biosolids. Part 503 established requirements for the final use or disposal of biosolids when biosolids are:

- Applied to land to condition the soil or fertilize crops or other vegetation;
- Placed on a surface disposal site for final disposal; or
- Fired in a biosolids incinerator (USEPA, 1994).

Part 503 permits are issued by the USEPA and are required for all biosolids generators. Part 503 requirements can be incorporated into the National Pollutant Discharge Elimination System (NPDES) permits that also are issued to publicly-owned treatment works.

State

California Code of Regulations (CCR)

Pursuant to CCR Title 23, Division 3, Article 2 (Waste Classification and Management) and Article 3 (Waste Unit Classification and Siting), Class III (municipal solid waste) landfills are sited in accordance with criteria that are similar to those found in Subtitle D of RCRA. CCR Title 27 includes various regulations pertaining to siting, design, construction, and operation of solid waste landfills.

CCR Title 22, Division 4, Sections 60301 through 60355 (Articles 1 through 9), includes descriptions of overall allowable sources of and uses for recycled water, as well as specific use descriptions depending on treatments. Title 22 also includes specific treatment pathways including disinfection procedures, oxidation, soils and bed filter media, and requirements for impoundments. It covers use area requirements, water testing and analysis, and plant design and operational requirements.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the state. AB 939 was adopted in an effort to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste sent to landfills by 1995 and 50 percent by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation. Other state statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires adequate areas for collecting and loading recyclable materials within a project site.

Protection of Underground Infrastructure

The California Government Code Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California.

Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Health and Safety Code

The California Health and Safety Code, Division 104, Part 12, Chapter 5, Article 2, Section 116815, requires all pipes carrying recycled water to be colored purple or wrapped in purple tape. This requirement stems from a concern in cross contamination and potential public health risks similar to those discussed for Title 17. It is also discussed in the California Health Laws Related to Recycled Water.

California Energy Action Plan II

The California Energy Action Plan II is the state's principal energy planning and policy document (California Energy Commission, 2005, 2008). The plan identifies state-wide energy goals, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy and capacity needs, clean and efficient fossil-fired generation is supported.

In 2002, California established its Renewable Portfolio Standard program,[2] with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. The California Energy Commission subsequently accelerated that goal to 2010, and further recommended increasing the target to 33 percent by 2020. Because much of electricity demand growth is expected to be met by increases in natural-gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are significant elements of plans to reduce natural gas demand.

[2] The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country. By increasing the required minimum amount over time, the Renewable Portfolio Standard puts the electricity industry on a path toward increasing sustainability.

California Department of Resources Recycling and Recovery (CalRecycle) Formerly California Integrated Waste Management Board (CIWMB)

CalRecycle is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. CalRecycle works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (Public Resources Code [PRC] 40050 et seq. or Assembly Bill [AB] 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

Regional Water Quality Control Board (RWQCB)

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine RWQCBs. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The program area is within the jurisdiction of the Santa Ana Region.

California Department of Water Resources (DWR)

The California DWR is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

Senate Bill 610 and Senate Bill 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection.

Regional

San Bernardino County Construction and Demolition Solid Waste Management Plan

San Bernardino County requires the preparation of construction and demolition solid waste management plans (waste management plans) for all new construction projects. The waste management plan's goal is to ensure a minimum of 50 percent diversion of construction building materials and demolition debris from landfills and compliance with State Law which states that 50 percent of non-hazardous construction and demolition debris be recycled and/or salvaged for reuse in order to extend the life of landfills. Information provided in the waste management plan includes how the waste will be managed, hauler identification, and anticipated material wastes (County of San Bernardino, 2016).

Local

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding utilities.

3.15.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this EIR and consistency with Appendix G of the CEQA Guidelines, applicable local plans, and agency and professional standards, the proposed program would have a significant effect on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- 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;
- Require new or expanded water supply resources or entitlements;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the projects projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Impacts Discussion

Wastewater Treatment Requirements

Impact 3.15-1: The proposed program would have a less than significant and less than cumulatively considerable effects regarding wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Project Impact Analysis

See section 3.8 Hydrology and Water Quality for more detailed information regarding water treatment and water quality issues.

Project Category 1: Treatment Facility Upgrades

The project would include future upgrades at existing treatment facilities. During project construction of all of the proposed upgrades, a minimal amount of wastewater would be generated by construction workers and collected by portable toilet facilities. All waste generated in portable toilets would be collected by a permitted portable toilet waste hauler and appropriately disposed of at one of the County identified liquid waste disposal stations. These waste disposal stations are permitted by the RWQCB. Impacts would be less than significant.

The discharge of tertiary-treated effluent treated to Title 22 levels from the existing treatment plants are currently subject to waste discharge requirements regulated by the SARWQCB under Order No. R8-2015-0036, Waste Discharge Requirements and Master Reclamation Permit for Inland Empire Utility Agency Regional Water Recycling Facilities Surface Water Discharges and Recycled Water Use. As described above in the regulatory framework, effluent quality standards require tertiary treatment with filters and disinfection equivalent to Title 22 requirements for recycled water, due to the use of the receiving water for recreation. The proposed upgrades would comply with the provisions of the Order. The treatment facility upgrades would be designed to comply with the applicable treatment and discharge requirements of Order No. R8-2015-0036. Compliance with permit limitations would ensure that impacts would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

During project construction of all of the conveyance systems and proposed ancillary facilities, a minimal amount of wastewater would be generated by construction workers and collected by portable toilet facilities. All waste generated in portable toilets would be collected by a permitted portable toilet waste hauler and appropriately disposed of at one of the County identified liquid waste disposal stations. These waste disposal stations have been appropriately permitted by the RWQCB. Impacts would be less than significant.

During operation, the conveyance systems and ancillary facilities would distribute recycled water and would not generate any wastewater, and therefore, would not exceed wastewater treatment requirements. There would be no impact.

Project Category 3: Groundwater Recharge and Extraction

The recycled water treated at the IEUA treatment facilities would be recharged via recharge basins and injections wells. The proposed upgrades and new recharge basins and injection wells would allow for increased groundwater recharge. In accordance with the Water Recycling Law (California Water Code, Chapter 7 Reclamation), the utilization of recycled water for the beneficial use of groundwater recharge would be subject to waste discharge requirements (WDRs) (California Water Code Section 13263) and water recycling requirements (WRRs) (Water Code Section 13523) from the SARWQCB, in addition to NPDES permit requirements. WRRs are issued to the recycled water producer to ensure that the recycled water has received effective treatment for disinfection and to the recycled water user to ensure that recycled water is being applied properly. WDRs are issued to the recycled water producer to protect the quality of receiving waters, including groundwater aquifers. In lieu of WRRs, the SARWQCB can issue a Master Recycling Permit to the recycled water producer, user, or both. The permit includes WDRs and rules and regulations for recycled water users.

In addition to the treatment facility permits, each project that involves replenishment with recycled water would be considered a groundwater recharge reuse project (GRRP) pursuant to California Code of Regulations (CCR) Title 22 Water Recycling Criteria (Sections 60301 through 60355, inclusive) adopted by the California Department of Public Health (DPH) (June 18, 2014). A Title 22 Engineering Report would be required for each GRRP project that incorporates and reflects information from the WDRs/WRRs or Master Recycling Permit. The current Title 22 Water Recycling Criteria require the submission of the Engineering Report to the SARWQCB and DPH before recycled water projects are implemented. These reports must also be amended prior to any modification to existing projects. The purpose of an Engineering Report is to describe the manner by which a project will comply with the Water Recycling Criteria. The Water Recycling Criteria prescribe:

- Recycled water quality and wastewater treatment requirements for the various types of allowed uses,
- Use area requirements pertaining to the actual location of use of the recycled water (including dual plumbed facilities), and
- Reliability features required in the treatment facilities to ensure safe performance.

For the proposed FMP projects, compliance with the requirements and conditions of the Title 22 Engineering Report, WDRs, and WRRs would ensure that the proposed project does not exceed wastewater treatment requirements of the SARWQCB. Impacts would be considered less than significant.

Combined Project Categories

Project Categories 1, 2, and 3 propose upgrades and construction of new treatment, conveyance, and groundwater recharge facilities. During project construction of all of the proposed facilities, a minimal amount of wastewater would be generated by construction workers and collected by portable toilet facilities. All waste generated in portable toilets would be collected by permitted portable toilet waste hauler and appropriately disposed of at one of the County identified liquid

waste disposal stations. These waste disposal stations have been appropriately permitted by the RWQCB. Impacts would be less than significant.

For all proposed FMP projects, compliance with conditions under Order No. R8-2015-0036, requirements and conditions of the Title 22 Engineering Report, WDRs, and WRRs would ensure that the proposed project does not exceed wastewater treatment requirements of the SARWQCB. Impacts would be considered less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development could exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board and result in potential significant cumulative impacts. As discussed above, the proposed FMP projects would result in less than significant impacts associated with exceedance of wastewater treatment requirements. Since the project would result in less than significant impacts related to exceedance of wastewater treatment requirements, the project's contribution to cumulative impacts is not considered cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Water or Wastewater Treatment Facilities

Impact 3.15-2: The proposed program would have no impact and no contribution to cumulative physical impacts associated with the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause environmental effects, in order to maintain acceptable service.

Implementation of FMP projects would result in construction and operation of new or expanded wastewater treatment facilities, conveyance facilities, and groundwater recharge facilities as described in Chapter 2*, Project Description*. Proposed facilities would include treatment plant systems, ancillary facilities, pipelines, pump stations, storage tanks, recharge basins, and injection and extraction wells. The environmental effects associated with the proposed project are documented throughout this PEIR.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed facilities within Project Category 1 would include the construction or expansion of existing IEUA treatment plant facilities. Construction workers would temporarily require use of portable sanitary units during construction of the proposed projects. Wastewater generated and the demand for water during construction of the proposed projects would be minimal and would not require the construction of new water or wastewater treatment facilities. Because construction of new or expanded facilities is not required to accommodate the FMP projects, there would be no construction impacts associated with the provision of these facilities to serve the FMP projects.

During operation, approximately 35 new employment opportunities would be created to serve the various treatment facilities. Wastewater generated and the demand for water by the additional employees would be nominal at each of the treatment facilities. Wastewater and water treatment for the nominal increase in the generation of wastewater and demand for water by the new employees would be accommodated by the existing treatment plants. There would be no requirement for the construction of new or expanded water or wastewater treatment facilities to serve the proposed project. Because construction of new or expanded facilities is not required to accommodate the FMP projects, there would be no construction impacts associated with the provision of these facilities to serve the FMP projects.

Project Category 2: Conveyance Systems and Ancillary Facilities

The proposed facilities within Project Category 2 would include construction or expansion of IEUA conveyance pipelines and ancillary facilities such as pump stations. Construction workers would temporarily require use of portable sanitary units and demand water during construction of the proposed projects. Wastewater generated and water demanded during construction of the proposed projects would be minimal and would not require the construction of new wastewater or water treatment facilities. Because construction of new or expanded facilities is not required to accommodate the FMP projects, there would be no construction impacts associated with the provision of these facilities to serve the FMP projects.

During operation, the proposed conveyance systems and ancillary facilities would not generate wastewater during their operation. Therefore, the proposed project would not require the expansion or construction of a new wastewater or water treatment facilities. Because construction of new or expanded facilities is not required to accommodate the FMP projects, there would be no construction impacts associated with the provision of these facilities to serve the FMP projects.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Project Categories 1, 2, and 3 include upgrades and construction of new treatment, conveyance, and groundwater recharge facilities. Wastewater generated and water demanded during construction of the proposed projects would be minimal and would not require the construction of new wastewater or water treatment facilities. Furthermore, any wastewater generated or water demanded by the additional employees would be nominal at each of the treatment facilities and wastewater. Wastewater and water treatment for the nominal increase in the generation of wastewater and demand for water by the new employees would be accommodated by the existing treatment plants. There would be no requirement for the construction of new or expanded water or wastewater treatment facilities to serve the proposed project. Because construction of new or expanded facilities is not required to accommodate the FMP projects, there would be no construction impacts associated with the provision of these facilities to serve the FMP projects.

Significance Determination before Mitigation: No Impact.

Cumulative Impact Analysis

Future cumulative development is forecast to require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. The cumulative need for additional and expanded wastewater or water treatment facilities could result in significant environmental effects during the construction of these facilities. Because the proposed FMP projects would not require new or expanded wastewater or water treatment facility capacity to serve the FMP projects, the project would not result in the need for construction of wastewater or water treatment facilities. Therefore, the FMP projects would not contribute to cumulative environmental effects and thus would result in no cumulative impacts.

Significance Determination before Mitigation: No Impact.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: No Impact.

Stormwater Drainage Facilities

Impact 3.15-3: The proposed program could have significant and cumulatively considerable environmental effects from the construction of new stormwater drainage facilities or expansion of existing facilities.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Implementation of the treatment facility upgrades would result in the addition of impervious surfaces that would increase stormwater quantity. This increase could affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. The construction of new and/or expanded drainage facilities could result in significant environmental effects.

Project Category 2: Conveyance Systems and Ancillary Facilities

Proposed pipelines would be underground and would not permanently alter existing site drainage patterns. The pipelines would not require the construction of new or expanded stormwater drainage facilities. Because there would be no requirement for the construction of new or expanded drainage facilities to serve the proposed project, there would be no construction impacts associated with the provision of these facilities to serve the proposed pipelines.

Implementation of the ancillary facilities including new reservoir tanks and pump stations would be located aboveground. The ancillary facilities would also result in the addition of impervious surfaces that would increase stormwater quantity. This increase could affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. The construction of new and/or expanded drainage facilities could result in significant environmental effects.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Project Categories 1, 2, and 3 propose upgrades and construction of new treatment, conveyance, and groundwater recharge facilities. The presence of new facilities at each project site and changes in the decrease of permeable areas and increases in impervious surfaces could alter the direction and volume of overland stormwater flows. The increase in stormwater flow could affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. The construction of new and/or expanded drainage facilities could result in significant environmental effects.

Significance Determination before Mitigation: Potentially Significant.

Cumulative Impact Analysis

Future cumulative development within the IEUA service area would result in the removal of pervious surfaces and increase impervious surfaces. Increases in impervious surfaces would increase stormwater quantity. This increase could cumulatively affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. This cumulative need for the construction of new and/or expanded stormwater drainage facilities could result in significant environmental effects. Because the proposed FMP projects could also require new and/or expanded stormwater drainage facilities of which their construction could cause significant environmental effects, the program's contribution to cumulative effects would be significantly considerable, and thus would result in as a significant cumulative impact.

Significance Determination before Mitigation: Potentially Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

U-1: **Implementation of a Drainage Plan to Reduce Downstream Flows.** Prior to construction of project facilities, the IEUA shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.

Project Category 2: Conveyance Systems and Ancillary Facilities

Implementation of Mitigation Measure U-1 is required.

Project Category 3: Groundwater Recharge and Extraction

Implementation of Mitigation Measure U-1 is required.

Combined Project Categories

Implementation of Mitigation Measure U-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure U-1 would ensure the reduction of peak concentration stormwater flows so that the capacities of the existing downstream drainage facilities are not exceeded.

Cumulative Measures

Implementation of Mitigation Measure U-1 is required.

Significance Determination after Mitigation: Less than Significant. The implementation of Mitigation Measure U-1 would ensure that the proposed facilities' contribution to cumulative stormwater drainage facilities impacts would be reduced to less than cumulatively considerable by ensuring the reduction of peak concentration stormwater flows exiting the aboveground facility sites.

Water Supplies

Impact 3.15-4: The proposed program would have less than significant and less than cumulatively considerable effects from new or expanded water supply resources or entitlements.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Construction of the proposed treatment facility upgrades would require nominal amounts of water for dust control to meet SCAQMD Rule 403 standards, concrete mixing and sanitary purposes. Construction water would either be accessed via a local water line or trucked in from another local area. Recycled water could be supplied by IEUA. The construction demand would be minimal and accommodated by existing supplies. Impacts would be less than significant.

The proposed treatment facilities would require a nominal amount of water for landscaping and on-site sanitation for employees. Recycled water could be supplied by IEUA**.** According to projections, water demand and water supply are expected to increase incrementally from 2016 through 2035. IEUA's existing supplies would accommodate the minimal increase in demand resulting from the addition of up to 35 new employees that could be required to operate the new facilities. The FMP projects are specifically designed to provide a more efficient and effective program for managing water resources within the IEUA service area. Implementation of the project would serve to meet the existing and future demand of development for the service area. The project is not forecast to create substantial growth or demand for new connections that would place additional demand on the existing water supply system that beyond that anticipated in the individual jurisdictions' General Plans. Impacts to water supply resulting from project implementation would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Construction of the proposed pipelines would require minimal water usage for dust control and concrete washout activities. Pipeline construction would occur in phases and is expected to be

relatively short, lasting from several months to a year. Therefore, water demand during construction would not be substantial and would not require new or expanded water supply resources. Impacts would be less than significant.

The proposed pipelines and ancillary facilities would distribute recycled water to other IEUA facilities, various end users, and other locations, and would not require additional water for operation. Conveyance and distribution of recycled water through the proposed pipelines and ancillary facilities would provide additional water sources for IEUA, water companies, and groundwater recharge, and therefore offset demands on other water supplies. Impacts related to new or expanded water supply resources or entitlements would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Groundwater recharge and extraction facilities, such as recharge basins and wells, would require minimal water usage for dust control and concrete washout activities. These proposed facilities would aid in the recharge of the groundwater basin and would not require additional water for operation. Recharge of the groundwater basin would provide increased local groundwater supplies. Therefore, impacts related to new or expanded water supply resources or entitlements would be less than significant.

Combined Project Categories

Project Categories 1, 2, and 3 propose upgrades and construction of new treatment, conveyance, and groundwater recharge facilities. Construction of all proposed facilities would require minimal amounts of water for dust control, concrete mixing and sanitary purposes. Minimal to no additional water supplies would be required for operation and landscaping of treatment facilities and all other projects. Therefore, impacts related to new or expanded water supply resources or entitlements would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development within the IEUA service area is expected to require new or expanded water supply resources or entitlements to serve the increase in urban development. IEUA's IRP identifies management actions required to achieve adequate water supply through 2040. The plan developed implementation strategies that would improve near-term and long-term groundwater management for the region. In addition, the IRP evaluates new growth, development, and water demand patterns within the IEUA service area. Management actions to ensure adequate water supplies were evaluated based on various demand factors such as land development and community density.

The IRP includes management actions such as Low Impact Development (LID) and best management practices (BMPs). IEUA will be supporting LID systems as cumulative development within the IEUA service area occurs. The County of San Bernardino Stormwater Program defines LID BMPs as any stormwater control that uses on-site natural treatment processes to reduce or remove pollutants in runoff (SWRCB, 2011). LID would result in development that utilizes water conservations measures by reducing urban runoff and ultimately increasing the amount of

stormwater that is captured and stored in the Chino Basin groundwater table. Practices and management actions such as these would assist in reducing demands of the IEUA's service area water supplies.

The proposed FMP projects would accommodate increasing water demand and would not contribute to the need for new or expanded water supply resources or entitlements. Because the project would result in a less than significant impact related to expanded water supply resources, the project's contribution to cumulative impacts is not considered cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Wastewater Treatment Capacity

Impact 3.15-5: The proposed program would have less than significant and less than cumulatively considerable effects on wastewater treatment capacity.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

Wastewater generated during construction of the proposed treatment facility upgrades would be minimal, consisting of portable toilet waste generated by construction workers. During operation, some treatment facilities would have bathrooms and/or a kitchen area to accommodate the

anticipated wastewater increase from approximately 35 additional employees. Any wastewater treatment needs for employee facilities at new or expanded treatment facilities would be accommodated in-house by the IEUA treatment plants. The treatment plants would have sufficient capacity to serve the project's projected wastewater demand; therefore, impacts related to available wastewater treatment capacity would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Wastewater generated during construction of the proposed facilities would be minimal, consisting of portable toilet waste generated by construction workers and therefore would not substantially impact wastewater treatment capacity. All conveyance systems, groundwater recharge, wells, and ancillary facilities would not generate wastewater during their operation. Therefore, impacts related to available wastewater treatment capacity would be less than significant.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Combined Project Categories

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development within the IEUA service area would increase the generation of wastewater. This cumulative increase could result in inadequate capacity of the wastewater treatment plant(s) to serve the additional demand.. However, the IEUA WFMP Update addresses long term projection of growth and capacity needs within the IEUA service area and models capacity utilization of the four Regional Water Recycling Plants (RWRPs). The projects proposed within the WFMP would ensure that IEUA would have adequate capacity to treat wastewater for the region; therefore, the program's contribution to cumulative impacts is less than cumulatively considerable, and therefore, would be a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Landfill Capacity

Impact 3.15-6: The proposed program would have less than significant and less than cumulatively considerable effects on solid waste disposal facilities.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The solid waste generated during construction of the proposed facilities would mainly consist of general construction debris, building material wrapping, worker personal waste, and excavated soils. In addition, the project also includes the demolition of Regional Plant 2. This demolition would result in an estimated 16,500 cubic yards of concrete and other building materials removed from the site. Each of the improvements and demolition activities would include the preparation of a construction and demolition solid waste management plan as required by San Bernardino County for all new construction projects (County of San Bernardino, 2016). The plan would demonstrate a minimum of 50 percent diversion of construction building materials and demolition debris from landfills through reuse or recycling. Information provided in this waste management plan would include how the waste will be managed, hauler identification, and anticipated material wastes. Construction waste would likely be disposed of at the El Sobrante or Mid-Valley Landfill. Both landfills permit thousands of tons of waste per day, which is beyond what the expected amount of waste would be generated by the proposed facilities during construction. Further, these landfills are expected to continue to operate for 15-30 more years (the approximate planning period for the FMP), and combined, have adequate permitted remaining capacity of 171,470,000 cubic yards. Both landfills are Class III which permits non-hazardous solid waste. Impacts regarding permitted remaining landfill capacity would be less than significant.

Operation the proposed treatment facilities would generate additional biosolids as a byproduct of the wastewater treatment process. These biosolids would be sent to IEUA Biosolids Handling Facilities at RP-5, once relocated from RP-2, and the IERCF to be reused as soil amendments, or would be disposed of at appropriate landfills similar to existing operations conducted at IEUA treatment facilities. The proposed facility upgrades would not substantially increase the amount of biosolids generated in the region. Thus, the project would not exceed landfill capacity or change regional reuse opportunities. The impact to landfills would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Landfills in proximity to the IEUA service area would accommodate all forms or solid waste generated by construction of the proposed facilities. Further, these landfills are expected to continue to operate for several more years and have a substantial remaining capacity. Operation of the proposed facilities would not substantially increase the amount of biosolids generated in the region. Impacts regarding remaining landfill capacity would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Future cumulative development within the IEUA would cumulatively contribute to the generation of solid waste and disposal of solid waste at the El Sobrante and Mid-Valley Landfill landfills. Based on growth projections, these two landfills have approximately 15 to 30 more years of capacity. Future cumulative development could eventually exceed the capacities of these landfills. Therefore, cumulative development could result in significant impacts on landfills. Because the proposed FMP project would not substantially increase the generation of solid waste, the project's contribution to cumulative effects on landfills would be less than cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades

No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities

No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction

No mitigation measures are required.

Combined Project Categories

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Compliance with Solid Waste Regulations and Statutes

Impact 3.15-7: The proposed program would have less than significant and less than cumulatively considerable effects associated with solid waste federal, state, and local statutes and regulations.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The proposed project would comply with all city and County construction and demolition requirements during construction of the proposed facilities as described above in the regulatory setting. All excavated soil would be hauled offsite by truck to an appropriately permitted solid waste facility. The daily amount of soil to be disposed per day would not exceed the maximum permitted throughput for each waste type (i.e., non-hazardous and hazardous). It is possible that soil disposal for one day could consist of one type (non-hazardous and hazardous). Based on this, there would be adequate maximum permitted daily throughput for each category. The proposed project would be in compliance with all federal, State, and local statues related to solid waste disposal. Therefore, the proposed project would result in less than significant construction impacts.

The cities and County in which the project would be located are required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. The project would be required to recycle during its operation. Project impacts related to potential noncompliance with solid waste statutes and regulations would be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Because each of the FMP projects that are located within each city or County are required to comply with construction and demolition requirements during construction, impacts related to noncompliance with solid waste statues and regulations would be less than significant.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

Potential cumulative impacts related to solid waste facilities and solid waste disposal would occur if projects within the IEUA service area would be served by a facility without sufficient permitted

capacity to accommodate solid waste disposal needs, or if cumulative projects do not comply with federal, state, and local statutes and regulations related to solid waste. Specifically, projects producing solid waste during project implementation, including cleanup, residential and commercial projects, could produce a waste stream that could together not be accommodated by current solid waste facilities within regional solid waste disposal areas, resulting in a cumulatively considerable impact to solid waste facilities.

The proposed FMP projects would comply with all federal, State, and local statues and regulations related to solid waste and would not result in potential significant impacts. When added to cumulative projects, the effects of the proposed FMP projects would contribute incrementally to the cumulative impacts on solid waste facilities.

Cumulative projects would generally be served by the local municipal solid waste disposal facilities and hazardous waste disposal facilities, resulting in potential cumulative impacts to solid waste facilities. However, new cumulative development projects would participate in local programs designed to divert 50 percent of waste from landfills. In addition, all cumulative projects implemented in the area would also be required to comply with federal, State, and local solid waste regulations and statutes. Therefore, when considered in addition to the anticipated impacts of other cumulative projects, the proposed project's incremental contribution to solid waste facility capacity impacts would not be cumulatively considerable, and therefore, would result in a less than significant cumulative impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

3.15.4 References

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CHAPTER 4
Other CEQA Considerations

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this EIR. The other CEQA considerations include environmental effects that were found not to be significant, significant and unavoidable adverse impacts, significant irreversible environmental changes that would be caused by the program, growth-inducing impacts, and energy consumption.

4.1 Effects That Were Found Not To Be Significant

An Initial Study was not prepared for the program. Each of the environmental issues identified in Appendix G of the State CEQA Guidelines are evaluated in Sections 3.1 through 3.15 of this PEIR.

4.2 Significant and Unavoidable Adverse Environmental Impacts

As required by Section 15126.2 (b) of the State CEQA Guidelines, an EIR must identify any significant environmental effects which cannot be avoided if the proposed program is implemented. The significant environmental impacts of the proposed program that would be considered unavoidable are summarized below.

Air Quality: The implementation of some of the FMP projects within Project Categories 1, 2, and 3 could result in significant air quality impacts due to potential violation of air quality standards during construction activities. Mitigation measures are recommended to be implemented; however, impacts could remain significant. The FMP projects in Project Category 2 and 3 could also expose sensitive receptors to pollutant concentrations during construction resulting in a significant air quality impact. Mitigation measures are recommended to be implemented; however, impacts could remain significant.

Cultural Resources: The implementation of the proposed FMP projects within Project Categories 1, 2 and 3 could result in impacts on historical resources. Mitigation measures are recommended to reduce potential impacts on historic resources; however, because there are no policies in place to prevent the IEUA Board to approve demolition of a historic resource, the removal of a historical resource would remain potentially significant.

Noise: The implementation of some of the FMP projects in Project Categories 2 and 3 could result in significant noise impacts due to potential exceedances of local noise standards and

substantial vibration levels during construction activities. Mitigation measures are recommended to be implemented; however, impacts could remain significant. The FMP projects in Project Categories 2 and 3 could also result in substantial temporary increases in existing noise levels during construction activities resulting in a significant noise impact. Mitigation measures are recommended to be implemented; however, impacts could remain significant.

4.3 Significant Irreversible Environmental Changes

CEQA Guidelines 21100(b) (2) and 15126.2(b) require that any significant effect on the environment that would be irreversible if the pro is implemented must be identified. A project would generally result in a significant irreversible impact if:

- Primary and secondary impacts (such as roadway improvements that provide access to previously inaccessible areas, etc.) would commit future generations to similar uses.
- The project would involve a large commitment of nonrenewable resources.
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project.

Construction and operation of the proposed projects would require the use and consumption of nonrenewable resources, such as steel and other metals. Renewable resources, such as lumber and other wood byproducts, would also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Construction of facilities would require the commitment of a relatively small amount of building materials. The small quantity of building materials used during implementation of proposed projects would not result in a significant impact because these types of resources are anticipated to be in adequate supply into the foreseeable future.

Energy would be consumed during both construction and operation of the proposed program. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction and site restoration activities. The projects would not result in the wasteful, inefficient or unnecessary consumption of energy during construction or operation. The proposed program would result in the irretrievable and irreversible commitment of energy resources in the form of diesel fuel, gasoline and electricity during construction and operation. However, these types of resources are anticipated to be in adequate supply into the foreseeable future, and in general, the production and use of recycled water is more energy efficient than imported water. Since the FMP would decrease reliance on imported water by offsetting its use for replenishment with recycled water, the proposed program would reduce the energy requirement otherwise associated with the use of imported water for replenishment. (See Section 4.5 below for additional information.) Therefore, impacts due to these irretrievable and irreversible commitments of resources are considered less than significant.

4.4 Growth-Inducing Impacts

The California Environmental Quality Act (CEQA) Guidelines (Section 15126.2(d)) require that an Environmental Impact Report (EIR) discuss the potential growth-inducing impacts of a proposed project. The CEQA Guidelines provide the following guidance for such discussion:

> *"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involved construction of new housing. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Under CEQA, growth is not considered necessarily detrimental or beneficial.

Based on the CEQA definition above, assessing the growth-inducement potential of the proposed plan involves answering the question: "Would implementation of the proposed plan directly or indirectly support economic expansion, population growth, or residential construction?" Water supply availability is one of the chief public services needed to support growth and community development. IEUA's IRP identifies management actions required to achieve adequate water supply through 2040. The plan developed implementation strategies that would improve near-term and long-term groundwater management for the region. In addition, the IRP evaluates new growth, development, and water demand patterns within the IEUA service area. Management actions to ensure adequate groundwater supplies were evaluated based on various demand factors such as land development and community density. IRP management actions such as Low Impact Development (LID) and best management practices (BMPs) are incorporated to the some of the proposed FMP projects. IEUA will be supporting LID systems as cumulative development within the IEUA service area occurs. LID would result in development that uses water conservations measures by reducing urban runoff and ultimately increasing the amount of stormwater that is captured and stored in the Chino Basin groundwater table. Practices and management actions such as these would assist in reducing demands of the IEUA's service area water supplies. All FMP projects would be designed to reduce dependence on imported water in the future and to ensure water supplies meet the needs of the people in the service area.

While adequate water supply plays a role in supporting additional growth, it is not the single determinant of such growth. Other factors, including General Plan policies, land use plans, and zoning, the availability of wastewater treatment capacity and solid waste disposal capacity, public schools, transportation services, and other important public infrastructure, also influence business and residential population growth. Economic factors, in particular, greatly affect development rates and locations.

4.4.1 Methodology

This section evaluates how the FMP could affect population growth in the IEUA service area. Population and water demand projections are compiled for the IEUA service area and compared with existing water demands. The growth anticipated in the region has been identified in local General Plans prepared by local land use agencies and municipalities. IEUA has no control over land use decisions or future population growth. This section evaluates IEUA's relationship to local population trends and water supply availability.

Growth inducement itself is not necessarily an adverse impact. It is the potential consequences of growth, the secondary effects of growth, which may result in environmental impacts. Potential secondary effects of growth could include increased demand on other public services; increased traffic and noise; degradation of air quality; loss of plant and animal habitats; and the conversion of agriculture and open space to developed uses. Growth inducement may result in adverse impacts if the growth is not consistent with the land use plans and growth management plans and policies for the area, as "disorderly" growth could indirectly result in additional adverse environmental impacts. Thus, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

To determine direct growth-inducement potential, the proposed program was evaluated to verify whether an increase in population or employment, or the construction of new housing would occur as a direct or indirect result of the proposed program. If either of these scenarios occurred, the proposed program could result in direct growth-inducement within the IEUA service area.

4.4.2 Population Projections

SCAG and Department of Finance Projections

The eight local jurisdictions that govern land use and development in the IEUA service area are listed below in **Table 4-1.** Each jurisdiction's adopted General Plan guides the type and location of land uses and the intensity of development in response to projected population growth and associated housing needs. Each jurisdiction has assessed the growth-related impacts associated with planned land use and build-out scenarios allowed under their General Plans.

The IEUA service area is located within the planning area of the Southern California Association of Governments (SCAG). SCAG consists of local governments from San Bernardino, Ventura, Orange, Los Angeles, Riverside, and Imperial Counties. One of SCAG's primary functions is to forecast population, housing, and employment growth for each region, subregion, and city.

According to the SCAG *Profile of San Bernardino County 2015,* the total population of San Bernardino has increased by 373,530 people from 2000 to 2014. During that 14 year period, the growth rate was 22 percent, which was higher than the SCAG Region rate of 12.3 percent. San Bernardino County contributed a total of 11.2 percent of the SCAG Region population.

SCAG and Department of Finance (DOF) population estimates are enumerated in Table 4-1 for the cities within the IEUA service area and the entire County of San Bernardino beginning with the base year 2008 and SCAG forecasting 2020 and 2035. The 2015 population estimate for San Bernardino County is approximately 2,104,291 (DOF, 2015). SCAG updated the County of San Bernardino's population estimate in the 2016-2040 Regional Transportation Plan/Sustainable Communities Plan (RTP/SCS). These estimates were for the years 2012 and 2040. Based on the 2015 and 2040 population data, the persons within the County are forecast to increase by 29.8 percent over the next 25 years and the County is expected to have an estimated population of 2,731,300 people in the year 2040 (SCAG, 2016).

TABLE 4-1
POPULATION PROJECTIONS FOR THE IEUA SERVICE AREA

City	2008[a]	2012[b]	2015[c]	2020[a]	2035[a]	2040[b]	Population % Increase from 2015-2040 forecast
Chino	75,600	79,400	84,465	88,800	107,200	120,400	42.5%
Chino Hills	74,600	75,800	77,596	76,600	78,400	94,900	22.3%
Fontana	193,900	200,200	204,312	222,700	259,100	280,900	37.5%
Montclair	36,000	37,200	38,548	39,700	43,900	42,700	10.8%
Ontario	162,900	166,300	168,777	203,800	307,600	258,600	53.2%
Rancho Cucamonga	162,800	170,100	174,064	167,100	167,100	204,300	17.4%
Upland	72,600	74,700	75,787	76,700	80,200	81,700	7.8%
Total San Bernardino County	**2,016,000**	**2,068,000**	**2,104,291**	**2,268,000**	**2,750,000**	**2,731,300**	**29.8%**

[a] SOURCE: SCAG 2012
[a] SOURCE: SCAG 2016
[a] SOURCE: DOF, 2015

IEUA Retail Agency UWMP Projections

The eight major water suppliers (retail agencies) within the boundaries of IEUA that provide water to all eight jurisdictions within the IEUA service area are: the City of Chino, Chino Hills, Ontario, and Upland, Cucamonga Valley Water District, Fontana Water Company, Monte Vista Water District, and the San Antonio Water Company. **Table 4-2** provides population projections for each retail agency's service area. These projections are from the specific retail agencies' Urban Water Management Plans (UWMP). UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 connections is required to assess the

reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. This assessment is to be included in its UWMP, which are to be prepared every five years and submitted to the Department of Water Resources (DWR) for consistency review under the Urban Water Management Planning Act.

TABLE 4-2
POPULATION PROJECTIONS FOR IEUA SERVICE AREA BASED ON 2010 AND 2015 UWMPS

District	2010	2020	2035
City of Chino	71,500	84, 806	103,902
City of Chino Hills	74,738	77,920	88,511
City of Ontario [a]	168,766	180,591	288,709
City of Upland	72,732	78,500	82,050
Cucamonga Valley Water District	199,225	209,034	218,955
Fontana Water Company	209,035	221,603	246,738
Monte Vista Water District	52,488	56,555	59,384
San Antonio Water Company	3,371	3,486	3,602
TOTAL	**851,855**	**912,495**	**1,091,851**

[a] City of Ontario population projections are from 2010 and 2015 UWMP.

SOURCES: City of Chino 2010 UWMP; City of Chino Hills 2010 UWMP; City of Ontario 2010 UWMP; City of Upland 2010 UWMP; Cucamonga Valley Water District 2010 UWMP; Fontana Water Company 2010 UWMP; Monte Vista Water District 2010 UWMP; San Antonio Water Company 2010 UWMP.

4.4.3 Water Supply and Demand Projections

IEUA water demands represent the total demand of all agencies within IEUA's service area over the planning horizon. Total regional demand includes imported water, which is provided by IEUA, recycled water, groundwater, and local surface water. These demands are broken down by retail agencies. In addition to the eight retail agencies, a relatively small portion of the West Valley Water District service area also is included within IEUA's boundaries. For simplicity, West Valley has not been included in the following analysis of water supply and demand. The projected water demand and supply for each of the other eight agencies are provided below in **Table 4-3**.

TABLE 4-3
TOTAL SUPPLY AND DEMAND FOR IEUA SERVICE AREA

District	2010	2020	2035
City of Chino	22,161	25,388	28,369
City of Chino Hills	16,080	18,450	20,950
City of Ontario	37,379	56,134	86,301
City of Upland	20,118	19,192	20,062
Cucamonga Valley Water District	48,591	58,100	61,900
Fontana Water Company	41,769	44,613	53,741
Monte Vista Water District	20,849	35,200	36,081
San Antonio Water Company	17,848	21,090	21,090
Total Demand	**224,795**	**278,167**	**328,494**
City of Chino	18,436	22,866	26,528
City of Chino Hills	17,514	27,250	27,250
City of Ontario	37,379	56,134	86,301
City of Upland	25,408	27,030	27,030
Cucamonga Valley Water District	50,463	65,938	66,688
Fontana Water Company	41,769	44,613	53,741
Monte Vista Water District	21,325	51,790	51,828
San Antonio Water Company	17,192	16,645	16,645
Total Supply	**229,486**	**262,159**	**356,011**

4.4.4 Growth Inducement Potential

Direct Growth

The proposed FMP intends to expand IEUA wastewater treatment facilities and recycled water distribution system through the upgrades of conveyance systems and ancillary facilities. Furthermore, increased recycled water would be conveyed to upgraded and new recharge basins and injection wells to enhance groundwater recharge. The FMP would increase local water sources and storage capacity that would reduce demands for imported water.

Implementation of the FMP would not have direct growth inducement effects, as it does not propose development of new housing that would attract additional population. Further implementation of the FMP would not result in substantial permanent or even short-term construction employment that could indirectly induce population growth by establishing new employment opportunities. The temporary construction employment opportunities are expected to be filled by workers within the local economy, and new housing for construction employees would not be required. Operation of the proposed facilities would require approximately 35 future new employees to operate the proposed facilities. These employees are expected to be drawn from existing population. As a worst-case assumption, the 35 new employees could result in the demand for 35 new housing units. An increased demand of 35 new housing units is within the

housing projections anticipated to accommodate the population growth expected to occur within the IEUA service area. This increase would be minimal and would not directly induce substantial population growth in the IEUA service area.

One objective of the FMP is to reduce the region's dependence on imported water supplies with local supplies to meet existing and future demands. All the water purveyors in the IEUA service area have projected water demands that would be met with a combination of imported and local water supplies. Total population in 2035 is projected to increase by approximately 29.8 percent (see Table 4-1). Consequently, water demand in the service area is projected to increase by about 46 percent, from 224,795AFY in 2010 to 328,494 AFY in 2035 (see Table 4-3). In order to keep up with demand, water supplies are expected to increase overall by 126,525 AFY by 2035 (see Table 4-3).

The FMP projects would result in replenishment of groundwater and development of groundwater supply at a level that would support planned future growth through 2035. The FMP proposes phasing of project implementation in a step-wise fashion, which would allow for the development of water supplies in a manner that would keep up with planned future demand. The FMP does not propose implementation of future water projects that would result in a water supply that would exceed projected future demand. The local water supply would minimize the need to import water to meet the already planned water demands.

As discussed above, SCAG as well as the eight water purveyors within the IEUA service area anticipate increased population, as documented in their 2010 UWMPs. IEUA does not have the authority to approve or limit growth. The local land use jurisdictions including the cities of Chino, Chino Hills, Upland Montclair, Fontana, Ontario, Rancho Cucamonga, and San Bernardino County have adopted General Plans that outline planned levels of growth in the community. IEUA is required to plan for the water demands estimated by the local land use jurisdictions. The proposed FMP projects accommodate this planned demand projection, but do not induce additional demand beyond that planned for in the local General Plans. The proposed program accommodates the demand for wastewater treatment and recycled water production required by planned future growth.

Secondary Effects of Growth

Growth is not in and of itself a significant adverse impact. However, population growth could results in secondary environmental effects that could be significant. The environmental impact analysis conducted for local General Plans identify significant environmental impacts associated with growth. Secondary effects of growth typically found to be significant and unavoidable include:

- Effects to or loss of agricultural resources;
- Air quality degradation;
- Hydrology and water quality modification and degradation;
- Traffic congestion;

- Transportation demand increase;
- Increased noise; and
- Increased demand on public services and utilities.

One impact of growth is the potential for out-growing existing utility infrastructure. One element of the FMP, the Septic System Conversion Program, would accommodate secondary growth within the IEUA service area. The conversion of up to 10,000 homes to a centralized collection system is a growth accommodating system because it would expand the collection system to areas not currently served with wastewater collection facilities. This transition away from septic would be used to meet regional water demands and would not adversely affect groundwater supplies in the region.

The proposed program would not directly cause the capacities of existing utility infrastructure to be exceeded; however, the program would mitigate the impact of future growth associated with cumulative developments through the construction of additional treatment capacity and provision of additional recycled water to meet future water supply demand.

The County of San Bernardino General Plan and city General Plans all plan for increased growth. The General Plan EIRs acknowledge that planned development results in adverse secondary effects. Effects which have been identified as significant and unavoidable are impacts to surface water quality, groundwater levels, biological resources, housing, and traffic and circulation. Pursuant to CEQA, the County of San Bernardino and cities have adopted statements of overriding consideration for the anticipated significant unavoidable effects. The proposed FMP projects would not cause additional secondary effects beyond those identified in the General Plan EIRs.

Regional adverse effects caused by growth are generally mitigated through regional resource management agencies. **Table 4-4** lists some of the agencies with the authority and mandate to mitigate secondary effects of growth.

4.5 Energy Conservation

This section provides an analysis of energy consumption that would result from program implementation. CEQA Section 21100(b) requires that an EIR discuss and consider mitigation measures for the potential energy impacts of proposed projects, and emphasizes avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section provides the required analysis, evaluation and mitigation as specified in Appendix F of the CEQA Guidelines. The guidelines provided in Appendix F of the CEQA Guidelines provide the following three means of achieving the ultimate goal of conserving energy.

1. Decreasing overall per capita energy consumption,
2. Decreasing reliance on natural gas and oil, and
3. Increasing reliance on renewable energy sources.

TABLE 4-4
AGENCIES HAVING AUTHORITY TO IMPLEMENT MITIGATION MEASURES FOR GROWTH-RELATED IMPACTS

Agency	Authority
San Bernardino County	Responsible for planning, land use, and environmental protection of unincorporated areas. Of particular importance is development of presently undeveloped lands, provision of regional solid waste management facilities, and regional transportation, air quality and flood control improvement programs.
City of Chino, Chino Hills, Montclair, Upland Rancho Cucamonga, Fontana, and Ontario	Responsible for adoption of the *General Plan* and various planning elements and local land use regulations. Adopts and implement local ordinances for control of noise and other environmental concerns. Participates in regional air quality maintenance planning through adoption of local programs to control emissions via transportation improvements. Responsible for enforcing adopted energy efficiency standards in new construction.
Local Agency Formation Commissions	Empowered to approve or disapprove all proposals to incorporate cities, to form special districts or to annex territories to cities or special districts. Also empowered to guide growth of governmental service responsibilities.
San Bernardino Associated Governments	Under State and federal law, have authority and responsibility over transportation planning and funding. Allocate transportation infrastructure and housing.
Regional Water Quality Control Board	Share responsibility with SWRCB to coordinate and control water quality. Formulates and adopts water quality control plans. Implements portions of the Clean Water Act when EPA and SWRCB delegate authority, as is the case with issuance of NPDES permits for waste discharge, reclamation, and storm water drainage.
State Department of Health	Responsible for the purity and potability of domestic water supplies for the State. Assists SWRCB and RWQCBs in setting quality standards.
California Air Resources Board	Responsible for adopting and enforcing standards, rules, and regulations for the control of air pollution from mobile sources throughout the State.
South Coast Air Quality Management District	Adopt and enforce local regulations governing stationary sources of air pollutants. Issue Authority to Construct Permits and Permits to Operate. Provide compliance inspections of facilities and monitors regional air quality. Developed the Clean Air Plan in compliance with the Clean Air Act.
U.S. Fish and Wildlife Service	Requires consultation under Section 7 or Section 10 of the Endangered Species Act for projects which could potentially impact endangered or threatened species. Prepares biological opinions on the status of species in specific areas and potential effects of proposed projects. Approves mitigation measures to reduce impacts and establishes Habitat Conservation Plans.
U.S. Army Corps of Engineers	Issues permits to place fill in waterways pursuant to Section 404 of the Clean Water Act.
California Department of Fish and Wildlife	Issues Streambed Alteration Agreements for projects potentially impacting waterways.

SOURCE: ESA, 2015.

4.5.1 Existing Conditions

Electricity

Southern California Edison

Electrical services are provided to the IEUA service area by Southern California Edison. SCE provides electricity to approximately 15 million people, 180 incorporated cities, 15 counties, 5,000 large businesses, and 280,000 small businesses throughout its 50,000-square-mile service area, (SCE, 2016).

SCE produces and purchases its energy from a mix of conventional and renewable generating sources. **Table 4-5** shows the electric power mix that was delivered to SCE's retail customers in 2014 compared to the statewide power mix.

TABLE 4-5
ELECTRIC POWER MIX DELIVERED TO SCE RETAIL CUSTOMERS IN 2014

Energy Resources	2014 SCE Power Mix (Actual)	2013 CA Power Mix[a]
Eligible Renewable	24%	19%
• Biomass & waste	1%	3%
• Geothermal	9%	4%
• Small hydroelectric	0%	1%
• Solar	4%	2%
• Wind	10%	9%
Coal	3%	8%
Large Hydroelectric	27%	44%
Natural Gas	6%	9%
Other	0%	0%
Unspecified sources of power[b]	40%	12%
TOTAL	**100%**	**100%**

[a] Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year.
[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

SOURCE: CEC, 2014

SCE monitors and maintains a vast electricity system. To ensure energy availability and reliability for existing and future consumers, SCE engages in ongoing planning efforts that involve power use projections, system upgrades, and changes to their power mix (SCE, 2016).

IEUA's electricity purchases are procured through a mixture of Direct Access (DA) (paying the local utility for transmission charges and a competing energy service provider for generation charges) and bundled service through SCE (paying the local utility for both transmission and

generation charges). Due to the temporal and site-specific variability in energy rates, the Agency closely evaluates the procurement options at each facility regularly. **Table 4-6** below includes details on each site.

IEUA Energy Use and Generation

IEUA's electricity usage for fiscal year 2013/2014 is approximately 88,000 MW/hour (IEUA, 2015). The sources include imported energy, cogeneration, solar, wind, fuel cell, and overall energy efficiency. IEUA's natural gas usage for fiscal year 2013/2014 is approximately 425,000 therms (IEUA, 2015).

As shown in Table 4-6, IEUA is also served by various renewable energy sources. IEUA signed a Power Purchase Agreement (PPA) for 3.5 megawatts (MW) of solar energy across four Agency facilities. RP-1 currently has 0.83 MW of solar panels installed onsite. RP-4/IERCF currently has 1 MW of solar panels. CCWRF: Currently has a 625 kW solar array. RP-5 currently has a 1 MW solar array installed at the SW portion of the facility (10acres). IEUA also purchases 100 percent of the energy produced by a 1 MW wind turbine located at RP-4. IEUA's Solids Handling Facility at RP-5 diverts food waste regionally with the goal of producing enough digester gas to fuel two 1.5 MW cogeneration engines that provide power for operations at RP-5.

A description of energy supplied by IEUA at each of the facilities is described below in Table 4-6.

TABLE 4-6
FISCAL YEAR 2013-2014 ELECTRICITY PROCUREMENT

Generation Source	Service Type	Percentage of Facility Load
RP-1		
Imported (as needed)	Direct Access	45
Fuel Cell (2.8 MW)	PPA	50
Solar (0.83 MW)	PPA	5
RP-4		
Imported	Bundled	90
Solar (1 MW)	PPA	8
Wind (1 MW)	PPA	2
CCWRF		
Imported	Direct Access	83
Solar (625 kW)	PPA	17
RP-2		
Imported	Bundled	22
Internal Combustion Engine (580 kW)	-	78
RP-5		
Imported	Bundled	82
Solar (1 MW)	PPA	18
Internal Combustion Engines (3 MW)	PPA	0

SOURCE: IEUA, 2016

Water Management Activities Electricity Usage

Energy intensity (kWh/MG) is a measure of the amount of energy required to perform water management activities, such as treating and conveying potable water; collecting, treating, and discharging wastewater; or treating and distributing recycled water. Energy intensity is expressed in terms of the energy requirement for managing a unit of one million gallons of water. The proposed program would reduce the use of existing and future imported water for groundwater replenishment and other uses with recycled water. The potential impact of this action is based on the amount of energy required to convey imported water to the points of recharge versus the amount of energy required to treat and convey recycled water to the points of recharge.

Several organizations, including the California Energy Commission (CEC) and the WateReuse Research Foundation, have calculated energy intensities for water use cycle segments. The CEC has estimated the differential energy intensity for water management activities in northern California and southern California. In southern California, the energy intensity for water supply and conveyance is estimated to be 3,020 kWh/AF (9,272 kWh/MG), which is greater than that for northern California, due to the travel distance and requirements for pumping and lifting water over natural features such as the Tehachapi Mountains as water is conveyed from north to south (CEC, 2006). For purposes of evaluating the effects of the FMP, we assume the baseline energy intensity for importing water for replenishment is 3,020 kWh/AF.

Petroleum

Petroleum Supply

Fueling stations throughout the program region are used to provide gasoline and diesel for current operations. These fueling stations receive gasoline and diesel fuel supplies from refineries located throughout California. Approximately 36 percent of California's petroleum supply comes from in-state sources while 52 percent is imported from foreign sources and 12 percent is imported from Alaska (CEC, 2016a). Crude oil is moved throughout California through a network of pipelines that carry it from both on-shore and off-shore oil wells to the refineries that are located in the San Francisco Bay Area, the Los Angeles area, and the Central Valley (USEIA, 2016a). Currently, 17 petroleum refineries operate in California (USEIA, 2016a).

Most crude oil produced in California is refined within California to meet state-specific formulations required by the California Air Resources Board (ARB). The major categories of petroleum fuels are gasoline and diesel for passenger vehicles, transit, rail vehicles, and construction equipment; and fuel oil for industry and electrical power generation.

In 2014, California consumed approximately 629.5 million barrels (26.4 billion gallons) of petroleum (USEIA, 2016a). As of December 31, 2015, California has 2,845 million barrels of crude oil left in the State's reserves (USEIA, 2016a).

Petroleum Usage

Current petroleum usage by IEUA facilities is primarily limited to gasoline and diesel fuel consumption related to worker vehicle trips. A minimal amount of gasoline is used at treatment plants for power generation.

Natural Gas

Southern California Gas Company

The program is located within Southern California Gas Company's (SoCalGas) service area. Southern California Gas Company is the nation's largest natural gas distribution utility that delivers natural gas to 21.6 million consumers. The service area encompasses approximately 20,000 square miles in throughout Central and Southern California, from Visalia to the Mexican border (SoCalGas, 2016a).

Natural Gas Use

IEUA's natural gas usage has fluctuated in recent years. The changes are mainly due to the renewable self-generation technologies employed at the biosolids handling facilities. The usage increase since fiscal year 2012/2013 is due to the fuel cell installation, which is operated on a blend of digester gas and natural gas.

Since the fuel cell catalyst is highly sensitive to air contaminants, the blend may vary depending on the status of the gas conditioning system. As such, natural gas can account for anywhere from 25 to 100 percent of the total fuel cell gas blend.

The fuel cell agreement structure contains provisions that outline IEUA's natural gas responsibility depending on the operating condition of the power plant. Under normal conditions, the fuel cell is expected to operate on a blend of approximately 75 percent digester gas and 25 percent natural gas by flow. As such, IEUA is responsible for the procurement of 25 percent of the natural gas utilized by the fuel cell. Natural gas usage on site is heavily dependent on the operational status of the fuel cell and digester gas conditioning systems. In fiscal year 2013/2014, IEUA used approximately 425,000 therms of natural gas.

4.5.2 Regulatory Setting

State

California Senate Bill X1-2

California Senate Bill X1-2 is the most recent update to the state's Renewables Portfolio Standard (RPS) requirements, and requires publicly owned utilities and retail sellers of electricity in California to procure 20 percent of their electricity sales from eligible renewable sources by 2013, and 50 percent by the end of 2030.

California Energy Code

Title 24, Part 6 of the California Code of Regulations is the California Energy Code, a section of the California Building Code (CBC) that includes standards mandating energy conservation measures in new construction for heating, cooling, ventilation, water heating, and lighting. Since its establishment in 1977, these standards (along with standards for energy efficiency in appliances) have contributed to a reduction in electricity and natural gas usage and costs in California. The California Energy Commission produces, and the California Building Standards Commission subsequently adopts updates to these standards every 3 years to incorporate new energy efficiency technologies. The current California Energy Code became effective on January 1, 2014, and resulted in a 33% increase in energy efficiency compared to the prior, 2008 Energy Code. The CBC is implemented through the local planning and permit process.

4.5.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this EIR and consistency with Appendix F of the CEQA Guidelines, and agency and professional standards, the proposed program would have a significant effect on energy if it would:

- Effect local and regional energy supplies such that additional electrical capacity is required.

Impacts Discussion

Energy

Impact 4.4-1: Operation of the proposed program would not require substantial additional power that could affect local and regional energy supplies.

Project Impact Analysis

Project Category 1: Treatment Facility Upgrades

The FMP proposes to reduce the dependency on imported water with recycled water. The WateReuse Research Foundation has estimated the energy intensity for various types of recycled water treatment, including Microfiltration (MF), Reverse Osmosis (RO), and Ultraviolet (UV)/advanced oxidation for use in groundwater recharge. It is estimated that the energy intensity for such advanced membrane treatment is 1,199 kWh/AF (3,680 kWh/MG) (WRF, 2012). The energy intensity for recycled water distribution is estimated to vary between 326 and 977 kWh/AF; however this is based on the distribution of recycled water for end uses other than indirect potable reuse (WRF, 2012). Thus, we assume conservatively that the greater value applies (977 kWh/AF), and the total energy intensity for producing advanced treated recycled water and its distribution is estimated to be 2,176 kWh/AF. As a result, the offset of imported water with recycled water would produce a decrease in the energy demand per million gallons of water, related to the acquisition of the replenishment source for the proposed FMP projects utilizing recycled water.

In general, the production and use of recycled water is more energy efficient than imported water, although unit electricity consumption rises as the degree of treatment and complexity of the processes increases (CEC, 2006). Several projects include replacement of existing features within the facilities, so once constructed, operational demands on energy and support resources should remain consistent with existing conditions. Additionally, the Agency's long-term goal is to attain grid independence during peak periods. The FMP would implement technologies through building an energy infrastructure that is capable of handling the full demand at each facility at any given time, with an export of energy when generation exceeds demand.

Implementation of the FMP would require energy to operate the proposed pipelines, injection and extraction wells, and the new and expanded treatment plants. Even though more power would be required as a result of project facility construction and operation, this power would otherwise be used to import water for replenishment in the groundwater basins. As discussed above, energy associated with FMP would be less than importing the same amount of water. As such, the proposed program would constitute an energy offset. Impacts to regional energy supplies and energy consumption would be less than significant.

While not increasing the net amount of power required to supply water for replenishment, implementation of the FMP may increase demands on local energy providers. However, it is not anticipated that additional power generation facilities would be required to serve the proposed facilities, or that the demand would exceed capacity of energy providers. Management strategies would be implemented to lessen the impact on local power supply providers while also supporting policies of the California Energy Action Plan II to reduce the State's overall energy users. The proposed facility improvements would include energy efficient equipment such as system pumps and lighting to minimize energy impacts. In addition, proposed pumps would be scheduled to operate as much as possible during off-peak energy demand periods. Energy demand would be curtailed with the assumption of increasing efficiency created by LID. The Energy Management Plan describes IEUA's generation projects and improved energy management capabilities to achieve peak power independence by 2020 thereby reducing energy impacts related to imported nonrenewable energy resources. These strategies would also be consistent with state policies for maximizing off-peak power usage for utilities. The program's potential impact on local and regional energy supplies are anticipated to be less than significant.

Project Category 2: Conveyance Systems and Ancillary Facilities

Impacts would be the same as described above for Project Category 1.

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as described above for Project Category 1.

Combined Project Categories

Implementation of the FMP would require energy to operate the proposed pipelines, injection and extraction wells, and the new and expanded treatment plants. T More power in the short-term would be required as a result of project facility construction and operation. However, as part of the EMP, IEUA would implement projects to achieve peak power independence by 2020.

Significance Determination before Mitigation: Less than Significant.

Cumulative Impact Analysis

The IEUA FMP would contribute to the cumulative use of energy and by other agencies within the greater Inland Empire region. The region is anticipating significant population growth and associated housing, commercial, and industrial developments that would cumulatively increase the demand for energy. While IEUA FMP aims at reducing overall energy consumption for wastewater treatment, conveyance, and replenishment, it would increase the energy demand required to operate the proposed pipelines, injection and extraction wells, and the new and expanded treatment plants in the short-term. Therefore, the proposed FMP's contribution to energy consumption would be cumulatively considerable, and thus a potentially significant impact.

Significance Determination before Mitigation: Less than Significant.

Mitigation Measures

Project Measures

Project Category 1: Treatment Facility Upgrades
No mitigation measures are required.

Project Category 2: Conveyance Systems and Ancillary Facilities
No mitigation measures are required.

Project Category 3: Groundwater Recharge and Extraction
No mitigation measures are required.

Combined Project Categories
No mitigation measures are required.

Cumulative Measures

No mitigation measures are required.

Significance Determination after Mitigation: Less than Significant.

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CHAPTER 5
Alternatives

5.1 Overview of Alternatives Analysis

In accordance with *CEQA Guidelines* (Section 15126.6), an EIR must describe and compare a range of reasonable alternatives to a project, or alternative locations for a project, that could feasibly attain most of the basic project objectives but avoid or substantially lessen any significant environmental impacts associated with the project. An EIR must consider a reasonable range of feasible alternatives to facilitate informed decision making and public participation. An EIR need not consider every conceivable alternative to a project and is not required to consider alternatives which are infeasible. The lead agency shall select a range of project alternatives and disclose its reasoning for selecting those alternatives. The selection of such alternatives is governed only by the rule of reason, as described further below.

5.1.1 Selection of a Range of Reasonable Alternatives

Because an EIR must identify ways to mitigate or avoid significant environmental effects of a project, the analysis of alternatives shall focus on alternatives that are capable of avoiding or substantially lessening one or more significant environmental effects (*CEQA Guidelines*, Section 15126.6(b)). The EIR must explain the rationale for selecting the alternatives to be evaluated and identify alternatives that were considered but rejected (*CEQA Guidelines*, Section 15126.6(c)). The lead agency is required to explain the reasons for rejecting alternatives. The factors that may be used to eliminate alternatives from detailed consideration in an EIR include, but are not limited to, the following: (1) failure to meet most of the basic project objectives, (2) inability to avoid significant environmental impacts, and (3) infeasibility. When considering the feasibility of an alternative, the following factors may be considered: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability to reasonably acquire, control, or otherwise have access to the alternative site (*CEQA Guidelines*, Section 15126.6(f)(1)).

5.1.2 Evaluation of Alternatives

An EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project (*CEQA Guidelines*, Section 15126.6(d)). The environmental impacts associated with the alternatives are evaluated relative to the impacts associated with the proposed project. A matrix can be used to summarize and compare the major characteristics and significant environmental effects of each alternative. If an alternative would cause additional significant effects, in addition to those caused by the proposed

project, they are required to be discussed but in less detail than the significant effects of the proposed project.

Section 15126.6(e)(1) of the *CEQA Guidelines* requires that a no project alternative be addressed in this analysis. The purpose of evaluating a no-project alternative is to allow decision-makers to compare the potential consequences of the project with the consequences that would occur without implementation of the project. An EIR must also identify the environmentally superior alternative. A no-project alternative may be environmentally-superior to the project based on the minimization or avoidance of physical environmental impacts. However, a no-project alternative must also achieve the project objectives in order to be selected as the environmentally-superior alternative. Section 15126.6(e)(2) of the *CEQA Guidelines* requires that if the environmentally superior alternative is the no-project alternative, an EIR shall identify an environmentally superior alternative among the other alternatives.

5.2 Proposed Program Summary

5.2.1 FMP Objectives

As stated earlier in Chapter 2, the objectives established for the FMP are to:

- Implement a program strategy that is consistent with the mission, vision, and core values of IEUA.
- Ensure that the IEUA service area is served with adequate wastewater treatment capacity that meets regulatory requirements and recycled water objectives through service area build out.
- Ensure that IEUA produces adequate recycled water supply to meet the objectives established in the Recycled Water Program Strategy through service area build out.
- Deliver sufficient wastewater discharge to meet IEUA's downstream discharge obligations to the Santa Ana River and to sustain Prado Basin Riparian/Wetland Habitat through service area build out.
- Provide sufficient processing capacity at the Inland Empire Regional Composting Facility to meet service area biosolids management demands through service area build out.
- To the maximum extent feasible provide sustainable energy generation to minimize IEUA demand for electricity and natural gas from the Southern California Edison (SCE) and the Southern California Gas Company (SCG) grids.
- Maintain IEUA's leadership role in developing and providing new water resources and working with other stakeholders in the Chino Basin to maintain the Chino Groundwater Basin aquifer as a suitable source of potable water within its service area.
- Identify key water resource supply vulnerabilities and evaluate water supply options that could reduce these vulnerabilities and continue to develop a robust water resource strategy that can adapt and respond to a wide range of possible futures.

- Implement an organics diversion program and food waste co-digestion in support of IEUA's Member Agencies and local businesses in complying with the State's organics diversion requirements, and the Agency long term goals of peak power independence and carbon neutrality.

The FMP encompasses IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan Update Report (2015), Integrated Water Resources Plan (2015) and Energy Management Plan (2015). The activities that would be implemented within these individual Facilities Master Plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area.

5.2.2 Potentially Significant Impacts of the Proposed FMP

Chapters 3 and 4 provide analyses of potentially significant impacts that could result from implementation of the FMP. As summarized below in **Table 5-1,** the potentially significant and unavoidable impacts associated with the FMP are to air quality as a result of construction equipment emissions, changes to historical resources as a result of ground disturbance during construction of FMP projects, and noise impacts associated with construction of proposed FMP projects. The final locations of some FMP project components have not been determined and as such, could be in close proximity to sensitive receptors and land uses.

TABLE 5-1
SUMMARY OF PROGRAM IMPACT ANALYSIS

Issue Area	Significance Determination
Aesthetics	LSM
Agriculture and Forest Resources	LSM
Air Quality and GHG Emissions	SU
Biological Resources	LSM
Cultural Resources	SU
Geology, Soils, and Mineral Resources	LSM
Hazards and Hazardous Materials	LSM
Hydrology and Water Quality	LSM
Land Use and Planning	LSM
Noise	SU
Population and Housing	LTS
Public Services	LSM
Recreation	LSM
Traffic and Transportation	LSM
Utilities	LSM
Growth Inducement (Indirect)	SU

LTS = Less than Significant
LSM = Less than Significant with Mitigation
PS = Potentially Significant
SU = Significant and Unavoidable

SOURCE: ESA 2016.

5.3 Development of FMP Alternatives

In the development of the Draft FMP, IEUA determined which projects or combination of projects would be most effective in meeting the goals of the Agency. The process began with the definition of specific FMP goals and the establishment of current facilities operations. System constraints were identified, and scenarios to achieve the FMP goals were developed given the acknowledged constraints.

5.4 Program Alternatives

Three alternatives were selected for detailed analysis. The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the program, while attaining most of the program objectives. Significant impacts of the program include construction air emissions, construction noise, historical resources impacts from construction, and secondary effects of growth.

The following sections provide a general description of each alternative, its ability to meet the program objectives, and a qualitative discussion of its comparative environmental impacts. As provided in Section 15126.6(d) of the CEQA Guidelines, the significant effects of these alternatives are identified in less detail than the analysis of the program in Chapter 3 of this Final PEIR. **Table 5-2** provides a comparison of the alternatives with the proposed program. **Table 5-3** compares the alternatives with the program objectives.

TABLE 5-2
SUMMARY OF IMPACTS OF ALTERNATIVES COMPARED TO THE PROPOSED PROGRAM

Environmental Topic	Proposed Program	Alternative 1: No Program	Alternative 2: Reduced Groundwater Recharge	Alternative 3: Advanced Water Treatment Facility
Aesthetics	Less than Significant with Mitigation	Less	Less	Similar
Agriculture and Forestry Resources	Less than Significant with Mitigation	Less	Less	Similar
Air Quality and GHG Emissions	Significant Unavoidable	Greater	Greater	Greater
Biological Resources	Less than Significant with Mitigation	Less	Similar	Similar
Cultural Resources	Significant Unavoidable	Less	Less	Similar
Geology, Soils, and Mineral Resources	Less than Significant with Mitigation	Less	Similar	Similar
Hydrology and Water Quality	Less than Significant with Mitigation	Greater	Greater	Less
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less	Similar	Similar

Environmental Topic	Proposed Program	Alternative 1: No Program	Alternative 2: Reduced Groundwater Recharge	Alternative 3: Advanced Water Treatment Facility
Land Use and Planning	Less than Significant with Mitigation	Similar	Less	Similar
Noise and Vibration	Significant Unavoidable	Less	Similar	Similar
Population and Housing	Less than Significant	Greater	Similar	Similar
Public Services	Less than Significant with Mitigation	Less	Similar	Similar
Recreation	Less than Significant with Mitigation	Less	Similar	Similar
Transportation and Traffic	Less than Significant with Mitigation	Less	Similar	Similar
Utilities	Less than Significant with Mitigation	Less	Greater	Greater
Secondary Effects of Growth	Significant and Unavoidable	Greater	Similar	Similar

TABLE 5-3
ABILITY OF PROGRAM ALTERNATIVES TO MEET OBJECTIVES

Project Objectives	Proposed Program	Alternative 1: No Program	Alternative 2: Reduced Groundwater Recharge	Alternative 3: Advanced Water Treatment Facility
Implement a program strategy that is consistent with the mission, vision, and core values of IEUA.	Yes	No	Yes	Yes
Ensure that the IEUA service area is served with adequate wastewater treatment capacity that meets regulatory requirements and recycled water objectives through service area build out.	Yes	No	Yes	Yes
Ensure that IEUA produces adequate recycled water supply to meet the objectives established in the Recycled Water Program Strategy through service area build out.	Yes	No	Yes	Yes
Deliver sufficient wastewater discharge to meet IEUA's downstream discharge obligations to the Santa Ana River and to sustain Prado Basin Riparian/Wetland Habitat through service area build out.	Yes	No	Yes	Yes
Provide sufficient processing capacity at the Inland Empire Regional Composting Facility to meet service area biosolids management demands through service area build out.	Yes	No	Yes	Yes

Project Objectives	Proposed Program	Alternative 1: No Program	Alternative 2: Reduced Groundwater Recharge	Alternative 3: Advanced Water Treatment Facility
To the maximum extent feasible provide sustainable energy generation to minimize IEUA demand for electricity and natural gas from the Southern California Edison (SCE) and the Southern California Gas Company (SCG) grids.	Yes	No	Yes	Yes (to a lesser degree)
Maintain IEUA's leadership role in developing and providing new water resources and working with other stakeholders in the Chino Basin to maintain the Chino Groundwater Basin aquifer as a suitable source of potable water within its service area.	Yes	No	Yes (to a lesser degree)	Yes
Identify key water resource supply vulnerabilities and evaluate water supply options that could reduce these vulnerabilities and continue to develop a robust water resource strategy that can adapt and respond to a wide range of possible futures.	Yes	No	Yes (to a lesser degree)	Yes
Implement an organics diversion program and food waste co-digestion in support of IEUA's Member Agencies and local businesses in complying with the State's organics diversion requirements, and the Agency long term goals of peak power independence and carbon neutrality. Refer to the Energy Management Plan (EMP).	Yes	No	Yes	Yes

5.4.1 Alternative 1: No Program Alternative

An analysis of the No Program Alternative is required under CEQA Guidelines Section 15126.6(e). According to Section 15126.6(e)(2) of the CEQA Guidelines, the "no program" analysis shall discuss:

> *what is reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.*

The No Program Alternative represents a "no build" scenario in which the proposed project would not be constructed or operated. It assumes that all proposed treatment plant facilities, treated water conveyance systems, storage reservoirs, conveyance ancillary facilities, sewage collection facilities, groundwater recharge basins, injection and extraction wells, and groundwater recharge ancillary facilities, along with other elements of the program would not be implemented and no program components would be constructed. Under the No Program Alternative, IEUA would continue to convey wastewater to the treatment plants for treatment then convey recycled water treated to Title 22 standards to creeks, recharge basins, biosolids, other facilities, storage reservoirs, or injection wells. There would be no increase in the use of recycled water to solve regional water supply challenges and there would be no availability of recycled water for multiple

beneficial uses within the Santa Ana Watershed and Chino Groundwater Basin. Additionally, there would be no increase in the operational flexibility for potable water resources within the IEUA service area by advancing the localized recycled water management and groundwater recharge objectives of the region.

5.4.2 Alternative 2: Reduced Groundwater Recharge

All proposed FMP projects either directly or indirectly support the FMPs goal of increasing groundwater recharge to reduce reliance on imported water. The 2013 RMPU proposes the most projects that would directly impact groundwater recharge in order to achieve this goal. These projects would increase stormwater and dry-weather runoff recharge in the Chino Basin by about 4,066 AFY and increase recycled water recharge capacity by about 3,025 AFY. When fully implemented, the 2013 RMPU would reduce the future demand for SWP water by about 12,600 AFY. Table 2-13 in Chapter 2 of this PEIR displays key improvement projects that would support this increased recharge capacity. Groundwater recharge projects consist of improved conveyance systems, ancillary facilities such as pump stations, drainage structures, berms, injection wells and recharge basins. The proposed projects that would construct new recharge basins and/or implement upgrades to existing recharge basins would result in the most substantial environmental impacts as compared to other proposed groundwater recharge facility projects.

Alternative 2 would reduce groundwater recharge by 25 percent by eliminating all new recharge basin locations and only implementing the enlarging of existing recharge basins. Under this Alternative a maximum of 702,000 CY of material (soil) would be excavated as opposed to 936,000 CY under the proposed program. Since no new recharge basins would be built, no impacts to undeveloped property would occur. The reduced recharge basin capacity would reduce some of the impacts associated with the proposed program from excavation and grading. Construction activities would occur intermittently throughout the 20-year FMP implementation period. Basin excavation and grading would result in VOC and NOx emissions during construction. Recharge basins would also account for the most truck haul and delivery trips needed to export and import soil, and therefore would attribute to greenhouse gas emissions. Additionally, construction of the recharge basins would impact traffic the most out of other proposed recharge facilities.

By not implementing all recharge basin projects, there would be a reduction in the total amount of cubic yards of soil that would need to be excavated; therefore, impacts to air quality, cultural resources, greenhouse gases, land use, traffic, and potentially other environmental resources would be proportionately reduced.

5.4.3 Alternative 3: Expanded Advanced Water Treatment Facility

Alternative 3 would construct an advanced water treatment facility (AWTF) to supply approximately 9 million gallons per day (MGD) of highly treated recycled water beyond the proposed FMP. The Integrated Water Resources Plan includes projects to increase direct-use and groundwater recharge by up to 22 MGD recycled water. Alternative 3 would construct an additional 9 MGD of AWTF capacity, enough to treat all potentially available recycled water

supplies through buildout. The proposed AWTF would be constructed within existing IEUA facilities, or at a member agency facility. The AWTF would utilize recycled water, potentially from Regional Water Recycling Plant No. 1 (RP-1), IEUA's largest and most central wastewater treatment facility located in Ontario, California. The AWTF may treat a sidestream of the facility's available recycled water.

The proposed AWTF under Alternative 3 may include construction of a Microfiltration (MF) treatment facility, Reverse Osmosis (RO) treatment facility, Ultraviolet-Advanced Oxidation Process (UV-AOP) treatment or similar disinfection process, booster pump station, standby power for critical processes, chemical storage, truck off-loading pad, and associated piping and ancillary systems. The advance treated water may be used as facility treated effluent to neighboring creeks or recharged in recharge basins within the IEUA service area, potentially with the first phase to be basins closest to RP-1 , such as RP-3, San Sevaine and/or Victoria Basins. The MF/RO membrane treatment process followed by UV-AOP provides tertiary-treated high quality recycled water suitable for groundwater recharge. The process provides the level of treatment needed to meet the Title 22 regulatory requirements for groundwater recharge through spreading and direct injection.

Each facility to be constructed as part of the AWTF would be designed and installed to meet applicable local, State and Federal regulations and would undergo related permitting. The AWTF may utilize approximately 150,000 – 200,000 square feet within an existing IEUA facility. Alternatively, IEUA may consider offsite AWTF locations such as Monte Vista Water District's Plant 28 in the city of Montclair for treatment and injection into Chino Basin Management Zone 1 (MZ1), such as Brooks Basin, Montclair Basin, College Heights and Upland Basin.

Following are brief general descriptions of the potential AWTF major processes:

Microfiltration (MF) Facility

MF membranes are an efficient technology for particle removal and pathogen control. These technologies yield finished water turbidities consistently below 0.1 NTU, independent of feed water quality. Membrane filtration is a pressure-driven process that provides a near absolute barrier to suspended solids and microorganisms with pore sizes ranging from 0.1 to 0.5 microns. The MF treatment facility may include:

- Feed pump,
- Microfiltration membranes, and
- Ancillary equipment

Reverse Osmosis (RO) Facility

High-pressure membrane processes, such as RO, are typically used for the removal of dissolved constituents including both inorganic and organic compounds. RO is a process in which the mass-transfer of ions through membranes is diffusion controlled. The feed water is pressurized, forcing water through the membranes concentrating the dissolved solids that cannot travel through the membrane. Consequently, these processes can remove salts, hardness, synthetic organic compounds, disinfection-by-product precursors, etc. The RO treatment facility may include:

- RO break tank and pump station,
- RO trains consisting of a feed pump and reverse osmosis membranes
- An RO flush tank with pump station, and
- An RO clean-in-place system

Ultraviolet Advanced Oxidation Process (UV-AOP) Facility

UV disinfection is a physical process that uses no toxic chemicals and produces no known toxic residuals or byproducts. The disinfection mechanism of UV light involves damage or destruction of an organism's genetic material due to the transference of electromagnetic energy (i.e., wavelength of 254 nanometers [nm]) from a UV lamp to the genetic material. The lethal effects of this energy result primarily from the organism's inability to replicate. When coupling this system with a small dose of hydrogen peroxide, an advanced oxidation process (AOP) results, in which hydroxyl radicals are produced which can mineralize many organic microconstituents. The UV-AOP facility may include:

- UV reactor, and
- Hydrogen peroxide feed system

5.5 Impact Analysis

5.5.1 Alternative 1: No Program Alternative

The No Program Alternative excludes any of the proposed facility upgrades. As a result, there would be less construction activity when compared to the proposed FMP projects. Fewer projects and new facilities result in fewer construction-related impacts to practically all resources. Impacts associated with siting of new permanent project components also may be avoided with the No Program Alternative. The relative difference in environmental impacts associated with the No Program Alternative when compared to the proposed FMP is provided below.

Aesthetics

The proposed projects would result in a less than significant impact to aesthetics with mitigation (see Section 3.1). Under Alternative 1, the project sites would remain the same as existing conditions, retaining their current visual character; therefore, no views of the site would be altered. Additionally, no new sources of light and glare would be created. Therefore, this alternative would have no impacts to aesthetics, and would have fewer impacts compared to the proposed FMP program.

Agriculture and Forestry Resources

The proposed FMP program would result in less than significant impacts to agriculture and forestry resources with mitigation (see Section 3.2). Alternative 1 would have no impact to agriculture and forestry resources.

Air Quality and Greenhouse Gas Emissions

Under Alternative 1, there would be no construction-related emissions (from construction activities, vehicles and equipment). The significant and unavoidable impact associated with short-term construction emissions would not occur under this alternative. However, air emissions associated with energy demands would remain high compared to the proposed program's goals of implementing renewable energy supplies. In addition, air emissions associated with imported water energy demands would be greater than the proposed program. Although short-term construction emissions would be avoided, long-term operational air emissions would be greater under the No Program Alternative.

Biological Resources

The proposed FMP program would result in less than significant impacts to biological resources with mitigation (see Section 3.4). Under Alternative 1, the project sites would not undergo construction or operation of facilities on open land that may contain habitat, and therefore would not put candidate, sensitive, or special-status species at risk or impede any biological resource regulation, ordinance, or conservation plans. Therefore, this alternative would have no impacts to any biological resources or areas that may contain biological resources, and would have fewer impacts compared to the proposed FMP program.

Cultural Resources

The proposed projects have the potential to encounter archaeological and paleontological resources during ground disturbing activities. Additionally, the proposed program would have significant and unavoidable impacts in regards to historical resources. Under Alternative 1, no ground disturbing activities would occur to any known or unknown historical, archaeological, or paleontological resources. Therefore, this alternative would have fewer impacts to cultural resources compared to the proposed FMP program.

Geology, Soils, and Mineral Resources

The proposed program would result in a less than significant impact related to exposure to geologic resources with mitigation incorporated. Additionally, the proposed FMP program would not result in the loss of availability of important mineral resources within the IEUA service area. Under Alternative 1, there would be no development and the potential effects associated with geology and soils, such as soil erosion during construction, and mineral resources, would not occur. Therefore, this alternative would have fewer impacts to geology, soils and minerals compared to the proposed program.

Hazards and Hazardous Materials

The proposed program would result in a less than significant impact to hazards and hazardous materials with mitigation. Under Alternative 1, no construction would occur; therefore no new facilities would be placed on hazardous material sites or expose structures or persons to hazardous materials. Therefore, this alternative would result in fewer impacts related to hazards and hazardous materials compared to the proposed FMP program.

Hydrology and Water Quality

The proposed projects would result in less than significant impacts to hydrology and water quality with mitigation. Under Alternative 1, there would be no development and thus no changes to the natural drainage patterns of any site, or to the potential to contribute to runoff into existing stormwater drainage systems. However, there would be no opportunity to increase groundwater supplies or increase capacity at treatment plants. In addition, salt loading into the groundwater basin would continue to rise. This alternative would result in fewer surface water quality impacts, but greater groundwater impacts.

Land Use and Planning

The proposed program would result in a less than significant impact to land use and planning. The FMP program would not physically divide a community, or conflict with any applicable land use plan, policy, or regulations. Under Alternative 1, no development would occur and project sites would remain in their current state. As such, this alternative would not change existing land use or have an effect on land use plans and policies related to the program area. Therefore, this alternative would result in fewer impacts compared to the proposed program.

Noise and Vibration

The proposed projects would result in a significant unavoidable impact from temporary construction noise and less than significant impacts from operation (see Section 3.10). Under Alternative 1, there would be no development and no change to existing ambient noise levels. No noise and vibration impacts would occur under Alternative 1. Therefore, this alternative would result in fewer impacts from noise and vibration compared to the proposed program and would avoid a significant impact of implementing the FMP program.

Population and Housing

The proposed program would result in a less than significant impact to population and housing. Alternative 1 would not result in the need for new housing or induce growth. However, providing wastewater treatment mitigates secondary effects of growth by accommodating future demands. Under Alternative 1, construction and operation of the projects would not occur, and accordingly there would be no potential impacts associated with construction. However, without implementation of the proposed program, IEUA would not be able to meet future growth forecasts' water demand. Ultimately, population growth would exceed capacity of IEUA's treatment system which could lead to significant water quality degradation. Alternative 1 would result in IEUA requesting that no population growth be allowed within service area. Alternative 1 would substantially affect population and housing.

Public Services

The proposed program would result in a less than significant impact to public services with mitigation. Under Alternative 1, there would be no development, thus no increased demand on existing fire protection, police protection, public schools, or recreational facilities. Therefore, this alternative would result in fewer impacts related to public services than the proposed program.

Recreation

The proposed program would result in a less than significant impact to recreation with mitigation. Under Alternative 1, there would be no development and no impact to recreational activities or facilities. Therefore, this alternative would have fewer impacts to recreation compared to the proposed program.

Traffic and Transportation

The proposed program would result in a less than significant impact to traffic and transportation with mitigation. Under Alternative 1, there would be no development, thus no additional traffic would be generated by uses on the project sites and no impacts related to traffic and circulation would occur. Therefore, this alternative would result in fewer impacts to transportation and traffic such as new development fees and roadway improvements, compared to the proposed program.

Utilities

The proposed program could result in the construction of new stormwater drainage facilities which would result in a less than significant impact with mitigation. Under Alternative 1, no development would occur and no construction of new drainage or other utility infrastructure systems would need to be implemented. Therefore, this alternative would result in fewer impacts related to utilities than the proposed program.

Secondary Effects of Growth

The proposed FMP program would indirectly accommodate anticipated population growth through the development of wastewater treatment facilities and increased groundwater recharge, but would not cause additional secondary effects beyond those that have been identified and addressed in prior EIRs on General Plans prepared by each of the cities experiencing growth. The development of new wastewater treatment and groundwater recharge facilities would mitigate potential impacts associated with out-growing existing wastewater treatment and groundwater recharge facilities. Under Alternative 1, there would be no method to accommodate increased wastewater treatment requirements which is a secondary effect of growth in the service area. Providing public utilities mitigates secondary effects of growth. Without implementation of the proposed program, IEUA would not be able to meet future growth forecasts' water demand. Ultimately, population growth would exceed capacity of IEUA's treatment system which could lead to significant water quality degradation and supply. This alternative would result in increased significant impacts from secondary effects of growth.

5.5.2 Alternative 2: Reduced Groundwater Recharge

The IRP provides strategies to improve near-term and long-term water resources management for the region. Alternative 2 would reduce groundwater recharge by 25 percent by eliminating construction of new recharge basins and associated ancillary facilities. By not constructing new recharge basins, there would be a reduction in the total amount of cubic yards of soil that would need to be excavated and less overall ancillary facilities such as pipelines, pumps, meters and electrical systems; therefore, construction impacts would be proportionately reduced. However, by reducing the amount of recharge within the groundwater basin, IEUA would not meet the 2040

water supply and demand discussed within the IRP. The remaining facilities that are part of the proposed FMP program would be implemented under Alternative 2.

Overall, the implementation of Alterative 2 would result in less environmental impacts compared to the proposed program. As shown in Table 5-3, Alternative 2 could meet the program objectives. However, the objectives that include developing and providing new water resources and developing robust water resource strategies to reduce water resource supply vulnerabilities would not be meet as fully as the proposed program.

The relative difference in environmental impacts associated with the Reduced Groundwater Recharge Alternative, when compared to the proposed FMP, is provided below.

Aesthetics

The proposed program was found to have less than significant impacts to aesthetics with mitigation (see Section 3.1). Alternative 2 would result in similar significant impacts associated with aesthetics prior to the implementation of mitigation measures as compared to the proposed program. However, because no new recharge basins would be constructed, impacts to scenic vistas, visual character, and light and glare would be lessened.

Agriculture and Forestry Resources

The proposed program would result in less than significant impacts to agriculture resources with mitigation and no impacts to forestry resources (see Section 3.2). New recharge basins and ancillary facilities could potentially be implemented on land that is zoned for agriculture or land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Because Alternative 2 would not construct any new recharge basins, no impacts to farmland conversion would occur. Therefore, this alternative would have fewer impacts to agriculture compared to the proposed FMP program.

Air Quality and Greenhouse Gas Emissions

The proposed FMP program would result in temporary construction-related emissions (from construction activities, vehicles, and equipment), and significant and unavoidable short term impacts associated with construction emissions (see Section 3.3). Additionally, the FMP program could expose sensitive receptors to substantial pollutant concentrations. The construction of new recharge basins account for the most substantial impact to NOx, VOC, and greenhouse gas emissions associated with construction equipment vehicles and soil haul trucks for excavation.

Alternative 2 would result in similar significant and unavoidable impacts to air quality (NOx), although emissions would be less than the proposed program since less soil would be excavated and hauled. Alternative 2 would similarly result in fewer greenhouse gases emissions compared to the proposed program.

Biological Resources

The proposed FMP program would result in less than significant impacts to biological resources with mitigation (see Section 3.4). Open space areas that could be used for new recharge basin implementation could contain special species, habitats, sensitive communities, or corridors for wildlife migration or movement.

Under Alternative 2, no new recharge basins would be constructed on open land that may contain habitat or special-status species. Alternative 2 would result in similar or fewer impacts associated with biological resources.

Cultural Resources

The proposed FMP program has the potential to encounter archaeological and paleontological resources during ground disturbing activities. Additionally, the proposed program would have significant and unavoidable impacts in regards to historical resources (see Section 3.5).

Alternative 2 would result in similar significant and unavoidable impacts to historical resources. However, under Alternative 2, with no new recharge basins constructed, the potential for encountering cultural resources or paleontological during excavation would be lessened. Therefore, this alternative would have fewer impacts to cultural resources compared to the proposed FMP program due to the decreased amount of construction, grading, and excavation that would occur because of new recharge basin implementation.

Geology, Soils, and Mineral Resources

The proposed FMP program would result in a less than significant impact related to exposure to geologic resources with mitigation incorporated. Additionally, the proposed program would not result in the loss of availability of important mineral resources within the IEUA service area (see Section 3.6). New recharge basins have the potential to contribute to the most significant soil erosion or topless due to the size and volume of the basins. Furthermore, increased recharge into the new basins could contribute to increased liquefaction hazards due to increased saturation of soils and landslide hazards along steep slopes of the new basins.

Alternative 2 would result in similar impacts associated with geology and soils, to the proposed program. Although fewer recharge basins would be constructed, impacts associated with seismic impacts, unstable soils and erosion would be similar for the existing basin enlargements. Alternative 2 would similarly result in fewer impacts to mineral resources since no new recharge basins would be constructed that could be located on mineral resource zones. .

Hazards and Hazardous Materials

The proposed program would result in a less than significant impact to hazards and hazardous materials with mitigation (see Section 3.7).

Alternative 2 would result in similar impacts associated with hazards and hazardous materials compared to the proposed program. However, under Alternative 2, since no new recharge basins would be constructed, the potential for encountering contaminated soils would be reduced. The

potential for accidental spills of hazardous materials due to construction equipment that could threaten surface runoff or groundwater quality would be similar to the proposed program. This alternative would result in fewer potential impacts related to hazards and hazardous materials compared to the proposed program.

Hydrology and Water Quality

The proposed FMP program would result in less than significant impacts to hydrology and water quality with mitigation (see Section 3.8).

Alternative 2 would result in similar impacts to hydrology and water quality compared to the proposed program. Although no new recharge basins would be constructed, impacts to surface runoff, drainage, and floodplains would be similar. However, the reduced recharge capacity would reduce the amount of low-TDS stormwater recharged into the groundwater basin. The management of salt and nutrients in the basin is outlined in the RWQCB Basin Plan. The reduced stormwater recharge would result in increasing salt concentrations within the groundwater. Furthermore, the use of imported water with high salt content would replace the local stormwater. This would result in greater water quality impacts than under the proposed program. In addition, due to the reduction in groundwater recharge, Alternative 2 would not meet goals for groundwater supplies in 2040. Therefore, impacts to groundwater supplies would be greater than the proposed program.

Land Use and Planning

The proposed FMP program would result in less than significant impacts to land use and planning (see Section 3.9). The FMP program would not physically divide a community, or conflict with any applicable land use plan, policy, or regulations.

Under Alternative 2, no development of recharge basins and associated ancillary facilities would occur and project sites would remain in their current state. As such, this alternative would not change existing land use or have an effect on land use plans and policies related to the specific recharge basins project areas. Therefore, this alternative would result in fewer impacts to land use and planning as compared to the proposed program.

Noise and Vibration

The proposed FMP program would result in a significant unavoidable impact from temporary construction noise and less than significant impacts from operation (see Section 3.10).

Alternative 2 would result in similar significant impacts associated with long-term noise compared to the proposed program. Alternative 2 would have the potential to result in significant and unavoidable impacts due to construction noise, although in fewer locations. This alternative would have similar impacts to noise and vibration as compared to the proposed FMP program.

Population and Housing

The proposed FMP program would result in a less than significant impact to population and housing (see Section 3.11).

Alternative 2 would not result in the need for new housing or induce growth, and would similarly result in less than significant impacts associated with Population and Housing. The Alternative would not alter the FMP's relationship to regional growth.

Public Services

The proposed FMP program would result in a less than significant impact to public services with mitigation (see Section 3.12).

The reduction of groundwater recharge would have no direct effect on public services. Under Alternative 2, there would be no increased demand on existing fire protection, police protection, or public schools; therefore, this alternative would have no impact on fire services, police services, or schools as compared to the proposed program. Alternative 2 would result in similar impacts associated with public services.

Recreation

The proposed FMP program would result in a less than significant impact to recreation with mitigation (see Section 3.13). Proposed new recharge basins have the potential to be located on land that could be used for recreational activities.

Although some locations would be avoided, overall, Alternative 2 would result in similar impacts associated with parks and other recreational facilities compared to the proposed program.

Traffic and Transportation

The proposed FMP program would result in a less than significant impact to traffic and transportation with mitigation (see Section 3.14). Construction of recharge basins contribute to the most traffic compared to other proposed FMP projects. This is because recharge basins require the removal and transportation/delivery of soil that would be excavated. The truck haul trips contribute to the existing traffic within the IEUA service area.

Although some locations would be avoided, overall, Alternative 2 would result in similar impacts associated with traffic compared to the proposed program.

Utilities

The proposed FMP program would result in less than significant impacts to utilities with mitigation (see Section 3.15).

Alternative 2 would reduce the amount of local water supplies through the reduction of stormwater recharge basins. As a result, imported water would be required to make up for the local water supply reduction. This would result in greater energy usage and air emissions to import water from Northern California and the Colorado River. Impacts associated with other utilities including wastewater treatment and landfill capacities would be similar to the proposed program.

Secondary Effects of Growth

The proposed program would indirectly accommodate anticipated population growth through the development of wastewater treatment facilities and increased groundwater recharge, but would not cause additional secondary effects beyond those that have been identified and addressed in prior EIRs on General Plans prepared by each of the cities experiencing growth. The development of new wastewater treatment and groundwater recharge facilities would mitigate potential impacts associated with out-growing existing wastewater treatment and groundwater recharge facilities.

Although the reduction of recharge capacity would reduce groundwater supplies for the region, alternative water sources could be attained to meet regional demands. Therefore, the Alternative would not alter the FMP's relationship to regional growth.

5.5.3 Alternative 3: Expanded Advanced Water Treatment Facility

Alternative 3 would include construction of an additional AWTF within an existing IEUA facility or other location. The AWTF would have the treatment capacity of approximately 9 MGD. The advance treated water would be discharged to neighboring creeks or recharged in recharge basins within the IEUA service area.

As shown in Table 5-3, Alternative 3 could meet the program objectives. However, the Alternative's use of additional electricity would meet the objective to minimize IEUA demand for electricity and natural gas to a lesser degree. The relative difference in environmental impacts associated with the Advanced Water Treatment Facility Alternative, when compared to the proposed FMP, is provided below.

Aesthetics

The proposed program was found to have less than significant impacts to aesthetics with mitigation (see Section 3.1).

Alternative 3 would result in similar impacts associated with aesthetics compared to the proposed program.

Agriculture and Forestry Resources

The proposed FMP program would result in less than significant impacts to agriculture and forestry resources with mitigation (see Section 3.2). Facilities could potentially be implemented on land that is zoned for agriculture or land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Alternative 3 would not alter potential impacts to agriculture or forest resources compared to the proposed program.

Air Quality and Greenhouse Gas Emissions

The proposed FMP program would result in temporary construction-related emissions (from construction activities, vehicles, and equipment), and significant and unavoidable short term impacts associated with construction emissions (see Section 3.3). Additionally, the FMP program could expose sensitive receptors to substantial pollutant concentrations.

Alternative 3 would result in similar significant and unavoidable impacts to air quality; however, the need for additional energy to power the facility would increase operational air emissions including GHG emissions.

Biological Resources

The proposed FMP program would result in less than significant impacts to biological resources with mitigation (see Section 3.4). Alternative 3 would not alter the potential impacts to biological resources compared to the proposed program.

Cultural Resources

The proposed FMP program has the potential to encounter archaeological and paleontological resources during ground disturbing activities. Additionally, the proposed program would have significant and unavoidable impacts in regards to historical resources (see Section 3.5).

Alternative 3 would not alter the potential impacts to cultural resources compared to the proposed program.

Geology, Soils, and Mineral Resources

The proposed FMP program would result in a less than significant impact related to exposure to geologic resources with mitigation incorporated. Additionally, the proposed program would not result in the loss of availability of important mineral resources within the IEUA service area (see Section 3.6).

Alternative 3 would not alter the potential impacts to geology, soils, or mineral resources compared to the proposed program.

Hazards and Hazardous Materials

The proposed program would result in a less than significant impact to hazards and hazardous materials with mitigation (see Section 3.7).

Alternative 3 would require increased use of chemicals to operate the AWTF. However, potential accidental spills of hazardous materials from treatment facilities and construction equipment would be similar to the proposed program.

Hydrology and Water Quality

The proposed FMP program would result in less than significant impacts to hydrology and water quality with mitigation (see Section 3.8).

Alternative 3 would provide high quality water for groundwater recharge and other reuse opportunities such as potable reuse. The high quality water would assist in reducing salt loading into the basin. This would result in benefits to the groundwater basin water quality. Other impacts to drainage, runoff, and floodplains would be similar to the proposed program.

Land Use and Planning

The proposed FMP program would result in less than significant impacts to land use and planning (see Section 3.9). The FMP program would not physically divide a community, or conflict with any applicable land use plan, policy, or regulations.

Alternative 3 would not alter the potential impacts to land use and planning compared to the proposed program.

Noise and Vibration

The proposed FMP program would result in a significant unavoidable impact from temporary construction noise and less than significant impacts from operation (see Section 3.10).

Alternative 3 would construct a new AWTF and would result in similar impacts to noise and vibration compared to the proposed program.

Population and Housing

The proposed FMP program would result in a less than significant impact to population and housing (see Section 3.11).

Alternative 3 would construct a new AWTF and would result in similar impacts to population and housing as the proposed program.

Public Services

The proposed FMP program would result in a less than significant impact to public services with mitigation (see Section 3.12).

Alternative 3 would construct a new AWTF that would not alter demands for public services such as fire protection, police protection, or public schools would be similar to the proposed program.

Recreation

The proposed FMP program would result in a less than significant impact to recreation with mitigation (see Section 3.13). Ancillary facilities have the potential to be located on land that could be used for recreational activities.

Alternative 3 would construct a new AWTF and would result in similar impacts to recreation as the proposed program.

Traffic and Transportation

The proposed FMP program would result in a less than significant impact to traffic and transportation with mitigation (see Section 3.14).

Alternative 3 would construct a new AWTF and would result in similar impacts to traffic as the proposed program.

Utilities

The proposed FMP program would result in less than significant impacts to utilities with mitigation (see Section 3.15).

Alternative 3 would construct a new AWTF that would increase energy demands compared with the proposed program. Demands for other utilities such as solid waste, water and wastewater treatment would be similar to the proposed program.

Secondary Effects of Growth

The proposed program would indirectly accommodate anticipated population growth through the development of wastewater treatment facilities and increased groundwater recharge, but would not cause additional secondary effects beyond those that have been identified and addressed in prior EIRs on General Plans prepared by each of the cities experiencing growth.

Alternative 3 would construct a new AWTF that could be used to augment water supplies to meet growing local demands. However, Alternative 3 would not alter the FMP's relationship to growth in the region.

5.6 Environmentally Superior Alternative

CEQA requires that an EIR identify an environmentally superior alternative of a project other than the No Project Alternative (CEQA Guidelines Section 15126.6(e)(2)). Table 5-2 shows an impact determination comparison for potentially significant impacts of the proposed program to all the proposed alternatives. The No Program Alternative (Alternative 1) would reduce or eliminate all proposed program impacts, including significant and unavoidable impacts of the proposed program, but it would result in new potentially significant impacts that could result from aging equipment including process malfunctions and inefficiencies that could result in hazardous material spills, increased energy usage, groundwater quality degradation, and increased air emissions.

Alternative 2 would reduce but not eliminate the potential significant impacts of the proposed program. However, by reducing the proposed recharge capacity, additional water sources would be necessary to meet growing water demands of the region. The only other available water supplies are recycled water and imported water. The proposed program includes recycled water production. Therefore, only imported water could replace the proposed new stormwater recharge capacity. Imported water requires a significant amount of energy to convey water from the Colorado River or Northern California and increases air emissions associated with energy

production. In addition, imported water has more dissolved salts compared with local stormwater which increases salt loading in the Inland Empire groundwater basins. Because Alternative 2 does not maximize the use of low-TDS stormwater supplies, it results in greater impacts to energy demands and air emissions and is not the environmentally superior alternative.

Alternative 3 would differ from the proposed program only in the construction of an additional AWTF to produce up to 9 MGD of high-quality recycled water. The water could be used for groundwater recharge, discharge to creeks, or eventually to augment potable water supplies. The operation of the treatment facility would require greater energy than the proposed tertiary treatment which would result in greater air emissions associated with energy production. Construction of the treatment facility would emit greater amounts of air pollutants, and operation of the plant would require storage of more hazardous chemicals needed in the treatment. However, the removal of salts from the recharge water would improve groundwater quality and assist in managing the salt balance of the region.

The proposed program would implement necessary improvements to minimize the need for imported water, while maximizing the efficiency of wastewater treatment, local water supply augmentation, energy efficiency, and asset maintenance. Upgrading aging infrastructure provides for greater operating efficiency that reduces the risk of spills, malfunctions, and air emissions associated with treatment facilities and energy production. As a result, the proposed program is the environmentally superior alternative since it provides for the careful planning and timed implementation of necessary public services while minimizing environmental impacts.

CHAPTER 6
Introduction to Response to Comments

The following chapters have been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (California Administrative Code Section 15000 et seq.) for the IEUA Facilities Master Plans Final PEIR.

6.1 CEQA Requirements

Before IEUA may approve the Program, it must certify that the Final PEIR: a) has been completed in compliance with CEQA; b) was presented to the IEUA Board of Directors who reviewed and considered it prior to approving the project; and c) reflects IEUA's independent judgment and analysis.

CEQA Guidelines Section 15132 specifies that the Final PEIR shall consist of the following:

- The Draft PEIR or a revision of that draft;
- Comments and recommendations received on the Draft PEIR;
- A list of persons, organizations, and public agencies commenting on the Draft PEIR;
- The response of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Final PEIR for the Facilities Master Plans presents Chapter 6 through Chapter 10 as a continuation of those included in the Draft PEIR:

- Chapter 6: Introduction and CEQA process
- Chapter 7: A list of persons, organizations, and public agencies commenting on the Draft PEIR, and the written comments received on the Draft PEIR
- Chapter 8: Written responses to each comment identified in Chapter 7
- Chapter 9: Revisions made to the Draft PEIR in response to comments received or initiated by the Lead Agency
- Chapter 10: Mitigation Monitoring and Reporting Program

6.2 CEQA Process

Public Participation Process

Notice of Preparation and Public Scoping

In accordance with Section 15082 of the *CEQA Guidelines*, a Notice of Preparation (NOP) of a PEIR was prepared and circulated for review by applicable local, state and federal agencies and the public. The 30-day project scoping period, which began with the distribution of the NOP, remained open through June 29, 2016. One public scoping meeting was held on July 21, 2016 at the IEUA Headquarters. There were no attendees at the scoping meeting. The NOP provided the public and interested public agencies with the opportunity to review the proposed project and to provide comments or concerns on the scope and content of the environmental review document including: the range of actions; alternatives; mitigation measures, and significant effects to be analyzed in depth in the PEIR.

Notice of Availability of the Draft PEIR

The Notice of Availability (NOA) of the Draft PEIR was posted on December 20, 2016 with the County Clerk in San Bernardino County. The Draft PEIR was circulated to federal, state, and local agencies and interested parties requesting a copy of the Draft PEIR. Copies of the Draft PEIR were made available to the public at the following locations:

- Inland Empire Utilities Agency Web Site (http://www.ieua.org/draft-program-eir)
- IEUA Headquarters, 6075 Kimball Avenue, Building A, Chino, CA 91708
- San Bernardino County Library Chino Branch, 13180 Central Avenue, Chino, CA 91710
- San Bernardino County Library Chino Hills Branch, 14020 City Center Drive, Chino Hills, CA 91709-5442

The Draft PEIR was circulated for public review from December 20, 2016 through February 2, 2017. IEUA established a 45-day review period, as required by Section 21091 of the Public Resources Code. During this period, IEUA held one public meeting to provide interested persons with an opportunity to comment orally or in writing on the Draft PEIR and the project. The public meeting was held at the IEAU headquarters in Chino on January 25, 2017. There were no attendees at the public meeting.

6.3 Evaluation and Response to Comments

CEQA Guidelines Section 15088 requires IEUA, as the Lead Agency, to evaluate comments on environmental issues received from parties that have reviewed the Draft PEIR and to prepare a written response. The written responses to commenting public agencies shall be provided at least ten (10) days prior to the certification of the Final PEIR *(CEQA Guidelines* §15088(b)).

6.4 Final PEIR Certification and Approval

Prior to considering the project for approval, IEUA, as the Lead Agency, will review and consider the information presented in the Final PEIR and will certify that the Final PEIR:

(a) Has been completed in compliance with CEQA;

(b) Has been presented to the Board of Directors as the decision-making body for the Lead Agency, which reviewed and considered it prior to approving the project; and

(c) Reflects IEUA's independent judgment and analysis.

Once the Final PEIR is certified, IEUA's Board of Directors may proceed to consider project approval (*CEQA Guidelines* §15090). Prior to approving the proposed project, IEUA must make written findings and adopt statements of overriding considerations for each unmitigated significant environmental effect identified in the Final PEIR in accordance with Sections 15091 and 15093 of the *CEQA Guidelines*.

6.5 Notice of Determination

Pursuant to Section 15094 of the *CEQA Guidelines*, IEUA will file a Notice of Determination (NOD) with the Office of Planning and Research and San Bernardino County Clerk within five working days of project approval.

CHAPTER 7
Comment Letters

The Draft PEIR for the Facilities Master Plans (proposed Program) was circulated for public review for 45 days (December 20, 2016 through February 2, 2017) in accordance with the requirements of CEQA Guidelines Section 15105(a). IEUA received ten comment letters during the public review period, which are listed in **Table 7-1** and included within this chapter. The letters have been marked with brackets that delineate comments pertaining to environmental issues and the information and analysis contained in the Draft PEIR. The bracketed comment letters are included in this Chapter 7. Responses to such comments are provided in Chapter 8.

TABLE 7-1
COMMENT LETTERS RECEIVED

Comment No.	Commenting Agency	Date of Comment
1	State Clearinghouse, Office of Planning and Research	February 3, 2017
2	Department of Toxic Substances Control (DTSC)	January 25, 2017
3	Metropolitan Water District of Southern California (MWD)	January 31, 2017
4	City of Rancho Cucamonga	January 31, 2017
5	Native American Heritage Commission	January 31, 2017
6	City of Ontario	February 1, 2017
7	Chino Basin Watermaster	February 2, 2017
8	San Bernardino County Department of Public Works (DPW)	February 2, 2017
9	City of Chino	February 2, 2017
10	Cucamonga Valley Water District	January 26, 2017

Comment Letter 1

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

February 3, 2017

Pietro Cambiaso
Inland Empire Utility Agency
6075 Kimball Avenue
Chino, CA 91710

Subject: IEUA Facilities Master Plan
SCH#: 2016061064

Dear Pietro Cambiaso:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on February 2, 2017, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

1-A

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2016061064
Project Title IEUA Facilities Master Plan
Lead Agency Inland Empire Utilities Agency

Type EIR Draft EIR

Description The FMP encompass IEUA's Asset Management Plan, Recycled water program strategy, amendment to the 2010 recharge master plan update, wastewater facilities master plan update report, integrated water resources plan and energy management plan. The activities that would be implemented within these individual facilities master plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area.
Many of the activities that make up the FMP are in the concept development or planning phase. The FMP evaluates the specific projects and management strategies by organizing proposed activities into three project categories: treatment facility upgrades, conveyance systems and ancillary facilities, and groundwater recharge and extraction.

Lead Agency Contact

Name Pietro Cambiaso
Agency Inland Empire Utility Agency
Phone 909-993-1639 **Fax**
email
Address 6075 Kimball Avenue
City Chino **State** CA **Zip** 91710

Project Location

County San Bernardino
City Chino, Chino Hills, Ontario, Rancho Cucamonga, Montclair, ...
Region
Lat / Long
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 71, 142, 83, 60, 201, 66, 10, 15
Airports LA/Ontario Int,Chino,Cable
Railways
Waterways
Schools Various
Land Use Various

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Housing; Job Generation; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Social; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Wildlife; Aesthetic/Visual

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 6; Department of Parks and Recreation; Resources, Recycling and Recovery; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 8; Regional Water Quality Control Bd., Region 6 (Victorville); State Water Resources Control Board, Division of Drinking Water; State Water Resources Control Board, Division of Drinking Water, District 13; State Water Resources Control Board, Division of Water Quality; State Water Resources Control Board, Division of Water Rights; Native American Heritage Commission; California Energy Commission; Public Utilities Commission; Department of Toxic Substances Control

Date Received 12/20/2016 **Start of Review** 12/20/2016 **End of Review** 02/02/2017
7-3

Note: Blanks in data fields result from insufficient information provided by lead agency.

Comment Letter 2

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

January 25, 2017

Mr. Pietro Cambiaso, P.E.
Inland Empire Utility Agency
6075 Kimball Avenue
Chino, California 91710

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR INLAND EMPIRE UTILITIES AGENCY (IEUA) FACILITIES MASTER PLAN (FMP) PROJECT (SCH# 2016061064)

Dear Mr. Cambiaso:

The Department of Toxic Substances Control (DTSC) has reviewed the subject EIR. The following project description is stated in the EIR: "The FMP encompass IEUA's Asset Management Plan, Recycled water program strategy, amendment to the 2010 recharge master plan update, wastewater facilities master plan update report, integrated water resources plan and energy management plan. The activities that would be implemented within these individual facilities master plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area. Many of the activities that make up the FMP are in the concept development or planning phase. The FMP evaluates the specific projects and management strategies by organizing proposed activities into three project categories: treatment facility upgrades, conveyance systems and ancillary facilities, and groundwater recharge and extraction." 2-A

Based on the review of the submitted document DTSC has the following comments:

1. The EIR should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. A Phase I Environmental Site Assessment is necessary to identify any recognized environmental conditions.

2. If there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction. 2-B

Comment Letter 2

3. If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB). 2-C

4. The EIR states, "An assessment of the hazardous materials content of the facilities to be demolished has not been performed." If buildings or other structures are present/were historically present onsite, then lead-based paints or products, mercury, and asbestos containing materials (ACMs) should be addressed in accordance with all applicable and relevant laws and regulations. This information should be properly addressed in the EIR. 2-D

5. The EIR states, "Electrical equipment at RP-2 may contain PCBs." To address potential polychlorinated biphenyl (PCB) impact to soil, DTSC recommends investigation and mitigation, if necessary, in the project area prior to construction. This information should be included in the EIR. 2-E

6. The EIR further states, "If the Phase II ESA determines that the site has contaminated soil and/or groundwater, a Soil and Groundwater Management Plan that specifies the method for handling and disposing of contaminated soil and groundwater prior to demolition, excavation, and construction activities shall be prepared and implemented." If soil contamination is suspected or observed in the project area, then excavated soil should be sampled prior to export/disposal. If the soil is contaminated, it should be disposed of properly in accordance with all applicable and relevant laws and regulations. In addition, if the project proposes to import soil to backfill the excavated areas, proper evaluation and/or sampling should be conducted to make sure that the imported soil is free of contamination. 2-F

7. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the EIR should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight. 2-G

Comment Letter 2

2-G

If you have any questions regarding this letter, please contact me at (714) 484-5476 or email at Johnson.Abraham@dtsc.ca.gov.

Sincerely,

Johnson P. Abraham
Project Manager
Brownfields Restoration and School Evaluation Branch
Brownfields and Environmental Restoration Program - Cypress

kl/sh/ja

cc: Governor's Office of Planning and Research (via e-mail)
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
State.clearinghouse@opr.ca.gov

Mr. Guenther W. Moskat, Chief (via e-mail)
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
Guenther.Moskat@dtsc.ca.gov

Mr. Dave Kereazis (via e-mail)
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Mr. Shahir Haddad, Chief (via e-mail)
Schools Evaluation and Brownfields Cleanup
Brownfields and Environmental Restoration Program - Cypress
Shahir.Haddad@dtsc.ca.gov

CEQA# 2016061064

Comment Letter 3

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

January 31, 2017

Via Electronic and Regular Mail

Pietro Cambiaso, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Dear Pietro Cambiaso:

Notice of Availability for the
IEUA Facilities Master Plans Program Environmental Impact Report (PEIR)

The Metropolitan Water District of Southern California (Metropolitan) reviewed the public notice for the Draft PEIR for the Facilities Master Plans Project (Project). The Inland Empire Utilities Agency (IEUA) is acting as the Lead Agency under the California Environmental Quality Act (CEQA) for this project. The Project consists of upgrades to four wastewater treatment plants, conveyance systems and ancillary facilities, and groundwater recharge and extraction. The projects would be long-term and implemented over a series of years. The Project is located within the IEUA's service area which includes cities of Upland, Claremont, Montclair, Rancho Cucamonga, Rialto, Fontana, Pomona, Chino, Chino Hills, Ontario, and Corona, in San Bernardino County. 3-A

IEUA is a regional wastewater treatment agency and wholesale distributor of imported and recycled water, and is a Metropolitan member agency. Metropolitan acknowledges IEUA's efforts to enhance water supply reliability and flexibility by developing programs to increase storage, and address sustainability and energy through its biosolids program and other resource-management plants. This Project involves upgrades to its wastewater treatment plants, biosolids handling facility, groundwater recharge basins; construct new wells and pump stations; and installation of up to 220,000 linear feet of pipeline. Metropolitan is concerned about new construction that could potentially impact our facilities and requests IEUA continue coordination efforts during the CEQA process and design phase of these facilties. 3-B

Metropolitan previously responded to the Notice of Preparation for the Project, see attached comment letter dated August 1, 2016. The NOP identified Metropolitan facilities located within the proposed Project area. The facilities include the Rialto, Etiwanda, Upper, Yorba Linda, and Lower feeders and associated facilities that support the feeders. We are concerned with potential impacts to these facilities associated with future excavation, construction, utilities or any development that may result from implementation of the proposed Project. 3-C

700 N. Alameda Street, Los Angeles, California 90012 • Mailing Address: P.O. Box 54153, Los Angeles, California, 90054-0153 • Telephone: (213) 217-6000

Comment Letter 3

Any temporary construction activity within the limits of our rights-of-way will need to be reviewed and approved by Metropolitan prior to the start of construction. Development and redevelopment associated with the proposed Project must not restrict any of Metropolitan's day-to-day operations and/or access to its facilities. 3-C

In order to avoid potential conflicts with Metropolitan's rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Approval of the Project where it could impact Metropolitan's property should be contingent on Metropolitan's approval of design plans for the Project. Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan's Substructure Information Line at (213) 217-6564. 3-D

We appreciate the opportunity to provide input to your planning process and look forward to receiving future environmental documentation on the Project. If we can be of further assistance, please contact, Ms. Brenda Marines at (213) 217-7902.

Very truly yours,

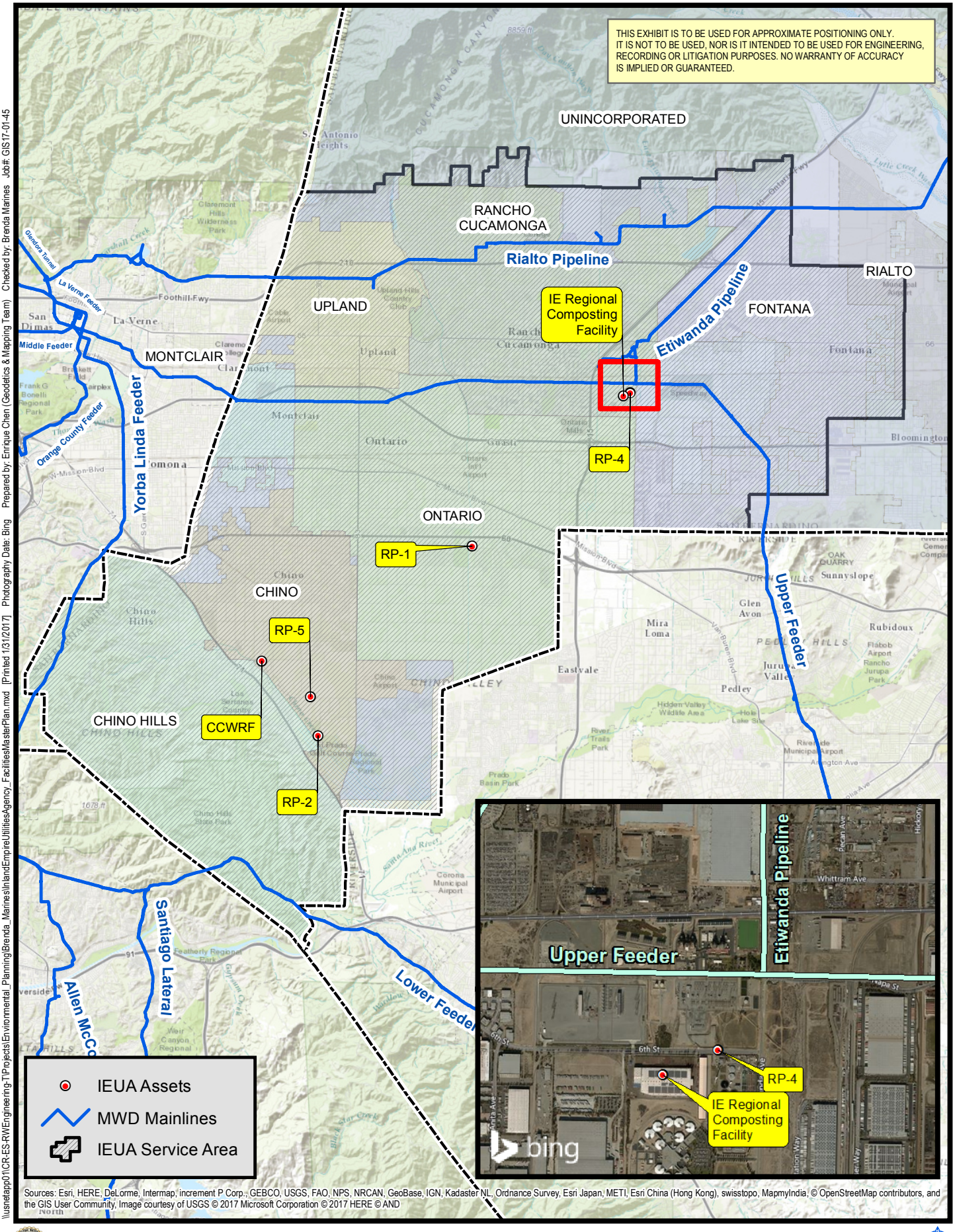
Vikki Dee Bradshaw

Deirdre West, Section Manager
By Vikki Dee Bradshaw, Principal Environmental Specialist

BSM/bsm
EPT Project No. 20170108EXT

Enclosures: Comment Letter to the NOP, dated August 1, 2016
Map

Comment Letter 3



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, Image courtesy of USGS © 2017 Microsoft Corporation © 2017 HERE © AND

\\usnetapp01\CR-ES-RWEngineering-T\Projects\Environmental_Planning\Brenda_Marines\InlandEmpireUtilitiesAgency_FacilitiesMasterPlan.mxd [Printed 1/31/2017] Photography Date: Bing Prepared by: Enrique Chen (Geodetics & Mapping Team) Checked by: Brenda Marines Job#: GIS17-01-45

Comment Letter 3

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

August 1, 2016 **Via Electronic and Regular Mail**

Pietro Cambiaso, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Dear Pietro Cambiaso:

Notice of Preparation and Public Scoping Meeting
For the IEUA Facilities Master Plans Program Environmental Impact Report (PEIR)

The Metropolitan Water District of Southern California (Metropolitan) reviewed the public notice for the Facilities Master Plans project (Project). The Inland Empire Utilities Agency (IEUA) is acting as the Lead Agency under the California Environmental Quality Act (CEQA) for this project. The Project consists of constructing and operating facilities in six interrelated Facilities Master Plans. The Facilities Master Plans would implement the strategy to manage IEUA's regional wastewater and recycled water distribution system; future strategy for the treatment and disposal of biosolids and manure; reliable and sustainable energy infrastructure to support these activities; and capital improvement plan projects. The projects would be long-term and implemented over a series of years. The Project is located within the IEUA's service area which includes cities of Upland, Claremont, Montclair, Rancho Cucamonga, Rialto, Fontana, Pomona, Chino, Chino Hills, Ontario, and Corona, in San Bernardino County. This letter contains Metropolitan's comments on the proposed Project as an affected responsible agency.

The public notice lists Metropolitan as a potential responsible agency. As such, Metropolitan would rely on the PEIR for any Metropolitan actions associated with the proposed Project; therefore, we recommend the PEIR discuss any Metropolitan involvement as a responsible agency.

Metropolitan reviewed the project description of the proposed Project and has determined the following facilities, which we own and operate, are within the Project area. The enclosed map shows these facilities in relation to the proposed Project. It will be necessary for the IEUA to consider these facilities in its Facilities Master Plans; all are located within the Project area:

- Rialto Feeder, which runs in a westerly to easterly direction in the cities of Fontana, Rialto, Rancho Cucamonga, Claremont, La Verne, San Dimas, and Glendora,

- Etiwanda Feeder, which runs in a northeasterly to southwesterly direction in the cities of Rancho Cucamonga and Fontana,

Comment Letter 3

- Upper Feeder, which runs in a westerly to easterly direction in the cities of Fontana, Ontario, Rancho Cucamonga, Pomona, and Chino,

- Yorba Linda Feeder, which runs in a northerly to southerly direction in the cities of Chino Hills and Yorba Linda, and

- Lower Feeder, which runs in a northwesterly to southeasterly direction in the cities of Chino and Corona.

We are concerned with potential impacts to these facilities associated with future excavation, construction, utilities or any development that may result from implementation of the proposed Project. Development and redevelopment associated with the proposed Project must not restrict any of Metropolitan's day-to-day operations and/or access to its facilities. Nor can the Project affect the water quality of Metropolitan supplies by allowing for non-compatible land uses.

In order to avoid potential conflicts with Metropolitan's rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Approval of the Project where it could impact Metropolitan's property should be contingent on Metropolitan's approval of design plans for the Project. Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan's Substructure Information Line at (213) 217-6564. To assist in preparing plans that are compatible with Metropolitan's facilities, easements, and properties, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future environmental documentation on this Project. If we can be of further assistance, please contact, Ms. Brenda Marines at (213) 217-7902.

Very truly yours,

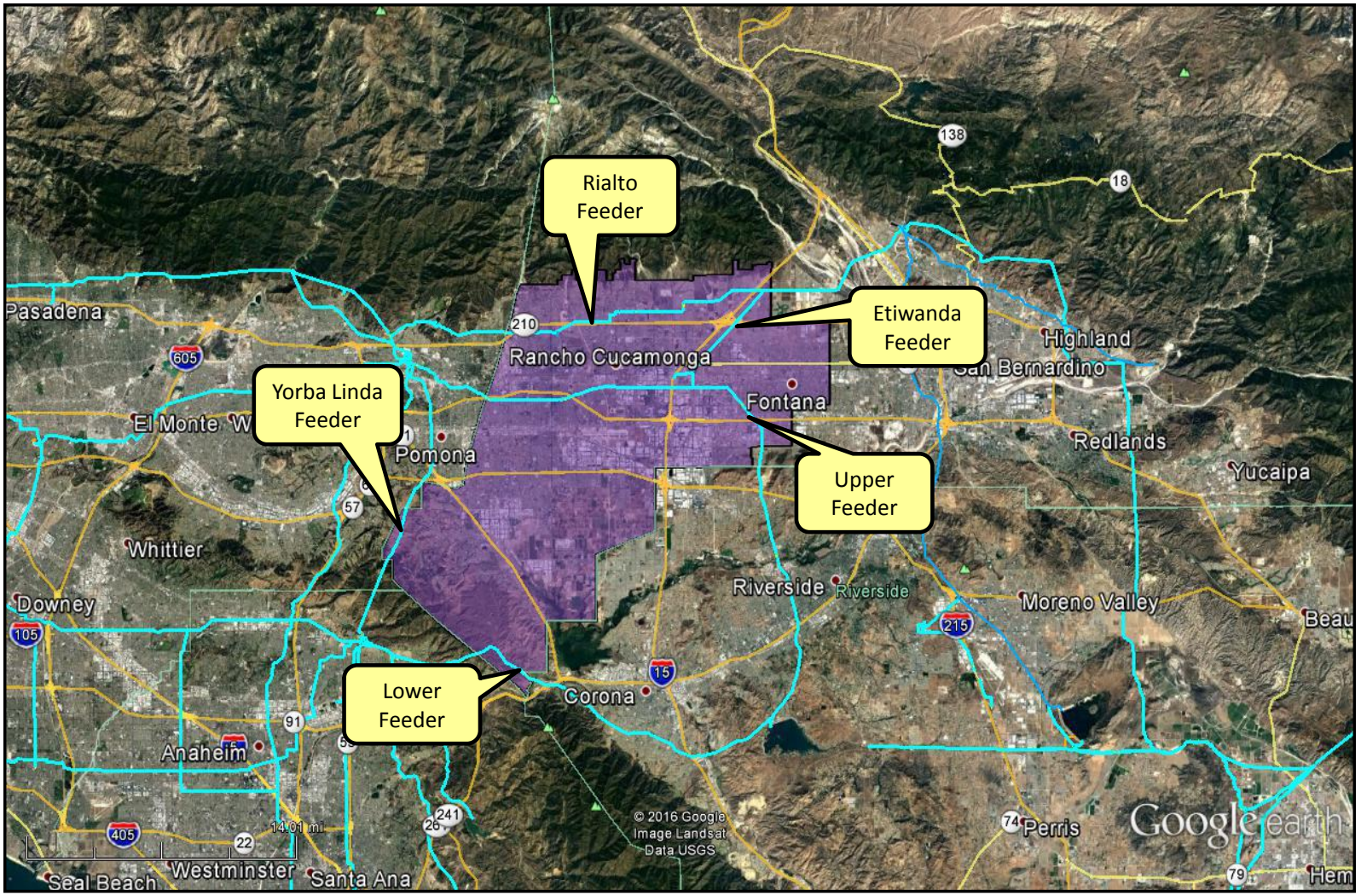
Deirdre West, Team Manager
By Deborah Drezner, Principal Environmental Specialist

BSM/bsm
EPT Project No. 20160704EXT

Enclosures: Planning Guidelines
Map

Comment Letter 3

The Metropolitan Water District of Southern California
and the Inland Empire Utilities Agency Facilities Master Plans project



Metropolitan Water District of Southern California.

Mayor L. Dennis Michael | Mayor Pro Tem Lynne B. Kennedy
Council Members William J. Alexander, Sam Spagnolo, Diane Williams
City Manager John R. Gillison

CITY OF RANCHO CUCAMONGA

10500 Civic Center Drive | P.O. Box 807 | Rancho Cucamonga, CA 91729-0807 | 909.477.2700 | www.CityofRC.us

January 31, 2017

VIA EMAIL AND HAND DELIVERED

Mr. Pietro Cambiaso, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

SUBJECT: COMMENTS ON DRAFT PROGRAM EIR FOR THE INLAND EMPIRE UTILITIES AGENCY DRAFT FACILITIES MASTER PLAN (SCH NO. 2016061064)

Dear Mr. Cambiaso:

Thank you for the opportunity to review and comment on the Draft Program Environmental Impact Report (PEIR) for the Inland Empire Utilities Agency Draft Facilities Master Plans (FMP). The City of Rancho Cucamonga (the "City") appreciates the opportunity to comment on PEIR. The City is supportive of the Inland Empire Utilities Agency's (IEUA) key service areas of treating wastewater, developing recycled water, converting biosolids into compost and generating electrical energy from renewable resources to offset energy demand by IEUA facilities. 4-A

When reviewing documents that assess environmental impacts, one of the goals of the City is to protect its residents from potential nuisance and undesirable environmental impacts while achieving the highest quality built environment and preservation of natural resources. One of the challenges the City faces with evaluating the IEUA's PEIR is that the breadth of the document in attempting to globally include six FMPs potentially resulting in incomplete disclosure and evaluation of the potential environmental impacts (both project and cumulative) to the City that could result from the implementation and construction from these FMPs. To that end, based upon a review of the proposed Draft PEIR, City staff offers the following comments, mitigation measures and modifications to the proposed PEIR: 4-B

1. General Comment: Expand the discussion of mitigations relating to aesthetics and noise to include the specific regulatory requirements that apply to lighting/glare and noise for each jurisdiction within the project area.

2. Air Quality: Add the following mitigation measures to Impact 3.3-2, AIR-1:

    1) The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

    2) Chemical soil-stabilizers (approved by SCAQMD and RWQCB) shall be applied to all inactive construction areas that remain inactive for 96 hours or more to reduce PM_{10} emissions. 4-C

3. Noise: Add the following mitigation measures to Impact 3.10-1, NOISE:

   1) Prior to the issuance of any grading plans, a construction-related noise mitigation plan shall be submitted to the local jurisdiction for review and approval. The Plan shall depict the location of the construction equipment and how the noise from this equipment would be mitigated during construction.

   2) When construction occurs within 150 feet of sensitive receptors, construction or grading shall not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday.

   3) Construction or grading noise levels shall not exceed the standards specified in local jurisdictions noise standards, as measured at the property line of residential land uses. When construction or grading occurs within 150 feet of sensitive receptors, during earthwork and construction operations, the contractor shall hire a consultant to perform weekly noise level monitoring to ensure compliance with the levels specified in local jurisdictions standards. If noise levels are compliant, the consultant shall report their findings to the City Planner or Building Official within 2 days of taking the sound readings; however, if noise levels exceed the above standards, then the consultant shall immediately notify the City Planner or Building Official. If noise levels exceed the above standards, then construction activities shall be reduced in intensity to a level of compliance with above noise standards, or noise levels are reduced to meet local jurisdictions standards through the use of mitigation measures, or activities are halted. If sound barriers are utilized, the adequacy of the sound barriers shall be verified by a professional consultant or engineer by noise level monitoring.

   4) Prior to commencement of construction related to this project at a specific site, notify all residents/owners of property within 660 feet of the perimeter of the site of the scope and details of this project, the duration of the work, etc. a minimum of 30 days prior to the start of such activity.

4-D

4. Traffic and Transportation: Add the following mitigation measures to Impact 3.14-1, TRAFFIC AND TRANSPORTATION:

   1) Prior to construction, the IEUA shall require that contractors shall coordinate with local jurisdictions to submit and receive approval for the following: traffic management plans, haul routes, traffic control measures, lane closures and oversize load permits.

4-E

5. Public Resources and Environmental Nuisance Impacts: Staff could not locate in the Draft PEIR document where potential nuisance impacts from vectors at recharge basins, such

4-F

as midge flies or mosquitoes, was evaluated. Since the Recharge Master Plan Update (RMPU) contemplates increasing capacity and the infiltration rate at certain basins (e.g., removing settled deposits at the Victoria Basin) or the construction of new basins (Lower San Sevaine), it is possible that water could be stored at higher water elevations for longer periods. This scenario could necessitate spraying and draining of the basins to keep the vector populations under control (e.g., midge fly) in order to avoid a nuisance condition for residential land uses in the vicinity of a basin. The Draft PEIR should be revised to address potential impacts from vectors and environmentally based nuisances on public services, and include mitigation measures as necessary. The Draft PEIR should also consider basin design modifications as way to maximize percolation, thereby reducing the duration of standing water and potential nuisance impacts from vectors. 4-F

As noted above, the City shares the goal supporting the IEUA's key service areas. The City also appreciates the opportunity to review and comment on the Draft PEIR for the Facilities Master Plans. The City also requests to be notified of any modifications made to the proposed PEIR prior to review and certification by the IEUA Board, and that the IEUA send the City notice of any subsequent CEQA notices that are proposed as a second tier action from the PEIR. Lastly, the City requests to be notified of any subsequent individual projects that are proposed from the implementation of any of the IEUA's six FMPs. 4-G

If you have any questions, please call me at (909) 477-2750 ext. 4308 or email at candyce.burnett@cityofrc.us

Sincerely,

PLANNING DEPARTMENT

Candyce Burnett
City Planner

CB:DG/ls

Cc: John R. Gillison, City Manager
Jeff Bloom, Deputy City Manager

Comment Letter 5

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

January 31, 2017

Pietro Cambiaso
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

~~sent via e-mail~~:

Re: SCH# 2016061064, IEUA Facilities Master Plan Project, Cities of Chino, Chino Hills, Ontario, Rancho Cucamonga; San Bernardino County, California

Dear Mr. Cambiaso:

The Native American Heritage Commission (NAHC) has reviewed the Draft Environmental Impact Report prepared for the project referenced above. The review included the Project Description/Introduction, the Summary of Impacts and Mitigation Measures, and the Environmental Setting, Impacts, and Mitigation Measures in section 3.5, Cultural Resources prepared by ES Associates, Inc. for the Inland Empire Utilities Agency. We have the following concerns: 5-A

- There is no Tribal Cultural Resources section or subsection in the Executive Summary as per California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf

- There are no mitigation measures specifically addressing Tribal Cultural Resources separately. Mitigation measures must take Tribal Cultural Resources into consideration as required under AB-52, **with or without consultation** occurring. Mitigation language for archaeological resources is not always appropriate for or similar to measures specifically for handling Tribal Cultural Resources. 5-B

- Tribal Cultural Resources assessments are not documented. These should adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources prior to Tribal Consultation occurring. 5-C

- Mitigation Measure CUL-1 states that the Inland Empire Utilities Agency "shall retain a qualified archaeologist… to conduct a study" of cultural resources prior to groundbreaking. To adequately assess the impacts to Tribal Cultural Resources, these studies should have been completed prior to consultation with the tribes and the (general) results of those studies should be included in this document. 5-D

The California Environmental Quality Act (CEQA)[1], specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.[2] If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.[3] In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE). 5-E

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).[4] **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** AB 52 created a separate category for "tribal cultural resources"[5], that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.[6] Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.[7] Your project may also be subject to **Senate Bill 18 (SB 18)** (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. **Both SB 18 and** 5-F

[1] Pub. Resources Code § 21000 et seq.
[2] Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)
[3] Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1); CEQA Guidelines § 15064 (a)(1)
[4] Government Code 65352.3
[5] Pub. Resources Code § 21074
[6] Pub. Resources Code § 21084.2
[7] Pub. Resources Code § 21084.3 (a)

Comment Letter 5

AB 52 have tribal consultation requirements. Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966[8] may also apply. 5-F

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/. Additional information regarding AB 52 can be found online at http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices". 5-G

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached. 5-H

Please contact me at gayle.totton@nahc.ca.gov or call (916) 373-3710 if you have any questions.

Sincerely,

Gayle Totton, B.S., M.A., Ph.D
Associate Governmental Project Analyst

Attachment

cc: State Clearinghouse

[8] 154 U.S.C. 300101, 36 C.F.R. § 800 et seq.

Comment Letter 5

Pertinent Statutory Information:

Under AB 52:
AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:
Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.
A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.[9] and **prior to the release of a negative declaration, mitigated negative declaration or environmental impact report**. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18).[10]
The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.
b. Recommended mitigation measures.
c. Significant effects.[11]

1. The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.

If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.[12]
With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.[13]
If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss** both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.[14]

Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.[15]

Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 **shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program**, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.[16]
If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation** pursuant to Public Resources Code section 21084.3 (b).[17]
An environmental impact report **may not be certified**, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

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[9] Pub. Resources Code § 21080.3.1, subds. (d) and (e)
[10] Pub. Resources Code § 21080.3.1 (b)
[11] Pub. Resources Code § 21080.3.2 (a)
[12] Pub. Resources Code § 21080.3.2 (a)
[13] Pub. Resources Code § 21082.3 (c)(1)
[14] Pub. Resources Code § 21082.3 (b)
[15] Pub. Resources Code § 21080.3.2 (b)
[16] Pub. Resources Code § 21082.3 (a)
[17] Pub. Resources Code § 21082.3 (e)

Comment Letter 5

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.[18]

This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:

Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf
- Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**[19]
- There is no Statutory Time Limit on Tribal Consultation under the law.
- Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research,[20] the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.[21]
- Conclusion Tribal Consultation: Consultation should be concluded at the point in which:
  - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.[22]

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
  - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
    - The request form can be found at http://nahc.ca.gov/resources/forms/.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
  - If part or the entire APE has been previously surveyed for cultural resources.
  - If any known cultural resources have been already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an 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.
  - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to 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.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

[18] Pub. Resources Code § 21082.3 (d)
[19] (Gov. Code § 65352.3 (a)(2)).
[20] pursuant to Gov. Code section 65040.2,
[21] (Gov. Code § 65352.3 (b)).
[22] (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Comment Letter 5

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
  - Planning and construction to avoid the resources and protect the cultural and natural context.
  - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - Protecting the cultural character and integrity of the resource.
  - Protecting the traditional use of the resource.
  - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.[23]
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.[24]

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.[25] In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

[23] (Civ. Code § 815.3 (c)).
[24] (Pub. Resources Code § 5097.991).
[25] per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).

Comment Letter 6

CITY OF ONTARIO
303 EAST "B" STREET, CIVIC CENTER ONTARIO CALIFORNIA 91764-4105
(909) 395-2000
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PAUL S. LEON
MAYOR

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ALAN D. WAPNER
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AL C. BOLING
CITY MANAGER

SHEILA MAUTZ
CITY CLERK

JAMES R. MILHISER
TREASURER

February 1, 2017

Inland Empire Utilities Agency
Mr.Pietro Cambiaso, P.E.
6075 Kimball Avenue
Chino, CA 91708

RE: Draft Program Environmental Impact Report (DPEIR) for Inland Empire Utilities Agency Facilities Master Plans (SCH No. 2016061064)

Dear Mr. Cambiaso,

Thank you for giving the City of Ontario the opportunity to review and comment on the above referenced project. After reviewing the DPEIR for the Facilities Master Plans, the City requests that the following comments be addressed in the DPEIR:

1. The existing operation of RP-1 regularly results in significant objectionable odors affecting the surrounding area. Effects from upgrades and operations at RP-1 should not utilize existing conditions as a baseline for less than significant impact. Rather, Mitigation Measures should aim to rectify existing conditions and result in vastly improved air quality and odor control systems. 6-A

2. Projects proposed by IEUA in the FMP may overlap with projects or facilities planned by member agencies in its service area. During site-specific project evaluations, IEUA should coordinate with member agencies to determine if joint facilities can further minimize environmental impacts to the region from construction as well as long-term impacts from ongoing operations and maintenance. 6-B

3. The DPEIR indicates that IEUA's Orange County Judgment joint obligation with WMWD to provide a minimum discharge to the Santa Ana River is to be met with reclaimed effluent from IEUA's sewage treatment and reclamation plants. If sufficient supplies of reclaimed effluent are not available to meet this obligation, IEUA must provide alternative sources. The DPEIR should identify alternative 6-C

Comment Letter 6

sources and Mitigation Measure(s) should be established for those sources and their environmental impacts. 6-C

4. The DPEIR should evaluate and recommend any Mitigation Measures necessary to ensure water supply service reliability to direct use recycled water customers with expanded groundwater recharge and continued discharge of recycled water to the Santa Ana River. 6-D

5. Mitigation Measures related to hydrologic impacts on the region should also consider the effects that the projects may have on groundwater levels and yield (particularly the Safe Yield of the Chino Basin), groundwater quality, groundwater storage, ground subsidence, and Chino Basin groundwater management and hydraulic control (particularly under Chino Basin Watermaster's Optimum Basin Management Plan). 6-E

6. IEUA should take into consideration existing and proposed utilities in the public right of way when planning and designing any sewer or recycled water facilities. If the proposed IEUA facility cannot be accommodated within the existing public right of way, IEUA will need to acquire additional right of way or consider an alternate alignment. 6-F

7. On-site upgrades/improvements to IEUA facilities, ie treatment plants, may be subject to Development Impact Fees (DIF). Determination of DIF subjectivity will be made during development plan review by the City. 6-G

8. On page 3.8-13 under the heading "Municipal Stormwater Permitting (MS4)" in the 2nd paragraph, the 3rd sentence shall be revised as follows: "The permit requires the development of a site-specific Water Quality Management Plan (WQMP) for certain types of development, including new industrial development projects that create 10,000 square feet or more of impervious surface collectively over the project site or which add or replace 5,000 square feet of impervious surface on an existing developed site." 6-H

We appreciate being informed of the project and look forward to continued communications regarding this project. If you have any questions regarding our comments, please contact me at (909) 395-2419 or Richard Ayala, Senior Planner, at (909) 395-2421.

Sincerely,

Scott Murphy, AICP
Planning Director

Comment Letter 7

Brownstein Hyatt Farber Schreck

Bradley J. Herrema
Attorney at Law
805.882.1493 tel
805.965.4333 fax
BHerrema@bhfs.com

February 2, 2017

VIA EMAIL: pcambias@ieua.org

Pietro Cambiaso, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Re: Chino Basin Watermaster Comments on the Facilities Master Plan Draft Program Environmental Impact Report

Dear Mr. Cambiaso:

Chino Basin Watermaster (Watermaster) appreciates the opportunity to provide comments on the Inland Empire Utilities Agency (IEUA) Facilities Master Plan Draft Program Environmental Impact Report (Draft PEIR) under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.; Cal. Code Regs., tit. 14, § 15000 et seq. (CEQA Guidelines).) Watermaster recognizes and appreciates the continuing working relationship it shares with IEUA and offers the below comments as points of clarification on the Draft PEIR's analysis of the proposed program that encompasses IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013) (RMPU), Wastewater Facilities Master Plan Update Report (2015), Integrated Water Resources Plan (2015), and Energy Management Plan (2015).

Watermaster's role is to oversee implementation of the San Bernardino County Superior Court's 1978 Judgment, which adjudicated the groundwater rights to the Chino Groundwater Basin (Basin). One of the key features of the 1978 Judgment is that the court retains continuing jurisdiction to ensure that the water resources of the Basin—including its storage space—are utilized in a manner consistent with Article X, Section 2 of the California Constitution. In that regard, Watermaster wishes initially to correct certain inaccuracies in the Draft PEIR regarding Watermaster and the 1978 Judgment. Watermaster wishes to clarify that pumping rights within the Chino Basin are assigned by the 1978 Judgment itself, and that Watermaster administers the Judgment. (*See, e.g.,* Draft PEIR at 3-8.4.) The Safe Yield of the Basin limits pumping allocation for all production rights – including those considered to be appropriative in nature – not just overlying rights. (*Id.*) Watermaster administers the 1978 Judgment and the OBMP Implementation Plan, consistent with both the Peace Agreement and the Peace II Agreement, pursuant to Court order.

7-A

2049 Century Park East, Suite 3550
Los Angeles, CA 90067
main 310.500.4600

Comment Letter 7

One of the central tasks given to Watermaster under the 1978 Judgment is the development of a physical solution for the Basin. This physical solution takes the form of a comprehensive and integrated groundwater management plan called the Optimum Basin Management Program (OBMP). As part of the OBMP, Watermaster operates a comprehensive recharge program to maintain the health of the Basin. Watermaster additionally is responsible for the oversight and management of the Basin's storage space. As part of these tasks, pursuant to the Peace II Agreement, Watermaster and IEUA are collectively required to update the Recharge Master Plan every five years,[1] which includes ensuring sufficient recharge capacity within the Basin to allow for replenishment of production beyond the Basin's Safe Yield, as well as recharge projects that will protect and enhance the Basin's Safe Yield. (*See* Draft PEIR at 3-8.4.) It is in its role of implementing the 1978 Judgment and maximizing the beneficial use of the Basin's resources, that Watermaster provides these comments.

Because the Draft PEIR contemplates six facility plans and IEUA operates an existing network of groundwater recharge facilities in partnership with Watermaster and others, these comments are offered to assist in the Draft PEIR's disclosure requirements under CEQA. Watermaster first wishes to clarify that Watermaster is not a responsible agency under the California Environmental Quality Act (CEQA), and therefore references to Watermaster as a "potential responsible agenc[y]" should be amended in the Final PEIR. (*See, e.g.,* Draft PEIR at 2-48.) Under CEQA, a "responsible agency" is defined as "a public agency which proposes to carry out or approve a project" analyzed in an EIR or negative declaration by the lead agency. (CEQA Guidelines § 15381.) In turn, "public agency" is defined to include "any state agency, board, or commission and any local or regional agency . . . . It does not include the courts of the state." (CEQA Guidelines § 15379.) Therefore, as an arm of the San Bernardino County Superior Court, Watermaster is not properly considered a responsible agency under CEQA.

7-B

Second, Watermaster notes that before implementing the proposed CSI Storm Water Basin Project (2013 RMPU Project ID 18a discussed at pages 2-35 to 2-36 of the Draft PEIR) and IEUA's suggested dry weather flow projects (Draft PEIR at pages 2-28 to 2-29), Water Code section 1701 requires a petition to the State Water Resources Control Board (SWRCB) to add points of diversion to Watermaster's diversion permit(s). The Draft PEIR should identify that the right to divert the dry-weather discharge addressed on pages 2-28 to 2-29[2] is held by the Watermaster—IEUA does not have permission from the SWRCB to divert surface water.

7-C

Finally, Watermaster, together with its expert consultants, Wildermuth Environmental, Inc. (WEI), offers the following technical comments on the Draft PEIR:

- Page 2-35, Section 2.5.8, second paragraph, line 5:
    - Insert the word "production" or "pumping" after the word "groundwater."

7-D

[1] The 2010 Recharge Master Plan Update was amended in 2013 pursuant to the 2013 Amendment to the 2010 Recharge Master Plan Update. The Draft PEIR's summary of the RMPU on page 3.8-17 should be clarified to make clear to which document it refers.

[2] Also, the 2013 RMPU Project ID 23a project (Wineville, Jurupa, and RP3) will intercept dry-weather discharge in the Wineville and Jurupa Basins for subsequent recharge.

Comment Letter 7

- Page 2-35, Section 2.5.8, generally, last paragraph and Table 2-13:
  - References to the 2013 RMPU Amendment[3] should be made consistent throughout the document, and Table 2-13 should be updated to provide the most current information on stormwater recharge estimates, cost, and project descriptions. 7-E

- Page 2-37, Section 2.5.11:
  - The sewering of improved properties that overlie the IEUA service area will increase the recycled water available for reuse but will also reduce groundwater recharge and therefore the yield of the underlying groundwater basins. This decreased yield will impact not only the yield of the underlying groundwater basins, but also the groundwater users dependent on the basins. The Draft PEIR should be revised to identify these impacts. 7-F

- Pages 3.7-3 and 3.7-4, Section "Hazardous Materials in Soil and Groundwater":
  - Watermaster maintains a comprehensive relational database that includes water quality data and produces a biennial State of the Basin Report that summarizes the water quality in the Basin. The 2014 report is available on Watermaster's website,[4] and the 2016 report is presently in progress. Watermaster suggests that these resources should be consulted and cited in the Draft PEIR, as updated, as appropriate. 7-G

- Sections starting on pages 3.7-17, 3.7-19, and 3.7-24 regarding impact analysis for "Routine Use", "Accident" and "Hazardous Materials Site Listing" conditions:
  - Hazardous materials discharged to storm drains can flow into recharge basins and subsequently degrade groundwater. This impact should be addressed and analyzed in the Draft PEIR. If found to be significant, mitigation measures should be developed and analyzed. 7-H

- Finally, and more generally, the Draft PEIR should address that all groundwater recharge has the potential to create hydraulic conditions that can change the direction and speed of contaminant plume movement. On behalf of Watermaster, WEI has recently completed an assessment of the recharge impact on plume movement as part of the Material Physical Injury analysis for the 2013 RMPU. This assessment is presently scheduled to be published in the next month 7-I

[3] Watermaster notes that there are two additional 2013 RMPU Amendment projects being implemented that were the subject of separate environmental review.
[4] http://www.cbwm.org/rep_engineering.htm.

Comment Letter 7

We thank you in advance for your consideration of our comments.

Sincerely,



Bradley J. Herrema

BXH:ibc

cc: Peter Kavounas, Chino Basin Watermaster
Justin Nakano, Chino Basin Watermaster

Comment Letter 8

825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.8109 Fax: 909.387.7876
www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works
- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

Gerry Newcombe
Director

February 2, 2017

Inland Empire Utilities Agency
Pietro Cambiaso, P.E.
6075 Kimball Ave.
Chino, CA. 91708
Pcambias@ieua.org

File: 10(ENV)-4.01

RE: NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE FACILITIES MASTER PLAN FOR THE INLAND EMPIRE UTILITIES AGENCY

Dear Mr. Cambiaso,

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project which was received on **December 20, 2016**. Though we appreciate the complexity and scope of this project which consists of over 500 individual projects and covers six different facility plans, we are concerned the document as a whole lacks the specificity required to accurately determine the validity of the documents conclusions and the impacts these projects may or may not have on District facilities and resources. Pursuant to our review, the following comments are provided: 8-A

General Comment

The project is subject to the following San Bernardino County Flood Control District's (District) Comprehensive Storm Drain Plan Nos. 1&2, and Rancho Cucamonga CSDP. Also, the following Master Plan of Drainages: South Fontana MPD, Fontana MPD, Ontario MPD, Chino MPD, Chino Hills MPD, Chino Area 2 MPD, Montclair MPD, West Cucamonga MPD, Upland MPD, and Chino Airport MPD. If you have any questions, please contact Michael Fam in the District Flood Control Planning Division at 909-387-8120. 8-B

Permits/Operations Support Division (Melissa Walker, Chief, 909-387-7995):

Since the proposed project takes place on District facilities, any work affecting the District's right-of-way would need a Flood Control Permit. The necessity and any impacts associated with the construction within District facilities should be analyzed in the Final EIR. 8-C

BOARD OF SUPERVISORS
Robert A. Lovingood, Vice Chairman, First District | Janice Rutherford, Second District | James Ramos, Chairman, Third District | Curt Hagman, Fourth District | Josie Gonzales, Fifth District
Gregory C. Devereaux, Chief Executive Officer

Comment Letter 8

Environmental Management Division (Patrick Egle, Planner III, 909-387-8109):

1. Page 2-28 of the DEIR discusses the diversion of dry weather flows from five locations where District channels cross IEUA sewage collection lines. However, the document does not address impacts due to the loss of those dry weather flows to downstream habitats. The document defers the cumulative impacts to SAWPA and the development of an HCP in the future.

   For example, downstream of Cucamonga Channel at Hellman is a large patch of riparian vegetation, which is occupied by least Bell's vireo, a state and federally endangered species. The document states this riparian habitat is supported by surface runoff contributed by these creeks, but then states groundwater, which is managed by a separate entity, would continue to support this habitat once the surface flows are removed. The document states "Although some riparian habitat could be modified where the channel concrete lining ends and the water enters the greater Prado Basin, the overall effect to the forest would be minimal" (Page 3.4-20). This "modification" would result in the loss or take of endangered species habitat which is not addressed nor mitigated for. We recommend the Final EIR should analyze and address the impacts due to the loss of dry weather flows to downstream habitats and at minimum establish an outline of what will be addressed in the HCP. 8-D

2. Section 3.4-20 of the DEIR states "The existing channels provide little to no habitat value since they are concrete-lined channels". The District disagrees with this statement. District ecologists routinely survey the concrete lined channels within the proposed project areas as part of the District's required ongoing maintenance activities and have found a variety of wildlife uses occurring within these concrete-lined channels such as bat roosting/foraging habitat, and avian foraging/nesting habitat. Nesting by a variety of swallows, swifts, black phoebe and Say's phoebe, killdeer, and black-necked stilts have also been observed within the concrete channels. Additionally, burrowing owl, a California state species of special concern, has been documented nesting and foraging within Cucamonga Creek and Lower Deer Creek concrete channels. The diversion of the dry weather flows would result in impact to roosting, nesting, and foraging habitat to many species. The Final EIR should analyze and address the potential loss of dry weather flows to these instream habitats. This analysis should include potential impacts and mitigation measures necessary to reduce these potential impacts to a less than significant level. 8-E

   Please note: If a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

Comment Letter 8

3. Section 3.4.3 of the DEIR, Impacts and Mitigation Measures, discusses Mitigation Measures proposed for the project, however, the Master Plan DEIR does not identify these impacts specifically. For example, on page 3.3-17, the DEIR states, "Approximately 220,000 linear feet of pipeline installation are proposed in the overall program". The DEIR does not identify specific environmental impacts resulting from more than 40 miles of construction related pipeline disturbance. 8-F

   Please note if a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

4. Additionally, the DEIR lacks a potential schedule and/or maps and figures in sufficient detail to adequately analyze the project related impacts associated with this pipeline. It also fails to discuss specific environs that will be potentially affected. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the future, at minimum the FEIR should identify the procedures that will be undertaken to protect the impacted environs/species and minimize impacts. 8-G

   Please note if a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

5. Figure 3.4-1 of the DEIR does not include the Riversidean alluvial fan sage scrub that is located within the proposed Lower San Sevaine Basin/San Sevaine Basin #5 project area. This figure should be updated for the Final EIR and any impacts to this environment fully discussed there within. 8-H

6. Page 4-6 of the DEIR discusses San Sevaine Basin #5 and proposes construction of internal berms within basin #5 that would enable a larger portion of the basin floor to be wet, therefore increasing storm water capture and recharge. The DEIR fails to analyze the following items based upon this statement: 8-I

   - San Sevaine Basin #5 has a large stockpile and has been identified as a continuing stockpile in the upper part of the basin. This would inhibit the use of this material and the ability to place new material during wetted periods.

   - San Sevaine Basin #5 was revegetated with Riversidean alluvial fan sage scrub and Coastal sage scrub vegetation communities as part of the mitigation measure for the construction of those facilities. The increase in the wetted areas has the potential to eliminate these natural communities.

Comment Letter 8

- San Sevaine Basin #5 has experienced an invasion of yellow star thistle (*Centaurea solstitialis*). The District is currently managing and working towards eradicating this population, however, water spreading within this basin has the potential to spread this species to other downstream facilities. The spread of seed is also possible by the movement of equipment from and to this basin.

The FEIR should fully analyze and discuss potential project related impacts to these environs and disclose any mitigation necessary to reduce potential impacts to a less than significant level. Should a new significant environmental impact result from the analysis, or new mitigation measure proposed, the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5. 8-I

7. Page 4-7 of the DIER discusses Wineville Basin. Wineville Basin has a large invasion of yellow star thistle (*Centaurea solstitialis*). The District is currently managing and working towards eradicating this population, however, water spreading within this basin has the potential to spread this species to other downstream facilities. The spread of seed is also possible by the movement of equipment to and from this basin. These potential impacts should be analyzed and discussed in the Final EIR. 8-J

8. Impacts to burrowing owl are not adequately addressed within the DEIR. Several of the activities (projects) described within the DEIR which have potential to impact the burrowing owl include pipeline installation, diversion of dry weather flows, construction of new facilities and maintenance activities. It is not clear how IEUA will proceed and avoid, minimize, and mitigate for impacts to burrowing owl. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the future, at minimum, the FEIR should identify the procedures that will be undertaken to protect the species and minimize impacts. 8-K

9. The property in which the Lower San Sevaine Basin is being proposed is District fee owned property. Additionally, this property is under the authority of the County of San Bernardino Department of Public Health, Division of Environmental Health Services, Local Enforcement Agency (LEA) and California Department of Resources Recycling and Recovery (CalRecycle) as our records indicate that it is a former Municipal Solid Waste burn site. Any proposed projects within this area would require, not only purchasing of the property from the District, but also complete approval through the LEA and CalRecycle and potentially the California Department of Toxic Substances Control. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the 8-L

Comment Letter 8

future, at minimum, the FEIR should identify the procedures that will be undertaken to protect the species and minimize impacts. 8-L

10. There is a typo on Figure D-34a of the DEIR (Appendix D). The legend identifies the basin as Wineville Basin, however it is not Wineville Basin. The figure should be corrected in the Final EIR. 8-M

11. In general, the DEIR does not discuss under what conditions or guidelines subsequent environmental evaluation will occur and/or what level of environmental evaluation will be required. The FEIR should identify all proposed projects that will be subject to subsequent CEQA environmental evaluation and the anticipated type of public review. 8-N

12. The FEIR should acknowledge that any projects carried out on District lands (owned in fee title or easement) must rely upon the most currently available environmental review and documentation. The District may request subsequent biological and cultural evaluations be conducted prior to issuance of any District issued permits. 8-O

13. The District does not concur that a Statement of Overriding Considerations relating to potential cultural resources is warranted as the cultural investigation does not identify specific impacts or explore all reasonable potential mitigation. The FEIR should acknowledge that future cultural analysis will be required and potential impact to cultural resources addressed on an individual and cumulative basis. 8-P

In closing, please be advised that our concurrence with the FEIR may be necessary for the District to issue future permits.

We respectfully request to be included on the circulation list for all project notices and reviews. I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above. 8-Q

Sincerely,

Michael R. Perry
Supervising Planner
Environmental Management

MRP:PE:sr

Cc: Kevin Blakeslee
Harold Zamora

Comment Letter 9

EUNICE M. ULLOA
Mayor

TOM HAUGHEY
Mayor Pro Tem

GLENN DUNCAN
EARL C. ELROD
Council Members

MATTHEW C. BALLANTYNE
City Manager

CITY of CHINO

February 2, 2017

Pietro Cambiaso, PE
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

RE: IEUA Facilities Master Plan Program Environmental Impact Report (PEIR)

Dear Mr. Cambiaso,

Thank you for providing the City of Chino an opportunity to comment on the Draft Program Environmental Impact Report for the IEUA Facilities Master Plan. As a result of our review, the City has the following comments:

1. For all upcoming facility upgrades in the City, IEUA will need to submit the required plans/information and permit applications so that proper conditions associated with the construction activity can be placed on the various projects. 9-A

2. Revise Section 3.15-2. The second paragraph is incorrect because the City of Chino provides water service to most of the City with the exception to certain areas that are serviced by either the City of Chino Hills or MVWD. 9-B

3. It is unclear if the Master Plan includes an expansion of the food waste diversion program, including any updates or relocation of anaerobic digesters. Based on the potential impacts (e.g. odors, traffic, etc.) associated with the food waste diversion program, the City is opposed to any expansion of the program at the RP5 Facility. The EIR should provide additional information that clarifies the existing food waste diversion program operation and associated impacts. 9-C

Thank you again for the opportunity to review and comment on the proposed Facilities Master Plan PEIR. Should you have any questions, please feel free to contact me at (909) 334-3332.

Sincerely,

Warren Morelion, AICP
City Planner

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Web Site: www.cityofchino.org

Comment Letter 10

On Jan 26, 2017, at 10:23 AM, Braden Yu <BradenY@cvwdwater.com> wrote:

Hey Sylvie,

In review of the Draft EIR of the IEUA Facilities Master Plan, we have a comment regarding Appendix G "Recycled Water Program Strategy". I believe this document was completed prior to the finalization of the Recycled Water Policy Principles and as such, it currently show that "…the RW Program is operated based on the following priorities for recycled water deliveries: 1) Regional discharge obligations (Santa Ana Judgment, environmental obligations, etc.), 2) Member agency direct use demands and 3) Regional GWR." We would like to see that this is amended or updated to reflect the current priorities as addressed in the negotiated "Recycled Water Policy Principles". 10-A

Please contact me if you have any questions.

Thanks

Braden Yu, P.E.
Planning and Development Manager
Cucamonga Valley Water District
10440 Ashford Street
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fax (909) 476-7031
BradenY@CVWDwater.com

Braden Yu

<mime-attachment.jpg>

"Water Smart - Thinking in Terms of Tomorrow"
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Connect with us

CHAPTER 8
Comments on the Draft PEIR and Responses to Comments

The comment letters received during the public review period for the Draft PEIR are included in this section. IEUA provides individual responses to the bracketed comments in each letter. In some instances, in response to the comment, IEUA has made additions or deletions to the text of Draft PEIR; additions are included as underlined text and deletions as ~~stricken text~~. The revisions do not significantly alter the conclusions in the Draft PEIR.

Letter 1: State Clearinghouse, Office of Planning and Research

Comment 1-A

The comment acknowledges the State Clearinghouse distributed the EIR as required under CEQA to pertinent agencies. The Department of Toxic Substances Control comment letter is attached.

Response 1-A

No response is required. The Department of Toxic Substances Control letter is responded to as Letter 2 below.

Letter 2: Department of Toxic Substances Control

Comment 2-A

The Department of Toxic Substances Control (DTSC) has reviewed the subject EIR. The following project description is stated in the EIR: "The FMP encompass IEUA's Asset Management Plan, Recycled water program strategy , amendment to the 2010 recharge master plan update, wastewater facilities master plan update report, integrated water resources plan and energy management plan. The activities that would be implemented within these individual facilities master plans would provide for future wastewater treatment, biosolids handling, and recycled water to the IEUA service area. Many of the activities that make up the FMP are in the concept development or planning phase. The FMP evaluates the specific projects and management strategies by organizing proposed activities into three project categories: treatment facility upgrades, conveyance systems and ancillary facilities, and groundwater recharge and extraction."

Based on the review of the submitted document DTSC has the following comments:

1. The EIR should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. A Phase I Environmental Site Assessment is necessary to identify any recognized environmental conditions.

Response 2-A

The IEUA FMP Draft PEIR describes ten primary sites within the IEUA service area that have experienced historic uses where release of hazardous wastes/substances may have occurred. Further, the Hazard and Hazardous Materials Section of the Draft PEIR shows a summary table which identifies open hazardous sites within the IEUA service area (see page 3.7-4 through 3.7-7 of the Draft PEIR). Page 3.7-24 through 3.7-26 of the Draft PEIR also includes an analysis of whether the proposed projects would be sited in areas with current or historic uses that could result in the release of hazardous wastes and substances.

The Draft PEIR requires a Phase I Site Assessment for soil and groundwater contamination to be conducted in project areas prior to the initiation of any construction requiring ground-disturbing activities (see Mitigation Measure HAZ 1 and Haz-2 on page 3.7-25 of the Draft PEIR). These mitigation measures would ensure that site-specific conditions are evaluated for future projects to reduce potential impacts to construction workers and the public from exposure to contaminated soils.

Comment 2-B

2. If there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction.

Response 2-B

Mitigation Measure HAZ-1 in the Draft PEIR (page 3.7-25-3.7-26) would require that hazardous environmental conditions are evaluated for future projects and Mitigation Measure HAZ-2 requires the development of a Soil and Groundwater Management Plan. The Soil and Groundwater Management Plan would specify methods for investigation, sampling, and remedial actions that need to be taken under appropriate regulatory agencies, prior to any construction.

Comment 2-C

3. If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB).

Response 2-C

As noted on page 3.8-20 of the Draft PEIR, some proposed project components will require a NPDES discharge permit. The Draft PEIR identifies that discharge permits are needed for discharges to waters of the US. Existing NPDES permits may need to be modified as future expansion of facilities proceeds in accordance with future growth within the IEUA service area (see Hydrology and Water Quality section of the Draft PEIR). NPDES permits will be obtained and/or updated under the RWQCB.

Comment 2-D

4. The EIR states, "An assessment of the hazardous materials content of the facilities to be demolished has not been performed." If buildings or other structures are present/were historically present onsite, then lead-based paints or products, mercury, and asbestos containing materials (ACMs) should be addressed in accordance with all applicable and relevant laws and regulations. This information should be properly addressed in the EIR.

Response 2-D

The Draft PEIR states that buildings located on the RP-2 project site may contain ACMs and LBPs (see page 3.7-2 of the Draft PEIR). Further, the Draft PEIR analyzes the potential for these hazardous materials to be released with demolition of buildings on site. All affected structures would require abatement of identified hazards prior to demolition under Federal and state regulations. Adherence to these applicable and relevant laws and regulations regarding hazardous building materials are properly addressed in the Draft PEIR Hazards and Hazardous Materials section, specifically on pages 3.7-19 through 3.7-20.

Comment 2-E

5. The EIR states, "Electrical equipment at RP-2 may contain PCBs." To address potential polychlorinated biphenyl (PCB) impact to soil, DTSC recommends investigation and mitigation, if necessary, in the project area prior to construction. This information should be included in the EIR.

Response 2-E

The Draft PEIR states that buildings located on the RP-2 project site may contain PCBs (see page 3.7-2 of the Draft PEIR). Further, the Draft PEIR analyzes the potential for these hazardous materials to be released with demolition of buildings on site. To avoid soil contamination, all affected structures would require abatement of PCBs and other hazardous materials, prior to demolition under Federal and state regulations. Adherence to these applicable and relevant laws and regulations regarding hazardous building materials are properly addressed in the Draft PEIR Hazards and Hazardous Materials section, specifically on pages 3.7-19 through 3.7-20.

The Draft PEIR requires a Phase I Site Assessment for soil and groundwater contamination to be conducted in project areas prior to the initiation of any construction requiring ground-disturbing activities (see Mitigation Measure HAZ 1 and Haz-2 on page 3.7-25 of the Draft PEIR). These mitigation measures would ensure that site-specific conditions are evaluated for future projects prior to initiating construction activities to reduce potential impacts to construction workers and the public from exposure to contaminated soils, equipment or structures.

Comment 2-F

6. The EIR further states , "If the Phase II ESA determines that the site has contaminated soil and/or groundwater , a Soil and Groundwater Management Plan that specifies the method for handling and disposing of contaminated soil and groundwater prior to demolition, excavation, and construction activities shall be prepared and implemented ." If soil contamination is suspected or observed in the project area, then excavated soil should be sampled prior to export/disposal.

If the soil is contaminated, it should be disposed of properly in accordance with all applicable and relevant laws and regulations. In addition, if the project proposes to import soil to backfill the excavated areas, proper evaluation, and/or sampling should be conducted to make sure that the imported soil is free of contamination.

Response 2-F

Mitigation Measures HAZ-1 and HAZ- 2 on page 3.7-25 through 3.7-26 of the Draft PEIR properly address potential soil contamination. Soil contamination, if any, would be observed and analyzed during the Phase I ESA required under Mitigation Measure HAZ-1; and excavated soil would be sampled prior to export/disposal of the soil on the project site. All contaminated soil (if any) would be handled and disposed of properly in accordance with all applicable and relevant laws and regulations in place at the time of the activity.

Comment 2-G

7. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the EIR should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight.

If you have any questions regarding this letter, please contact me at (714) 484-5476 or email at Johnson.Abraham@dtsc.ca.gov

Response 2-G

Please refer to response 1-F, above. The procedures outlined under Comment 1-F would be implemented if contamination with hazardous materials is unexpectedly encountered during construction activities.

Letter 3: Metropolitan Water District of Southern California

Comment 3-A

The Metropolitan Water District of Southern California (Metropolitan) reviewed the public notice for the Draft PEIR for the Facilities Master Plans Project (Project). The Inland Empire Utilities Agency (IEUA) is acting as the Lead Agency under the California Environmental Quality Act (CEQA) for this project. The Project consists of upgrades to four wastewater treatment plants, conveyance systems and ancillary facilities, and groundwater recharge and extraction. The projects would be long-term and implemented over a series of years. The Project is located within the IEUA's service area which includes cities of Upland, Claremont, Montclair, Rancho Cucamonga, Rialto, Fontana, Pomona, Chino, Chino Hills, Ontario, and Corona, in San Bernardino County.

IEUA is a regional wastewater treatment agency and wholesale distributor of imported and recycled water, and is a Metropolitan member agency. Metropolitan acknowledges IEUA's efforts to enhance water supply reliability and flexibility by developing programs to increase storage,

and address sustainability and energy through its biosolids program and other resource-management plants. This Project involves upgrades to its wastewater treatment plants, biosolids handling facility, groundwater recharge basins; construct new wells and pump stations; and installation of up to 220,000 linear feet of pipeline.

Response 3-A

The comment reiterates the description of the Facilities Master Plans Program and does not include a specific comment on the Draft PEIR; therefore, no further response is necessary.

Comment 3-B

Metropolitan is concerned about new construction that could potentially impact our facilities and requests IEUA continue coordination efforts during the CEQA process and design phase of these facilities.

Response 3-B

Please refer to response 2-D.

Comment 3-C

Metropolitan previously responded to the Notice of Preparation for the Project, see attached comment letter dated August I, 2016. The NOP identified Metropolitan facilities located within the proposed Project area. The facilities include the Rialto, Etiwanda, Upper, Yorba Linda, and Lower feeders and associated facilities that support the feeders. We are concerned with potential impacts to these facilities associated with future excavation, construction, utilities or any development that may result from implementation of the proposed Project.

Any temporary construction activity within the limits of our rights-of-way will need to be reviewed and approved by Metropolitan prior to the start of construction. Development and redevelopment associated with the proposed Project must not restrict any of Metropolitan's day-to-day operations and/or access to its facilities.

Response 3-C

Please refer to response 2-D.

Comment 3-D

In order to avoid potential conflicts with Metropolitan's rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Approval of the Project where it could impact Metropolitan's property should be contingent on Metropolitan's approval of design plans for the Project. Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan’s Substructure Information Line at (213) 217-6564.

We appreciate the opportunity to provide input to your planning process and look forward to receiving future environmental documentation on the Project. If we can be of further assistance, please contact, Ms. Brenda Marines at (213) 217-7902.

Response 3-D

IEUA will coordinate with Metropolitan during the design and construction phases of future facility implementation that may impact Metropolitan facilities or right-of-way within the Program area: Rialto, Etiwanda, Upper, Yorba Linda, and Lower feeders and associated feeder facilities. Coordination of construction schedules and approval of proposed project designs with Metropolitan would ensure avoidance of potential conflicts with Metropolitan's rights-of-way, day-to-day operations, and access to Metropolitan facilities. This is not a comment on the content of the Draft PEIR; therefore, no further response is required.

Letter 4: City of Rancho Cucamonga

Comment 4-A

Thank you for the opportunity to review and comment on the Draft Program Environmental Impact Report (PEIR) for the Inland Empire Utilities Agency Draft Facilities Master Plans (FMP). The City of Rancho Cucamonga (the "City") appreciates the opportunity to comment on PEIR. The City is supportive of the Inland Empire Utilities Agency's (IEUA) key service areas of treating wastewater, developing recycled water, converting biosolids into compost and generating electrical energy from renewable resources to offset energy demand by IEUA facilities.

Response 4-A

The comment thanks IEUA for the opportunity to review and comment on the Draft PEIR. The comment does not include a specific comment on the Draft PEIR; therefore, no further response is necessary.

Comment 4-B

When reviewing documents that assess environmental impacts, one of the goals of the City is to protect its residents from potential nuisance and undesirable environmental impacts while achieving the highest quality built environment and preservation of natural resources. One of the challenges the City faces with evaluating the IEUA's PEIR is that the breadth of the document in attempting to globally include six FMPs potentially resulting in Incomplete disclosure and evaluation of the potential environmental impacts (both project and cumulative) to the City that could result from the implementation and construction from these FMPs. To that end, based upon a review of the proposed Draft PEIR, City staff offers the following comments, mitigation measures and modifications to the proposed PEIR:

1. General Comment: Expand the discussion of mitigations relating to aesthetics and noise to include the specific regulatory requirements that apply to lighting/glare and noise for each jurisdiction within the project area.

Response 4-B

As noted in the Draft EIR page 3.1-10 (Mitigation Measure AES-1), facility designs would be prepared to be consistent with the local surroundings and local jurisdiction preferences. Listing all of the various specific lighting and noise design requirements for all the jurisdictions within IEUA’s service area would establish mitigation that may be changed in the future by these

jurisdictions. The more general commitment to prepare facilities consistent with local jurisdiction preferences ensures that when such facilities are proposed in the future, the current lighting and noise design requirements will be properly implemented. Also, please note that under Section 53091 of the California Government Code (see page 3.9-8 of the Draft PEIR); IEUA is not subject to design review and approval from local jurisdictions. However, as noted in the Draft PEIR, IEUA is committed to ensuring facility designs are compatible with local land uses and character.

Comment 4-C

2. Air Quality: Add the following mitigation measures to Impact 3.3-2, AIR-1:

1) The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

2) Chemical soil-stabilizers (approved by SCAQMD and RWQCB) shall be applied to all inactive construction areas that remain inactive for 96 hours or more to reduce PM10 emissions.

Response 4-C

As noted on page 3.3-15 and 3.3-46 of the Draft PEIR, IEUA would be subject to SCAQMD's Rule 403 to control dust emissions from construction areas. Rule 403 includes the dust suppression measures suggested in the comment. However in the spirit of cooperation with local jurisdictions, IEUA will include these specific measures as mitigation to be included for future ground disturbing activities within its service area.

Comment 4-D

3. Noise: add the following mitigation measures to Impact 3.10-1, NOISE:

1) Prior to the issuance of any grading plans, a construction-related noise mitigation plan shall be submitted to the local jurisdiction for review and approval. The Plan shall depict the location of the construction equipment and how the noise from this equipment would be mitigated during construction.

2) When construction occurs within 150 feet of sensitive receptors, construction or grading shall not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday.

3) Construction or grading noise levels shall not exceed the standards specified in local jurisdictions noise standards, as measured at the property line of residential land uses. When construction or grading occurs within 150 feet of sensitive receptors, during earthwork and construction operations, the contractor shall hire a consultant to perform weekly noise level monitoring to ensure compliance with the levels specified in local jurisdictions standards. If noise levels are compliant, the consultant shall report their findings to the City Planner or Building Official within 2 days of taking the sound readings; however, if noise levels exceed the above standards, then the consultant shall

immediately notify the City Planner or Building Official. If noise levels exceed the above standards, then construction activities shall be reduced in intensity to a level of compliance with above noise standards, or noise levels are reduced to meet local jurisdictions standards through the use of mitigation measures, or activities are halted. If sound barriers are utilized, the adequacy of the sound barriers shall be verified by a professional consultant or engineer by noise level monitoring.

4) Prior to commencement of construction related to this project at a specific site, notify all residents/owners of property within 660 feet of the perimeter of the site of the scope and details of this project, the duration of the work, etc. a minimum of 30 days prior to the start of such activity.

Response 4-D

The comment outlines the local noise ordinance requirements required for projects within the City. The potential for noise to impact local sensitive receptors is evaluated in section 3.10 of the Draft PEIR. Mitigation Measures NOISE-1 through NOISE-6 have been included in the Draft PEIR to minimize noise impacts. The Draft PEIR identifies that each jurisdiction within the IEUA service area has adopted unique noise control ordinances. The Draft PEIR concludes that though IEUA will comply with each jurisdiction's noise ordinance whenever feasible, there may be certain conditions where compliance will not be possible, resulting in a significant and unavoidable temporary impact during construction. Thus, IEUA will implement the following:

- Mitigation Measure NOISE-1 will be implemented, but construction noise mitigation plans will be submitted to local jurisdictions for review and comment, not approval;

- Mitigation Measure NOISE-2 will be implemented as recommended;

- Mitigation Measure NOISE-3 may not be feasible to implement as noted in the preceding discussion, however where sensitive receptors are in close proximity to a project site (150 feet of sensitive receptors), IEUA will conduct monitoring, compare the results with local standards, and to the extent feasible shall implement available measures to minimize noise levels, including installation of more effective sound barriers or modifying construction activity schedules to reduce noise;

- Mitigation Measure NOISE-4, on page 3.10-29 of the Draft PEIR will be revised as follows:

NOISE-4: ~~Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight~~

~~between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible.~~

Prior to commencement of construction related to the FMP programs at a specific site that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to the start of such activity.

Comment 4-E

4. Traffic and Transportation: Add the following mitigation measures to Impact 3.14-1, TRAFFIC AND TRANSPORTATION:

1) Prior to construction, the IEUA shall require that contractors shall coordinate with local jurisdictions to submit and receive approval for the following: traffic management plans, haul routes, traffic control measures, lane closures, and oversize load permits.

Response 4-E

The Draft PEIR acknowledges on page 3.14-5 that IEUA would be required to coordinate with local jurisdictions to obtain encroachment permits for construction activities within City public rights-of-way. Mitigation Measure TT-1 on page 3.14-12 of the Draft PEIR requires IEUA to prepare traffic control plans that would be shared with local jurisdictions for review and comment. No additional mitigation is required.

Comment 4-F

5. Public Resources and Environmental Nuisance Impacts: Staff could not locate in the Draft PEIR document where potential nuisance impacts from vectors at recharge basins, such as midge flies or mosquitoes, were evaluated. Since the Recharge Master Plan Update (RMPU) contemplates increasing capacity and the infiltration rate at certain basins (e.g., removing settled deposits at the Victoria Basin) or the construction of new basins (Lower San Sevaine), it is possible that water could be stored at higher water elevations for longer periods. This scenario could necessitate spraying and draining of the basins to keep the vector populations under control (e.g., midge fly) in order to avoid a nuisance condition for residential land uses in the vicinity of a basin. The Draft PEIR should be revised to address potential impacts from vectors and environmentally based nuisances on public services, and include mitigation measures as necessary. The Draft PEIR should also consider basin design modifications as way to maximize percolation, thereby reducing the duration of standing water and potential nuisance impacts from vectors.

Response 4-F

IEUA routinely manages for vectors resulting from standing water in recharge basins in cooperation with the vector control agencies, including for mosquitos and midges. In response to

this comment, the following discussion, and mitigation measure has been added to section 3.9 Hazards and Hazardous Materials, pages 3.7-22 of the Draft PEIR:

> Project Category 3: Groundwater Recharge and Extraction
>
> Impacts would be the same as Project Category 2.
>
> Further, proposed recharge basins and expansions to existing recharge basins could create new standing pools of water. If algae growth develops or insects such as midges or mosquitoes use the water as a breeding area, standing pools of water could be considered a nuisance or a health threat to the surrounding community. Hatching midges can emerge in such tremendous numbers that they create nuisance problems. Midges often emerge simultaneously forming clouds of flying insects. IEUA would coordinate with the local vector control agencies as is currently the case, to ensure that insects do not become a nuisance or health hazard. Impacts would be potentially significant. The following mitigation measure shall be implemented to achieve adequate vector control with new or expanded recharge basins.
>
> *Project Category 3: Groundwater Recharge and Extraction*
>
> **HAZ 6**: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.

Comment 4-G

As noted above, the City shares the goal supporting the IEUA's key service areas. The City also appreciates the opportunity to review and comment on the Draft PEIR for the Facilities Master Plans. The City also requests to be notified of any modifications made to the proposed PEIR prior to review and certification by the IEUA Board, and that the IEUA send the City notice of any

subsequent CEQA notices that are proposed as a second tier action from the PEIR. Lastly, the City requests to be notified of any subsequent individual projects that are proposed from the implementation of any of the IEUA's six FMPs.

If you have any questions, please call me at (909) 477-2750 ext. 4308 or email at candyce.burnett@cityofrc.us

Response 4-G

The comment requests to be notified of any modifications made to the Draft PEIR or subsequent individual projects. IEUA commits to meeting this request for future notifications. This comment does not include a specific comment on the Draft PEIR; therefore, no further response is necessary.

Letter 5: Native American Heritage Commission

Comment 5-A

The Native American Heritage Commission (NAHC) has reviewed the Draft Environmental Impact Report prepared for the project references above. There review included the Project Description. Introduction, the Summary of Impacts and Mitigation Measures, and the Environmental Setting, Impacts, and Mitigation Measures in section 3.5, Cultural Resources prepared by ES Associates, Inc. for the Inland Empire Utilities Agency. We have the following concerns:

- There is no Tribal Cultural resources section or subsection in the Executive Summary as per California Natural Resources Agency (02016) “Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form,” http:///resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf

Response 5-A

The Draft PEIR describes IEUA’s outreach efforts to Native American Groups on page 3.5-10. An overview of the AB-52 process requirements is included on page 3.5-15.

Comment 5-B

- There are no mitigation measures specifically addressing Tribal Cultural Resources separately. Mitigation measures must take Tribal Cultural Resources into consideration as required under AB-52, with or without consultation occurring. Mitigation language for archeological resources is not always appropriate for or similar to measures specifically for handling Tribal Cultural Resources.

Response 5-B

The Draft EIR evaluated impacts to tribal resources and described the status of Native American consultations. No significant impacts were identified that required mitigation measures.

Comment 5-C

- Tribal Cultural Resources assessments are not documented. These should adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources prior to Tribal Consultation occurring.

Response 5-C

The Draft PEIR describes IEUA's outreach efforts to Native American Groups on page 3.5-10. The Draft PEIR acknowledged that the process was underway but was not complete. No Tribes requested consultation in response to IEUA's notification letters. No tribal cultural resources were identified. An overview of the AB-52 process requirements is included on page 3.5-15.

Comment 5-D

- Mitigation Measure CUL-1 states that the Inland Empire Utilities agency "shall retain a qualified archeologist….to conduct a study" of culture resources prior to groundbreaking. To adequately assess the impacts to Tribal Cultural Resources, these studies should have completed prior to consultation with the tribes and the (general) results of those studies should be included in this document.

Response 5-D

As a Program EIR, many projects are not well enough defined to have conducted site specific surveys. The Program EIR provides a process for future projects to identify and provide treatment of archaeological resources through the implementation of mitigation measures.

Comment 5-E

The California Environmental Quality Act (CEQA), specifically Public Resources Code Section 21084.1, states that the project that may cause a substantial adverse change in the significant of a historical resource is a project that may have a significant effect on the environment. If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

Response 5-E

The Draft PEIR describes potential impacts to historical resources on page 3.5-18. The Draft PEIR includes mitigation measures to minimize impacts to historical resources. The Draft PEIR concludes that impacts may be significant and unavoidable on page 3.5-19.

Comment 5-F

CEQA was amended in 2014 by Assembly Bill 52 (AB 52). AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015. AB 52 created a separate category for "tribal cultural resources:",

that now includes "a project with an effect that may cause a substantial adverse change in the significant of a tribal cultural resource is a project that may have a significant effect on the environment. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resources. Your project may also be subject to Senate Bill 18 (SB 18), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. Both SB 18 and AB 52 have tribal consultation requirements. Additionally, if your project is also subject to the federal National Environmental Policy Act (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 may also apply.

Response 5-F

The Draft PEIR describes IEUA's outreach efforts to Native American Groups on page 3.5-10. In accordance with AB 52, IEUA notified tribes who had requested notification of projects within the IEUA service area. None of the tribes requested such consultation. An overview of the AB-52 process requirements is included on page 3.5-15.

Comment 5-G

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the times frames provided in AB 52. For that reason, we urge you to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/. Additional information regarding AB 52 can be found online at: http: ///nahc.ca.gov/wpcontent/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB52: Requirements and Best Practices".

Response 5-G

The Draft PEIR describes IEUA's outreach efforts to Native American Groups on page 3.5-10. An overview of the AB-52 process requirements is included on page 3.5-15.

Comment 5-H

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Please contact me at gayle.totton@nahc.ca.gov or call (916) 373-3710 if you have any questions.

Response 5-H

The Draft PEIR describes IEUA's outreach efforts to Native American Groups on page 3.5-10. An overview of the AB-52 process requirements is included on page 3.5-15.

Letter 6: City of Ontario

Comment 6-A

Thank you for giving the City of Ontario the opportunity to review and comment on the above referenced project. After reviewing the DPEIR for the Facilities Master Plans, the City requests that the following comments be addressed in the DPEIR:

1. The existing operation of RP-1 regularly results in significant objectionable odors affecting the surrounding area. Effects from upgrades and operations at RP-I should not utilize existing conditions as a baseline for less than significant impact. Rather, Mitigation Measures should aim to rectify existing conditions and result in vastly improved air quality and odor control systems.

Response 6-A

The Draft PEIR identifies an Odor Impact Minimization Plan (OIMP) to be implemented, as required by Mitigation Measure AIR-4 on page 3.3-48. IEUA is currently implementing specific projects and an overall program to control periodic odors at RP-1. Further, implementation of an OIMP would provide operational protocols covering the implementation of the odor control system, including during varied meteorological conditions. The OIMP would include complaint response protocol, operating procedures, and an odor monitoring program. A complaint response protocol would be implemented to receive complaints, investigate the source, and implement changes to minimize the odors. No further mitigation is deemed required to address this concern.

Comment 6-B

2. Projects proposed by IEUA in the FMP may overlap with projects or facilities planned by member agencies in its service area. During site-specific project evaluations, IEUA should coordinate with member agencies to determine if joint facilities can further minimize environmental impacts to the region from construction as well as long-term impacts from ongoing operations and maintenance.

Response 6-B

IEUA already coordinates new projects with member agencies during the design and construction phases of future facility implementation that may impact member agencies' facilities within the Program area. Such coordination will continue into the future. Coordination of construction schedules and design of joint facilities, where feasible, may minimize local environmental impacts. This is not a comment on the content of the Draft PEIR; therefore, no further response is required.

Comment 6-C

3. The DPEIR indicates that IEUA's Orange County Judgment joint obligation with WMWD to provide a minimum discharge to the Santa Ana River is to be met with reclaimed effluent from

IEUA's sewage treatment and reclamation plants. If sufficient supplies of reclaimed effluent are not available to meet this obligation, IEUA must provide alternative sources. The DPEIR should identify alternative sources and Mitigation Measure(s) should be established for those sources and their environmental impacts.

Response 6-C

The Draft PEIR notes on pages 3.8-3 and 3.8-4 that IEUA discharges contribute to surface water reaching Prado Dam. The Orange County Judgement is noted on page 3.8-2 of the Draft PEIR. Implementation of the FMPs would not alter IEUA's commitments under the Judgement. This commitment has been fulfilled to date, and IEUA would manage its available discharges to continue to meet this obligation. Specific methods of meeting this obligation should not be pre-defined, but should be implemented based on the best judgment of the Agency, in consultation with the Chino Basin Watermaster and stakeholders.

Comment 6-D

4. The DPEIR should evaluate and recommend any Mitigation Measures necessary to ensure water supply service reliability to direct use recycled water customers with expanded groundwater recharge and continued discharge of recycled water to the Santa Ana River.

Response 6-D

The Recycled Water Program Strategy identifies existing and future demands for recycled water as part of the actual Plan objectives. As noted on page 3.8-10 of the Draft PEIR, existing recycled water demands will continue to be a major component of the future water demands. The Plan itself constitutes "mitigation" since it identifies how IEUA can maintain and increase ongoing and future availability of recycled water to all users within the Chino Basin. Thus, no mitigation is necessary to support future recycled water management within the Basin. IEUA is committed to maintaining delivery commitments while increasing recycled water production for other uses including groundwater recharge.

Comment 6-E

5. Mitigation Measures related to hydrologic impacts on the region should also consider the effects that the projects may have on groundwater levels and yield (particularly the Safe Yield of the Chino Basin), groundwater quality, groundwater storage, ground subsidence, and Chino Basin groundwater management and hydraulic control (particularly under Chino Basin Watermaster's Optimum Basin Management Plan).

Response 6-E

All of the Facility Master Plans (FMPs) have been prepared with the objective of providing adequate wastewater management capacity to meet the objectives of the Optimum Basin Management Program (OBMP) as embodied in the Peace I and Peace II programs. This includes supporting the objectives mentioned in this comment, such as safe yield; groundwater quality; and hydraulic control. As indicated in response to comment 4-D, the FMPs themselves serve as the mitigation by anticipating future recycled water volumes required to support safe yield,

groundwater quality and hydraulic control. Additional mitigation is not required because the FMPs will be implemented consistent the broad goals of the OBMP and Peace I and Peace II programs through IEUA's participate in regional programs established by the Chino Basin Watermaster and the Basin stakeholders.

Comment 6-F

6. IEUA should take into consideration existing and proposed utilities in the public right of way when planning and designing any sewer or recycled water facilities. If the proposed IEUA facility cannot be accommodated within the existing public right of way, IEUA will need to acquire additional right of way or consider an alternate alignment.

Response 6-F

The Draft PEIR notes on pages 3.15-7 and 3.15-8 that underground utilities and infrastructure should be protected during construction of facilities within public rights-of-way. IEUA recognizes that installation of underground pipelines will require detailed utility search and designs to minimize disruption during installation, as required by the California Government Code Section 4216-4216.9. Also, refer to response to comment 4-B which requests coordination with local agencies as future site specific projects are implemented within individual jurisdictions of IEUA's service area. Such coordination prior to implementing projects in local jurisdictions, such as the City of Ontario, can and will allow alternative designs to be considered to meet both specific IEUA infrastructure requirements and local jurisdiction constraints.

Comment 6-G

7. On-site upgrades/improvements to IEUA facilities, i.e. treatment plants, may be subject to Development Impact Fees (DIF). Determination of DIF subjectivity will be made during development plan review by the City.

Response 6-G

As mentioned on page 3.9-8 of the Draft PEIR, pursuant to California Government Code Section 53091, essential facilities for water utilities are not subject to local land use approvals. IEUA is committed to developing projects in coordination with local cities to maintain compatibility with local land use policies, including opportunities to provide review and comment on such facilities in local jurisdictions and complying with applicable statures covering water and wastewater utilities. However, IEUA does not expect future public facilities to be subjected to Development Impact Fees within any jurisdiction.

Comment 6-H

8. On page 3.8-13 under the heading "Municipal Stormwater Permitting (MS4)" in the 2nd paragraph, the 3rd sentence shall be revised as follows: "The permit requires the development of a site-specific Water Quality Management Plan (WQMP) for certain types of development, including new industrial development projects that create 10,000 square feet or more of impervious surface collectively over the project site or which add or replace 5,000 square feet of impervious surface on an existing developed site."

We appreciate being informed of the project and look forward to continued communications regarding this project. If you have any questions regarding our comments, please contact me at (909) 395-2419 or Richard Ayala, Senior Planner, at (909) 395-2421.

Response 6-H

IEUA appreciates the clarification provided in this comment. In response to the comment, page 3.8-13 of the Draft PEIR has been modified as follows:

> The permit requires the development of a site-specific water quality management plan (WQMP) for certain types of development, including new industrial development projects that create 10,000 square feet or more of impervious surface collectively over the project site or which add or replace 5,000 square feet of impervious surface on an existing developed site. This WQMP should be based on the model WQMP Guidance and Template, and must include site design (including, where feasible, Low Impact Development (LID) principles), source control and treatment control elements to reduce the discharge of pollutants into urban runoff.

Letter 7: Chino Basin Watermaster

Comment 7-A

Chino Basin Watermaster (Watermaster) appreciates the opportunity to provide comments on the Inland Empire Utilities Agency (IEUA) Facilities Master Plan Draft Program Environmental Impact Report (Draft PEIR) under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.; Cal. Code Regs., tit. 14, § 15000 et seq. (CEQA Guidelines).) Watermaster recognizes and appreciates the continuing working relationship it shares with IEUA and offers the below comments as points of clarification on the Draft PEIR's analysis of the proposed program that encompasses IEUA's Asset Management Plan (FY 2015/2016), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013) (RMPU), Wastewater Facilities Master Plan Update Report (2015), Integrated Water Resources Plan (2015), and Energy Management Plan (2015).

Watermaster's role is to oversee implementation of the San Bernardino County Superior Court's 1978 Judgment, which adjudicated the groundwater rights to the Chino Groundwater Basin (Basin). One of the key features of the 1978 Judgment is that the court retains continuing jurisdiction to ensure that the water resources of the Basin—including its storage space—are utilized in a manner consistent with Article X, Section 2 of the California Constitution. In that regard, Watermaster wishes initially to correct certain inaccuracies in the Draft PEIR regarding Watermaster and the 1978 Judgment. Watermaster wishes to clarify that pumping rights within the Chino Basin are assigned by the 1978 Judgment itself, and that Watermaster administers the Judgment. (See, e.g., Draft PEIR at 3-8.4.) The Safe Yield of the Basin limits pumping allocation for all production rights – including those considered to be appropriative in nature – not just overlying rights. (Id.) Watermaster administers the 1978 Judgment and the OBMP Implementation Plan, consistent with both the Peace Agreement and the Peace II Agreement, pursuant to Court order.

Response 7-A

The comment states that the CBWM appreciates the opportunity to provide comments on the Draft PEIR and discusses the CBWM's role in the 1978 Judgement. This is not a comment on the content of the Draft PEIR; therefore, no further response is required.

Comment 7-B

One of the central tasks given to Watermaster under the 1978 Judgment is the development of a physical solution for the Basin. This physical solution takes the form of a comprehensive and integrated groundwater management plan called the Optimum Basin Management Program (OBMP). As part of the OBMP, Watermaster operates a comprehensive recharge program to maintain the health of the Basin. Watermaster additionally is responsible for the oversight and management of the Basin's storage space. As part of these tasks, pursuant to the Peace II Agreement, Watermaster and IEUA are collectively required to update the Recharge Master Plan every five years, 1 which includes ensuring sufficient recharge capacity within the Basin to allow for replenishment of production beyond the Basin's Safe Yield, as well as recharge projects that will protect and enhance the Basin's Safe Yield. (See Draft PEIR at 3-8.4.) It is in its role of implementing the 1978 Judgment and maximizing the beneficial use of the Basin's resources, that Watermaster provides these comments.

Because the Draft PEIR contemplates six facility plans and IEUA operates an existing network of groundwater recharge facilities in partnership with Watermaster and others, these comments are offered to assist in the Draft PEIR's disclosure requirements under CEQA. Watermaster first wishes to clarify that Watermaster is not a responsible agency under the California Environmental Quality Act (CEQA), and therefore references to Watermaster as a "potential responsible agenc[y]" should be amended in the Final PEIR. (See, e.g., Draft PEIR at 2-48.) Under CEQA, a "responsible agency" is defined as "a public agency which proposes to carry out or approve a project" analyzed in an EIR or negative declaration by the lead agency. (CEQA Guidelines § 15381.) In turn, "public agency" is defined to include "any state agency, board, or commission and any local or regional agency … It does not include the courts of the state." (CEQA Guidelines § 15379.) Therefore, as an arm of the San Bernardino County Superior Court, Watermaster is not properly considered a responsible agency under CEQA.

Response 7-B

IEUA appreciates these comments on the role of the Watermaster with respect to CEQA approval requirements. In response to this comment, page 2-48 of the Draft PEIR has been modified as follows:

> The Inland Empire Utilities Agency Board of Directors must approve and certify the PEIR before any of the proposed development will be allowed to proceed and cause the corresponding changes to the environment. This PEIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the Inland Empire Utilities Agency, and subsequently by the Watermaster and any constituent agencies should they decide to adopt the six management plans. Responsible agencies for this PEIR may include:

- ~~Chino Basin Watermaster~~
- Chino Basin Water Conservation District
- San Bernardino County Flood Control District

Comment 7-C

Second, Watermaster notes that before implementing the proposed CSI Storm Water Basin Project (2013 RMPU Project ID 18a discussed at pages 2-35 to 2-36 of the Draft PEIR) and IEUA's suggested dry weather flow projects (Draft PEIR at pages 2-28 to 2-29), Water Code section 1701 requires a petition to the State Water Resources Control Board (SWRCB) to add points of diversion to Watermaster's diversion permit(s). The Draft PEIR should identify that the right to divert the dry-weather discharge addressed on pages 2-28 to 2-29 is held by the Watermaster—IEUA does not have permission from the SWRCB to divert surface water.

Response 7-C

IEUA appreciates the clarifications provided in the comments. In response to the comment, page 2-28 of the Draft PEIR has been modified as follows:

> Water Code section 1701 requires a petition to the State Water Resources Control Board (SWRCB) to add points of diversion. The right to divert dry-weather discharge within the Chino Basin is held by the Chino Basin Watermaster; therefore, the Chino Basin Watermaster will be required to amend their diversion permit from the SWRCB before IEUA can implement the proposed diversion project.

Comment 7-D

Finally, Watermaster, together with its expert consultants, Wildermuth Environmental, Inc. (WEI), offers the following technical comments on the Draft PEIR:

- Page 2-35, Section 2.5.8, second paragraph, line 5:
    - Insert the word "production" or "pumping" after the word "groundwater."

Response 7-D

Comment noted. In response to the comment, page 2-36 of the Draft PEIR has been modified as follows:

> In order to estimate the water demands and establish other water supply plans, Wildermuth Environmental, Inc. (WEI) collected available Urban Water Master Plans from the Chino Basin Parties for the 2013 Amendment to the 2010 RMPU. WEI found that the total water demand is projected to increase from about 309,000 AFY in 2010 to about 417,000 AFY by 2035, while Chino Basin groundwater production is projected to decrease from about 162,000 AFY in 2010 to about 159,000 AFY by 2020 but will gradually increase to 191,000 AFY in 2035. This gradual increase would occur due to a projected recycled water increase from about 14,000 AFY in 2010 to about 41,000 AFY

in 2035; cumulatively, these findings indicate that the GW production projections for 2012 are substantially less than assumed in the 2010 RMPU.

Comment 7-E

- Page 2-35, Section 2.5.8, generally, last paragraph and Table 2-13:
    - References to the 2013 RMPU Amendment should be made consistent throughout the document, and Table 2-13 should be updated to provide the most current information on stormwater recharge estimates, cost, and project descriptions.

Response 7-E

Comment noted. In response to the comment, pages: 2-9, 2-36, 2-37, 2-41, and 2-43 of the Draft PEIR have been modified as follows:

Page 2-9:

The 2013 ~~Amendment to the 2010~~ RMPU projects groundwater elevation through data collected in 2010, through the planning year 2030 in order to anticipate what projects will be necessary to maintain a sustainable system.

Page 2-36:

2.5.8 2013 ~~Amendment to the 2010~~ Recharge Master Plan Update

The IEUA and Watermaster prepared the 2013 RMPU~~2010 Recharge Master Plan Update and amended it in 2013~~. The 2013 RMPU was ~~2010 Recharge Master Plan Update and its 2013 amendment were~~ developed in a public, transparent process, including ~~2010 Recharge Master Plan Update~~ 67 steering committee meetings and workshops. The steering committee meetings were open to all stakeholders with an interest in storm water and dry-weather runoff management and groundwater management in the Chino Basin. The IEUA and Watermaster Boards of directors approved the 2013 RMPU, and it was submitted to the Court in the fall of 2013 for review and approval. The Court approved the 2013 RMPU in 2014 and directed the IEUA and Watermaster to implement it.

In order to estimate the water demands and establish other water supply plans, Wildermuth Environmental, Inc. (WEI) collected available Urban Water Master Plans from the Chino Basin Parties for the 2013 ~~Amendment to the 2010~~ RMPU. WEI found that the total water demand is projected to increase from about 309,000 AFY in 2010 to about 417,000 AFY by 2035, while Chino Basin groundwater production is projected to decrease from about 162,000 AFY in 2010 to about 159,000 AFY by 2020 but will gradually increase to 191,000 AFY in 2035.

Page 2-37:

TABLE 2-13
KEY PROJECT IMPROVEMENTS

Project ID	Basin Projects	Key Project Improvements	Additional Yield (acre-feet per year) SW	RW
18a	CSI Storm Water Basin	New storage and recharge facility by deepening/removing 36,000 CY	100	-
23a	Wineville, Jurupa, and RP3	Improve storage and recharge capacity with pumps/conveyance systems between basins and provide new diversion structures	2,921	2,905
27	Declez Basin	Improve capacity by modifying existing/adding new structures	507	-
11	Victoria Basin	Improve the infiltration rate and increase storage by removing settled deposits	75	120
14	Turner Basin	Increase storage and recharge by raising the spillway height	23	-
15a	Ely Basin	Improve storage and recharge by removing 470,000 CY	101	-
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	233	-
Total			**3,960**	**3,025**

Page 2-41:

> Pipelines
>
> Up to 220,000 LF of pipeline may be installed in support of the Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU).

Page 2-43:

> The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU) propose to construct one new booster pump station for the 1158-1299 pressure zones.

Comment 7-F

- Page 2-37, Section 2.5.11:
    - The sewering of improved properties that overlie the IEUA service area will increase the recycled water available for reuse but will also reduce groundwater recharge and therefore the yield of the underlying groundwater basins. This decreased yield will impact not only the yield of the underlying groundwater basins, but also the groundwater users dependent on the basins. The Draft PEIR should be revised to identify these impacts.

Response 7-F

The information on page 2-37, Section 2.5.11 was based on the following concept: Sewering captures all of the wastewater currently discharged to subsurface wastewater disposal systems; between a septic tank discharge point and the groundwater table most publications assume at least a 50% loss of the wastewater due to evapotranspiration and saturation in the vadose zone before reaching the groundwater table, especially where the groundwater table is deep; thus, capture of wastewater in sewers should result in a larger amount of available recycled water being available for recharge to the underlying groundwater basins than currently may reach the water table from individual subsurface systems, located primarily in the City of Fontana. However, this comment appears to be correct in the sense that recharge of the underlying groundwater in the sewered area(s) could be reduced. The solution to this change appears to require monitoring of groundwater levels in the affected area and if loss of replenishment is measures, some of the reclaimed wastewater (recycled water) may need to be recharged in the affected area. Given the Watermaster's current groundwater monitoring program, this information could, if necessary, be used to adjust recharge locations. Note that the Chino Basin as a whole should benefit from sewering and capture and reuse of the increased volume of available recycled water from the unsewered areas of the project area.

Comment 7-G

- Pages 3.7-3 and 3.7-4, Section "Hazardous Materials in Soil and Groundwater":
    - Watermaster maintains a comprehensive relational database that includes water quality data and produces a biennial State of the Basin Report that summarizes the water quality in the Basin. The 2014 report is available on Watermaster's website, and the 2016 report is presently in progress. Watermaster suggests that these resources should be consulted and cited in the Draft PEIR, as updated, as appropriate.

Response 7-G

The comment is noted. In response to this comment, the following modifications have been made to page 3.7-3 and 3.7-36 of the Draft PEIR.

Page 3.7-3:

> Further, The Chino Basin Watermaster maintains a comprehensive database that includes water quality data and produces State of the Basin Reports that summarize the most current water quality in the Chino Basin. The 2014 State of the Basin Report was consulted in order to assess potential contamination of groundwater within the IEUA service area (Chino Basin Watermaster, 2014).

Page 3.7-36

> California Integrated Waste Management Board (CIWMB). 2002. Household Universal Waste Generation in California. Available at: www.calrecycle.ca.gov/Publications/HHW/52002004.pdf. Accessed on April 22, 2016.

Chino Basin Watermaster, 2014. OBMP State of the Basin Reports. Available at: www.cbwm.org/rep_engineering.htm. Accessed on February 9, 2017.

Comment 7-H

- Sections starting on pages 3.7-17, 3.7-19, and 3.7-24 regarding impact analysis for "Routine Use", "Accident" and "Hazardous Materials Site Listing" conditions:

    - Hazardous materials discharged to storm drains can flow into recharge basins and subsequently degrade groundwater. This impact should be addressed and analyzed in the Draft PEIR. If found to be significant, mitigation measures should be developed and analyzed.

Response 7-H

The Draft PEIR notes on page 3.7-20 that stormwater can include contaminants. This is a potential indirect impact to the recharge basins that would typically be managed at the location of the spill. However, if hazardous contaminants reach (flow into) recharge basins, it would be necessary to control and remediate such contamination if it poses a substantial degradation of water quality or other direct hazard (such as causing mortality to wildlife). In cooperation with the Chino Basin Watermaster, the owners of the basins and stakeholders and the Santa Ana Regional Board, IEUA will develop a general contingency plan to respond and address this type of accidental hazard situation. This will include identifying current resources available to respond to such contamination and an evaluation of whether additional resources are needed to provide an adequate response to such a situation.

Comment 7-I

- Finally, and more generally, the Draft PEIR should address that all groundwater recharge has the potential to create hydraulic conditions that can change the direction and speed of contaminant plume movement. On behalf of Watermaster, WEI has recently completed an assessment of the recharge impact on plume movement as part of the Material Physical Injury analysis for the 2013 RMPU. This assessment is presently scheduled to be published in the next month

Response 7-I

The current recharge programs have been vetted through the Peace I and Peace II Program EIRs and found to not create a potential to change the direction and speed of contaminant plume movements. As long as the recharge programs remain consistent with these forecasts, it is assumed that no change in plume movement will result. However, as the recharge program approaches the maximum recharge volumes previously evaluated, it will be necessary to conduct additional modeling assessment of the effect on the plumes. IEUA will coordinate with Watermaster to initiate modeling of potential plume movement in a timely manner prior to expanding recharge activities beyond that already authorized.

Letter 8: San Bernardino County, Department of Public Works

Comment 8-A

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project which was received on December 20, 2016. Though we appreciate the complexity and scope of this project which consists of over 500 individual projects and covers six different facility plans, we are concerned the document as a whole lacks the specificity required to accurately determine the validity of the documents conclusions and the impacts these projects may or may not have on District facilities and resources. Pursuant to our review, the following comments are provided:

Response 8-A

The comment expresses concern that the document as a whole lacks specificity due to the complexity of the Program. This is not a specific comment on the content of the Draft PEIR; therefore, no further response is required.

Comment 8-B

General Comment:

The project is subject to the following San Bernardino County Flood Control District's (District) Comprehensive Storm Drain Plan Nos. 1&2, and Rancho Cucamonga CSDP. Also, the following Master Plan of Drainages: South Fontana MPD, Fontana MPD, Ontario MPD, Chino MPD, Chino Hills MPD, Chino Area 2 MPD, Montclair MPD, West Cucamonga MPD, Upland MPD, and Chino Airport MPD. If you have any questions, please contact Michael Fam in the District Flood Control Planning Division at 909-387-8120.

Response 8-B

The Draft PEIR notes on page 3.8-10 that each watershed within the IEUA service area includes flood control channels maintained by the County. Projects that could affect these facilities would require coordination and potentially encroachment permits from the County.

Comment 8-C

Permits/Operations Support Division (Melissa Walker, Chief, 909-387-7995):

Since the proposed project takes place on District facilities, any work affecting the District's right-of- way would need a Flood Control Permit. The necessity and any impacts associated with the construction within District facilities should be analyzed in the Final EIR.

Response 8-C

Please refer to response 6-B, above.

Comment 8-D

Environmental Management Division (Patrick Egle, Planner Ill, 909-387-8109):

1. Page 2-28 of the DEIR discusses the diversion of dry weather flows from five locations where District channels cross IEUA sewage collection lines. However, the document does not address impacts due to the loss of those dry weather flows to downstream habitats. The document defers the cumulative impacts to SAWPA and the development of an HCP in the future.

For example, downstream of Cucamonga Channel at Hellman is a large patch of riparian vegetation, which is occupied by least Bell's vireo, a state, and federally endangered species. The document states this riparian habitat is supported by surface runoff contributed by these creeks, but then states groundwater, which is managed by a separate entity, would continue to support this habitat once the surface flows are removed. The document states "Although some riparian habitat could be modified where the channel concrete lining ends and the water enters the greater Prado Basin, the overall effect to the forest would be minimal" (Page 3.4-20) . This "modification" would result in the loss or take of endangered species habitat which is not addressed nor mitigated for. We recommend the Final EIR should analyze and address the impacts due to the loss of dry weather flows to downstream habitats and at minimum establish an outline of what will be addressed in the HCP.

Response 8-D

Impacts to riparian habitats resulting from dry-weather diversions are discussed on page 3.4-20 of the Draft PEIR. The Draft PEIR notes on page 3.4-20 that dry weather diversions could result in a reduction of riparian habitats in certain locations, but that the overall contribution of dry weather flows to the Prado Basin riparian forest was a small percentage of the flows that reach Prado Dam. The Draft PEIR includes Mitigation Measure BIO-5 that requires compensation for impacts to riparian habitats. If a project reduces riparian habitat, such as through diversion of dry weather flows, the habitat would be replaced at a minimum ratio of 2:1. Prior to implementation of dry weather diversions, IEUA would be required to assess specific potential downstream impacts in order to comply with the diversion permit needed from the SWRCB and as part of the subsequent environmental review for specific proposed diversions.

Comment 8-E

2. Section 3.4-20 of the DEIR states "The existing channels provide little to no habitat value since they are concrete-lined channels". The District disagrees with this statement. District ecologists routinely survey the concrete lined channels within the proposed project areas as part of the District's required ongoing maintenance activities and have found a variety of wildlife uses occurring within these concrete-lined channels such as bat roosting/foraging habitat, and avian foraging/nesting habitat. Nesting by a variety of swallows, swifts, black phoebe and Say's phoebe, killdeer, and black-necked stilts have also been observed within the concrete channels. Additionally, burrowing owl, a California state species of special concern, has been documented nesting and foraging within Cucamonga Creek and Lower Deer Creek concrete channels. The diversion of the dry weather flows would result in impact to roosting, nesting, and foraging habitat to many species. The Final EIR should analyze and address the potential loss of dry weather flows to these instream habitats. This analysis should include potential impacts and mitigation measures necessary to reduce these potential impacts to a less than significant level.

Please note: If a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

Response 8-E

The comment notes that numerous birds and bat species utilize the concrete channel for nesting and foraging. The comment is noted. The Draft PEIR on pages 3.4-4 through 3.4-15 identifies common and sensitive wildlife that exist within the IEUA service area, utilizing the available urban, suburban, and open space habitats available to them. Urban runoff can provide some level of foraging value for common and sensitive wildlife existing in the region, but the concrete lined channels provide a very marginal habitat value, particularly since emerging habitat is routinely removed. Eliminating surface water flows in the concrete channels would not directly reduce nesting opportunities for birds. Although wading and foraging opportunities for birds may be reduced in the concrete channels due to dry weather diversions, equal or better habitat will be created by diverting the water into recharge ponds. Prior to implementation of dry weather diversions, IEUA would be required to assess potential downstream impacts in order to comply with the diversion permit needed from the SWRCB. Similarly based on this comment, future site specific projects envisioned within concrete channels will now receive appropriate biological resource surveys, including evaluation of the potential species of concern listed in this comment. Where damage to significant biological resources in a channel may occur mitigation can be implemented (nesting birds and burrowing owl, Measures BIO-1, BIO-2 and BIO-3). Elimination of water in concrete channels is not considered to be a significant impact to wildlife habitat. The comment does not identify a new environmental impact or provide new information on the severity of an impact that would require recirculation of the Draft PEIR

Comment 8-F

3. Section 3.4.3 of the DEIR, Impacts and Mitigation Measures, discusses Mitigation Measures proposed for the project, however, the Master Plan DEIR does not identify these impacts specifically. For example, on page 3.3-17, the DEIR states, "Approximately 220,000 linear feet of pipeline installation are proposed in the overall program." The DEIR does not identify specific environmental impacts resulting from more than 40 miles of construction related pipeline disturbance.

Please note if a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

Response 8-F

The Draft PEIR complies with Section 15168 of the CEQA Guidelines which provides for the analysis of a series of actions that can be characterized as one large project. The Draft PEIR identifies typical construction methods and impacts associated with installing pipeline within City Streets. Impacts associated with these construction methods are analyzed throughout the Draft PEIR as Project Category 2. The Draft PEIR provides information sufficient to estimate construction and operational impacts of the proposed pipelines, though the specific alignments

are not yet developed. For example, the specific air emission from daily installation of pipelines is defined in the Draft PEIR. As specific project alignments are developed, IEUA will consider the adequacy of the analysis for future CEQA compliance documentation. The comment does not identify a new environmental impact or provide new information on the severity of an impact that would require recirculation of the Draft PEIR.

Comment 8-G

4. Additionally, the DEIR lacks a potential schedule and/or maps and figures in sufficient detail to adequately analyze the project related impacts associated with this pipeline. It also fails to discuss specific environs that will be potentially affected. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the future, at minimum the FEIR should identify the procedures that will be undertaken to protect the impacted environs/species and minimize impacts.

Please note if a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

Response 8-G

The Draft PEIR considers the entire IEUA service area as the existing setting, identifying land uses within the service area in section 3.9, Land Use, and habitat types on Figure 3.4-1 through 2.4-2. The Draft PEIR provides information sufficient to estimate construction and operational impacts of the proposed pipelines, though the specific alignments are not yet developed. As specific project alignments are developed, IEUA will consider the adequacy of the analysis for future CEQA compliance documentation. The Draft PEIR identifies mitigation measures that would be required for each project to ensure impacts are minimized or avoided for the environmental topic areas covered under the CEQA Guidelines. The comment does not identify a new environmental impact or provide new information on the severity of an impact that would require recirculation of the Draft PEIR.

Comment 8-H

5. Figure 3.4-1 of the DEIR does not include the Riversidean alluvial fan sage scrub that is located within the proposed Lower San Sevaine Basin/San Sevaine Basin #5 project area. This figure should be updated for the Final EIR and any impacts to this environment fully discussed there within.

Response 8-H

The Draft PEIR identifies on page 3.4-20 that Riversidean Alluvial Fan Sage Scrub exists within the service area and that it could be affected by proposed projects including construction of new recharge basins. The Draft PEIR concludes on page 3.4-21 that construction of Category 3 projects including recharge basins could impact sensitive habitats including Riversidean Alluvial Fan Sage Scrub. Mitigation Measures BIO-1 through BIO-4 would be required prior to

implementing a recharge project. These mitigation measures require that field surveys are conducted near to the time of the project implementation to identify potential habitat impacts. Mitigation Measure BIO-3 requires that sensitive habitat be compensated at a minimum ratio of 0.5:1 or higher if required by permitting agencies.

Comment 8-I

6. Page 4-6 of the DEIR discusses San Sevaine Basin #5 and proposes construction of internal berms within basin #5 that would enable a larger portion of the basin floor to be wet, therefore increasing storm water capture and recharge. The DEIR fails to analyze the following items based upon this statement:

- San Sevaine Basin #5 has a large stockpile and has been identified as a continuing stockpile in the upper part of the basin. This would inhibit the use of this material and the ability to place new material during wetted periods.

- San Sevaine Basin #5 was revegetated with Riversidean alluvial fan sage scrub and Coastal sage scrub vegetation communities as part of the mitigation measure for the construction of those facilities. The increase in the wetted areas has the potential to eliminate these natural communities.

- San Sevaine Basin #5 has experienced an invasion of yellow star thistle (Centaurea solstitialis). The District is currently managing and working towards eradicating this population, however, water spreading within this basin has the potential to spread this species to other downstream facilities. The spread of seed is also possible by the movement of equipment from and to this basin.

The FEIR should fully analyze and discuss potential project related impacts to these environs and disclose any mitigation necessary to reduce potential impacts to a less than significant level. Should a new significant environmental impact result from the analysis, or new mitigation measure proposed, the DEIR should be recirculated to allow adequate review in accordance with CEQA Guidelines Section 15088.5.

Response 8-I

The Draft PEIR recognizes that construction of recharge basins or enhancement of existing recharge basins may affect existing habitat types and flood control values. The Draft PEIR acknowledges on page 3.4-22 that use of flood control facilities will require coordination and approval from the County. Furthermore, the Draft PEIR identifies on page 3.4-20 that Riversidean Alluvial Fan Sage Scrub exists within the service area and that it could be affected by proposed projects including construction or enhancement of recharge basins. The Draft PEIR concludes on page 3.4-21 that construction of Category 3 projects including recharge basins could impact sensitive habitats including Riversidean Alluvial Fan Sage Scrub. Mitigation Measures BIO-1 through BIO-4 would be required prior to implementing a recharge project. These mitigation measures require that field surveys are conducted near to the time of the project implementation to identify potential habitat impacts. Mitigation Measure BIO-3 requires that sensitive habitat be compensated at a minimum ratio of 0.5:1 or higher if required by permitting

agencies. With respect to the yellow star thistle management actions identified in the comment, IEUA recognizes the challenges faced by the County in managing invasive species within County-managed flood control channels. Expanded use of the recharge basins would not increase the potential for invasive species to spread downstream, since the basins would be designed to capture water that otherwise would flow to Prado Basin. The Draft PEIR notes on page 2-49 that IEUA would require approval from the County when implementing projects in flood control channels.

Comment 8-J

7. Page 4-7 of the DIER discusses Wineville Basin. Wineville Basin has a large invasion of yellow star thistle (Centaurea so/stitia/is). The District is currently managing and working towards eradicating this population, however, water spreading within this basin has the potential to spread this species to other downstream facilities. The spread of seed is also possible by the movement of equipment to and from this basin. These potential impacts should be analyzed and discussed in the Final EIR.

Response 8-J

The proposed project would not increase the spread of invasive species. The Draft PEIR notes on page 3.4-22 that IEUA supports invasive removal efforts within the service area. Mitigation Measure BIO-5 requires that any project that could impact waters of the US would be required to compensate for the effects that could include invasive species removal. IEUA recognizes the challenges faced by the County in managing invasive species within County-managed flood control channels. Expanded use of the recharge basins would not increase the potential for invasive species to spread downstream, since the basins would be designed to capture water that otherwise would flow to Prado Basin. The Draft PEIR notes on page 2-49 that IEUA would require approval from the County when implementing projects in flood control channels. For construction in areas where invasive species may be spread, IEUA would work cooperatively with the County to employ methods that meet County guidelines to control the spread of existing invasive species and limit the introduction of new invasive species.

Comment 8-K

8. Impacts to burrowing owl are not adequately addressed within the DEIR. Several of the activities (projects) described within the DEIR which have potential to impact the burrowing owl include pipeline installation, diversion of dry weather flows, construction of new facilities and maintenance activities. It is not clear how IEUA will proceed and avoid, minimize, and mitigate for impacts to burrowing owl. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the future, at minimum, the FEIR should identify the procedures that will be undertaken to protect the species and minimize impacts.

Response 8-K

IEUA routinely surveys for burrowing owls prior to routine basin maintenance activities. The Draft PEIR notes on page 3.4-21 that sensitive species could be impacted during construction

activities, including nesting birds. The Biology Technical Report in Appendix D identifies that burrowing owls are present in the IEUA service area. Mitigation Measure BIO-3 provides for focused nesting surveys to avoid impacts to nesting birds. In response to the comment, Mitigation Measure BIO-3 has been expanded to ensure these pre-construction surveys include focused borrowing owl surveys (page 3.4-23 of the Draft PEIR):

> **Mitigation Measure BIO-3a**: Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

Comment 8-L

9. The property in which the Lower San Sevaine Basin is being proposed is District fee owned property. Additionally, this property is under the authority of the County of San Bernardino Department of Public Health, Division of Environmental Health Services, Local Enforcement Agency (LEA) and California Department of Resources Recycling and Recovery (CalRecycle) as our records indicate that it is a former Municipal Solid Waste burn site. Any proposed projects within this area would require, not only purchasing of the property from the District, but also complete approval through the LEA and CalRecycle and potentially the California Department of Toxic Substances Control. The Final EIR should fully analyze and discuss these impacts and if necessary, present mitigation measures capable of reducing potential impacts to a less than significant level. If a complete assessment of potential impacts and mitigation cannot be determined because the project is planned too far in the future, at minimum, the FEIR should identify the procedures that will be undertaken to protect the species and minimize impacts.

Response 8-L

The Draft PEIR notes on page 3.7-24 that implementation activities could encounter contaminated soils. Mitigation Measures HAZ-1 and HAZ-2 require that prior to ground disturbance for any future project, an assessment of the property be conducted to determine the potential for contaminated soils. Prior to the use of the lower San Sevaine Basin, IEUA would be required to conduct soils analysis. If contamination is identified, the contaminated soils would need to be removed or otherwise managed (such as soil blending) according to applicable regulations. The implementation of mitigation measures ensures that impacts would be less than significant.

Comment 8-M

10. There is a typo on Figure D-34a of the DEIR (Appendix D). The legend identifies the basin as Wineville Basin; however it is not Wineville Basin. The figure should be corrected in the Final EIR.

Response 8-M

The comment is noted and the Figure D-34a of the 2013 RMPU has been corrected accordingly.

Comment 8-N

11. In general, the DEIR does not discuss under what conditions or guidelines subsequent environmental evaluation will occur and/or what level of environmental evaluation will be required. The FEIR should identify all proposed projects that will be subject to subsequent CEQA environmental evaluation and the anticipated type of public review.

Response 8-N

The need for subsequent CEQA compliance documentation for the future projects listed in the Draft PEIR will be evaluated on a case-by-case basis. Section 2.6, beginning on page 2-38, outlines how individual specific projects will be considered under future, subsequent CEQA review. Every future specific project will receive some level of CEQA review in accordance with Sections 15162 and 15168 of the State CEQA Guidelines. If impacts could occur or if new information is uncovered that were not foreseen in the Draft PEIR, subsequent detailed environmental documentation (Initial Study or EIR) may be necessary. However, if potential impacts of a project would be within the range of effects identified in the Draft PEIR, IEUA may conclude that the Draft PEIR adequately characterizes impacts such that no additional CEQA documentation is necessary.

Comment 8-O

12. The FEIR should acknowledge that any projects carried out on District lands (owned in fee title or easement) must rely upon the most currently available environmental review and documentation. The District may request subsequent biological and cultural evaluations be conducted prior to issuance of any District issued permits.

Response 8-O

The Draft PEIR acknowledges on page 2-49 that projects on County lands will require encroachment permits from the County. As part of the permit analysis, the County may require additional site surveys to confirm site conditions. IEUA would be subject to the County's encroachment permit application requirements.

Comment 8-P

13. The District does not concur that a Statement of Overriding Considerations relating to potential cultural resources is warranted as the cultural investigation does not identify specific impacts or explore all reasonable potential mitigation. The FEIR should acknowledge that future

cultural analysis will be required and potential impact to cultural resources addressed on an individual and cumulative basis.

Response 8-P

The Draft PEIR concludes that since not all of the site-specific surveys have been conducted, it was not possible to conclude that significant impacts to all historic or archaeological resources can be avoided. As a result, as noted on page 3.5-19, the Draft PEIR concludes that impacts to historic resources may indeed remain significant and unavoidable even after mitigation. Under this circumstance the IEUA Board of Directors would need to evaluate the merits of the project compared to the potential impact and if a decision is made to proceed with such a project, a Statement of Overriding Considerations may be necessary.

Comment 8-Q

In closing, please be advised that our concurrence with the FEIR may be necessary for the District to issue future permits.

We respectfully request to be included on the circulation list for all project notices and reviews. I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Response 8-Q

The Draft PEIR acknowledges on page 2-49 that projects on County lands will require encroachment permits from the County. As part of the permit analysis, the County may require additional CEQA compliance to act as a Responsible Agency. IEUA would be subject to the County's encroachment permit application requirements. County Public Works will be notified of future actions, more importantly including those within the County's rights-of-way.

Letter 9: City of Chino

Comment 9-A

Thank you for providing the City of Chino an opportunity to comment on the Draft Program Environmental Impact Report for the IEUA Facilities Master Plan. As a result of our review, the City has the following comments:

1. For all upcoming facility upgrades in the City, IEUA will need to submit the required plans/information and permit applications so that proper conditions associated with the construction activity can be placed on the various projects.

Response 9-A

IEUA will coordinate with the City of Chino and provide construction schedules and project design plans before proposed projects within the City's jurisdiction are implemented. Also, please note that under Section 53091 of the California Government Code (see page 3.9-8 of the Draft

PEIR), IEUA is not subject to design review, and approval from local jurisdictions for essential facilities, but on a case-by-case basis may agree to participate with a local jurisdiction's review process. However, as noted in the Draft PEIR, IEUA is committed to ensuring facility designs are compatible with local land uses and character.

This is not a comment on the content of the Draft PEIR; therefore, no further response is required.

Comment 9-B

2. Revise Section 3.15-2. The second paragraph is incorrect because the City of Chino provides water service to most of the City with the exception to certain areas that are serviced by either the City of Chino Hills or MVWD.

Response 9-B

The comment is noted. In response to this comment, the following modifications have been made to page 3.15-2 of the Draft PEIR:

> ***City of Chino Utilities Department***
>
> The City of Chino Utilities Department provides water service to most of the City of Chino, with the exception to certain areas that are serviced by either the City of Chino Hills Water Department or MVWD, described above (City of Chino, 2016). ~~The City of Chino receives and distributes water from either MVWD or the Chino Hills Water Department described above (City of Chino, 2016).~~

Comment 9-C

It is unclear if the Master Plan includes an expansion of the food waste diversion program, including any updates or relocation of anaerobic digesters.Based on the potential impacts (e.g. odors, traffic, etc) associated with the food waste diversion program, the City is opposed to any expansion of the program at the RPS Facility. The EIR should provide additional information that clarifies the existing food waste diversion program operation and associated impacts.

Thank you again for the opportunity to review and comment on the proposed Facilities Master Plan PEIR. Should you have any questions, please feel free to contact me at (909) 334-3332.

Response 9-C

Pages 2-16, 2-31, 2-40, and 2-41 of the Draft PEIR discuss proposed projects related to food waste diversion and associated facilities such as anaerobic digesters. RP-1 in the City of Ontario will require the addition of anaerobic digesters to meet projected capacity. Further, some RP-2 biosolids-handling facilities will be relocated to RP-5 in the City of Chino (see page 2-41, specifically). If a decision is made to precede with additional food waste diversion facilities, they would be implemented within these existing regional plant footprints. Impacts associated with these facilities are discussed throughout every resource section within Chapter 3 of the Draft PEIR under Project Category 1: Treatment Facility Upgrades. The objective of considering food

waste processing is to achieve the carbon reduction associated with their processing. At the present time, a pilot facility is operating at RP-5, but it has been subject to a previous independent environmental review. It is currently operating below it maximum capacity. As noted in Section 2.6 of the Draft PEIR, further review of any specific food processing activities will be required when and if proposed for implementation. The City will be afforded an opportunity to participate in this subsequent CEQA review process.

Letter 10: Cucamonga Valley Water District

Comment 10-A

In review of the Draft EIR of the IEUA Facilities Master Plan, we have a comment regarding Appendix G "Recycled Water Program Strategy". I believe this document was completed prior to the finalization of the Recycled Water Policy Principles and as such, it currently show that "…the RW Program is operated based on the following priorities for recycled water deliveries: 1) Regional discharge obligations (Santa Ana Judgment, environmental obligations, etc.), 2) Member agency direct use demands and 3) Regional GWR." We would like to see that this is amended or updated to reflect the current priorities as addressed in the negotiated "Recycled Water Policy Principles".

Please contact me if you have any questions.

Response 10-A

Since the completion of the Recycled Water Program Strategy in 2015, the priorities of the Regional Recycled Water System were negotiated with the IEUA Member Agencies, and adopted in March 2016. The Recycled Water Policy Principles are to be used for developing operational priorities of the RW system, and should supersede other references in the 2015 Recycled Water Program Strategy. To reflect this, the Recycled Water Policy Principles were included with the Recycled Water Program Strategy in Appendix G of the Draft PEIR.

CHAPTER 9
Corrections and Additions to the Draft PEIR

This chapter contains a compilation of revisions made to the text of the Draft PEIR by IEUA as the Lead Agency, in response to the comments received during the 45-day public review period. All revisions are previously introduced in Chapter 8 of this Final PEIR but are summarized here for convenience of the reader. Where the responses indicate additions or deletions to the text of the Draft PEIR, additions are indicated in underline and deletions in ~~strikeout.~~

ES Executive Summary

Page ES-15 to ES-16

BIO-3a: Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

BIO-3b:

Page ES-20 to ES-21

~~No mitigation measures are required.~~

HAZ-6: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize

potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.

Page ES-26 to ES 27

NOISE-4: ~~Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible.~~

Prior to commencement of construction related to the FMP programs at a specific site that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to the start of such activity.

2.0 Project Description

Page 2-9:

The 2013 ~~Amendment to the 2010~~ RMPU projects groundwater elevation through data collected in 2010, through the planning year 2030 in order to anticipate what projects will be necessary to maintain a sustainable system.

Page 2-13

The issues addressed in the RP-1 Technical Memorandum include the following: alternatives for improving RP-1 flow equalization (balancing flows between different wastewater reclamation plants); identifies future RP-1 plant ~~expansion~~ rehabilitation projects within the 20-year planning period (2035); and identifies future influent flow and loading projections. The tertiary effluent from RP-1 is currently regulated by the Santa Ana Regional Water Quality Control Board under Order No. R8-2015-0036.

Page 2-15

2.5.1.2 Plant ~~Expansion~~ Rehabilitation Needs

In addition to the flow equalization improvements described above, additional liquid treatment facilities and solids handling facilities will be needed to accommodate project influent flows and loads at RP-1. These include construction of Train D for secondary treatment, new secondary clarifiers, and new digesters. **Table 2-3** summarizes ~~expansion~~ rehabilitation requirements for

RP-1 and **Figure 2-4** shows these new facilities at RP-1. Based on the analysis in this section, three plant ~~expansion~~ rehabilitation projects have been identified for inclusion in the 20-year CIP: the RP-1 Primary Effluent Equalization Project; the RP-1 Liquid Treatment Expansion Project; and the RP-1 Solids Treatment ~~Expansion~~ Rehabilitation Project.

Page 2-16

TABLE 2-3
RP-1 FACILITY ~~EXPANSION~~ REHABILITATION REQUIREMENTS FOR PLANNING YEAR 2035

Parameter	Size of New Units	Comments
Primary Clarifiers		No new units are needed.
Train D Secondary Treatment (MBR)	1 module (8 mg/L TIN)	Includes fine screening for the MBR system feed, MBR equipment includes permeate blowers and pumps.
Train D MBR Bioreactor	1 module 130-foot x 60-foot x 18-foot	Two trains per module
Train D Membrane Tank	1 module 30-foot x 60-foot x 10-foot	Three trains per module.
Trains A, B, C New Secondary Clarifiers (PE EQ Elimination)	2 x 120-foot (Trains A and B) 1 x 130-foot (Train C)	Flow splitting structure for each of the trains, new RAS/WAS piping and pumping
Anaerobic Digesters	2 digesters 110-foot diameter 30-foot sidewater depth	New digesters with complete sludge transfer and recirculation, mixing and heating, and pumping equipment.
Flow Management Lagoons	2 digesters	Modifications to piping and pumping systems.
PE – primary effluent // EQ – equalization // RAS – return activated sludge // WAS – waste activated sludge	-	

Page 2-28

Water Code section 1701 requires a petition to the State Water Resources Control Board (SWRCB) to add points of diversion. The right to divert dry-weather discharge within the Chino Basin is held by the Chino Basin Watermaster; therefore, the Chino Basin Watermaster will be required to amend their diversion permit from the SWRCB before IEUA can implement the proposed diversion project.

Page 2-36:

2.5.8 2013 ~~Amendment to the 2010~~ Recharge Master Plan Update

The IEUA and Watermaster prepared the 2013 RMPU~~2010 Recharge Master Plan Update and amended it in 2013~~. The 2013 RMPU was ~~2010 Recharge Master Plan Update and its 2013~~

~~amendment were~~ developed in a public, transparent process, including nine workshops for the ~~2010 Recharge Master Plan Update~~ and 67 steering committee meetings and workshops for the 2013 RMPU. The steering committee meetings were open to all stakeholders with an interest in storm water and dry-weather runoff management and groundwater management in the Chino Basin. The IEUA and Watermaster Boards of directors approved the 2013 RMPU, and it was submitted to the Court in the fall of 2013 for review and approval. The Court approved the 2013 RMPU in 2014 and directed the IEUA and Watermaster to implement it.

In order to estimate the water demands and establish other water supply plans, Wildermuth Environmental, Inc. (WEI) collected available Urban Water Master Plans from the Chino Basin Parties for the 2013 ~~Amendment to the 2010~~ RMPU. WEI found that the total water demand is projected to increase from about 309,000 AFY in 2010 to about 417,000 AFY by 2035, while Chino Basin groundwater production is projected to decrease from about 162,000 AFY in 2010 to about 159,000 AFY by 2020 but will gradually increase to 191,000 AFY in 2035.

Page 2-37:

TABLE 2-13
KEY PROJECT IMPROVEMENTS

			Additional Yield (acre-feet per year)	
Project ID	**Basin Projects**	**Key Project Improvements**	**SW**	**RW**
18a	CSI Storm Water Basin	New storage and recharge facility by deepening/removing 36,000 CY	100	-
23a	Wineville, Jurupa, and RP3	Improve storage and recharge capacity with pumps/conveyance systems between basins and provide new diversion structures	2,921	2,905
27	Declez Basin	Improve capacity by modifying existing/adding new structures	507	-
11	Victoria Basin	Improve the infiltration rate and increase storage by removing settled deposits	75	120
14	Turner Basin	Increase storage and recharge by raising the spillway height	23	-
15a	Ely Basin	Improve storage and recharge by removing 470,000 CY	101	-
2	Montclair Basins	Increase storage and recharge capacity by directing more channel flow	233	-
Total			**3,960**	**3,025**

Page 2-41:

RP-1 will require the addition of anaerobic digesters to facilitate capacity ~~expansion~~ rehabilitation. RP-1 solids handling ~~expansion~~ rehabilitation may require some grading, however the facility already exists and has been engineered so any grading would be minimal.

Pipelines

Up to 220,000 LF of pipeline may be installed in support of the Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU).

Page 2-43

The Agency's six management plans (WFMP, EMP, AMP, RWPS, IRP, and 2013 ~~Amendment to the~~ RMPU) propose to construct one new booster pump station for the 1158-1299 pressure zones.

Page 2-45

WRF Modifications

Regional Plants – The majority of the projects necessary to meet demand in future years at RP-1, RP-4, and RP-5 require expanding liquid treatment capacity and/or solids treatment capacity. RP-1 will require a liquid treatment capacity ~~expansion~~ rehabilitation of 4 MGD from the present capacity of 32 MGD to 36 MGD projected flow by 2050. RP-4 will require expanding secondary and tertiary treatment capacity. Tertiary capacity at RP-4 is presently 14 MGD and will require expansion to 17 MGD by 2050; Secondary capacity is presently at 16 MGD and will require expansion to 17 MGD by 2050. RP-5 will require a liquid treatment capacity expansion of 11 MGD by 2050 from the present capacity of 15 MGD to 26 MGD in 2050. As a result of these treatment capacity expansions and rehabilitations at each regional facility, operations of each facility will require greater energy consumption.

Page 2-46

The WRFs also require periodic delivery and storage of chemicals to support treatment operations. The expansion/rehabilitation of treatment capacity at RP-1, RP-4, and RP-5 will require additional chemical delivery and storage at the WRFs. Estimates of future effects on chemical delivery and storage will be included in the impact forecast.

The ~~expansion~~ rehabilitation of treatment capacity at RP-1 and the new facilities/expansion at RP-5 will require additional biosolids delivery at each solids handling facilities. Estimates of future effects on biosolids delivery will be included in the impact forecast.

Page 2-49

The Inland Empire Utilities Agency Board of Directors must approve and certify the PEIR before any of the proposed development will be allowed to proceed and cause the corresponding changes to the environment. This PEIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the Inland Empire Utilities Agency, and subsequently by the Watermaster and any constituent agencies should they decide to adopt the six management plans. Responsible agencies for this PEIR may include:

- ~~Chino Basin Watermaster~~
- Chino Basin Water Conservation District
- San Bernardino County Flood Control District

3.4 Biological Resources

Page 3.4-23

BIO-3a: Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

BIO-3b: Construction of proposed improvements within the IEUA Service Area shall avoid special-status natural communities, unless deemed essential by the Agency. If a proposed improvement must be installed and result in a loss of a special-status natural community that is not occupied by a special-status species, compensatory habitat-based mitigation consisting of onsite preservation of habitat, restoration of similar habitat, or purchase of off-site credits from an approved mitigation bank shall be implemented. At a minimum IEUA will provide compensation at a 0.5:1 ratio for loss of habitat, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis.

3.7 Hazards and Hazardous Materials

Page 3.7-3:

Further, The Chino Basin Watermaster maintains a comprehensive database that includes water quality data and produces State of the Basin Reports that summarize the most current water quality in the Chino Basin. The 2014 State of the Basin Report was consulted in order to assess potential contamination of groundwater within the IEUA service area (Chino Basin Watermaster, 2014).

Page 3.7-21

Project Category 3: Groundwater Recharge and Extraction

Impacts would be the same as Project Category 2.

Further, proposed recharge basins and expansions to existing recharge basins could create new standing pools of water. If algae growth develops or insects such as midges or mosquitoes use the water as a breeding area, standing pools of water could be considered a nuisance or a health threat to the surrounding community. Hatching midges can emerge in such tremendous numbers that they create nuisance problems. Midges often emerge simultaneously forming clouds of flying insects. IEUA would coordinate with the local vector control agencies as is currently the case, to ensure that insects do not become a nuisance or health hazard. Impacts would be potentially significant. The following mitigation measure shall be implemented to achieve adequate vector control with new or expanded recharge basins.

Page 3.7-22

Project Category 3: Groundwater Recharge and Extraction

HAZ-6: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.

Cumulative Measures

~~No mitigation measures are required.~~

Implementation of Mitigation Measure HAZ-6 is required.

Page 3.7-35

California Integrated Waste Management Board (CIWMB). 2002. *Household Universal Waste Generation in California.* Available at: www.calrecycle.ca.gov/Publications/HHW/52002004.pdf. Accessed on April 22, 2016.

Chino Basin Watermaster, 2014. OBMP State of the Basin Reports. Available at: www.cbwm.org/rep_engineering.htm. Accessed on February 9, 2017.

3.8 Hydrology and Water Quality

Page 3.8-13

The permit requires the development of a site-specific water quality management plan (WQMP) for certain types of development, including new industrial development projects that create 10,000 square feet or more of impervious surface collectively over the project site or which add or replace 5,000 square feet of impervious surface on an existing developed site. This WQMP should be based on the model WQMP Guidance and Template, and must include site design (including, where feasible, Low Impact Development (LID) principles), source control and treatment control elements to reduce the discharge of pollutants into urban runoff.

3.10 Noise

Page 3.10-29

NOISE-4: ~~Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible.~~

Prior to commencement of construction related to the FMP programs at a specific site that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to the start of such activity.

3.15 Utilities and Service Systems

Page 3.15-2

City of Chino Utilities Department

The City of Chino Utilities Department provides water service to most of the City of Chino, with the exception to certain areas that are serviced by either the City of Chino Hills Water Department or MVWD, described above (City of Chino, 2016). ~~The City of Chino receives and distributes water from either MVWD or the Chino Hills Water Department described above (City of Chino, 2016).~~

CHAPTER 10
Mitigation Monitoring and Reporting Program

CEQA Requirements

Section 15091(d) and Section 15097 of the CEQA Guidelines require a public agency to adopt a program for monitoring or reporting on the changes it has required in the project or conditions of approval to substantially lessen significant environmental effects. This Mitigation, Monitoring and Reporting Program (MMRP) summarizes the mitigation commitments identified in the IEUA Facilities Master Plans (proposed Program; FMP) Program EIR (State Clearinghouse No. 2016061064). Mitigation measures are presented in the same order as they occur in the Final PEIR.

The columns in the MMRP table provide the following information:

- **Mitigation Measure(s):** The action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Implementation, Monitoring, and Reporting Action:** The appropriate steps to implement and document compliance with the mitigation measures.
- **Responsibility:** The agency or private entity responsible for ensuring implementation of the mitigation measure. However, until the mitigation measures are completed, IEUA, as the CEQA Lead Agency, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the MMRP (CEQA Guidelines, Section 15097(a)).
- **Monitoring Schedule:** The general schedule for conducting each task, either prior to construction, during construction and/or after construction.

TABLE 10-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Aesthetics			
AES-1: Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before Construction
AES-2: All new permanent exterior lighting associated with proposed project components shall be shielded and directed downward to avoid any light intrusion to surrounding uses. The maximum light allowed beyond the property boundary adjacent to sensitive light receptors shall be limited to 1.5 candles.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before, During and After Construction
AES-3: Development of the proposed project and associated facilities shall comply with existing and future lighting ordinances.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before, During and After Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
AES-4: Structures with large facades shall not include highly reflective building materials.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before Construction
Agriculture and Forestry Resources			
AG-1: Where an ancillary facility is proposed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the improvement shall be relocated to urban land or non-important Farmland. Alternatively, if important farmland must be utilized for an ancillary facility, then IEUA shall conduct a California Land Evaluation and Assessment (LESA) Model. If the evaluation determines the loss of designated Farmland is significant, then it shall be offset by acquisition of agricultural land conservation credits at a minimum ratio of 1:1.	• Retain copies of specifications in project files. • Conduct a California Land Evaluation and Assessment (LESA) Model	IEUA	Before Construction and After Construction
Air Quality and Greenhouse Gas Emissions			
AQ-1: The following measures shall be incorporated to minimize emissions of NOx and VOC associated with construction activities for the proposed facilities: • Construction activities shall require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) to the extent feasible. Under conditions where it is determined that 2010 model year or newer diesel trucks are not readily available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use trucks that meet USEPA 2007 model year NOx emissions requirements. • Off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 3 emissions standards at a minimum and Tier 4 where available. Under conditions where it is determined that equipment meeting Tier 4 emission standards are not readily available or obtainable for a project, the implementing party shall be required to provide this evidence to IEUA and shall instead use USEPA Tier 3 equipment.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before and During Construction
AQ-2: For each individual FMP project, IEUA shall require by contract specifications that: • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use to avoid excessive idling. • Construction operations shall minimize use of diesel-powered generators and rely on the electricity infrastructure where feasible. • Construction trucks shall be routed away from congested streets or sensitive receptor areas where feasible.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before and During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
AQ-3: Unpaved roads on the project site used for any vehicular travel are required to be watered by water trucks at least four times per eight hour workday or otherwise sufficient to reduce fugitive dust (PM10 and PM2.5) emissions consistent with Rule 403.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before and During Construction
AQ-4: Prior to the construction upgrades at each treatment facility, IEUA would be required to prepare an Odor Impact Minimization Plan (OIMP), pursuant to Title 14, California Code of Regulations Section 17863.4. The OIMP provides operational protocols covering the implementation of the odor control system including during varied meteorological conditions. The OIMP would include complaint response protocol, operating procedures, and an odor monitoring program. A complaint response protocol would be implemented to receive complaints, investigate the source, and implement changes to minimize the odors.	• Retain copies of the Odor Impact Minimization Plan in the project file. • Perform site inspections to verify regular maintenance compliance. • Retain records in the project file.	IEUA	After Construction
Biological Resources			
BIO-1: Construction of the proposed improvements should avoid, where possible, special status natural communities and other vegetation communities that provide suitable habitat for a special-status species known to occur within the IEUA Service Area. If construction within potentially suitable habitat must occur, a presence/absence survey of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species, including listed species, are determined to occupy any portion of a project site, avoidance and minimization measures such as temporary fencing, inspection of trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspection of pipes, culverts, and similar construction material for entrapped wildlife, and the prohibition of chemical uses shall be incorporated into the construction phase of the proposed improvement to avoid direct or incidental take of a listed species to the greatest extent feasible.	• Include mitigation measure in construction contractor specifications. • Retain copies of the survey(s) in the project file. • Prepare reports to document any species relocation activities, and retain such reports in the project file.	IEUA; Construction Contractor	Before and During Construction
BIO-2: If direct or incidental take of a listed species is unavoidable, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation but shall include the following or comparable mitigation: restoration of habitat to comparable value as existed prior to disturbance; compensation for take or habitat loss through conserving suitable habitat in perpetuity off site; or participating in a habitat mitigation bank approved by the resource agency(ies). At a minimum IEUA will provide compensation at a 1:1 ratio for direct or indirect loss of habitat that supports listed species, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis.	• Include mitigation measure in construction contractor specifications. • Retain copies of correspondence with CDFW and USFWS in project file. • Prepare reports to document any avoidance or compensation measures, and retain such reports in the project file.	IEUA	Before, During and After Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
BIO-3a: Prior to the start of construction of facilities, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).	• Include mitigation measure in construction contractor specifications. • Retain copies of the Burrowing Owl survey reports in the project file. • Prepare reports to document any passive relocation program, and retain such reports in the project file.	IEUA; Construction Contractor	Before Construction
BIO-3b: Construction of proposed improvements within the IEUA Service Area shall avoid special-status natural communities, unless deemed essential by the Agency. If a proposed improvement must be installed and result in a loss of a special-status natural community that is not occupied by a special-status species, compensatory habitat-based mitigation consisting of onsite preservation of habitat, restoration of similar habitat, or purchase of off-site credits from an approved mitigation bank shall be implemented. At a minimum IEUA will provide compensation at a 0.5:1 ratio for loss of habitat, except when regulatory agencies assign a higher compensation ratio on a case-by-case basis.	• Include mitigation measure in construction contractor specifications. • Perform construction site inspections to ensure any measures decided upon are implemented properly. • Retain copies of construction site inspection logs in the project file.	IEUA; Construction Contractor	Before and During Construction
BIO-4: The proposed improvement projects within the IEUA Service Area shall avoid, if possible, construction within the general nesting season of February 1 through August 31 for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor.	• Include mitigation measure in construction contractor specifications. • A qualified biologist will conduct pre-construction clearance survey as defined. • Prepare documentation to record results of the pre-construction survey. • Retain copies of pre-construction survey documentation in the project file.	IEUA; Construction Contractor	Before and During Construction
BIO-5: Any future project that must discharge fill into a channel or otherwise alter a streambed shall be mitigated. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. For jurisdictional waters without any riparian or wetland habitat IEUA will mitigate at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A revegetation plan using native riparian vegetation common to the project area shall be prepared and reviewed and approved by the appropriate regulatory agencies. The Agency shall also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Santa Ana Regional Water Quality	• Include mitigation measure in construction contractor specifications. • Retain copies of correspondence with any regulatory agencies. • Retain records in the project file.	IEUA; Construction Contractor	Before and During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Control Board and CDFW) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands. Mitigation can be provided by purchasing into any authorized mitigation bank; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. The regulatory agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.			
BIO-6: Best Management Practices (BMPs) shall be incorporated into the design and construction phase of the project to ensure that no pollutants or silt drain into a federal or state protected jurisdiction area, including wetlands and riparian areas. Project design features (BMPs) to fulfill this mitigation requirement shall be clearly identified as part of project engineering plans prior to initiating construction.	• Include mitigation measure in project design specifications. • Ensure BMPs are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	Before and During Construction
BIO-7: Construction of a proposed project shall avoid, where possible, a wildlife corridor; however, if the wildlife corridor cannot be avoided, such as a discharge location within a drainage channel or creek, construction activities shall use best management practices such as placing temporary fencing to protect wildlife and plant species from construction activities, inspecting trenches and holes for entrapped wildlife each morning prior to the onset of project construction, inspecting pipes, culverts, or similar construction material for entrapped wildlife, and prohibiting the use of rodenticides, herbicides, insecticides or other chemicals that could potentially harm migratory species.	• Include mitigation measure in construction contractor specifications. • Ensure BMPs are included in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform construction site inspections to ensure any measures decided upon are implemented properly. • Retain copies of construction site inspection logs in the project file.	IEUA; Construction Contractor	Before and During Construction
BIO-8: Once construction is completed, restore the impacted wildlife corridor area to its original vegetation and in accordance with any regulatory permitting, if applicable.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform construction site inspections to ensure restoration is complete. • Retain copies of restoration inspection logs in the project file.	IEUA; Construction Contractor	After Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
BIO-9: Prior to construction activities to provide treatment facilities upgrades, the IEUA shall comply with the local policies and ordinances to protect biological resources.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform construction site inspections to ensure policy compliance.	IEUA; Construction Contractor	Before Construction
BIO-10: IEUA shall avoid constructing facilities within existing habitat conservation plan areas such as the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana, unless avoidance is not feasible and the habitat conservation plans allow the construction of the proposed facility. IEUA shall follow the mitigation procedures outlined in such HCPs to bring the project in compliance with the HCP.	• Retain copies of HCP specifications in project files. • Perform site inspections to verify compliance with HCP mitigation procedures. • Retain inspection records in the project file.	IEUA	Before and During Construction
Cultural Resources			
CUL-1: Prior to development involving ground disturbance, IEUA shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology to conduct a study of the project area(s) for all project components that involve ground disturbance. The archaeologist shall conduct a cultural resources inventory designed to identify potentially significant resources. The cultural resources inventory would consist of: a cultural resources records search to be conducted at the South Central Coastal Information Center located at California State University Fullerton; consultation with the NAHC and with interested Native Americans identified by the NAHC; a field survey where deemed appropriate by the archaeologist; and recordation of all identified archaeological resources located on a project site on California Department of Parks and Recreation 523 Site Record forms. The archaeologist shall provide recommendations regarding resource significance and additional work for those resources that may be affected by a project.	• Include mitigation measure in construction contractor specifications. • Retain copies of all cultural research and survey reports in the project file. • Perform site inspections to ensure compliance with cultural sensitivity requirements. • Retain inspection forms in the project file.	IEUA; Construction Contractor	Before and During Construction
CUL-2: Development involving ground disturbance and containing structures 50 years old or older shall be subject to a historic built environment survey, and potentially historic structures shall be evaluated for their potential historic significance, prior to IEUA's approval of project plans. The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior's Standards for Architectural History. If potentially significant resources are encountered during the survey, a treatment plan shall be prepared prior to demolition or substantial alteration of such resources identified.	• Include mitigation measure in construction contractor specifications. • Retain copies of all historical research and survey reports in the project file. • Perform site inspections to ensure compliance with historical sensitivity requirements. • Retain inspection forms in the project file.	IEUA; Construction Contractor	Before and During Construction
CUL-3: For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources.	• Include mitigation measure in construction contractor specifications. • In the event that paleontological resources are discovered, documentation of the assessment of the significance of the find will be prepared and retained in the project file • Paleontological monitoring reports and logs will be retained in project file.	IEUA; Construction Contractor	Before and During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Geology, Soils, and Mineral Resources			
GEO-1: Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects.	• Retain copies of the geotechnical investigation in the project file. • IEUA shall verify that recommendations have been incorporated into the project design prior to initiation of the project. • Include the geotechnical report as part of the construction documents. • Perform site inspections to ensure contractor compliance with geotechnical report recommendations.	IEUA; Construction Contractor	Before Construction
GEO-2: If an improvement is proposed within a designated Alquist-Priolo Fault Zone, the improvement shall be relocated, if possible. If relocation is not possible, the improvement shall be designed in accordance with the CBC or a project specific geotechnical study.	• Retain copies of the geotechnical investigation in the project file. • Verify that recommendations/ CBC regulations have been incorporated into the project design prior to initiation of the project. • Include the geotechnical report as part of the construction documents. • Perform site inspections to ensure contractor compliance with geotechnical report recommendations.	IEUA; Construction Contractor	Before Construction
Hazards and Hazardous Materials			
HAZ-1: Prior to the initiation of any construction requiring ground-disturbing activities, IEUA shall complete a Phase I Environmental Site Assessments (ESA) for soil and groundwater contamination in the project areas. The recommendations set forth in the Phase I ESA shall be implemented to the satisfaction of applicable agencies before and during construction. If the Phase I ESA indicates the potential for hazardous concentrations of contamination within the construction zone, Phase II ESA studies shall be completed before construction begins. Phase II studies shall include soil and/or groundwater sampling and analysis for anticipated contaminants. The Phase II sampling is intended to identify how to dispose of any potentially harmful material from excavations, and to determine if construction workers need specialized personal protective equipment.	• Include mitigation measure in construction contractor specifications. • Retain copies of all Phase I and II ESA reports in the project file.	IEUA; Construction Contractor	Before Construction
HAZ-2: If the Phase II ESA determines that the site has contaminated soil and/or groundwater, a Soil and Groundwater Management Plan that specifies the method for handling and disposing of contaminated soil and groundwater prior to demolition, excavation, and construction activities shall be prepared and implemented. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information: • Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and	• Include mitigation measure in construction contractor specifications. • Retain copies of Soil and Groundwater Management Plan in the project file. • Perform site inspections to verify contractor compliance with hazardous materials. Retain inspection records in the project file.	IEUA; Construction Contractor	Before and During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. • Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils. • Detailed control measures for use and storage of hazardous materials to prevent the release of pollutants to the environment, and emergency procedures for the containment and cleanup of accidental releases of hazardous materials to minimize the impacts of any such release. These procedures shall also include reporting requirements in the event of a reportable spill or other emergency incident. At a minimum, the IEUA or its contractor shall notify applicable agencies in accordance with guidance from the California Office of Emergency Services as well as the San Bernardino County Department of Public Health, Division of Environmental Health Services. • Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method used to analyze groundwater for hazardous materials likely to be encountered at specific locations and the appropriate treatment and/or disposal methods.	• Retain inspection forms in the project file.		
HAZ-3: For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use plan. All design plans within an airport land use planning area shall be submitted to the appropriate airport management agencies for review and comment prior to implementation.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file. • Retain copies of correspondence with airport management agencies in project file.	IEUA; Construction Contractor	Before and During Construction
HAZ-4: Prior to initiating construction of proposed facilities, IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access. 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. In addition, 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. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan.	• Include mitigation measure in construction contractor specifications. • The Traffic Control Plan shall be documented and retained in the project file. • Construction site inspections shall be performed to ensure contractor compliance with Traffic Control Plan. • Retain copies of construction inspection logs or reports in the project file. • Retain copies of correspondence with public services in project file.	IEUA; Construction Contractor	Before and During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
HAZ-5: During construction of facilities located in areas designated as Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks.	• Include mitigation measure in construction contractor specifications. • The fire management plan shall be documented and retained in the project file. • Construction site inspections shall be performed to ensure contractor compliance with fire management plan. • Retain copies of construction inspection logs or reports in the project file.	IEUA; Construction Contractor	Before and During Construction
HAZ-6: IEUA shall cooperate with the local vector control agencies to implement a strategy to use recharge basins in a manner that minimizes occurrence of vectors, such as midges and mosquitos. Based on discussions with vector control professionals, this strategy shall include monitoring for presence of vectors and shall consider the following range of control measures for implementation: a) revising basin floors or management to ensure depth of water can be raised to more than two feet deep, or to ensure the basin floors can be dried; b) using mechanical means (for example sprinklers) to keep the surface of the water stored in a basin in motion; c) use of short-lived, non-water polluting pesticides to control outbreaks of midges when necessary or pre-treatment of the basin floors prior to filling the basin; d) other water or pest management actions to minimize potential for vector populations to grow into a public nuisance at nearby sensitive receptors (such as using basins with higher rates of percolation or using lights to attract and keep the midges at a basin); and use of water recharge management options developed based on past experience, such as operation in seasonally cooler weather. The strategy may be general (applying to all basins) or basin-specific and the strategy shall be compiled and available for implementation prior to initiating the additional groundwater recharge basins or expanding such basin use.	• Include mitigation measures in construction contractor specifications. • Retain copies of correspondence with vector control agencies. • Site inspections shall be performed to ensure compliance with vector control mitigation measures.	IEUA	Before, During and After Construction
Hydrology and Water Quality			
HYDRO-1: Prior to installing new injection or extraction wells, IEUA and the Watermaster shall ensure that IEUA conduct groundwater modeling near the affected areas sufficient to estimate extraction and injection capacities at specific locations and to avoid impacts to neighboring production well operations.	• IEUA will maintain a repository of groundwater modeling results and reports, and make this information available to the public. • All modeling will be reported and saved in project files.	IEUA	Before Construction
HYDRO-2: IEUA shall continue to support monitoring of groundwater levels throughout the Chino Basin to identify areas of elevated groundwater levels. IEUA and the Watermaster shall ensure that, where necessary, future groundwater recharge projects are designed with groundwater monitoring capabilities sufficient to evaluate and minimize impacts of shallow groundwater on subsurface and surface infrastructure.	• IEUA shall continue ground water quality monitoring. • Watermaster Panel shall insure that IEUA follows the review and approval provisions under Judgement. • Retain copies of monitoring results and processes in project file. • Retain copies of Watermaster panel correspondence and approval in project file.	IEUA	Before, During and After Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
HYDRO-3: Implementation of a Grading and Drainage Plan. Prior to construction of project facilities, the IEUA shall prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of San Bernardino and/or the city in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, best management practices, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.	• Include mitigation measure in construction contractor specifications. • Prepare grading and drainage plan under applicable County/City regulations and requirements • Retain copies of the plan and records verifying implementation of the plan in the project file.	IEUA; Construction Contractor	Before and During Construction
HYDRO-5: Following the demolition of RP-2 facilities, IEUA shall implement a soil stability plan that ensures soil and wind erosion does not substantially occur at the RP-2 site. The soil stability plan shall provide best management practice (BMP) measures such as soil binders, hydroseeding, straw mulch or other measures to ensure the onsite soils do not erode off of the RP-2 site.	• Include mitigation measure in construction contractor specifications. • Prepare soil stability plan and identify BMPs • Perform site inspections to verify BMP compliance. Retain inspection records in the project file. • Retain copies of the plan and records verifying implementation of the plan in the project file.	IEUA; Construction Contractor	Before and During Construction
HYDRO-6: All creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the SBCFCD and USACE to ensure that they do not impede high flow capacity.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copies of design and contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file. • Retain copies of SBCFCD and USACE correspondence and approval in project file.	IEUA; Construction Contractor	Before Construction
HYDRO-7: Where a facility is proposed within a 100-year flood zone, the improvement shall be relocated to land that is not within a 100-year flood zone. Alternatively, if a 100-year flood zone must be utilized for a facility, a hydrology study shall be conducted to ensure that there is no substantial impediment or redirection of flood flows.	• Include mitigation measure in project design specifications. • IEUA will conduct a hydrology study. • The hydrology studying will be reported and saved in the project files.	IEUA	Before Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Noise			
NOISE-1: IEUA shall implement the following measures during construction: • Include design measures where feasible to reduce the construction noise levels if necessary to comply with local noise ordinances. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site. • Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals. • Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers. • Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible, and require that these noise sources be muffled and enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances.. • Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications. • If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged. • For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations. • For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.	• Include mitigation measure in construction contractor specifications. • Appoint a construction monitor to verify contractor compliance with noise measures. • Retain copies of monitoring records in the project file. • Appoint a Noise Concern Coordinator to respond to construction noise complaints. • Maintain log of concerns filed with the Coordinator and the resolution of each complaint. • Retain copies of the notification and concern log in the project file • Retain copies of notifications to all landowners and occupants of properties	IEUA; Construction Contractor	Before and During Construction
NOISE-2: IEUA shall require that all FMP-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable city or county noise level requirements at neighboring property lines.	• Include mitigation measure in project design specifications. • Include mitigation measure in construction contractor specifications. • Perform construction site inspections to ensure compliance with noise ordinances. • Retain copies of site inspection logs or reports in project files.	IEUA; Construction Contractor	During Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
NOISE-3: For construction activities during non-standard working hours or hours that are not exempt from compliance with applicable city or county noise ordinances (e.g., 24-hour well drilling), IEUA will secure a noise waiver from the appropriate jurisdiction if available.	• Include mitigation measure in construction contractor specifications. • Initiate correspondence with the appropriate jurisdiction for noise waiver • Retain copies of the correspondence and waiver in the project file.	IEUA; Construction Contractor	Before and During Construction
NOISE-4: Prior to commencement of construction related to the FMP programs at a specific site that will endure for more than a few days and that are not emergency projects, IEUA will notify property owners within 300 feet regarding the scope and duration of work a minimum of 10 days prior to the start of such activity.	• Include mitigation measure in construction contractor specifications. • Initiate correspondence with property owners • Retain copies of the correspondence in the project file.	IEUA; Construction Contractor	Before Construction
NOISE-5: IEUA shall require the construction contractor(s) to implement the following measure: • Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various FMP projects. Use of small rubber-tired bulldozers shall be encouraged within these areas during grading operations to reduce vibration effects.	• Include mitigation measure in construction contractor specifications. • Retain copies of contractor specifications in project files. • Perform site inspections to verify contractor compliance. Retain inspection records in the project file.	IEUA; Construction Contractor	During Construction
NOISE-6: Where a FMP project would be constructed adjacent to an existing or potential historic building, IEUA shall require by contract specifications that a certified structural engineer be retained to submit evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building. Contract specifications shall be included in the construction documents for the applicable FMP project development.	• Include mitigation measure in construction contractor specifications. • Retain a certified structural engineer to submit evidence that the operation of construction activities would not result in any structural damage to historic building. • Structural engineer shall verify that operation of construction equipment would not result in damage. • Retain engineer report and any necessary information in project file. • Retain copies of construction equipment information in the project file.	IEUA; Construction Contractor	Before Construction
Public Services			
PS-1: If a proposed improvement results in the removal of park or recreational facilities, IEUA will either relocate the proposed improvement or coordinate with the local jurisdiction to develop replacement park or recreational facility capacity.	• Include mitigation measure in construction contractor specifications. • Initiate correspondence with local jurisdiction • Retain copies of the correspondence in the project file	IEUA; Construction Contractor	Before Construction

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Traffic and Transportation			
TT-1: For projects that may affect traffic flow along existing roadways, IEUA shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following: • Develop circulation and detour plans if necessary to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. • To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours. • Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones. • For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls. • Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.	• Include mitigation measure in construction contractor specifications. • Retain copy of Plan in the project file, including correspondence documenting approval of the Plan by the applicable local jurisdiction(s). • Perform site inspections to verify compliance with the Plan. • Retain copies of monitoring records in the project file.	IEUA; Construction Contractor	Before and During Construction
Utilities			
U-1: Implementation of a Drainage Plan to Reduce Downstream Flows. Prior to construction of project facilities, the IEUA shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.	• Include mitigation measure in project design specifications. • Ensure design specifications are included in construction contractor specifications. • Retain copy of Drainage Plan in the project file • Perform site inspections to verify compliance with the Plan. • Retain copies of design and contractor specifications in project files.	IEUA; Construction Contractor	Before and During Construction

CHAPTER 11
Report Preparation

Lead Agency

Inland Empire Utilities Agency
6075 Kimball Avenue Chino, CA 91708

Pietro Cambiaso, P.E.

EIR Consultants

Tom Dodson & Associates
2150 N Arrowhead Ave, San Bernardino, CA 92405

Tom Dodson, Project Director

Kaitlyn Dodson, Analyst

ESA
626 Wilshire Blvd, Suite 1100, Los Angeles CA 90066

Tom Barnes, Project Director

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Analysts:

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Katelyn Matroni	Jaclyn Anderson	Ronald Teitel
Michelle Irace	Jessie Lee	Camille Castillo
Jack Hutchinson	April Gunderson	Matthew Wetherbee
Matt Panopio	Marlie Long	Rachael Larson
Matthew South	Candace Ehringer	

ATTACHMENT B

Environmental Filing Fee Cash Receipt

CLERK OF THE
BOARD OF SUPERVISORS
2017 MAR 17 PM 2:39
COUNTY OF SAN BERNARDINO
CALIFORNIA

Notice of Determination

Appendix D

TO:

☒ Office of Planning and Research
For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044
Street Address: 1400 Tenth Street, Sacramento, CA 95814

☒ County Clerk
County of: San Bernardino
Address: 385 N. Arrowhead Avenue - San Bernardino, CA 92415

FROM: Public Agency: Inland Empire Utilities Agency
Address: 6075 Kimball Avenue
Chino, CA 91708
Contact: Pietro Cambiaso
Phone: (909) 993-1639
Lead Agency (if different from above):

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2016061064

Project Title: IEUA Facilities Master Plans

Project Location (include county): Various cities in San Bernardino County

Project Description: The FMP encompasses six of IEUA's master planning efforts including the Asset Management Plan, the Recycled Water Program Strategy, the Amendment to the 2010 Recharge Master Plan Update, the Wastewater Facilities Master Plan Update Report, the Integrated Water Resources Plan, and the Energy Management Plan. The activities that would be implemented within these individual Facilities Master Plans would provide for future wastewater treatment, biosolids handling, and recycled water production for the IEUA service area.

This is to advise that the Inland Empire Utilities Agency (☒ *Lead Agency or* ☐ *Responsible Agency*) has approved the above described project on _____ (*Date*) and has made the following determinations regarding the above described projects.

1. The project [☒ will ☐ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☒ was ☐ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to the General Public at:
IEUA Headquarters, 6075 Kimball Avenue, Building A, Chino, CA 91708

Signature (Public Agency) _____ Title: General Manager

Date: 3/15/17 Date Received for filing at OPR: _____

FILED / POSTED

County of Riverside
Peter Aldana
Assessor-County Clerk-Recorder
E-201700307
03/20/2017 08:19 AM Fee: $ 50.00
Page 1 of 1

Removed: By: Deputy

Governor's Office of Planning & Research
MAR 20 2017
STATE CLEARINGHOUSE

DATE FILED & POSTED
Posted On: 03/17/17
Removed On: 04/29/17
Receipt No: 36-031717-156

ATTACHMENT C

Notice of Determination

State of California - Department of Fish and Wildlife

2017 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/17) Previously DFG 753.5a

Print | StartOver | Finalize&Email

RECEIPT NUMBER: 36 — 031717 — 156

STATE CLEARINGHOUSE NUMBER *(If applicable)*: 2016061064

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
Inland Empire Utilities Agency		031717

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
San Bernardino	

PROJECT TITLE: IEUA Facilities Master Plans

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL	PHONE NUMBER
Inland Empire Utilities Agency		(909) 993-1639

PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE
6075 Kimball Avenue	Chino	CA	91708

PROJECT APPLICANT *(Check appropriate box)*

☑ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☑ Environmental Impact Report (EIR)	$3,078.25	$	3,078.25
☐ Mitigated/Negative Declaration (MND)(ND)	$2,216.25	$	0.00
☐ Certified Regulatory Program document (CRP)	$1,046.50	$	0.00

☐ Exempt from fee

- ☐ Notice of Exemption (attach)
- ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	0.00
☑ County documentary handling fee		$	50.00
☐ Other CHECK # 218223		$	

PAYMENT METHOD:

☐ Cash ☐ Credit ☑ Check ☐ Other **TOTAL RECEIVED** $ 3,128.25

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	Mariela Barrera, Deputy Clerk

Governor's Office of Planning & Research

MAR 20 2017

STATE CLEARINGHOUSE

ORIGINAL - PROJECT APPLICANT | COPY - CDFW/ASB | COPY - LEAD AGENCY | COPY - COUNTY CLERK | DFW 753.5a (Rev. 20151215)

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME

ENVIRONMENTAL FILING FEE CASH RECEIPT

Receipt #: 17-85639

State Clearinghouse # (if applicable): 2016061064

Lead Agency: INLAND EMPIRE UTILITIES AGENCY *Date:* 03/20/2017

County Agency of Filing: RIVERSIDE *Document No:* E-201700307

Project Title: IEUA FACILITIES MASTER PLANS

Project Applicant Name: INLAND EMPIRE UTILIES AGENCY *Phone Number:* (909) 993-1639

Project Applicant Address: 6075 KIMBALL AVENUE, CHINO, CA 91708

Project Applicant: LOCAL PUBLIC AGENCY

CHECK APPLICABLE FEES:

☐ *Environmental Impact Report*	
☐ *Negative Declaration*	
☐ *Application Fee Water Diversion (State Water Resources Control Board Only)*	
☐ *Project Subject to Certified Regulatory Programs*	
☒ *County Administration Fee*	$50.00
☒ *Project that is exempt from fees (DFG No Effect Determination (Form Attached))*	
☐ *Project that is exempt from fees (Notice of Exemption)*	
Total Received	$50.00

Signature and title of person receiving payment: Deputy

Notes:

Governor's Office of Planning & Research

MAR 20 2017

STATE CLEARINGHOUSE

ACR 533 (Est. 12/2013)

ATTACHMENT D

Identification and Evaluation of Historic Properties

IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

MONTCLAIR BASINS 2 AND 3 IMPROVEMENT PROJECT

City of Montclair
San Bernardino County, California

For Submittal to:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91710
and
State Water Resources Control Board
1001 I Street/P.O. Box 944212
Sacramento, CA 94244

Prepared for:

Tom Dodson, President
Tom Dodson and Associates
2150 N. Arrowhead Avenue
San Bernardino, CA 92405

Prepared by:

CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

Michael Hogan, Principal Investigator, Archaeology
Bai "Tom" Tang, Principal Investigator, History
Terri Jacquemain, Historian/Report Writer
Harry M. Quinn, Geoarchaeologist
Salvadore Boites, Archaeologist
Nina Gallardo, Archaeologist

December 14, 2017

CRM TECH Project No. 3265
Approximately 4.5 acres
USGS Ontario, Calif., 7.5' quadrangle; Section 15, T1S R8W, SBBM
Keywords: Western San Bernardino Valley; Phase I survey; no "historic properties," "historical resources," or "tribal cultural resources" found

EXECUTIVE SUMMARY

Between September and December 2017, at the request of Tom Dodson and Associates, CRM TECH performed a Phase I cultural resources survey on the Area of Potential Effects (APE) for the proposed Montclair Basins 2 and 3 Improvement Project in the City of Montclair, San Bernardino County, California. The undertaking seeks to improve stormwater capture at Montclair Basins 2 and 3 by constructing two new 6.5' x 8' drop inlet structures within the San Antonio Creek channel and installing two approximately 144-foot-long pipelines to deliver the captured water to the two basins. The APE is located on both sides of the San Antonio Creek channel, between Interstate Highway 10 and Moreno Street, in the east half of Section 15, Township 1 South, Range 8 West, San Bernardino Baseline and Meridian.

Construction activities for the undertaking will occur within an approximately 1,023-square-foot area at each of the drop inlet sites within the channel, and a 25,641-square-feet area for the connector pipeline, which will cross under an existing access road and require slope grading around the outlets into each basin. The APE is delineated to encompass these areas as well as a buffer zone around each construction site to account for the maximum extent of ground disturbance during the undertaking. It measures 4.5 acres in total and is divided into two roughly equal-sized, non-contiguous portions that contain segments of the existing channel, the adjacent access road, and areas on the slopes of the basins where the pipeline outlet will be installed. The maximum depth of disturbance, or the vertical extent of the APE, will not exceed 10-12 feet below the existing ground surface.

The study is a part of the environmental review process for the undertaking. The Inland Empire Utilities Agency (IEUA), as the project proponent and the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA). As the undertaking involves State Revolving Funds administered by the State Water Resources Control Board (SWRCB), the study was conducted in accordance with the provisions of both CEQA and Section 106 of the National Historic Preservation Act (NHPA), in a process known as CEQA-Plus.

The purpose of the study is to provide IEUA and SWRCB with the necessary information and analysis to determine whether the proposed undertaking would have an effect on any "historic properties," "historical resources," or "tribal cultural resources," as defined by the pertinent federal and state statutes and regulations, that may exist in or near the APE. In order to accomplish this objective, CRM TECH conducted a cultural resources records search, pursued historical and geoarchaeological background research, contacted Native American representatives, and carried out an intensive-level field survey of the entire APE.

Throughout the course of the study, no "historic properties," "historical resources," or "tribal cultural resources" were encountered within or adjacent to the APE, and the heavily disturbed subsurface sediments in the vertical APE appear to be relatively low in archaeological sensitivity. Pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1-2, CRM TECH recommends to IEUA and SWRCB a finding that *no "historic properties," "historical resources," or "tribal cultural resources" will be affected by the proposed undertaking*. No further cultural resources investigation is recommended for the undertaking unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are inadvertently discovered during earth-moving operations associated with the undertaking, all work in the immediate area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between September and December 2017, at the request of Tom Dodson and Associates, CRM TECH performed a Phase I cultural resources survey on the Area of Potential Effects (APE) for the proposed Montclair Basins 2 and 3 Improvement Project in the City of Montclair, San Bernardino County, California (Figure 1). The undertaking seeks to improve stormwater capture at Montclair Basins 2 and 3 by constructing two new 6.5' x 8' drop inlet structures within the San Antonio Creek channel and installing two approximately 144-foot-long pipelines to deliver the captured water to the two basins. The APE is located on both sides of the San Antonio Creek channel, between Interstate Highway 10 and Moreno Street, in the east half of Section 15, Township 1 South, Range 8 West, San Bernardino Baseline and Meridian (Figures 2, 3).

Construction activities for the undertaking will occur within an approximately 1,023-square-foot area at each of the drop inlet sites within the channel, and a 25,641-square-feet area for the connector pipeline, which will cross under an existing access road and require slope grading around the outlets into each basin. The APE is delineated to encompass these areas as well as a buffer zone around each construction site to account for the maximum extent of ground disturbance during the undertaking. It measures 4.5 acres in total and is divided into two roughly equal-sized, non-contiguous portions that contain segments of the existing channel, the adjacent access road, and areas on the slopes of the basins where the pipeline outlet will be installed (Figures 2, 3). The maximum depth of disturbance, or the vertical extent of the APE, will not exceed 10-12 feet below the existing ground surface.

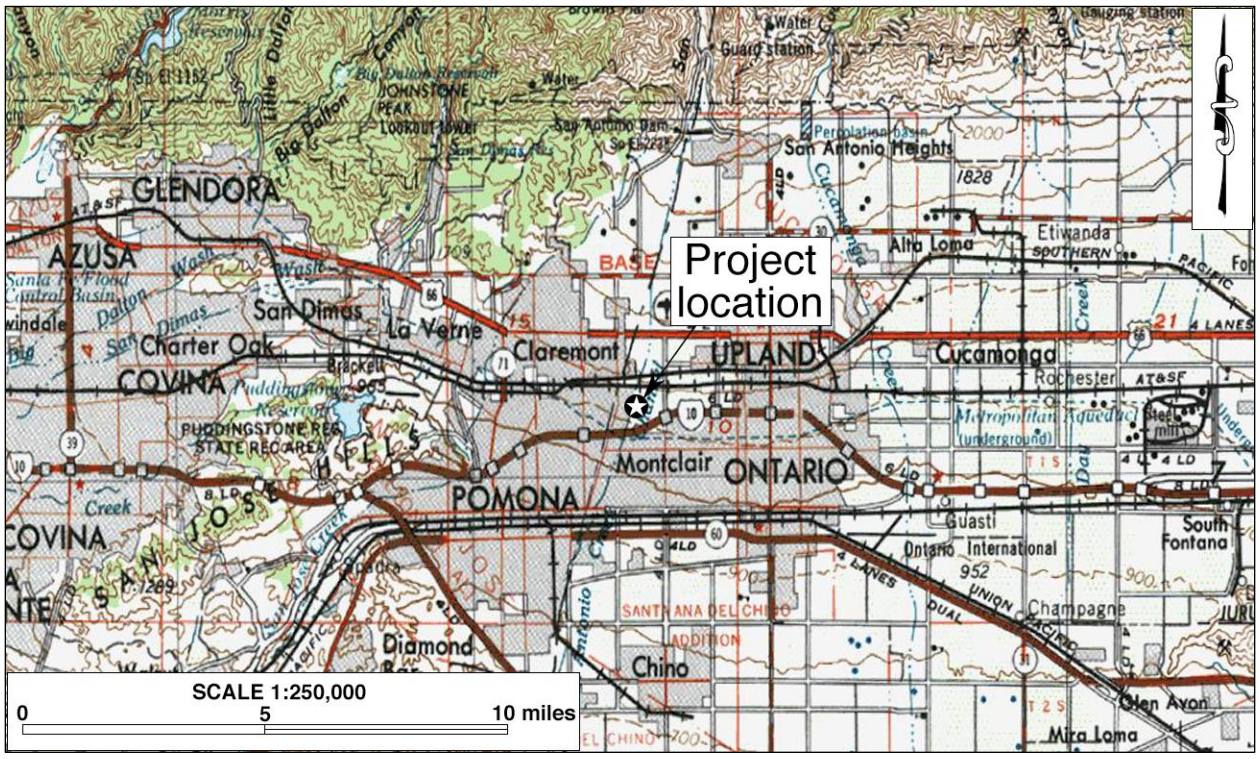


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 60' quadrangle [USGS 1969])

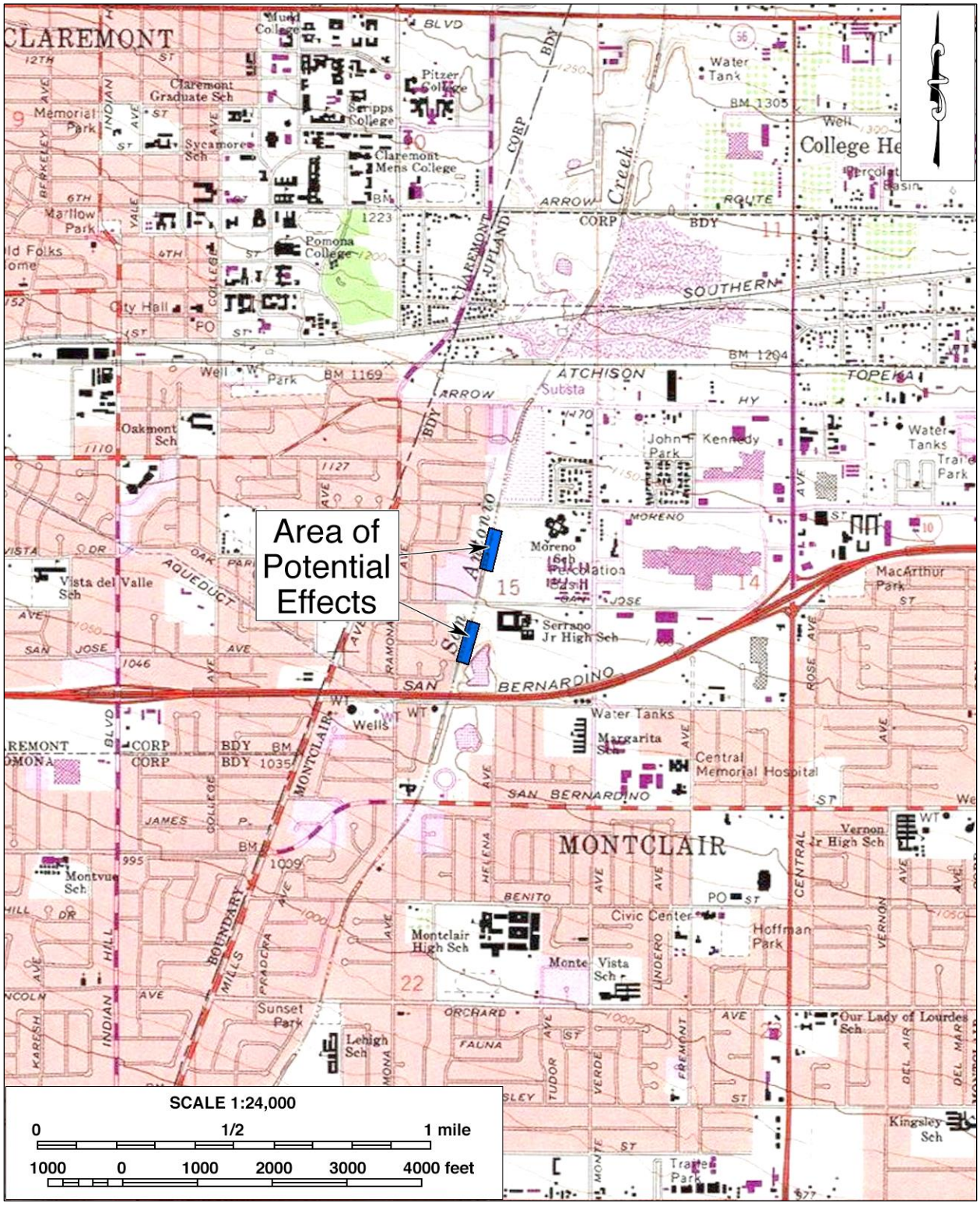


Figure 2. Area of Potential Effects. (Based on USGS Ontario, Calif., 7.5' quadrangle [USGS 1981])



Figure 3. Aerial view of the APE. (Based on Google Earth imagery)

The study is a part of the environmental review process for the undertaking. The Inland Empire Utilities Agency (IEUA), as the project proponent and the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA). As the undertaking involves State Revolving Funds administered by the State Water Resources Control Board (SWRCB), the study was conducted in accordance with the provisions of both CEQA and Section 106 of the National Historic Preservation Act (NHPA), in a process known as CEQA-Plus.

The purpose of the study is to provide IEUA and SWRCB with the necessary information and analysis to determine whether the proposed undertaking would have an effect on any "historic properties," "historical resources," or "tribal cultural resources," as defined by the pertinent federal and state statutes and regulations, that may exist in or near the APE. In order to accomplish this objective, CRM TECH conducted a cultural resources records search, pursued historical and geoarchaeological background research, contacted Native American representatives, and carried out an intensive-level field survey of the entire APE. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

SETTING

CURRENT NATURAL SETTING

The City of Montclair is situated in the western portion of the San Bernardino Valley, a broad inland valley defined by the San Gabriel and San Bernardino Mountain Ranges on the north and a series of low rocky hills on the south. It lies on an alluvial fan extending south from the foothills of the mountain ranges, within a floodplain of San Antonio Creek, which is confined within a concrete-lined channel today. The natural environment of the region is characterized by a temperate Mediterranean climate, with seasonal average temperatures ranging between 43º and 91º Fahrenheit. Precipitation is typically less than 15 inches annually, falling mostly between November and March.

The Montclair Basins are a series of earthen flood-control features located along the eastern side of the San Antonio Creek channel, in a predominantly residential area on the western edge of the city. The ground surface in the APE has been extensively disturbed by past construction activities associated with the channel, the basins, and the graded, asphalt- and gravel-lined access road. The surface soil consists of loosely packed, gray sandy-loam, which hosts an occasional growth of typical small grasses and shrubs. Most of the land in the APE, however, is now covered by concrete, asphalt, or gravel (Figure 4). Elevations in the APE range approximately from 1,055 feet to 1,122 feet above mean sea level.

CULTURAL SETTING

Prehistoric Context

The earliest evidence of human occupation in inland southern California was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008).



Figure 4. Typical landscapes in the APE. *Left*: northern portion; *right*: southern portion. (Photographs taken on November 3, 2017; view to the south)

Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the nearby Cajon Pass area, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural history of southern California has been summarized into numerous chronologies, including the works of Chartkoff and Chartkoff (1984), Warren (1984), and others. The prehistory of Riverside County specifically has been addressed by O'Connell et al. (1974), McDonald, et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of the prehistory of inland southern California can be divided into three primary periods:

- Paleoindian Period (ca. 18,000-9,000 B.P.): Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- Archaic Period (ca. 9,000-1,500 B.P.): Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- Late Prehistoric Period (ca. 1,500 B.P.-contact): Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

The present-day Montclair area lies in the eastern portion of the traditional territory of the Gabrielino, a Takic-speaking people considered to be the most populous and most powerful ethnic group in aboriginal southern California (Bean and Smith 1978:538). The Gabrielino's territory spanned from the San Clemente Island to the San Bernardino-Riverside area and south into southern Orange County, and their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The leading ethnographic sources on Gabrielino culture and history include Bean and Smith (1978), Miller (1991), and McCawley (1996). The following summary is based mainly on these sources.

According to archaeological records, the Gabrielino first arrived in the Los Angeles Basin around 500 B.C., slowly replacing the indigenous Hokan speakers (Howard and Raab 1997; Porcasi 1998). In response to the varying natural environment of their territory, different groups of the Gabrielino adopted different subsistence economies, albeit all based on some combination of gathering, hunting, and/or fishing. In inland areas, the predominant food sources were acorns, sage, deer, and various small animals, including birds. Because of the similarities to other southern California tribes in economic activities, inland Gabrielino groups' industrial arts, dominated by basket weaving, demonstrated no substantial difference from those of their neighbors. Coastal Gabrielino material culture, on the other hand, reflected an elaborately developed artisanship most recognized through the medium of steatite, which was rivaled by few other groups in southern California.

The intricacies of Gabrielino social organization are not well known, although evidence suggests the existence of a moiety system in which various clans belonged to one or the other of two main social/ cultural divisions. There also seems to have existed at least three hierarchically ordered social classes, topped with an elite consisting of the chiefs, their immediate families, and the very rich. Some individuals owned land, and property boundaries were marked by the owner's personalized symbol. Villages were politically autonomous, composed of nonlocalized lineages, each with its own leader. The dominant lineage's leader was usually the village chief, whose office was generally hereditary through the male line. Often several villages were allied under the leadership of a single chief. The villages were frequently engaged in warfare against one another, resulting in what some consider to be a state of constant enmity between coastal and inland Gabrielino groups.

As early as 1542, the Gabrielino were in contact with the Spanish during the historic expedition of Juan Rodríguez Cabrillo, but it was not until 1769 that the Spaniards took steps to colonize Gabrielino territory. Shortly afterwards, most of the Gabrielino people were incorporated into Mission San Gabriel and other missions in southern California. Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrielino population dwindled rapidly. By 1900, they had almost ceased to exist as a culturally identifiable group (Bean and Smith 1978:540). In recent decades, however, there has been a renaissance of Native American activism and cultural revitalization among a number of groups of Gabrielino descendants.

Historic Context

In 1772, three years after the beginning of Spanish colonization of Alta California, Pedro Fages, *comandante* of the new province, and a small force of soldiers under his command became the first

Europeans to set foot in the San Bernardino Valley (Beck and Haase 1974:15; Schuiling 1984:23). They were followed in the next few years by two other famed Spanish explorers, Juan Bautista de Anza and Francisco Garcés, who traveled through the valley in the mid-1770s (Beck and Haase 1974:15). Despite these early visits, for the next 40 years the inland valley received little impact from the Spanish colonization activities in Alta California, which were concentrated predominantly in the coastal regions.

Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became nominally a part of the landholdings of that mission. In the 1830s-1840s, during secularization of the mission system, the Mexican authorities in Alta California made a number of large land grants of former mission properties in the valley. The nearest one among these is the 22,340-acre Rancho San José land grant, which lies roughly a half-mile to the west of the APE, in nearby Los Angeles County (Beck and Haase 1974:37-38). The area around the APE was not included in any of these land grants, and remained unclaimed public land when California became a part of the United States in 1848.

Used primarily as cattle ranches, the San Bernardino Valley saw little development until the mid-19th century, when the U.S. annexation brought waves of American immigrants into the once sparsely populated territory. In the late 19th century, however, the Montclair area remained open grazing land between the towns of Pomona and Ontario (Reeder Heritage Foundation n.d.). In 1897, the "Township of Marquette" was founded by the Frasers, a family of early settlers in the area (*ibid.*; City of Montclair n.d.). In 1907, Los Angeles-based land developer Emil Firth began marketing 5- to 40-acre lots in a 1,000-acre tract named Monte Vista, with special incentives to encourage home building and orchard planting (*ibid.*).

Initially an agrarian settlement focusing on citrus cultivation, Monte Vista experienced a boom in residential development after World War II (Reeder Heritage Foundation n.d.; City of Montclair n.d.). During the late 1940s and the 1950s, virtually all citrus acreage in Monte Vista gave way to suburban housing tracts (Reeder Heritage Foundation n.d.). Fearing annexation by the neighboring cities, the residents of Monte Vista voted to incorporate in 1956 (*ibid.*). Two years later, the new city was renamed Montclair to avoid confusion with a community in northern California (*ibid.*; City of Montclair n.d.). Since that time, Montclair has functioned largely as a "bedroom community" in support of the Greater Los Angeles area.

RESEARCH METHODS

RECORDS SEARCH

The cultural resources records search was conducted by CRM TECH archaeologist Nina Gallardo at the South Central Coastal Information Center (SCCIC) on September 27-28, 2017. Located at the California State University, Fullerton, the SCCIC is the State of California's official cultural resource records repository for the Counties of San Bernardino and Los Angeles. While the APE lies entirely within San Bernardino County, the scope of the records search extended into neighboring Los Angeles County.

During the records search, Gallardo examined maps, records, and electronic databases at the SCCIC for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the APE. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino/Los Angeles County Historical Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

NATIVE AMERICAN PARTICIPATION

On September 21, 2017, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's sacred lands file. Following the NAHC's recommendations and previously established consultation protocol, CRM TECH further contacted nine tribal representatives in the region on October 2-30, both in writing and by telephone, for additional information on potential Native American cultural resources in or near the APE. The correspondence between CRM TECH and the Native American representatives is attached as Appendix 2.

HISTORICAL BACKGROUND RESEARCH

Historical background research for this study was conducted by CRM TECH historian Terri Jacquemain on the basis of published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1865, U.S. Geological Survey (USGS) topographic maps dated 1903-1981, and aerial photographs taken in 1938-2016. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley, and the aerial photographs are available from the NETR Online website and the Google Earth software.

GEOARCHAEOLOGICAL ANALYSIS

As part of the research procedures, CRM TECH geologist Harry M. Quinn conducted a geoarchaeological analysis to assess the APE's potential to contain subsurface cultural deposits from the prehistoric period, which cannot be detected through a standard surface archaeological survey. Sources consulted for this purpose included primarily topographic, geologic, and soil maps and reports pertaining to the surrounding area. Findings from these sources were used to develop a geomorphologic profile of the area and to address the archaeological sensitivity of the vertical APE.

FIELD SURVEY

On November 3, 2017, CRM TECH archaeologist Salvadore Boites carried out the field survey of the APE by walking a series of parallel transects oriented along the San Antonio Creek channel and spaced 15 meters (approximately 50 feet) apart where practicable. Where such transects could not be walked, such as sloping basin sidewalls and the channel bottom, the ground surface was visually inspected from accessible areas above and/or below.

Using these methods, the entire APE was systematically examined for any evidence of cultural remains dating to the prehistoric or historic period (i.e., 45 years or older). As most of APE is

covered by concrete, asphalt, or gravel, visibility of the native ground surface was generally poor. However, in light of the heavily disturbed condition of the surface soil in the APE and the reduced archaeological sensitivity, the level of survey effort that could be completed was considered adequate for this study.

RESULTS AND FINDINGS

RECORDS SEARCH

According to SCCIC records, portions the APE were included in three previous studies, but the APE as a whole had not been surveyed systematically, and no cultural resources were previously identified within or adjacent to the APE. Among the three previous studies involving the APE, one was completed in 1993 and covered Montclair Basins 1-4 in their entirety (Landis 1993; #1062851 in Figure 5). It is now more than 20 years old and is considered outdated for statutory compliance purposes today.

The second study involving the APE was a linear survey for a pipeline project that coincided with a small portion of the APE at Montclair Basin 3 (Tang 2007; #1065877 in Figure 5). The most recent among the three studies, completed in 2016, also covered the four basins in their entirety (Tang 2016; #1068257 in Figure 5), but it was a due-diligence-level study that did not involve a systematic field survey. Since the APE had not been surveyed adequately for cultural resources over the previous 20 years, a field inspection was deemed necessary for this study.

Outside the APE but within a one-mile radius, SCCIC records yielded more than 30 additional studies on various tracts of land and linear features, collectively covering some 20% of the land within the scope of the records (Figure 5). As a result, 12 recorded historical/archaeological sites, one "pending" site, and one isolate—i.e. a locality with fewer than three objects—have been reported to the SCCIC within one mile of the APE, as listed below in Table 1.

Table 1. Previously Recorded Cultural Resources within the Scope of the Records Search
(See Appendix 3 for locations)

Site No.	Recorded by/Date	Description
19-000349	Blackburn 1968	Midden deposit
19-180728	Various 1976-2003	Claremont depot of the Atchison Topeka and Santa Fe Railway
19-180776	Snowiss 1977	Residential buildings in "Russian Village"
19-185548	Chasteen 2003	Sumner House, ca. 1886
19-186058	Unknown 1976-1978	Claremont Colleges Historic District
19-186146	Krinsky 1980	Scripps College for Women
19-189171	Chasteen 2003	Southern California Water Company building
19-189187	Chasteen 2003	Kenyon House at Pomona College
36-006847	Various 1990-2014	Kite-Shaped Track, Atchison Topeka and Santa Fe Railway
36-007794	Landis 1993	Refuse dumping ground
36-020273	Taniguchi 2004	Bridge, ca. 1926
36-024507	Unknown 2004	Commercial building, ca. 1951
36-024458	Goodman 2012	Isolate: hopper mortar
P1083-31H	Unknown 1993	Pending site: Montclair Basin 4 and loading dock

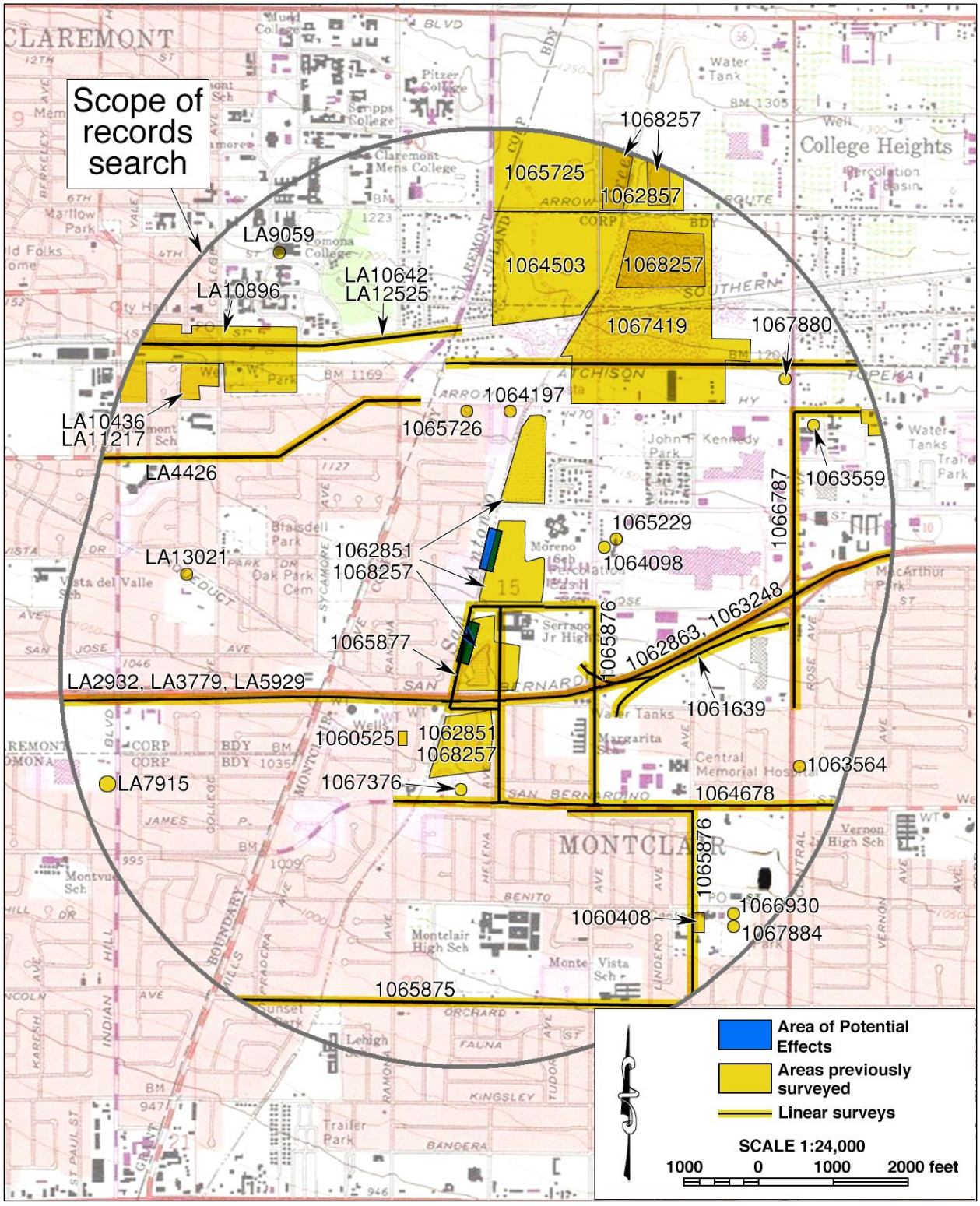


Figure 5. Previous cultural resources studies in the vicinity of the APE, listed by SCCIC file number.

Among these known cultural resources, the isolate and one of the recorded sites were prehistoric—i.e., Native American—in origin, consisting of a midden deposit discovered in the 1960s near the intersection of Arrow Highway and Indian Hill Boulevard, nearly a mile to the northwest, and an isolated mortar found in fill dirt about a half mile to the south of the APE (Appendix 3). The other 11 recorded sites and the "pending" site dated to the historic period.

The most notable among the historic-period sites is "pending" site P1083-31H, which consisted of Montclair Basin 4 and an associated loading dock, located on the south side of Interstate Highway 10 (Appendix 3). Dating at least to 1949, P1083-31H was noted during the 1993 study on the basins but not formally recorded or evaluated (Landis 1993:9-11). None of these previously identified cultural resources was found in the immediate vicinity of the APE (Appendix 3). Therefore, none of them requires further consideration during this study.

NATIVE AMERICAN PARTICIPATION

In response to CRM TECH's inquiry, the NAHC reported that the sacred lands record search identified no Native American cultural resources within the APE, but recommended that local Native American groups be contacted for further information. For that purpose, the NAHC provided a list of potential contacts in the region (Appendix 2). Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to all seven of the individuals on the referral list (Appendix 2). In addition, as recommended by the appropriate tribal government staff, the following designated spokespersons for the tribes were also contacted:

- Samuel H. Dunlap, Cultural Resources Director, Gabrielino Tongva Nation;
- Chris Devers, Vice-Chairman and Cultural Committee member, Pauma Band of Luiseño Indians.

The written requests for comments were sent to the tribal representatives on October 2, 2017, and follow-up telephone solicitations were carried out on October 23-30. As of this time, two of the tribal representatives have responded in writing (Appendix 2). Andrew Salas, Chairman of the Gabrieleño Band of Mission Indians-Kizh Nation, found the APE to be a part of the tribe's ancestral territory and requested monitoring of ground-disturbing activities by a member of his group. Chris Devers of the Pauma Band expressed no specific concerns over this undertaking but requested timely notification if any Luiseño cultural remains were discovered.

HISTORICAL BACKGROUND RESEARCH

Prior to the 1950s, the APE showed no evidence of any settlement or land development activities (Figures 6-9; NETR Online 1938-1953). During the 1850s-1860s, the "Old San Bernardino Road," an important early transportation artery in southern California, traversed approximately 1,000 feet to the south of the APE, but its presence evidently had little impact on settlement and growth in present-day Montclair (Figures 6, 7; Reeder Heritage Foundation n.d.). Between 1894 and 1953, the Montclair area demonstrated a typical rural settlement pattern, with most of the land dedicated to citrus cultivation (Figure 8, 9; NETR Online 1938-1953).

Situated in the largely unconstrained wash of San Antonio Creek, the APE was part of a narrow strip of unused virgin land in the 1938-1953 era, flanked on both sides by expanses acres of citrus groves (NETR Online 1938-1953). Between 1953 and 1959, San Antonio Creek was channelized, and the

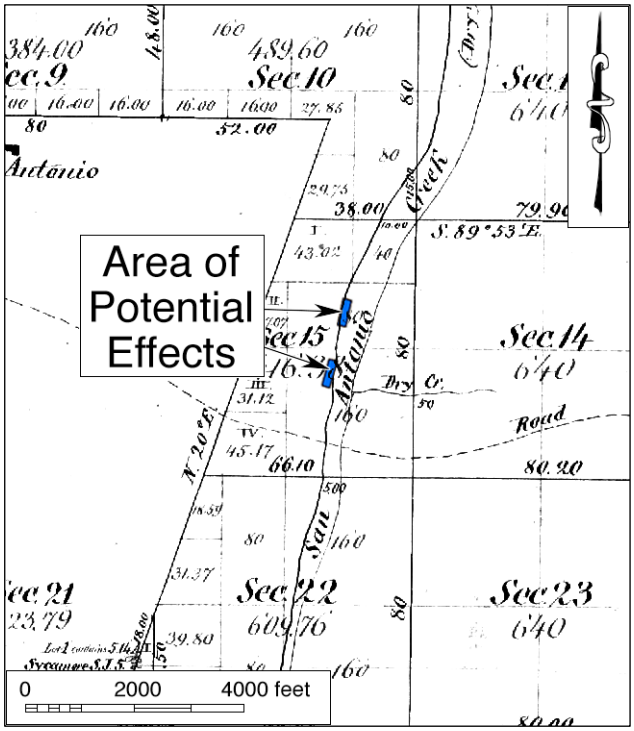


Figure 6. The APE and vicinity in 1852-1856. (Source: GLO 1865)

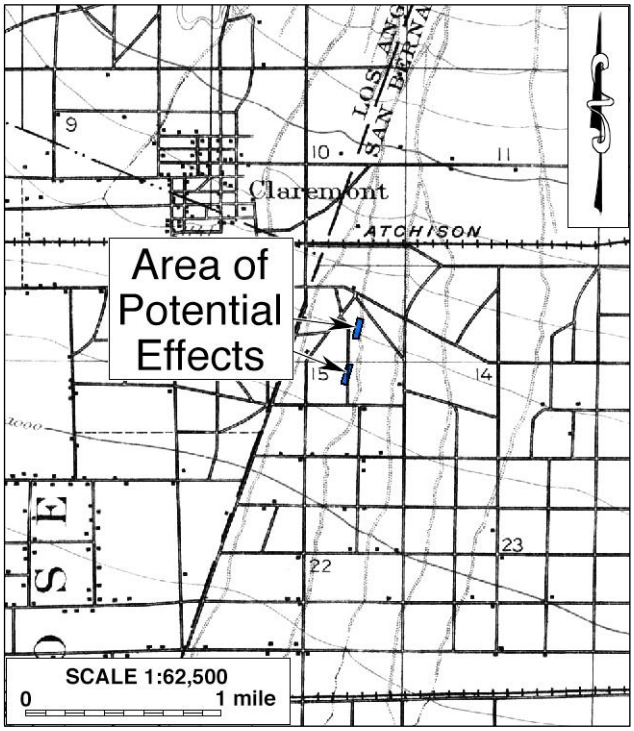


Figure 7. The APE and vicinity in 1894. (Source: USGS 1903)

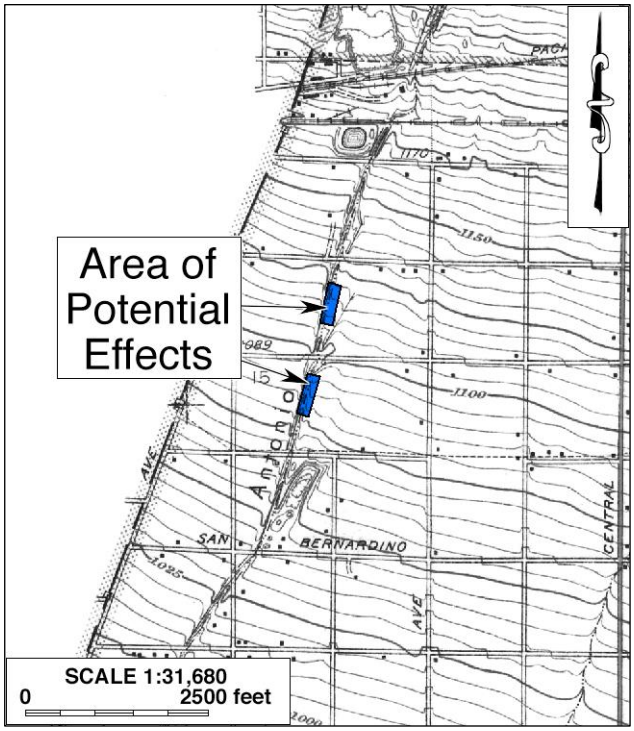


Figure 8. The APE and vicinity in 1933. (Source: USGS 1942)

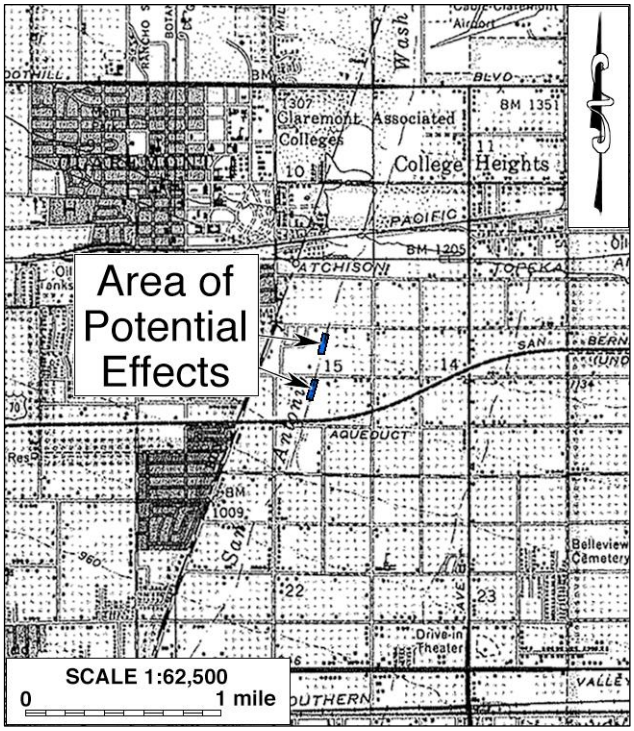


Figure 9. The APE and vicinity in 1952. (Source: USGS 1954)

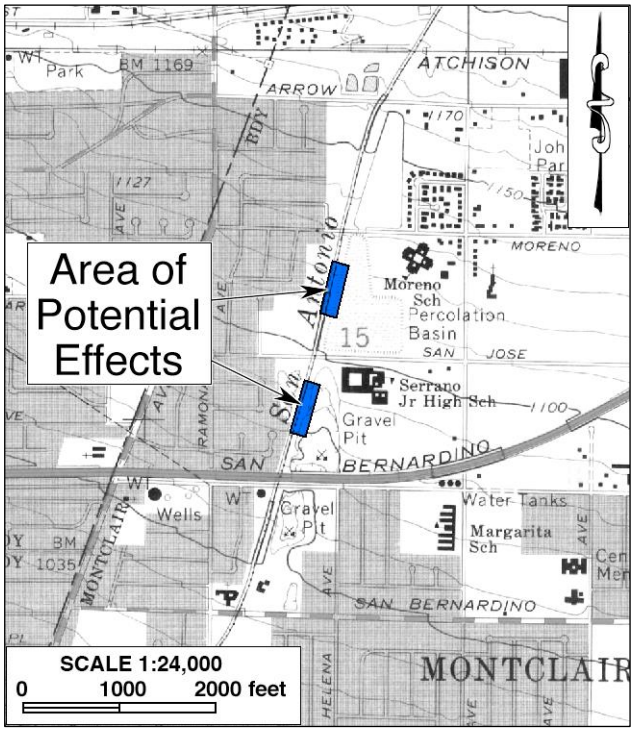


Figure 10. The APE and vicinity in 1966-1967. (Source: USGS 1967)

forerunners of today's Montclair Basins 2 and 3 were built roughly within their current perimeters (NETR Online 1953; 1959). In the meantime, suburban development gradually approached the APE from the west, and spread to the area east of the APE by the mid-1960s (Figure 10; NETR Online 1953-1966). By 1980, virtually the entire area around the APE had been urbanized, and little further change has occurred in the land use since then (NETR Online 1972-2012; Google Earth 1994-2016).

GEOARCHAEOLOGICAL ANALYSIS

Woodruff and Brock (1980:22, Map Sheet 5) mapped the surface soils in the APE as gravelly loamy sands that occur on narrow alluvial fans. Bortugno and Spittler (1986) and Morton and Miller (2006) both mapped the surface geology in and around the APE as mainly younger alluvial fan deposits of Holocene age, with Bortugno and Spittler (1986) noting that some of these soils may rest on top of older Pleistocene-age sediments at an unknown depth. Dibblee (2004) mapped the surface geology at this location as alluvial gravel and sand of stream channels. In general, Pleistocene-age and early Holocene-age deposits were established before human occupation of the region and, thus, are considered to be too old to contain deeply buried prehistoric cultural remains.

The existing prehistoric hunter-gatherer settlement-subsistence model for inland southern California suggests that long-term settlement was more likely to occur on elevated terraces, hills, and finger ridges near permanent or reliable sources of water, while the unprotected valley floor was mostly used for resource procurement, traveling, and opportunistic camping. The APE is situated on the level valley floor and along the natural course of the intermittent San Antonio Creek, which would not have provided a permanent or reliable water source and at the same would have subjected the area to occasional flooding during heavy rains.

In light of its geographical setting, the APE would not have been considered a favorable location for long-term settlement in prehistoric times, nor would the environment be conducive to the preservation of archaeological deposits. It may have been used for resource procurement and processing and probably for temporary camps, which tended to leave behind surface scatters of artifacts but no substantial subsurface cultural deposits.

As noted previously, the entire APE has been extensively disturbed by the construction of Montclair Basins, the San Antonio Creek channel, and other associated facilities such as the access road. Therefore, the subsurface sediments within the vertical extent of the APE, measuring 10-12 feet in

maximum depth, are highly unlikely to contain any intact, potentially significant archaeological remains of prehistoric or early historical origin. Based on these considerations, the subsurface component of the APE appears to be relatively low in archaeological sensitivity.

FIELD SURVEY

The field survey encountered no potential "historic properties," "historical resources," or "tribal cultural resources." Although Montclair Basins 2 and 3 both date to the 1950s, as does the San Antonio Creek channel, the current configuration and appearance of these structures reflect the results of repeated upgrading and constant maintenance over the past 60 years. Designed and built in accordance with industry standards, they do not exhibit any particularly historical qualities or any remarkable architectural, engineering, or aesthetic merits.

Generally speaking, working components of the standardized modern infrastructure such as Montclair Basins 2 and 3 and the San Antonio Creek channel are not considered potential "historic properties" or "historical resources" due to the lack of distinctively historical character. Furthermore, given its limited scope and scale, the proposed undertaking has little potential to alter the current condition and appearance of these structures substantially. Based on these considerations, it was determined that Montclair Basins 2 and 3 and the San Antonio Creek channel do not require further analysis and evaluation during this study.

MANAGEMENT CONSIDERATIONS

The purpose of this study is to identify any "historic properties," "historical resources," or "tribal cultural resources" that may exist within the APE. "Historic properties," as defined by the Advisory Council on Historic Preservation, include "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" (36 CFR 800.16(l)). The eligibility for inclusion in the National Register is determined by applying the following criteria, developed by the National Park Service as per provision of the National Historic Preservation Act:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
> (b) that are associated with the lives of persons significant in our past; or
> (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> (d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

For CEQA-compliance considerations, the State of California Public Resources Code (PRC) establishes the definitions and criteria for "historical resources" and "tribal cultural resources," which require similar protection to what NHPA Section 106 mandates for "historic properties."

"Historical resources," according to PRC §5020.1(j), "includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) 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.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

For "tribal cultural resources," PRC §21074, enacted and codified as part of a 2014 amendment to CEQA through Assembly Bill 52, provides the statutory definition as follows:

"Tribal cultural resources" are either of the following:
(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

In summary of the research results outlined above, no potential "historic properties," "historical resources," or "tribal cultural resources" were previously identified within or adjacent to the APE, and none were encountered during this survey. Although the APE occupies portions of three flood-control facilities that date to the late historic period, namely Montclair Basins 2 and 3 and the San Antonio Creek, these working components of the modern flood-control infrastructure do not demonstrate any distinctively historical character due to modern alterations to maintain functionality, and thus are not considered potential "historic properties" or "historical resources."

The subsurface sediments within the vertical extent of the APE have been heavily disturbed in the past by the construction of the existing flood-control facilities, and appear to be relatively low in sensitivity for potentially significant archaeological remains in buried deposits, especially those of

prehistoric or early historic origin. Based on these findings, and in light of the criteria listed above, this study concludes that no "historic properties," "historical resources," or "tribal cultural resources" are present within or adjacent to the APE.

CONCLUSION AND RECOMMENDATIONS

Section 106 of the National Historic Preservation Act mandates that federal agencies take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate any adverse effects on such properties (36 CFR 800.1(a)). Similarly, CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired."

As stated above, the results of this study indicate that no "historic properties," "historical resources," or "tribal cultural resources" are known to be present within or adjacent to the APE, and the heavily disturbed subsurface sediments in the APE appear to be relatively low in archaeological sensitivity. Therefore, pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1-2, CRM TECH presents the following recommendations to IEUA and SWRCB:

- No "historic properties," "historical resources," or "tribal cultural resources" will be affected by the proposed undertaking.
- No further cultural resources investigation will be necessary for the undertaking unless project plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are inadvertently discovered during earth-moving operations associated with the undertaking, all work in the immediate area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the find.

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APPENDIX 1
PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR/HISTORIAN
Bai "Tom" Tang, M.A.

Education

1988-1993	Graduate Program in Public History/Historic Preservation, UC Riverside.
1987	M.A., American History, Yale University, New Haven, Connecticut.
1982	B.A., History, Northwestern University, Xi'an, China.
2000	"Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994	"Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002	Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997	Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993	Project Historian, Archaeological Research Unit, UC Riverside.
1990	Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992	Teaching Assistant, History of Modern World, UC Riverside.
1988-1993	Research Assistant, American Social History, UC Riverside.
1985-1988	Research Assistant, Modern Chinese History, Yale University.
1985-1986	Teaching Assistant, Modern Chinese History, Yale University.
1982-1985	Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., RPA*

Education

1991	Ph.D., Anthropology, University of California, Riverside.
1981	B.S., Anthropology, University of California, Riverside; with honors.
1980-1981	Education Abroad Program, Lima, Peru.
2002	"Section 106—National Historic Preservation Act: Federal Law at the Local Level," UCLA Extension Course #888.
2002	"Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002	"Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992	"Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992	"Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Registrations

*Registered Professional Archaeologist 28576644

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998	Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998	Assistant Research Anthropologist, University of California, Riverside
1992-1995	Project Director, Archaeological Research Unit, U.C. Riverside.
1993-1994	Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C. Riverside, Chapman University, and San Bernardino Valley College.
1991-1992	Crew Chief, Archaeological Research Unit, U.C. Riverside.
1984-1998	Project Director, Field Director, Crew Chief, and Archaeological Technician for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Principal investigator for, author or co-author of, and contributor to numerous cultural resources management study reports since 1986.

Memberships

Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT GEOLOGIST/ARCHAEOLOGIST
Harry M. Quinn, M.S.

Education

1978 Certificate in Archaeology, University of California, Los Angeles.
1968 M.S., Geology, University of Southern California, Los Angeles.
1964 B.S., Geology, Long Beach State College, Long Beach.
1962 A.A., Los Angeles Harbor College, Wilmington.

2001 "The Art and Science of Flintknapping," presented by Jeanne D. Binning, Zzyzx.
1999 "Certified Local Government Preservation Commission, Board, and Staff Training Program," presented by the California Preservation Foundation, Long Beach and Palm Springs.
1998 "Historic Archaeology Workshop," presented by Richard Norwood, Torres-Martinez Indian Reservation.
1997 "Native American Archaeology," presented by Russell Kaldenberg, College of the Desert, Palm Desert.
1996-1998 "Project Archaeology," presented by BLM and DOE, North Palm Springs.
1996 "Mojave Desert Heritage Interagency Workshop," Palm Springs,.
1996 "Cultural Resources and CEQA: Your Responsibility," presented by the Association of Environmental Professionals, Hemet.
1991 "Ceramic Workshop," presented by Dr. Jerry Schaefer, Palm Springs.
1990 "Introduction to Coachella Valley Archaeology," presented by Anne Duffield, Palm Desert.
1989 "Prehistoric Rock Art and Archaeology of the Southern California Deserts," presented by Anne Duffield, UC Riverside Extension, Palm Springs.

Professional Experience

1998- Project Archaeologist/Field Director, CRM TECH, Riverside/Colton, California.
1994-1996 Environmental Geologist, E.C.E.S., Inc., Redlands, California.
1992-1998 Independent Geological/Archaeological/Environmental Consultant, Pinyon Pines.
1988-1992 Project Geologist/Director of Environmental Services, STE Associates/Soil and Testing Engineers, San Bernardino, California.
1966-1988 Geologist/Senior Geologist, Texaco, Inc., Los Angeles; Tenneco Oil Exploration and Production, Englewood, Colorado; Loco Exploration, Inc., Aurora, Colorado; Jirsa Environmental Services, Norco, California.

Memberships

Society for American Archaeology; Society for California Archaeology; Archaeological Survey Association of Southern California; Coachella Valley Archaeological Society (President, 1993-1994, 2000; Vice President, 1992, 1995-1999, 2001; Basic Archaeology Training Course Instructor, 1996-2000; Environmental Assessment Committee Chair, 1997-1999); Coachella Valley Historical Society; Malki Museum; Southwest Museum; El Paso Archaeological Society; Ohio Archaeological Society; West Virginia Archaeological Society; Museum of the Fur Trade; Cahokia Mounds Association.

PROJECT HISTORIAN/REPORT WRITER
Terri Jacquemain, M.A.

Education

2004 M.A., Public History and Historic Resource Management, University of California, Riverside.
- M.A. thesis: Managing Cultural Outreach, Public Affairs and Tribal Policies of the Cabazon Band of Mission Indians, Indio, California; internship served as interim Public Information Officer, Cabazon Band of Mission Indians, June-October, 2002.

2002 B.S., Anthropology, University of California, Riverside.
2001 Archaeological Field School, University of California, Riverside.
1991 A.A., Riverside Community College, Norco Campus.

Professional Experience

2003- Historian/Architectural Historian/Report Writer, CRM TECH, Riverside/ Colton, California.
- Author/co-author of legally defensible cultural resources reports for CEQA and NHPA Section 106;
- Historic context development, historical/archival research, oral historical interviews, consultation with local communities and historical organizations;
- Historic building surveys and recordation, research in architectural history; architectural description

2002-2003 Teaching Assistant, Religious Studies Department, University of California, Riverside.
2002 Interim Public Information Officer, Cabazon Band of Mission Indians.
2000 Administrative Assistant, Native American Student Programs, University of California, Riverside.
1997-2000 Reporter, *Inland Valley Daily Bulletin*, Ontario, California.
1991-1997 Reporter, *The Press-Enterprise*, Riverside, California.

Membership

California Preservation Foundation.

PROJECT ARCHAEOLOGIST
Salvadore Boites, M.A.

Education

2013 M.A., Applied Anthropology, California State University, Long Beach.
2003 B.A., Anthropology/Sociology, University of California, Riverside.
1996-1998 Archaeological Field School, Fullerton Community College, Fullerton, CA.

Professional Experience

2014- Project Archaeologist/Paleontologist, CRM TECH, Colton, California.
2010-2011 Adjunct Instructor, Anthropology etc., Everest College, Anaheim, California.
2003-2008 Project Archaeologist/Paleontologist, CRM TECH, Riverside/Colton, California.
2001-2002 Teaching Assistant, Moreno Elementary School, Moreno Valley, California.
1999-2003 Research Assistant, Anthropology Department, University of California, Riverside.

Research Interests

Cultural Resource Management, Applied Archaeology/Anthropology, Indigenous Cultural Identity, Poly-culturalism.

PROJECT ARCHAEOLOGIST/NATIVE AMERICAN LIAISON
Nina Gallardo, B.A.

Education

2004 B.A., Anthropology/Law and Society, University of California, Riverside.

Professional Experience

2004- Project Archaeologist, CRM TECH, Riverside/Colton, California.

- Surveys, excavations, construction monitoring, field recordation, mapping, records searches, and Native American liaison.

Honors and Awards

2000-2002 Dean’s Honors List, University of California, Riverside.

APPENDIX 2

CORRESPONDENCE WITH NATIVE AMERICAN REPRESENTATIVES*

* Nine local Native American representatives were contacted during this study; a sample letter is included in the appendix.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 Fax
nahc@pacbell.net

Project: Montclair Basins Project (CRM TECH Contract No. 3265)

County: San Bernardino

USGS Quadrangle Name: Ontario, Calif.

Township 1 South **Range** 8 West SB **BM; Section(s)** 15

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA **Zip:** 92324

Phone: (909) 824-6400 **Fax:** (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to make improvements to two impact areas within the existing Montclair Basins, on approximately 4.3 acres of land located north of the I-10 Freeway and between Mills Avenue and Monte Vista Avenue, in the City of Montclair, San Bernardino County, California.

September 21, 2017

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

September 27, 2017

Nina Gallardo
CRM TECH

Sent by E-mail: ngallardo@crmtech.us

RE: Proposed Montclair Basins (CRM TECH Contract No. 3265) Project, City of Montclair; Ontario USGS Quadrangle, San Bernardino County, California

Dear Ms. Gallardo:

A records search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

Native American Heritage Commission
Native American Contact List
San Bernardino County
9/27/2017

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chariperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
gabrielenoindians@yahoo.com

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Pauma Band of Luiseno Indians - Pauma & Yuima Reservation
Temet Aguilar, Chairperson
P.O. Box 369 — Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 1289
Fax: (760) 742-3422

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Serrano
Phone: (760) 885 - 0955 — Tataviam
tsen2u@hotmail.com

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 Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Montclair Basins Project, San Bernardino County.

October 2, 2017

Samuel H. Dunlap, Director of Cultural Resources
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

RE: Montclair Basins Project
4.3 Acres in the City of Montclair
San Bernardino County, California
CRM TECH Contract #3265

Dear Mr. Dunlap:

I am writing to bring your attention to an ongoing CEQA-Plus study for the proposed project referenced above. The project entails improvements to two existing water retention and recharge basins on two non-contiguous parcels that measure 4.3 acres in total. The Area of Potential Effects (APE) for the undertaking is located north of the I-10 Freeway and between Mills Avenue and Monte Vista Avenue, in the City of Montclair. The accompanying map, based on the USGS Ontario, Calif., 7.5' quadrangle, depicts the location of the APE in Section 15, T1S R8W, SBBM.

According to records on file at the South Central Coastal Information Center (SCCIC), there are no known historical/archaeological sites within the boundaries of the APE. Outside the project boundaries but within a one-mile radius, SCCIC records show 12 historical/archaeological sites, one pending site, and one isolate—i.e. a locality with fewer than three objects—were previously identified. One of the known sites and the isolate were of prehistoric—i.e., Native American—origin, consisting of a midden and a mortar. The rest dated to the historic period and included the Claremont Colleges, the Atchison, Topeka and Santa Fe/Burlington Northern Santa Fe Railway, several buildings, a bridge, a basin, and a refuse dump.

In a letter dated September 27, 2017, the Native American Heritage Commission reports that the sacred lands record search identified no Native American cultural resources within the APE, but recommends that local Native American groups be contacted for further information (see attached). Therefore, as part of the cultural resources study for this project, I am writing to request your input on potential Native American cultural resources in or near the APE.

Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other sites of Native American traditional cultural value in or near the APE, or any other information to consider during the cultural resources investigations. Any information or concerns may be forwarded to CRM TECH by telephone, e-mail, facsimile, or standard mail. Requests for documentation or information we cannot provide will be forwarded to our client and/or the lead agencies, namely the Inland Empire Utilities Agency and the State Water Resource Control Board.

We would also like to clarify that, as the cultural resources consultant for the project, CRM TECH is not involved in the AB 52-compliance process or in government-to-government consultations. The

purpose of this letter is to seek any information that you may have to help us determine if there are cultural resources in or near the project area that we should be aware of and to help us assess the sensitivity of the APE. Thank you for your time and effort in addressing this important matter.

Respectfully,

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
Email: ngallardo@crmtech.us

Encl.: NAHC response letter and project location map

From: Cultural Pauma <cultural@pauma-nsn.gov>
Sent: Tuesday, October 3, 2017 9:53 AM
To: Nina Gallardo
Cc: Dixon, Patti; Jeremy Zagarella
Subject: RE: NA Scoping Letter for the Montclair Basins Project in the City of Montclair, San Bernardino County (CRM TECH # 3265)

Ms. Gallardo,

Thank you for the project notification. This project appears to be outside of the ancestral territory of the Pauma people. If any finds can be traced to the Luiseno culture, please contact us. If human remains are discovered, please contact us within the allocated time frame of NAGPRA. If there are any questions, contact us.

Thank you,

Mr. Chris Devers
Cultural Liaison
Pauma Band of Luiseno Indians

Gabrieleno Band of Mission Indians – Kizh Nation

Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

October 10, 2017

Regarding: Montclair Baisns Project

Dear Nina Gallardo,

This email is in response to the above referenced project located between Mills Ave & Monte Vista Ave in the city of Montclair . The project location is within our Ancestral territory which may have potential for discoveries of our cultural resources . Therefore, we would like to request that one of our Native Monitors be present during any and all ground disturbances.

Should you have any questions or concerns, please contact our office at 844-390-0787.

Thank you,

Andrew Salas
Chairman, Gabreileno Band of Mission Indians-Kizh Nation

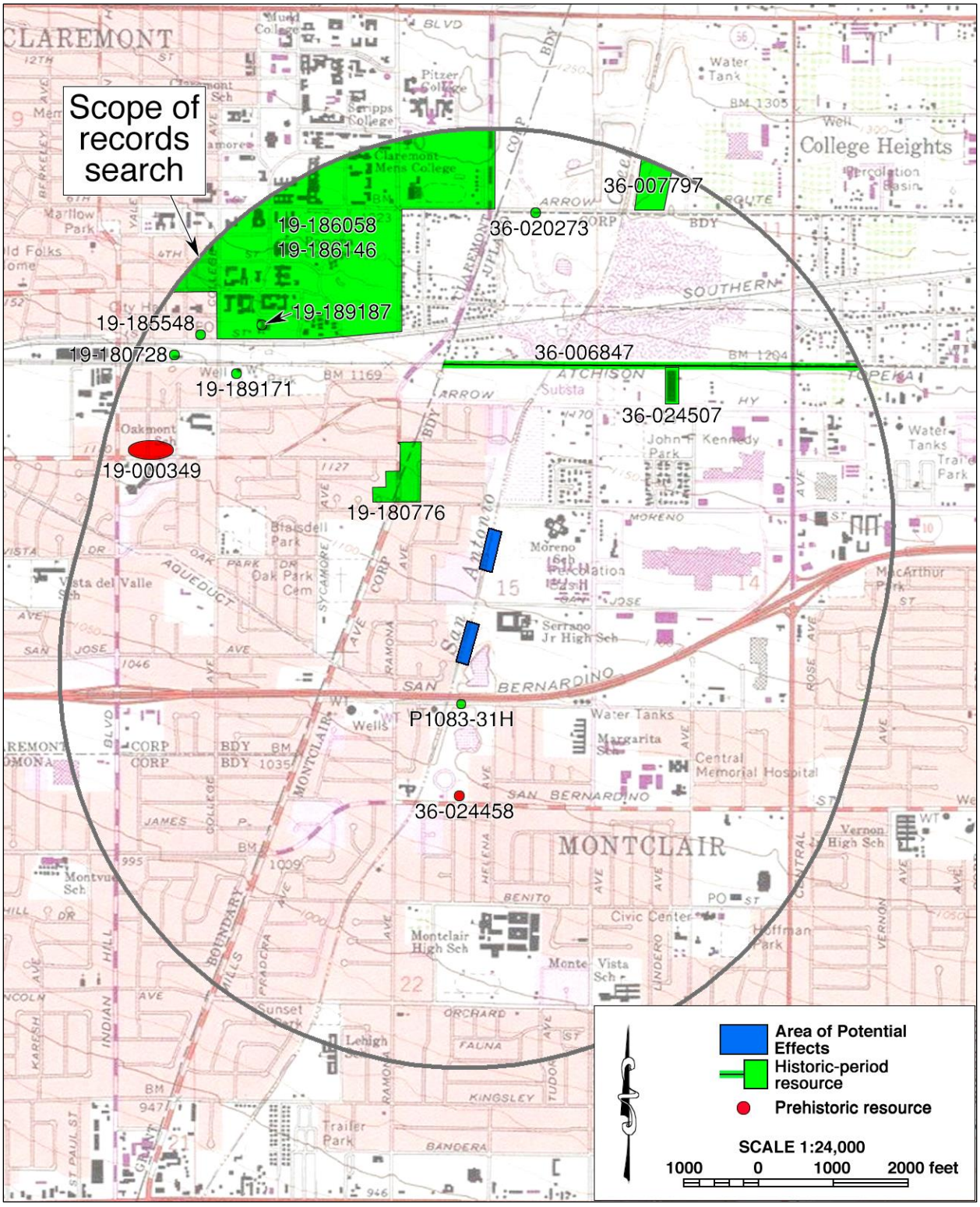
TELEPHONE LOG

Name	Tribe/Affiliation	Telephone Contacts	Note
Samuel H. Dunlap, Director of Cultural Resources	Gabrielino/Tongva Nation	10:28 am, October 23, 2017; 2:53 pm, October 30, 2017	Left voice messages; no response to date.
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation	None	Samuel Dunlap is the designated spokesperson for the tribe (see above).
Andrew Salas, Chairman	Gabrieleno Band of Mission Indians-Kizh Nation	None	Mr. Salas responded in a letter dated October 10, 2017 (copy attached).
Anthony Morales, Chairperson	Gabrieleño/Tongva San Gabriel Band of Mission Indians	10:24 am, October 23, 2017; 2:54 pm, October 30, 2017	Left voice messages; no response to date.
Charles Alvarez, Chairperson	Gabrielino-Tongva Tribe	10:18 am, October 23, 2017; 2:57 pm, October 30, 2017	Left voice messages; no response to date.
Robert F. Dorame, Tribal Chair/Cultural Resources	Gabrielino Tongva Indians of California Tribal Council	10:33 am, October 23, 2017; 3:00 pm, October 30, 2017	Mr. Dorame stated that the he had forwarded the letter to other tribal members, and that the tribe would comment in writing if necessary.
Temet Aguilar, Chairperson	Pauma Band of Luiseño Indians	None	Chris Devers is the designated spokesperson for the tribe (see below).
Chris Devers, Vice-Chairperson and Cultural Committee member	Pauma Band of Luiseño Indians	None	Mr. Devers responded by e-mail on October 3, 2017 (copy attached).
John Valenzuela, Chairperson	San Fernando Band of Mission Indians	11:00 am, October 23, 2017; 3:09 pm, October 30, 2017	Left voice messages; no response to date.

APPENDIX 3

LOCATIONS OF RECORDED CULTURAL RESOURCES WITHIN THE ONE-MILE SCOPE OF THE RECORDS SEARCH

(Confidential)


Scope of records search
19-186058
19-186146
19-189187
19-185548
19-180728
19-189171
19-000349
19-180776
36-007797
36-020273
36-006847
36-024507
P1083-31H
36-024458
CLAREMONT
MONTCLAIR
College Heights
Area of Potential Effects
Historic-period resource
Prehistoric resource
SCALE 1:24,000
1000 0 1000 2000 feet

ATTACHMENT E

SIP/NEPA De Minimis Air Quality/Pollution Determination

URBAN CROSSROADS

260 E. Baker St. | Suite 200 | Costa Mesa, CA 92626 | (949) 660-1994
urbanxroads.com

December 21, 2017

Mr. Tom Dodon
Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405

SUBJECT: IEUA BASIN IMPROVEMENT PROJECT AT MONTCLAIR BASIN
SIP/NEPA *DE MINIMIS* AIR QUALITY/POLLUTION DETERMINATION

Dear Mr. Tom Dodon:

The firm of Urban Crossroads, Inc. is pleased to submit this SIP/NEPA *De Minimis* Air Quality/Pollution Determination for the IEUA Basin Improvement Project at Montclair Basin ("Project").

PROJECT DESCRIPTION

The proposed project consists of excavating and constructing a recharge basin at the Montclair basin in the City of Montclair. The project is expected to occur over a two-month period starting in January 2018. The Project will require (2) Loader, (1) Excavator, and (1) Concrete Mix Truck. For analytical purposes, it is conservatively estimated that each piece of equipment is operating for 8 hours per day. Additionally, the project would result in the 125 cubic yards (225 square feet) of demolished waste and 450 cubic yards of exported material.

INTRODUCTION

The U.S. Environmental Protection Agency published "Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule," in the November 30, 1995, Federal Register (40 CFR Parts 6, 51, and 93). The 40 CFR Part 1 51.850(a) states that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity which does not conform to an applicable state implementation plan (SIP). It is the responsibility of the Federal agency to determine whether a Federal action conforms to the applicable implementation plan, before the action is taken. If the proposed project includes any federal funding, or if the project requires any federal permits such as for streambed alteration, federal participation is not allowed unless a conformity determination has been made.

Federal actions may be exempt from conformity determinations if they do not exceed designated *de minimis* emission levels. The 40 CFR Part 51.853(b) establishes these *de minimis* levels for criteria pollutants. The South Coast Air Basin is a designated extreme non-attainment area for the federal 8-hour standard for ozone and serious non-attainment for PM-10. These designations establish the *de minimis* annual air pollution emissions levels for any proposed action.

A meter replacement project will not have any operational air quality effects. The only potential source of air quality emissions would be from construction activities. Annualized construction activity emissions for the proposed project were calculated using the South Coast Air Quality Management District (SCAQMD) CalEEMod

computer model. The CalEEMod model provides a method of calculating construction emissions. It calculates both the daily maximum and annual emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

SIP/NEPA CONFORMITY

Annualized construction activity emissions were calculated by assuming peak daily activities would occur over a three-month time frame. The calculated emissions were then compared to the EPA *de minimis* emission thresholds that would allow for a federal conformity finding with Section 176c of the Clean Air Act.

If the project-related emissions from construction and operations are less than specified "*de minimis*" levels, no further SIP consistency demonstration is required. The SCAB is designated as a "extreme" non-attainment area for the federal 8-hour ozone standard. The basin is a non-attainment area for PM-10 andPM-2.5. Based on these designations, the following emissions levels are presumed evidence of SIP conformity (see Table 1):

TABLE 1: SIP CONFORMITY SCREENING-LEVELS

VOC/ROG<	<10 tons/year
NOx	<10 tons/year
PM-2.5	<100 tons/year
PM-10	<70 tons/year

Maximum annual project-related air pollution emissions were modeled in CalEEMod and compared relative to federal standard attainment designations and appropriate *de minimis* thresholds. The following construction assumptions were modeled for the proposed upsized pipeline replacement activities which will eliminate the existing internal bottleneck and will allow recycled water to move through the system without constraint.

As stated, the project is expected to occur over a two-month period starting in January 2018. The Project will require (2) Loader, (1) Excavator, and (1) Concrete Mix Truck. For analytical purposes, it is conservatively estimated that each piece of equipment is operating for 8 hours per day. Additionally, the project would result in the 125 cubic yards (225 square feet) of demolished waste and 450 cubic yards of exported material. Maximum annual project-related air pollution emissions relative to federal standard attainment designations and appropriate *de minimis* thresholds are summarized on Table 2. As shown, the maximum annual emissions are significantly less than their associated *de minimis* thresholds. As such, a formal SIP consistency analysis is not required as demonstrated on Table 3.

TABLE 2: PROPOSED PROJECT CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (tons per year)						
	VOC	NOx	CO	SOx	PM10	PM2.5	CO2
2018	0.03	0.33	0.26	4.90E-04	0.02	0.02	45.09
NEPA Threshold	10	10	100	100	70	100	--
Threshold Exceeded?	NO	NO	NO	NO	NO	NO	--

SIP CONSISTENCY FINDING

Maximum annual project-related air pollution emissions relative to federal standard attainment designations and appropriate *de minimis* thresholds are as summarized on Table 3 as follows:

TABLE 3: ATTAINMENT DESIGNATIONS AND EMISSIONS SUMMARY

Pollutant	Federal Status	Level	Threshold	Construction Emissions (Tons/Year)	Threshold Exceeded?	Operational Emissions (Tons/Year)
Ozone (O3)	Nonattainment	Extreme	10	0.03	No	N/A
Carbon Monoxide (CO)	Attainment	-	100	0.26	No	N/A
Oxides of Nitrogen (NOx)	Attainment	-	10	0.33	No	N/A
Reactive Organic Gases (ROG)	--	-	10	0.03	No	N/A
Volatile Organic Compounds (VOC)	--	-	10	0.03	No	N/A
Lead (Pb)	Nonattainment	-	10	0	No	N/A
Particulate Matter less than 2.5 microns in diameter (PM2.5)	Nonattainment	Serious	100	0.02	No	N/A
Particulate Matter less than 10 microns in diameter (PM10)	Attainment	-	70	0.02	No	N/A
Sulfur Dioxide (SO2)	Attainment	-	100	4.90E-04	No	N/A

If you have any questions, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.



Haseeb Qureshi,
Senior Associate

ATTACHMENT "A": CALEEMOD OUTPUT

Montclair Basin (Unmitigated)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction schedule adjusted as per information provided by the Client.

Off-road Equipment - Equipment adjusted as per information provided by the Client.

Off-road Equipment - Construction Run Only.

Grading -

Demolition -

Vehicle Trips - Construction Run Only.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	43.00
tblConstructionPhase	NumDays	0.00	43.00
tblConstructionPhase	PhaseEndDate	12/31/2017	2/28/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	2/28/2018
tblGrading	MaterialExported	0.00	450.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0311	0.3182	0.2724	4.3000e-004	3.2200e-003	0.0181	0.0213	8.4000e-004	0.0166	0.0175	0.0000	38.9325	38.9325	0.0109	0.0000	39.2054
Maximum	**0.0311**	**0.3182**	**0.2724**	**4.3000e-004**	**3.2200e-003**	**0.0181**	**0.0213**	**8.4000e-004**	**0.0166**	**0.0175**	**0.0000**	**38.9325**	**38.9325**	**0.0109**	**0.0000**	**39.2054**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0311	0.3182	0.2724	4.3000e-004	3.2200e-003	0.0181	0.0213	8.4000e-004	0.0166	0.0175	0.0000	38.9325	38.9325	0.0109	0.0000	39.2054
Maximum	**0.0311**	**0.3182**	**0.2724**	**4.3000e-004**	**3.2200e-003**	**0.0181**	**0.0213**	**8.4000e-004**	**0.0166**	**0.0175**	**0.0000**	**38.9325**	**38.9325**	**0.0109**	**0.0000**	**39.2054**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	0.3423	0.3423
		Highest	0.3423	0.3423

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	2/28/2018	5	43	
2	Grading	Grading	1/1/2018	2/28/2018	5	43	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Other Construction Equipment	1	8.00	172	0.42
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	1	3.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	56.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7200e-003	0.0565	0.0502	7.0000e-005		4.0100e-003	4.0100e-003		3.6900e-003	3.6900e-003	0.0000	6.1005	6.1005	1.9000e-003	0.0000	6.1480
Total	**5.7200e-003**	**0.0565**	**0.0502**	**7.0000e-005**	**1.1000e-004**	**4.0100e-003**	**4.1200e-003**	**2.0000e-005**	**3.6900e-003**	**3.7100e-003**	**0.0000**	**6.1005**	**6.1005**	**1.9000e-003**	**0.0000**	**6.1480**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.4000e-004	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0382	0.0382	0.0000	0.0000	0.0383
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.2000e-004	3.1400e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6477	0.6477	2.0000e-005	0.0000	0.6483
Total	**3.8000e-004**	**4.6000e-004**	**3.1600e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6859**	**0.6859**	**2.0000e-005**	**0.0000**	**0.6866**

3.2 Demolition - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7200e-003	0.0565	0.0502	7.0000e-005		4.0100e-003	4.0100e-003		3.6900e-003	3.6900e-003	0.0000	6.1005	6.1005	1.9000e-003	0.0000	6.1480
Total	**5.7200e-003**	**0.0565**	**0.0502**	**7.0000e-005**	**1.1000e-004**	**4.0100e-003**	**4.1200e-003**	**2.0000e-005**	**3.6900e-003**	**3.7100e-003**	**0.0000**	**6.1005**	**6.1005**	**1.9000e-003**	**0.0000**	**6.1480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.4000e-004	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0382	0.0382	0.0000	0.0000	0.0383
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.2000e-004	3.1400e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6477	0.6477	2.0000e-005	0.0000	0.6483
Total	**3.8000e-004**	**4.6000e-004**	**3.1600e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6859**	**0.6859**	**2.0000e-005**	**0.0000**	**0.6866**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0238	0.2523	0.2094	3.1000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	28.2793	28.2793	8.8000e-003	0.0000	28.4994
Total	**0.0238**	**0.2523**	**0.2094**	**3.1000e-004**	**3.0000e-005**	**0.0140**	**0.0141**	**0.0000**	**0.0129**	**0.0129**	**0.0000**	**28.2793**	**28.2793**	**8.8000e-003**	**0.0000**	**28.4994**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	8.1000e-003	1.2000e-003	2.0000e-005	4.8000e-004	3.0000e-005	5.1000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	2.1395	2.1395	1.2000e-004	0.0000	2.1426
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0200e-003	8.6000e-004	8.3800e-003	2.0000e-005	1.8900e-003	1.0000e-005	1.9000e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.7273	1.7273	6.0000e-005	0.0000	1.7288
Total	**1.2200e-003**	**8.9600e-003**	**9.5800e-003**	**4.0000e-005**	**2.3700e-003**	**4.0000e-005**	**2.4100e-003**	**6.3000e-004**	**4.0000e-005**	**6.7000e-004**	**0.0000**	**3.8667**	**3.8667**	**1.8000e-004**	**0.0000**	**3.8714**

3.3 Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0238	0.2523	0.2094	3.1000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	28.2793	28.2793	8.8000e-003	0.0000	28.4994
Total	**0.0238**	**0.2523**	**0.2094**	**3.1000e-004**	**3.0000e-005**	**0.0140**	**0.0141**	**0.0000**	**0.0129**	**0.0129**	**0.0000**	**28.2793**	**28.2793**	**8.8000e-003**	**0.0000**	**28.4994**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	8.1000e-003	1.2000e-003	2.0000e-005	4.8000e-004	3.0000e-005	5.1000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	2.1395	2.1395	1.2000e-004	0.0000	2.1426
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0200e-003	8.6000e-004	8.3800e-003	2.0000e-005	1.8900e-003	1.0000e-005	1.9000e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.7273	1.7273	6.0000e-005	0.0000	1.7288
Total	**1.2200e-003**	**8.9600e-003**	**9.5800e-003**	**4.0000e-005**	**2.3700e-003**	**4.0000e-005**	**2.4100e-003**	**6.3000e-004**	**4.0000e-005**	**6.7000e-004**	**0.0000**	**3.8667**	**3.8667**	**1.8000e-004**	**0.0000**	**3.8714**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT F

Biological Survey for the Montclair Basins

BIOLOGICAL SURVEY
FOR THE
MONTCLAIR BASINS
RECYCLED WATER IMPROVEMENT PROJECT

Prepared for:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, California 91708

Prepared by:

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San Bernardino, California 92405

JANUARY 2018

Certification: I hereby certify that the statements furnished herein and in the attached exhibits present data and information required for this Biological Survey to the best of my ability, and the facts, statements and information presented are true and correct to the best of my knowledge and belief.



Lisa M. Patterson

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1.0 INTRODUCTION AND SUMMARY OF FINDINGS

The purpose of this report is to assess the biological resources and the potential impacts associated with the Inland Empire Utility Agencies (IEUA) proposal to construct two drop-inlets in San Antonio Channel at Montclair Basins 2 and 3 located in the vicinity of Montclair, San Bernardino County, California. See Figure 1 and Figure 2 for Regional and Site Location maps.

IEUA's Recharge Master Plan Update (RMPU) examines alternatives for increasing stormwater and recycled water recharge by 7,091 acre-feet per year to the regional aquifer in the Chino Groundwater Basin. The proposed project is the first new Project being considered by IEUA for implementation under the RMPU. This entails various improvements and upgrades to the existing water recycling facilities.

The Area of Potential Effect (APE) is delineated to encompass the maximum extent of ground disturbance or construction areas required for the proposed rehabilitation project, and geographically coincides with the existing limits of Montclair Basin's proposed Drop Inlet Project. This project includes the with a drop structure within San Antonio Creek that will divert recycled and stormwater into the Montclair Basin complex. The site is mapped on the USGS 7.5 minute quadrangle "Ontario" in Section 15 of T1S R8W, San Bernardino Baseline and Meridian. Figure 3 shows the project plan and characteristics

The proposed project occurs entirely within the concrete trapezoidal channel of San Antonio Creek. The project does not support native plant communities, and the site does not provide suitable habitat for any of the sensitive plant and wildlife species identified in the state and federal data bases as having potential to occur in the general vicinity of the proposed project site. Further, based on habitat requirements for sensitive species identified in these database searches; and the availability and quality of habitats needed by each of the identified sensitive plant and wildlife species; it is determined that the project site does not provide suitable habitat that would support any of the sensitive plant and wildlife species known to occur in the general vicinity of the project site. Further, there is no designated critical habitat occurring within five miles of Jurupa Basin.

The Project proposes to design and install two new drop inlets at Montclair Basin 2 and Basin 3. San Antonio Creek is a Water of the United States as well as a Water of the State. If the drop inlets will be places below the OWHM, regulatory permitting from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, or California Department of Fish and Wildlife may be required for this project.

A habitat assessment for burrowing owl was conducted on the project area. No suitable burrowing owl habitat occurred within the project site; therefore, no follow-on surveys are recommended. During the site visit, the basins and the adjacent parcels were viewed from the subject parcel using Bushnell 10X40 binoculars. The result of this survey is that no burrowing owl or evidence thereof was encountered within the project area of potential effect. Further, there is no evidence to suggest historical use of the property by burrowing owls.

FIGURE 1 – Regional Location Map

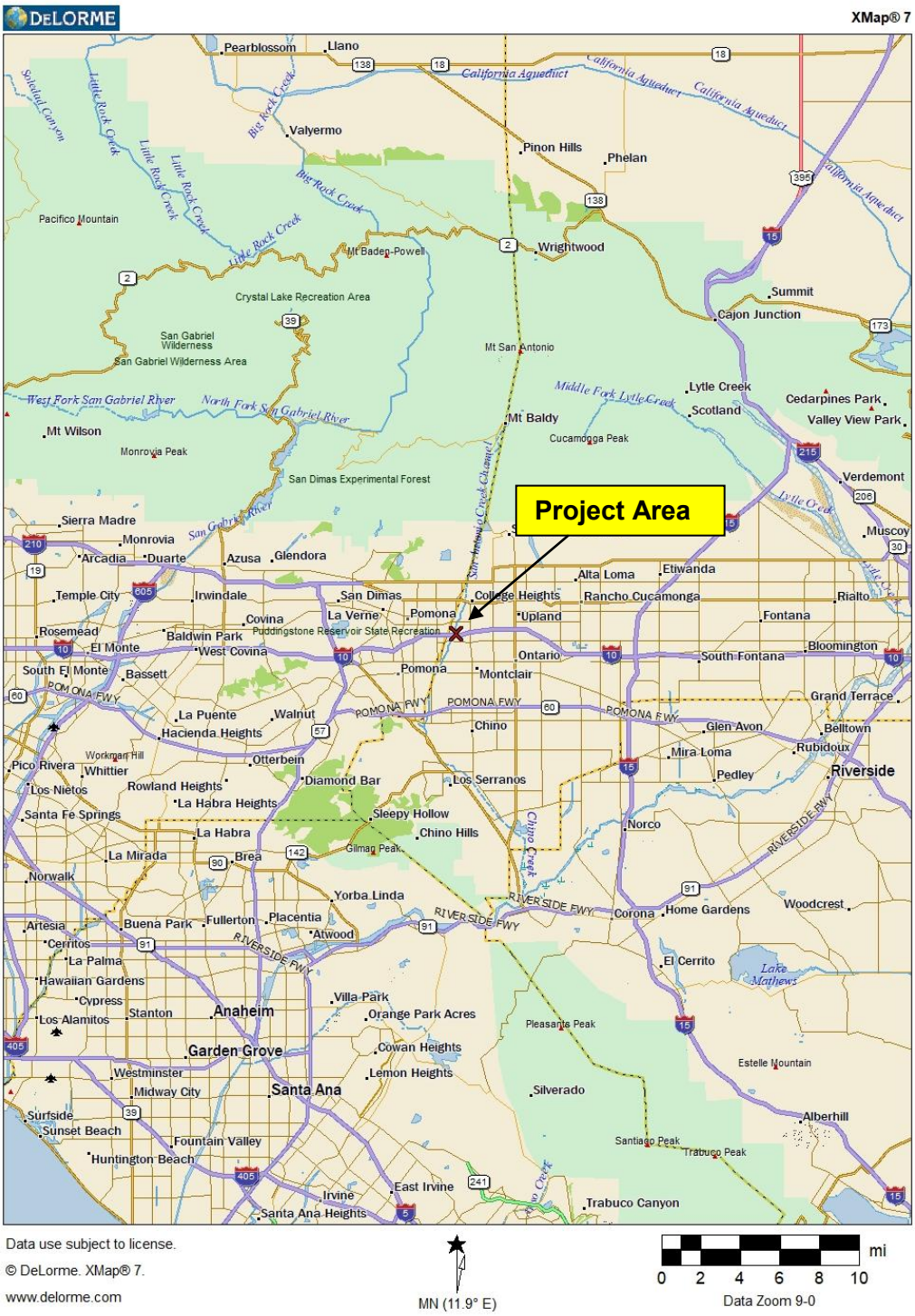
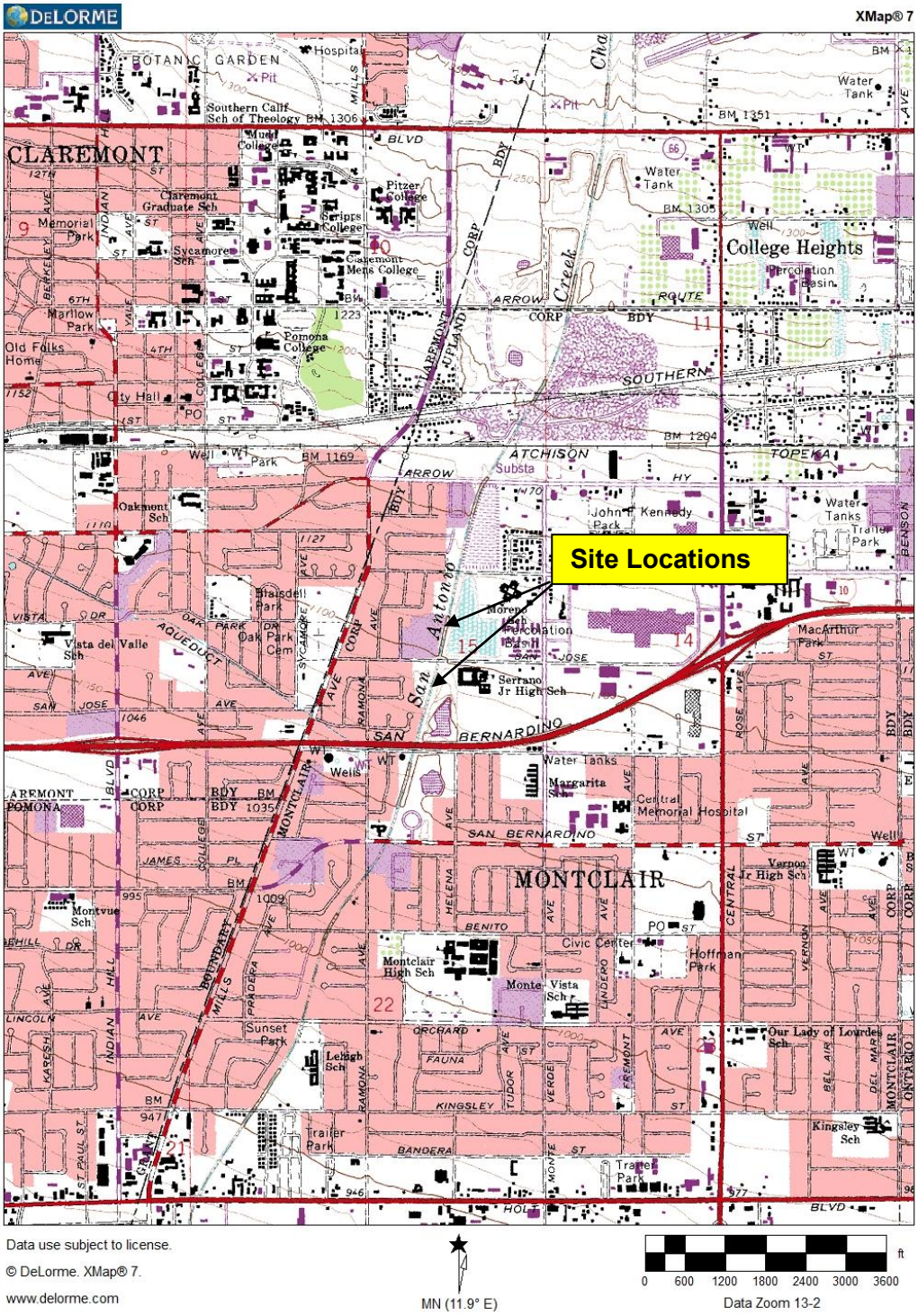


FIGURE 2 – Site Location Map



2.0 REGULATORY SETTING AND STUDY METHODS

This chapter presents the methods used to identify biological resources on the project site. In addition, this chapter provides an overview of the various regulatory requirements, definitions of terms used, background review conducted, field surveys, post-field data processing, personnel and survey dates, and coordination efforts with agency and professional contacts. It also summarizes the study limitations and how they may influence the results presented in this report.

Before conducting field surveys, existing background information was reviewed to identify the locations of jurisdictional waters, special-status plant and wildlife species, special-status plant communities, natural lands, and federally designated or proposed critical habitat units recorded or potentially occurring in the proposed infrastructure improvement areas. This section summarizes the background information that was reviewed.

2.1 Regulatory Requirements

2.1.1 Federal

2.1.1.1 Clean Water Act

The purpose of the Clean Water Act (CWA) (1977) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the RWQCB.

2.1.1.2 Section 10 of the Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable waters of the United States.

2.1.1.3 Endangered Species Act

The Federal Endangered Species Act (FESA) (1973) protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of FESA (USA) prohibits the taking of endangered wildlife, where taking is defined as any effort to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any

endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. FESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features "essential to the conservation of the species," or which may require "special Management consideration or protection..." (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the FESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in "the destruction or adverse modification of habitat determined to be critical" (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of ESA provides a means for authorizing the "take" of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a proposed project "may affect" a listed species or destroy or modify critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans

Section 10 of the federal ESA requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or "take") endangered or threatened wildlife on their land. To obtain a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

2.1.1.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

2.1.1.5 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. Section 1801 et seq.) requires all federal agencies to consult with the NMFS on all actions or proposed actions (permitted, funded, or undertaken by the agency) that may adversely affect fish habitats. It also requires cooperation among NMFS, the councils, fishing participants, and federal and state

agencies to protect, conserve, and enhance essential fish habitat, which is defined as those waters and substrates needed by fish for spawning, breeding, feeding, and growth to maturity.

2.1.1.6 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

2.1.1.7 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (1918) implements international treaties between the United States and other nations created to protect migratory birds, any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).

2.1.1.8 Executive Orders (EO)

2.1.1.8.1 Invasive Species—Executive Order 13112 (1999)

Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

2.1.1.8.2 Protection of Wetlands—Executive Order 11990 (1977)

Issued on May 24, 1977, helps avoid the long-term and short-term adverse impacts associated with destroying or modifying wetlands and avoiding direct or indirect support of new construction in wetlands when there is a practicable alternative.

2.1.1.8.3 Migratory Bird—EO 13186 (2001)

Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports

the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act: The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

2.1.2 State

2.1.2.1 California Fish and Game Code (CFGC)

2.1.2.1.1 Sections 1600 through 1606 of the CFGC

This section requires that a Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

2.1.2.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) (Sections 2050 to 2085) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats by protecting "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation." Animal species are listed by the CDFW as threatened or endangered, and plants are listed as rare, threatened, or endangered. However, only those plant species listed as threatened or endangered receive protection under the California ESA.

CESA mandates that state agencies do not approve a project that would jeopardize the continued existence of these species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. There are no state agency consultation procedures under the California ESA. For projects that would affect a species that is federally and state listed, compliance with ESA satisfies the California ESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the California ESA under Section 2080.1. For projects that would result in take of a species that is state listed only, the project sponsor must apply for a take permit, in accordance with Section 2081(b).

2.1.2.1.3 Fully Protected Species

Four sections of the California Fish and Game Code (CFGC) list 37 fully protected species (CFGC Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and state that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

2.1.2.1.4 Bird Nesting Protections

Bird nesting protections (Sections 3503, 3503.5, 3511, and 3513) in the CFGC include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), or Strigiformes (owls).
- Section 3511 prohibits the take or possession of fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

2.1.2.1.5 Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGC Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA (CFGC 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

2.1.2.1.6 Natural Communities Conservation Planning Act

This act was enacted to encourage broad-based planning to provide for effective protection and conservation of the state's wildlife resources while continuing to allow appropriate development and growth (CFGC Sections 2800 to 2835). Natural Community Conservation Plans (NCCP) may be implemented, which identify measures necessary to conserve and manage natural biological diversity within the planning area, while allowing compatible and appropriate economic development, growth, and other human uses.

2.1.2.1.7 Senate Concurrent Resolution No. 17 – Oak Woodlands

State Senate Concurrent Resolution No. 17 is legislation that requests state agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing Blue, Engleman, Valley, or Coast Live

Oak. The measure requests those state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands. The mitigation measures, as described above, will ensure that impacts to oak woodlands are less than significant.

2.1.3 Local

General, Specific, or Rural Community Plans or Municipal Codes for each local jurisdiction through which the Project passes were reviewed for regulations pertaining to biological resources. Most of the local jurisdictions have few regulations relating to biological resources due to the low-density population nature of the land. Local regulations are listed below:

2.1.3.1 San Bernardino

2.1.3.1.1 Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009) Development Code 88.01.010

This Ordinance provides regulations and guidelines for the management of plant resources in the unincorporated areas of the County on property or combinations of property under private or public ownership. The intent is to:

(a) Promote and sustain the health, vigor and productivity of plant life and aesthetic values within the County through appropriate management techniques.
(b) Conserve the native plant life heritage for the benefit of all, including future generations.
(c) Protect native trees and plants from indiscriminate removal and to regulate removal activity.
(d) Provide a uniform standard for appropriate removal of native trees and plants in public and private places and streets to promote conservation of these valuable natural resources.
(e) Protect and maintain water productivity and quality in local watersheds.
(f) Preserve habitats for rare, endangered, or threatened plants and to protect animals with limited or specialized habitats.

2.2 Studies Required

Prior to beginning the field surveys, available information was reviewed from resource management plans and other relevant documents to determine locations and types of biological resources that have the potential to exist within and adjacent to the APE.

The 2017 California Natural Diversity Database (CDFW, 2017), U.S. Fish and Wildlife Service Quad lists and IPac (USFWS, 2015 Attached), California Native Plant Society Electronic Inventory of Rare and Endangered Plants of California, and National Wetlands Inventory (USFWR, 2015) were queried for occurrence of special status species and habitats within the San Joaquin Rail Corridor. CDFW Bios database was also queried for general habitat types and potential features subject to environmental regulations (e.g., Clean Water Act [CWA], Porter-Cologne Water Quality Control Act [Porter-Cologne] and California Department of Fish and Wildlife's Fish and Game Code 1600 et seq. jurisdictional features) that may exist within or

adjacent to the APE. Areas potentially suspected of being special aquatic resources were documented during field surveys

In addition to the aforementioned literature reviews, field surveys of the APE were performed to assess general and dominant vegetation types, habitat types, and the potential for special status wildlife and plant species to occur within the project area. Community types were based on observed dominant vegetation composition and density. Vegetation classifications of plant communities in the APE were derived from the criteria and definitions of Holland (1986). The result of this survey is that no follow-on or focused surveys are warranted.

2.3 Habitat Assessment

The APE was also assessed in the field for the poential to support special-status plant and animal species based on habitat suitability comparisons with reported occupied habitats. The following potential for occurrences definitions were utilized to assess the Project-related effects to species with the Project's footprint. Potential for occurrence designations were derived from Caltrans' standard environmental reference (Caltrans 2005):

Absent [A] - Species distribution is restricted by substantive habitat requirements, which do not occur or are negligible within the Project's physical disturbance footprint, and no further survey or study is necessary to derermine the likely presence or absence of this species.

Habitat Prsent [HP] - Species distribution is restricted by substantive habitat requirements, which occur within the Project's physical disturbance footprint, and further survey or study may be necessary to determine the likely presence or absence of this species.

Present [P] - Species or species sign were observed within the Project's physical disturbance footprint.

Critical Habitat [CH] - The Project's footprint is located within a designated critical habitat unit.

No focused Surveys were conducted.

2.4 Limitations That May Influence Results

Surveys were conducted during the appropriate time of year and conditions to detect any sensitive or listed species within the APE. Typically, biological surveys are valid for one year. Estimations and assumptions regarding the potential for jurisdictional waters and special-status species were based on assessments from previous projects, and existing IEUA permits and resource information.

3.0 ENVIRONMENTAL SETTING

The general Montclair area lies within the northern/northwestern portion of the Peninsular Geomorphic Province of southern California, which is characterized by northwest-southwest-trending faults, folds, and mountain ranges. The Site is situated on a broad alluvial fan, which extends from the southern flank of the San Gabriel Mountains and dips gradually southward to the confluence of San Antonio Channel, Cucamonga Channel/Mill Creek, and the Santa Ana River at the Prado Dam Flood Control Basin in Riverside County. Elevation ranges from 1,150 feet above mean sea level (amsl) in the northwest portion to 650 feet amsl in the south-central portion of the City (USGS 1978).

Climate
The proposed Project is located in the non-desert portion of San Bernardino County within the South Coast Air Basin (Basin). The regional climate within the Basin is considered semiarid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and year-round moderate temperatures and low humidity. The average maximum temperature within the local vicinity is 90.9°F (Fahrenheit) in July while the average minimum temperature is reported at 40.5°F in December. Almost all rain falls from November through April and averages 21.64 inches per year. The area also experiences a typical daily wind pattern that is a daytime onshore sea breeze from the west and a nighttime land breeze. This regime is broken only by occasional winter storms and infrequent strong northeasterly Santa Ana winds from the mountains and deserts north of the Basin.

Geology
Recent (quaternary) alluvium underlies the entire valley. The western portion of the proposed Project area is underlain by young alluvial-fan deposits. The eastern portion is primarily underlain with young eolian (wind driven) deposits with small areas of young alluvial-fan deposits, artificial fill, and young alluvial-valley deposits.

Soils
The Site is located in a region that is made of the alluvial valley floors, fans, and terraces that cover broad areas of southwest San Bernardino County, extending eastward from Chino to the general vicinity of Yucaipa. The Soil Conservation Service Soil Survey of San Bernardino County, Southwestern Part (USDA 1980) identifies 4 soil types mapped for the City area include:

- Psamments and Fluyvents, Frequently Flooded (Ps) consists of sandy and gravelly material in intermittent streambeds of the Santa Ana River, Mill, Warm, and Cajon Creeks, large creeks and their major tributaries. During each flood, alluvium is freshly deposited and reworked. These areas have no value for farming and are mainly used as a source of sand and gravel for construction. Historically, vegetation was limited to scanty grasses and forbs and a few willows and cottonwood trees.

- The Soboba series consists of excessively drained, nearly level to moderately sloping soils formed on alluvial fans in granitic alluvium. These soils historically supported chamise, annual grasses, and forbs. These soils are rapidly permeable and are used mainly for irrigated citrus and dryfarmed seeded pasture.

Because the basin was created out of upland by excavation of the detention basin, soils are disturbed and do not necessarily retain the described features in the soil surveys.

3.1 Description of the Existing Biological and Physical Conditions

Montclair Basins were graded out of a predominantly upland area that had dry channels traversing the site. San Antonio Creek has been concrete lines and completely improved. Water enters the basin by direct precipitation, urban runoff, and IEUA directing water into the basin for recharge.

3.1.1 Vegetation Communities

3.1.1.1 Urban/Disturbed

This community occurs at the top and sides of the Monclair Basins and in disturbed areas. The community is characterized by storksbill (*Erodium cicutarium*), foxtail chess (*Bromus madritensis*), wild oats (*Avena barbata*), ripgut brome grass (*Bromus diandris*), and foxtail fescue (*Vulpia myuros*). Other species occurring in this community are short-pod mustard (*Brassica geniculata*), barley (*Hordium vulgare*), *Amsinkia sp*., and star thistle (*Centaurea melitensis*).

Due to the chronic disturbances as well as flood control maintenance activities, this area does not support a diverse fauna. The most common animal species observed in the APE was beachy ground squirrels (O*tospermophilus beecheyi*). Other common species include western meadowlark (*Sturnella magna*), and mourning doves (*Zenaida macroura*.

A complete list of animal species observed on site is included as Appendix A

3.1.2 Disturbances

Typically the level of disturbance with the Project APE is severe. The majority of the adjacent areas along the proposed drop-inlet structures are completely disturbed and developed.

3.1.3 Jurisdictional Determination

The result of the jurisdictional determination is that San Sevaine Creek as well as Jurupa Basin are Waters of the U.S, and subject to regulatory jurisdiction by the US Army Corps of Engineers under Section 404 of the Clean Water Act; the State Water Quality Control Board under Section 401 of the Clean Water Act, and California Department of Fish and Wildlife under Section 1600 of the Fish and Game Code. There are no wetlands associated with these Waters of the U.S.

The limits of the jurisdiction vary between the agencies. The limit of jurisdiction for Sections 404 and 401 of the Clean Water Act extend to the spillway height for the entire basin complex. The limits of jurisdiction for Section 1600 of the Fish and Game Code is the top of bank for each sub-basin and the cells. While the limits of Jurisdiction in San Antonio Creek extends to the Ordinary High Water Mark as indicated by field characteristics along across the entire bottom of the channel.

3.2 Potentially Occurring Listed or Protected Species

3.2.1 Burrowing Owl Habitat Assessment and Surveys

Burrowing owl (Athene cunicularia) is federally protected under the MBTA and by California Fish and Game Code Sections 3503, 3503.5, and 3800. In addition, the burrowing owl is a State Species of Special Concern and is covered under both the WR-MSHCP and CV-MSHCP. The California Fish and Game Commission rejected a proposal for State listing because of relatively high population levels in some parts of the State. However, because the species has declined in other parts of California, and it is particularly vulnerable to incidental take due to its unique utilization of burrows, the burrowing owl has been the focus of specific CDFW management recommendations since the 1990s.

Burrowing owls inhabit open country in North and South America. These owls are known to occupy and modify former ground squirrel burrows in grasslands, agricultural fields, rangelands, and other open habitat types including those in railroad rights-of-ways, margins of highways, golf courses, and airports. They often utilize structures such as earthen berms, concrete culverts, pipes, and concrete, asphalt, rock, or wood debris piles. Burrowing owls are active year-round and forage both diurnally and nocturnally for insects, scorpions, amphibians, reptiles, birds, and small mammals (Poulin et al. 2011).

No burrowing owls, burrowing owl sign, or evidence of historic use by burrowing owls was observed within the project site.

3.2.2 Coastal California Gnatcatcher Assessment and Surveys

No suitable habitat for coastal California gnatcatcher (*Polioptila californica californica*) occurs within the APE, therefore no follow-on surveys are warrented.

3.2.3 Small Mammal Habitat Assessment and Surveys

Jurupa Basin is not mapped within San Bernardino kangaroo rat (Dipodomys merriami parvus)(SBKR) critical habitat. In fact, the USFWS excluded these flood control facilities from critical habitat because they understood that these basin systems would be maintained annually for flood control purposes and would therefore not retain habitat value for SBKR that they may have held in the past. No suitable habitat occurs within the project area and no small mammal burrows were observed. Therefore, no follow on surveys are recommend.

3.3 Other Species with Potential to Occur within the Project APE

California Department of Fish and Wildlife's CNDDB for the Ontairo USGS 7.5 Minute Quadrangles, and surrounding areas was searched as well as the U.S. Fish and Wildlife Service's Official List of Threatened and Endangered Species with the potential to occur on the Cucamonga Peak USGS 7.5 Minute Quadrangles, and the U.S. Fish and Wildlife Service's IPac Results. The following is a discussion of the species listed by the databases as occurring within the vicinity of the Project. Note the Species on the U.S. Fish and Wildlife Service's list are in bolded text.

4.0 RESULTS

The purpose of this report is to assess the biological resources and the potential impacts associated with the Inland Empire Utility Agencies (IEUA) proposed new drop-inlet between San Antonio Creek channel and Montclair Basins 2 and 3. See Figure 1 and Figure 2 for Regional and Site Location maps.

The Area of Potential Effect (APE) is delineated to encompass the maximum extent of ground disturbance or construction areas required for the proposed rehabilitation project, and geographically coincides with the existing limits of Jurupa Basin's proposed Drop Inlet Project. This project includes the with a drop structure within San Sevaine Creek that will divert recycled and stormwater into Jurupa Basin. The site is mapped on the USGS 7.5 minute quadrangle "Ontario", in Section 15 of T1S R8W, San Bernardino Baseline and Meridian. Figure 3 shows the project plan and characteristics

The proposed project occurs entirely within the concrete trapezoidal channel of San Antonio Creek. The project does not support native plant communities, and the site does not provide suitable habitat for any of the sensitive plant and wildlife species identified in the state and federal data bases as having potential to occur in the general vicinity of the proposed project site. Further, based on habitat requirements for sensitive species identified in these database searches; and the availability and quality of habitats needed by each of the identified sensitive plant and wildlife species; it is determined that the project site does not provide suitable habitat that would support any of the sensitive plant and wildlife species known to occur in the general vicinity of the project site. Further, there is no designated critical habitat occurring within five miles of Jurupa Basin.

The Project proposes to design and install two new drop inlets. San Antonio Creek is a Water of the United States as well as a Water of the State. There are not wetlands or other special aquatic sites located within the project APE. If the inlet structures are placed below the OHWM, regulatory permitting from the US Army Corps of Engineers, Regional Water Quality Control Board, or California Department of Fish and Wildlife may be required for this project.

The biological analysis for this site included in this section is based on a field reconnaissance visit conducted by biologist, Lisa Patterson, conducted on October 12, 2017 between 1000 and 1100. The weather condition was mostly sunny with scattered clouds and winds of 1 to 3 miles per hour and 75 degrees Fahrenheit.

A habitat assessment for burrowing owl was conducted on the project area. No suitable burrowing owl habitat occurred within the project site; therefore, no follow-on surveys are recommended. During the site visit, the basins and the adjacent parcels were viewed from the subject parcel using Bushnell 10X40 binoculars. The result of this survey is that no burrowing owl or evidence thereof was encountered within the project area of potential effect. Further, there is no evidence to suggest historical use of the property by burrowing owls.

The site is completely unvegetated. The only wildlife observed within the project area are species that commonly occur within urbanized environments and would be expected to occur in the areas of impact (refer to site photos) including mockingbird (*Mimus polyglottos)*, and mourning Dove (*Zenaida macroura*). Due to the disturbed nature of the project sites and the

urbanized nature of the project area, the area does not support fauna. Further biological evaluation of the project area is not warranted, recommended or required.

The result of the general biological survey was that no state or federally listed as endangered, threatened or sensitive species were identified within the project areas and none are expected to occur.

The project area is not located within 5 miles of Designated Critical Habitat for the Federally listed species. Further there are no primary constituent elements for critical habitat located within the project area. Therefore, this project will not adversely modify or adversely affect designated critical habitat.

A preliminary jurisdictional delineation was assessed using the Rapanos Guideline in order to determine what areas on the project sites will likely be subject to jurisdiction under Sections 404 and 401 of the Clean Water Act. The U.S. Army Corps of Engineers has authority in conjunction with EPA to determine jurisdiction. Additionally, a Jurisdictional Assessment was conducted to determine if project areas would be subject to a Section 1600 Agreement of the Fish and Game Code. The result of this preliminary determination is that San Antonio Creek is a tributary to a TNW and would be subject to the Clean Water Act, as well as a Water of the State subject to CDFW's Lake and Streambed Alteration Agreement. Therefore, regulatory permitting from the US Army Corps of Engineers, Regional Water Quality Control Board, or California Department of Fish and Wildlife may be required for this project.

A list of sensitive species which occur within the USGS – Ontario quadrangle per the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife and the Service IPaC report. This table includes a discussion of the probability to occur within the project area, and a discussion of their occurrence potential is provided in Appendix B

5.0 CONCLUSIONS AND RECOMMENDATIONS

The project will likely have temporary impacts to California streambeds and may have temporary impacts to jurisdictional waters. The extent of these temporary impacts will be identified once the plans are finalized. Depending upon the extent of temporary impacts, a CWA Section 404 permit, CWA Section 401 Certification, and CDFG Code Section 1600 Streambed Alteration Agreement may be required for those impacts.

Based on information presented above in the results section, this BRA concludes that coastal California gnatcatcher, San Bernardino kangaroo rat, and burrowing owl are absent from the site and there is no risk of the project resulting in a "taking" of any of these species. Incidental take authority from the CDFG or the USFWS is not required.

According to protocol and standard practices, the results of this survey will remain valid for the period of one year, or until December of 2018, after which time, if the site has not been disturbed in the interim, another survey may be required to determine the persisting absence the above referenced species. Regardless of survey results and conclusions given herein, these species are protected by applicable State and/or federal laws, including but not exclusive to the California Endangered Species Act and Federal Endangered Species Act. As such, if a one is subsequently found on-site or at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report, including recommended mitigation measures, is intended to authorize the incidental take of any listed species during project construction. Such authorization must come from the appropriate regulatory agencies, including CDFG (i.e., authorization under section 2081 of the Fish and Game Code) and USFWS.

Due to either the lack of suitable habitat, or the absence of observations during any of the field surveys, none of the special-status species reported from the CNDDB or the IPAC will be adversely affected by the proposed project.

6.0 PROPOSED AVOIDANCE AND MINIMIZATION MEASURES

6.1 San Bernardino Kangaroo Rat (SBKR)

SBKR are considered absent from this site and as such no specific avoidance or minimization measures are proposed for this species.

6.2 Coastal California Gnatcatcher (CAGN)

The CAGN occurs in coastal sage scrub plant community. This species has been recorded historically in the vicinity of the project site. If a CAGN is encountered during construction, all construction activity will cease until the USFWS is contacted and concurrence regarding the next measure is established.

6.3 Burrowing Owl (BUOW)

The BUOW is a state Species of Special Concern. The BUOW is typically found in grassland, scrubland and desert habitats with numerous small mammal burrows (Coulombe 1971). Burrowing owls nest and roost in modified, expanded burrows originally created by fossorial animals including ground squirrels, rabbits, and badgers. They are also known to make use of human-created structures such as cement culverts and pipes for burrows. Within 30 days of the start of any land disturbance activities, a qualified biologist should survey the site to determine if burrowing owls are present and nesting in the construction area. If BUOW are encountered and determined to not be nesting, land disturbance activities shall not commence until the biologist has implemented the required measures according to the CDFW to clear the site for construction. No disturbance to an active BUOW nest will be permitted and all work within a 500-foot buffer zone radius will cease until the hatchlings have fledged. If the nest is not occupied by eggs or chicks then CDFW may agree to a passive relocation plan. This type of relocation requires the construction of artificial burrows in the near vicinity and collapsing of the old burrows once the owls have clearly flushed out of the site. If burrowing owls are encountered during construction, construction activities shall be halted in the vicinity of the find and the biologist/monitor called to the site. The contractor shall implement the recommendations of the biological monitor.

6.4 Nesting Birds

The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the State identified nesting season (nesting season is February 15 through September 1). Alternatively, the site can be evaluated by a qualified biologist prior to initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot buffer placed around it. No activity will occur within the 300 foot buffer until the young have fledged the nest.

6.5 Jurisdictional Waters

All project activities should be limited to a well-defined and visually delineated area. Prior to grading and construction activities, the limits of disturbance will be clearly marked with flagging, stakes, or fencing. Additionally, should regulatory permits be necessary, once obtained, any and all measures identified in these permits shall be included in the monitoring program.

FIGURE 3 – Montclair Basins Project Site



7.0 CONCLUSIONS

The result of the general biological survey was that no state or federally listed as endangered, threatened or sensitive species were identified within the project areas and none are expected to occur.

There are no features, streams, channels, drainages, or isolated wetlands within the proposed project site that would be subject to the Clean Water Act, or Streambeds or Lakes on the project site. Therefore no regulatory permitting from the US Army Corps of Engineers, Regional Water Quality Control Board, or California Department of Fish and Wildlife will be required for this project.

A habitat assessment for burrowing owl was conducted on the sites. No suitable burrowing owl habitat occurred within the project site, no follow-on surveys are recommended. During the site visit, the basins and the adjacent parcels were viewed from the subject parcel using Bushnell 10X40 binoculars. The result of this survey is that no burrowing owl or evidence thereof was encountered within the project area of potential effect. Further, there is no evidence to suggest historical use of the property by burrowing owls.

The project proponent is hereby informed that in the event that a listed species is observed within the construction areas prior to or during grading/construction, that the loss of any listed species is considered an illegal take under both state and federal law. **This report as recommended does not constitute authorization for incidental take of state of federally listed endangered, threatened or sensitive species or for state regulated bird nests or state or locally regulated plant species.**

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California Fish and Game Code 3503 and 3503.5 state:

3503: *It is unlawful to take, possess or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation made pursuant thereto.*

3503.5: *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

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SITE PHOTOGRAPHS

SITE PHOTOGRAPHS

Montclair Basin 2 - San Antonio Channel View of Drop Inlet Location



Montclair Basin 3 - San Antonio Channel View of Drop Inlet Location



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APPENDIX A

SPECIES LIST

APPENDIX A
SPECIES LIST

ANIMAL SPECIES LIST

Aves	**Birds**
Columbidae	
Columba fasciata	Pigeon
Zenaida macroura	Mourning Dove
Corvidae	
Corvus brachyrhynchos	Crow
Emberizidae	Sparrow, Warblers, Tanangers
Melospiza melodia	Song sparrow
Fringillidae	
Carpodacus mexicanus	House Finch
Mimidae	
Mimus polyglottos	Mockingbird

Mammals

Sciuridae	Squirrels
Otospermophilus beecheyi	beachy ground squirrels

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APPENDIX B

CNDDB and IPaC SPECIES OCCURRENCE POTENTIAL

The following Table summarizes the results of the IPaC report, and the CNDDB search. This table includes a discussion of the probability to occur within the project area.

TABLE 1: SPECIAL STATUS PLANT AND ANIMAL SPECIES KNOWN TO OCCUR OR POTENTIALLY OCCUR WITHIN THE PROJEC AREA (USGS GUASTI QUADRANGLE)

Scientific and Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Antrozous pallidus pallid bat	N/N	Oak and grassland ecotones. Prefers foraging in the open Roosts in attics or rock cracks; in the open, near foliage at night..	Marginally suitable habitat occurs adjacent to the APE. Potential for occurrence within the APE is low.
Arizona elegans occidentalis California glossy snake	N/N	Found at elevations from sea level to 1829 m (6000 ft)[3]. May be found in a variety of habitats including, barren desert, creosote flats, sagebrush flats, coastal sage, chaparral, grasslands, and pinion-juniper, oak or pine woodlands. Generally prefers open areas with soft or loamy soil.	No suitable soils occur on site. Therefore probability of occurrence is zero
Astragalus brauntonii **Braunton's Milk-vetch**	**E/N**	**Astragalus brauntonii is a plant of the coastal prairie grasslands, coastal sage scrub, and chaparral plant communities of the region. It is often found growing in disturbed areas, especially in carbonate soils areas.[**	**The 16 known remaining populations are found in the southwestern Transverse Ranges (eastern Santa Monica Mountains, east end Simi Hills, south base San Gabriel Mountains), northern Peninsular Ranges (northwest side Santa Ana Mountains) — within Los Angeles, Orange, and Ventura Counties The site is outside the known range of this species and there are no suitable soils within the APE. Therefore the probability occurrence is zero.**
Athene cunicularia **burrowing owl**	**N/N**	**Subterranean nester, dependent upon burrowing animals such as ground squirrels and desert tortoise for burrow sites. Inhabits open, dry annual or perennial grasslands as well as deserts and scrublands characterized by low-growing vegetation. Shortgrass prairies, grasslands lowland scrub, agricultural lands, coastal dunes, desert floors, and some artificial open areas. Uses abandoned ground squirrel burrows and artificial structures such as berms, culverts, and underpasses.**	**No Suitable foraging habitat occurs within the APE, Observed on site during field surveys.**

Scientific and Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Bombus crotchii Crotch bumble bee	N/N	Bombus crotchii inhabits open grassland and scrub habitats. Nesting occurs underground. This species is classified as a short-tongued species, whose food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia (Williams et al. 2014). Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees.	Suitable habitat occurs on site, probability of occurrence is low to moderate.
Buteo regalis (wintering) ferruginous hawk	N/N	Grasslands and other open terrain of the plains and foothills. Wintering species. Primarily open fields with low vegetation.	No Suitable foraging habitat occurs within the APE, Observed on site during field surveys.
Buteo swainsoni *Swainson's Hawk*	N/N	Grasslands and other open terrain.	No Suitable foraging habitat occurs within the APE, Not bserved on site during field surveys.
Calysegia felix Lucky morning-glory	N/N	This a newly described species that occurs in alkali meadows of the Chino Basin.	No Suitable habitat occurs within the APE, None observed on site during field surveys.
Calochortus plummereae Plummer's mariposa lily	N / N	Grows on dry, rocky open slopes and rock outcrops between 120-850meters in coastal scrub, chaparral, valley and foothill grassland.	No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.
Cladium californicum *California saw-grass*	N/N	This species occurs in moist wetland and meadow areas in a number of habitat types, often in alkaline soils.	No Suitable habitat occurs within the APE, None observed on site during field surveys.
Chaetodipus [Perognathus] fallax fallax northwestern San Diego pocket mouse	None/None	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities Moderately gravelly and rocky substrates, disturbed grassland and open sage scrub vegetation with sandy-loam to loam soils.	There is no suitable habitat for this species within the APE. There is no potential for this species to occur within the project APE
Cnemidophorus hyperythrus orange-throated whiptail	N / SC	Inhabits washes and other sandy areas with patches of brush and rocks with sufficient perennial plants to sustain termite populations in low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	Only extremely marginal habitat for this species occurs on the site. Due to the highly disturbed nature of the site, occurrence potential for this species is low.

Scientific and Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Diploctrona californica California diplectronan caddisfly	N/N	USFWS show this species as only occurring in the northern most coastal region of California. Little information is provided.	This site it outside the documented range of this species and it's occurrence in the CNDDB for this area is likely an error. This site is outside the known range of this species, and potential for occurrence is zero.
Dodechahema leptoceras **Slendar-horned Spineflower**	**E/E**	**This plant grows in the silt-rich floodplains and washes of the foothills of the Transverse Ranges and the Peninsular Ranges of southern California. It is known from fewer than 40 reported sightings, many of which were in locations that have since been claimed for development or otherwise altered. About 19 occurrences are believed to exist now.[1] This plant has been recorded in only a few general areas, including Tujunga Wash and the flood lands surrounding the Santa Ana and San Jacinto Rivers**	**There is no suitable habitat for this species within the APE. There is no potential for this species to occur within the project APE**
Dipodomys merriammi parvus ***San Bernardino kangaroo rat***	**E/N**	**Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. Prefers sandy loam substrates. Santa Ana River, Cajon Creek Wash, Lytle Creek Wash, City Creek, and upper Etiwanda Wash in San Bernardino County, and sites in western Riverside County**	**There is no suitable habitat for this species within the APE. There is no potential for this species to occur within the project APE**
Empidonax traillii **willow flycatcher**	**E / E**	**Inhabits extensive thickets of low, dense willows on edges of wet meadows, ponds, or backwaters between 2000-8000 elevation.**	**There is no suitable habitat for this species within the APE. There is no potential for this species to occur within the project APE**
Eumops perotis californicus California mastiff bat	N/N	Open areas with high cliffs.	Only extremely marginal habitat for this species occurs on the site. Due to the highly disturbed nature of the site, occurrence potential for this species is low.
Horkelia cuneate var puberula Mesa horkelia	N/N	All known locations are west of this site and the species is considered a coastal speicies. Occurs in coastal strand, closed-cone pine forest, foothill woodland, northern coastal scrub, chaparral, coastal sage scrub	APE is outside the range for this species. No suitable soils occur on site. Therefore probability of occurrence is zero
Larus californicus (nesting colony California gull*)*	N/N	Nearly all types of fresh and salt water, cropland, landfills, refuse areas, open lawns.	Common in winter. Occasional in summer. Probability of occurrence within the APE is moderate to high.

Scientific and Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Lasiurus xanthinus western yellow bat	N/N	Desert regions of the southwestern U.S., southern California. Capture sites are often associated with water features; open grassy areas and scrub, canyons and riparian areas, orchards. Particular association with palms in oases and ornamental palms in landscaping.	There is no suitable habitat for this species within the APE. Further the APE is outside the known range for this species. There is no potential for this species to occur within the project APE
Laterallus jamaicensis coturniculus California black-rail	N/T	This species occurs in freshwater marshlands. California population in Colorado River, Bay Delta, and San Joaquin Valley.	No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.
Muhlenbergia californica California muhly	N/N	This species occurs in the mountain and chaparral woodlands.	There is no suitable habitat within the APE. The potential for this species to occur in zero.
Navarretia prostrata *Prostrate vernal pool navarretia*	N/N	This species occurs in vernal pool complexes.	There is no suitable habitat within the APE. The potential for this species to occur in zero.
Neotoma lepida intermedia San Diego desert woodrat	N/N	Riversidean and coastal sage scrub, chaparral and nonnative grasslands. Shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth	No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.
Nyctinomops Macrotis big free-tailed bat	N/N	Desert habitats. Roosts in rock crevices in cliffs.	No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.
Nyctinomops Femorosaccus pocketed free-tailed bat	N/N	Desert habitats. Roosts in rock crevices in cliffs.	No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.
Phyrnosoma blainvillii Coast horned lizard	N/N	This lizard occurs in a variety of habitats, including scrubland, grassland, coniferous woods, and broadleaf woodlands. Typically it is found in areas with sandy soil, scattered shrubs, and ant colonies, such as along the edges of arroyo bottoms or dirt roads	Marginally suitable habitat occurs in the APE. However, the site is isolated and highly disturbed. Therefore the probability of occurrence is low.

Scientific and Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Polioptila californica californica **Coastal California gnatcatcher**	**T / N**	**Inhabits various successional stages of the sage scrub communities characterized by Artemisia californica, Eriogonum fasciculatum, Encelia farinosa, Salvia spp., and Opuntia spp. CAGN will also utilize chaparral, grassland, and riparian plant communities where they occur adjacent to or intermixed with sage scrub.**	**The site is not within proposed or designated critical habitat for this species. Focused Protocol Survey was conducted for CAGN. The result of this survey it there CAGN is absent from the site.**
Pseudognaphalium leucocephalum *White rabbit-tobacco*	N/N	Occurs in a wide variety of habitat including coastal sage scrub and chaparral.	No suitable habitat occurs in the project APE. Probability of occurrence is zero.
Rhaphiomidas terminatus abdominalis **Delhi Sands flower- loving fly.**	**E/N**	**Wholly or partially consolidated dunes (Delhi soils series), open sand. Fine, sandy soils with sparse vegetation cover of California buckwheat, croton, deerweed, and evening primrose**	**No Suitable habitat occurs within the Project APE. Therefore the probability of occurrence is zero**
Sidalcea neomexicana Salt Spring Checkerbloom	N / N	Grows in alkali springs and marshes in alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest and Mojavean desert scrub between 0-1500 meters in elevation.	No Suitable habitat occurs within the Project APE. Therefore the probability of occurrence is zero
Thamnophis hammondii Two-striped gartersnake	N/M	This snake occurs in wetted and moist areas within a variety of habitats, including scrubland, grassland, coniferous woods, and broadleaf woodlands. Typically it is found along the edges of arroyo bottoms and channels	Marginally suitable habitat occurs in the APE. However, the site is isolated and highly disturbed. Therefore the probability of occurrence is low.
Vireo bellii pusillus **least Bell's vireo**	**E / E**	**Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. In low riparian, in vicinity of water or in dry river bottoms below 2000 ft.**	**No suitable habitat for this species occurs on the site. Due to the highly disturbed nature of the site, there is no potential for this species to occur.**

Bold Indicates the species occurs on the U.S. Fish and Wildlife Service's List

.

APPENDIX C

CNDDB and IPaC REPORTS

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Ontario (3411716))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calochortus plummerae Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
Calystegia felix lucky morning-glory	PDCON040P0	None	None	GHQ	SH	3.1
Chaetodipus fallax fallax northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
Cladium californicum California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
Diplectrona californica California diplectronan caddisfly	IITRI23010	None	None	G1G2	S1S2	
Dodecahema leptoceras slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Lasiurus xanthinus western yellow bat	AMACC05070	None	None	G5	S3	SSC
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lepidium virginicum var. robinsonii Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
Muhlenbergia californica California muhly	PMPOA480A0	None	None	G4	S4	4.3
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.1
Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
Pseudognaphalium leucocephalum white rabbit-tobacco	PDAST440C0	None	None	G4	S2	2B.2
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
Sidalcea neomexicana salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
Symphyotrichum defoliatum San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Thysanocarpus rigidus rigid fringepod	PDBRA2Q070	None	None	G1G2	S1	1B.2

Record Count: 28

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To:
Consultation Code: 08ECAR00-2018-SLI-0320
Event Code: 08ECAR00-2018-E-00740
Project Name: RMPU - Montclair Basins

December 20, 2017

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2018-SLI-0320

Event Code: 08ECAR00-2018-E-00740

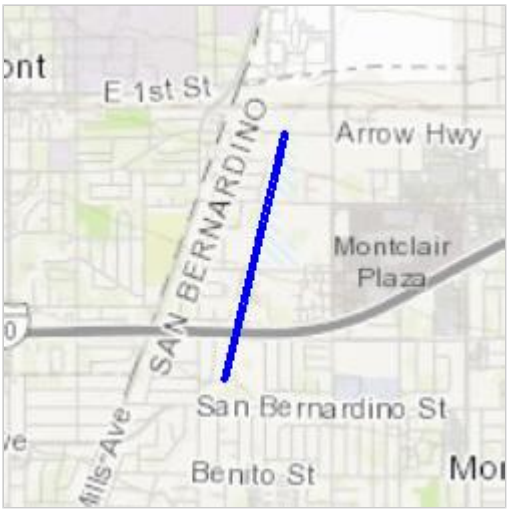
Project Name: RMPU - Montclair Basins

Project Type: WATER QUALITY MODIFICATION

Project Description: New Drop Inlet Structures

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.085862299501414N117.70331382751466W



Counties: San Bernardino, CA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENT G

Flood Insurance Rate Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11 North. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography collected by the U.S. Department of Agriculture Farm Service Agency. This imagery was flown in 2005 and was produced with a 1-meter ground sample distance.

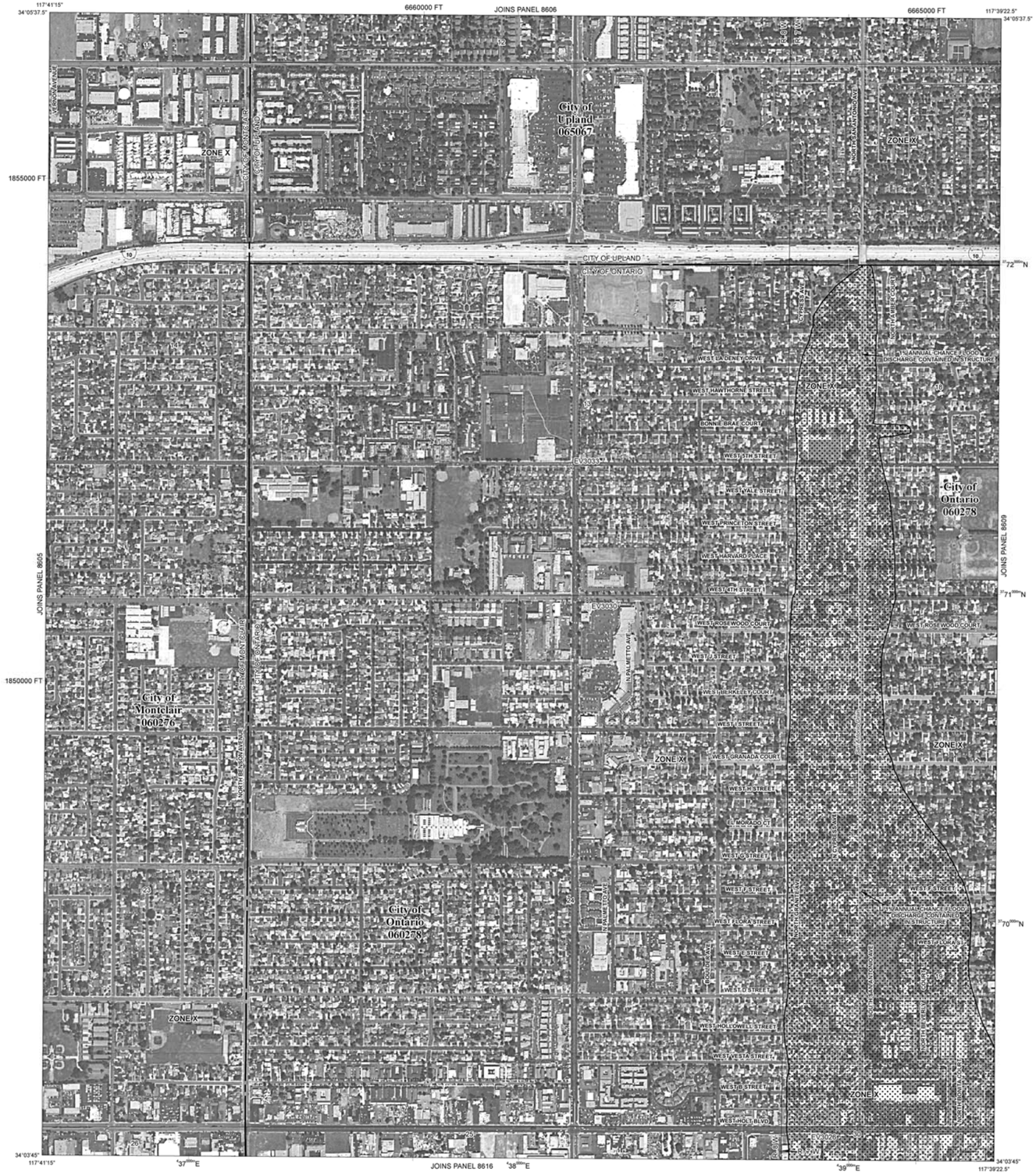
This map may reflect more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.


117°41'15"
34°05'37.5"
6660000 FT
JOINS PANEL 8606
6665000 FT
117°39'22.5"
34°05'37.5"
1855000 FT
1850000 FT
34°03'45"
117°41'15"
117°39'22.5"
34°03'45"
37'30"E
38'00"E
39'00"E
72'30"N
71'30"N
70'30"N
JOINS PANEL 8605
JOINS PANEL 8609
JOINS PANEL 8616
City of Upland 065067
City of Montclair 060276
City of Ontario 060278
City of Ontario 060278
CITY OF UPLAND
CITY OF ONTARIO
ZONE X
ZONE X
ZONE X
ZONE X
ZONE X
ZONE D
EL 1033
EL 1003
EL 1000
EL 1000
EL 1000