



**ENGINEERING, OPERATIONS, AND
WATER RESOURCES
COMMITTEE MEETING
OF THE BOARD OF DIRECTORS
INLAND EMPIRE UTILITIES AGENCY*
AGENCY HEADQUARTERS, CHINO, CALIFORNIA**

**WEDNESDAY, MARCH 8, 2017
9:45 A.M.**

*Or immediately following the
Community & Legislative Affairs
Committee Meeting*

CALL TO ORDER

PUBLIC COMMENT

Members of the public may address the Board on any item that is within the jurisdiction of the Board; however, no action may be taken on any item not appearing on the agenda unless the action is otherwise authorized by Subdivision (b) of Section 54954.2 of the Government Code. Those persons wishing to address the Board on any matter, whether or not it appears on the agenda, are requested to complete and submit to the Board Secretary a "Request to Speak" form which is available on the table in the Board Room. Comments will be limited to five minutes per speaker. Thank you.

ADDITIONS TO THE AGENDA

In accordance with Section 54954.2 of the Government Code (Brown Act), additions to the agenda require two-thirds vote of the legislative body, or, if less than two-thirds of the members are present, a unanimous vote of those members present, that there is a need to take immediate action and that the need for action came to the attention of the local agency subsequent to the agenda being posted.

1. ACTION ITEMS

A. MINUTES

The Committee will be asked to approve the Engineering, Operations, and Water Resources Committee meeting minutes from the February 8, 2017.

B. AMENDMENT TO CONTRACTS FOR AGENCY-WIDE CONTRACT SERVICES OF ROTATING MACHINERY

It is recommended that the Committee/Board:

1. Amend and increase the not-to-exceed amount of Contract No. 4600001868 to Superior Electric Motor Service, Inc. to provide repair, rebuild, or refurbishment services of rotating machinery for a total aggregate not-to-exceed amount of \$440,000 over the existing three-year period with a one-year option to extend;
2. Amend and increase the not-to-exceed amount of Contract No. 4600001864 to Vaughan's Industrial Repair, Inc. to provide repair, rebuild, or refurbishment services of rotating machinery for a total aggregate not-to-exceed amount of \$390,000 over the existing three-year period with a one-year option to extend; and
3. Authorize the General Manager to execute the contracts.

C. ENERGY STORAGE AGREEMENT AMENDMENT

It is recommended that the Committee/Board:

1. Approve the amendment to the Energy Management Services Agreement between Inland Empire Utilities Agency and Advanced Microgrid Solutions, Inc. (AMS); and
2. Authorize the General Manager to finalize and execute the agreement amendment subject to non-substantive changes.

D. PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) CERTIFICATION AND ADOPTION OF PLANNING DOCUMENTS

It is recommended that the Committee/Board:

1. Adopt Resolution No. 2017-3-1, certifying the Final Program Environmental Impact Report as complete; and
2. Approve IEUA's Asset Management Plan (FY 2015/16), 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).

E. UTILITY LOCATING SERVICES CONTRACT AMENDMENT

It is recommended that the Committee/Board:

1. Award a three-year contract amendment to UtiliQuest, LLC, for dig alert locating services for a not-to-exceed amount of \$440,000; and

2. Authorize the General Manager to execute the contract amendment.

F. RP-1 CONSULTANT TASK ORDER AMENDMENT (DISINFECTION)

It is recommended that the Committee/Board:

1. Approve the consultant task order amendment for the RP-1 Disinfection Improvements, Project No. EN11039, to Carollo Engineers, Inc., for the not-to-exceed amount of \$398,324; and
2. Authorize the General Manager to execute the amendment.

G. RP-1 DESIGN-BUILD CONTRACT AWARD (SOLIDS)

It is recommended that the Committee/Board:

1. Award a design-build contract for the RP-1 Dewatering Building Safety Improvements and RP-1 Vertical Conveyor Housing Replacement, Project Nos. EN17047 & EN17048 respectively, to Baghouse & Industrial Sheet Metal Services, Inc., in the amount of \$392,800; and
2. Authorize the General Manager to execute the design-build contract.

H. RP-1 GAS SYSTEM DESIGN-BUILD CONTRACT AWARD

It is recommended that the Committee/Board:

1. Award a design-build contract for the RP-1 Iron Sponges Installation, Project No. EN17059, to W.A. Rasic in the amount of \$319,900;
2. Approve a total project budget amendment in the amount of \$200,000 for Project No. EN17059; and
3. Authorize the General Manager to execute the design-build contract and budget amendment.

I. RP-1/RP-5 EXPANSION PRELIMINARY DESIGN REPORT

It is recommended that the Committee/Board concur with the findings of the RP-1/RP-5 Expansion Preliminary Design Report.

2. INFORMATION ITEM

A. OPERATIONS DIVISION UPDATE (POWERPOINT)

B. CHINO BASIN STORAGE PEIR ADDENDUM (WRITTEN)


RECEIVE AND FILE INFORMATION ITEMS

C. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES (POWERPOINT)

- 3. GENERAL MANAGER'S COMMENTS**
- 4. COMMITTEE MEMBER COMMENTS**
- 5. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS**
- 6. ADJOURN**

*A Municipal Water District

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary (909-993-1736), 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

Proofed by: 

DECLARATION OF POSTING

I, April Woodruff, Board Secretary of the Inland Empire Utilities Agency, A Municipal Water District, hereby certify that a copy of the agenda has been posted by 5:30 p.m. in the foyer at the Agency's main office, 6075 Kimball Ave., Building A, Chino, CA on Thursday, March 2, 2017.



April Woodruff

**ACTION
ITEM
1A**



MINUTES

ENGINEERING, OPERATIONS, AND WATER RESOURCES COMMITTEE MEETING INLAND EMPIRE UTILITIES AGENCY* AGENCY HEADQUARTERS, CHINO, CA

WEDNESDAY, FEBRUARY 8, 2017
11:00 A.M.

COMMITTEE MEMBERS PRESENT

Michael Camacho, Chair
Kati Parker

STAFF PRESENT

Chris Berch, Executive Manager of Engineering/AGM
Christina Valencia, Chief Financial Officer/AGM
Randy Lee, Executive Manager of Operations/AGM
Jerry Burke, Deputy Manager of Engineering
Nel Groenveld, Manager of Laboratories
Nasrin Maleki, Senior Engineer
Jason Marseilles, Senior Engineer
Jason Pivovaroff, Senior Engineer
Jesse Pompa, Senior Engineer
Craig Proctor, Source Control/Environmental Resources Supervisor
Shaun Stone, Manager of Engineering
Al VanBreukelen, Deputy Manager of Maintenance
April Woodruff, Board Secretary/Office Manager

OTHERS PRESENT

None

The meeting was called to order at 11:00 a.m. There were no public comments received or additions to the agenda.

ACTION ITEMS

The Committee:

- ◆ Approved the Engineering, Operations, and Biosolids Management Committee meeting minutes of January 11, 2017.
- ◆ Recommended that the Board:
 1. Approve a three-year blanket purchase agreement Contract No. 4600002251 to Downs Energy for the supply and delivery of diesel fuel with a three-year blanket purchase agreement, for a not-to-exceed amount of \$100,000 to various Agency locations, through December 31, 2019; and
 2. Authorize the Manager of Contracts and Procurement to issue a blanket

purchase agreement;

as a Consent Calendar Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award Master Service Contracts (Nos. 4600002275 through 4600002282) to the firms identified below for a two-year contract (two-year with two, one-year options to extend) to provide professional engineering and financial services for the development of water resources and the Integrated Water Resources Plan;
 - No. 4600002275 to Arcadis U.S., Inc.
 - No. 4600002276 to CH2M HILL Engineers, Inc.
 - No. 4600002277 to Carollo Engineers, Inc.
 - No. 4600002280 to Kennedy/Jenks Consultants
 - No. 4600002278 to Thomas Harder & Co., Inc.
 - No. 4600002282 to Daniel B. Stephens & Associates. Inc.
 - No. 4600002281 to INTERA Incorporated
 - No. 4600002279 to Michael Baker International
2. Increase the General Manager's authority set by Ordinance 101 to approve and execute task orders in the amount of not-to-exceed \$250,000 for services rendered under this project;
3. Authorize the Master Service Contracts of not-to-exceed \$3,000,000; and
4. Authorize the General Manager to approve, subject to not-substantive changes, and execute the Master Service Contracts.

as a Consent Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Approve the agreement amendment with Santa Ana Watershed Project Authority to extend the temporary Brine Line connection to March 2020;
2. Approve the agreement amendment with Chino Development Corporation, Chino Preserve Development Corporation, and Chino Holding Company to extend the temporary Brine Line connection to March 2020;
3. Approve the agreement amendment with the City of Chino to extend the permanent sewer facilities development guarantee to March 2020; and
4. Authorize the General Manager to execute the agreement amendments subject to non-substantive changes.

as a Consent Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award a design-build contract for the RP-2 Microturbine Installation Project No. EN17065, to Geveden Industrial in the amount of \$1,876,809;
 2. Approve a ten-year service agreement with Cal Microturbine in the amount of \$752,460 for Project No. EN17065;
 3. Approve a total project budget in the amount of \$2,210,000 and FY budget in the amount of \$850,000 for Project No. EN17065; and
 4. Authorize the General Manager to execute the budget amendment and the construction contract and maintenance service agreement subject to non-substantive changes.
1. Approve the consultant contract amendment for additional design efforts for the RP-1 Improvements, Project No. EN14019 to RMC Water and Environment for the not-to-exceed amount of \$68,204; and
 2. Authorize the General Manager to execute the amendment;

as an Action Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award a construction contract for the RP-4 Disinfection Facility Improvements, Project No. EN14018, to W.A. Rasic in the amount of \$1,839,400;
2. Approve a total project budget amendment in the amount of \$284,400 for Project No. EN14018; and
3. Authorize the General Manager to execute the construction contract and budget amendment;

as a Consent Item on the February 15, 2017 Board meeting agenda.

◆ Recommend that the Board:

1. Award a consulting engineering services contract for the RP-1 Primary Effluent Conveyance Improvements, Project No. EN15012, to Stantec for the not-to-exceed amount of \$461,483; and
2. Authorize the General Manager to execute the consulting engineering services contract;

as a Consent Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Approve the consultant contract amendment for additional design efforts for the RP-1 Power System Upgrades, Project No. EN13048 to Tetra Tech Inc., for the not-to-exceed amount of \$205,825; and

2. Authorize the General Manager to execute the amendment.

as a Consent Item on the February 15, 2017 Board meeting agenda.

◆ Recommended that the Board:

1. Award a construction contract for the CCWRF Valve Replacement, Project No. EN17051, to Ferreira Construction Co., in the amount of \$178,809; and
2. Authorize the General Manager to execute the contract.

as a Consent Item on the February 15, 2017 Board meeting agenda.

INFORMATION ITEMS

The following information items were presented or received and filed by the Committee:

- ◆ Regional Pretreatment Program Local Limits Update
- ◆ Laboratory Semi-Annual Update
- ◆ RP-5 Expansion Design Contract Update
- ◆ Engineering and Construction Management Project Update

GENERAL MANAGER'S COMMENTS

There were no General Manager's comments.

COMMITTEE MEMBER COMMENTS

There were no Committee Member comments.

COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

There were no Committee Member requested future agenda items.

With no further business, Director Camacho adjourned the meeting at 11:46 a.m.

Respectfully submitted,

April Woodruff
Board Secretary/Office Manager

*A Municipal Water District


APPROVED: MARCH 8, 2017

**ACTION
ITEM
1B**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (3/8/17)

From: P. Joseph Grindstaff 
General Manager

Submitted by: Randy Lee *PL*
Executive Manager of Operations/Assistant General Manager

Albert VanBreukelen *PL for AL*
Deputy Manager of Maintenance

Subject: Amendment to Contracts for Agency-Wide Contract Services of Rotating Machinery

RECOMMENDATION

It is recommended that the Board of Directors:

1. Amend and increase the not-to-exceed amount of Contract No. 4600001868 to Superior Electric Motor Service, Inc. to provide repair, rebuild, or refurbishment services of rotating machinery for a total aggregate not-to-exceed amount of \$440,000 over the existing three-year period with a one-year option to extend;
2. Amend and increase the not-to exceed amount of Contract No. 4600001864 to Vaughan's Industrial Repair, Inc. to provide repair, rebuild, or refurbishment services of rotating machinery for a total aggregate not-to-exceed amount of \$390,000 over the existing three-year period with a one-year option to extend; and
3. Authorize the General Manager to execute the contracts.

BACKGROUND

The Agency has rotating equipment such as pumps, blowers, gearboxes, compressors, mixers, etc. that periodically require major overhaul. After a formal solicitation process, two contracts were established; Contract No. 4600001864 with Vaughan's Industrial Repair, Inc. for a not-to-exceed amount of \$240,000, and Contract No. 4600001868 with Superior Electric Motor Service, Inc., for a

not-to exceed amount of \$240,000. Both contracts were established for a three-year period with a one-year option to extend.

Since the initiation of both contracts, the Agency has utilized both service contracts extensively due to unplanned major equipment repairs; e.g., the Regional Water Recycling Plant No. 5 (RP-5) influent and drain pumps, Regional Water Recycling Plant No. 4 (RP-4) and Carbon Canyon Water Recycling Facility (CCWRF) mixed liquor pumps, the Roots blowers, and gas mixers at Regional Water Recycling Plant No. 1 (RP-1). Due to these major repairs, expenditures on both contracts require amendments to the not-to-exceed limits for the remainder of the contract terms, to ensure necessary repairs to major equipment as negotiated under the current contract terms. The expenses encumbered to date for Vaughan's Industrial Repairs, Inc. is \$230,000 and \$163,000 to Superior Electric Motor Service, Inc.

The awards of these amendments align with the fiscal responsibility of the Agency and the goal of cost containment of the operating costs.

PRIOR BOARD ACTION

On May 20, 2015, the Board of Directors approved the award of Contract No. 4600001868 to Superior Electric Motor Service, Inc. for a total aggregate not-to-exceed amount of \$240,000 and Contract No. 4600001864 to Vaughan's Industrial Repair, Inc. for a total aggregate not-to-exceed amount of \$240,000 to provide repair, rebuild, or refurbishment services of rotating machinery over a three-year period with a one year option to extend.

IMPACT ON BUDGET

If approved, sufficient funds are available in Fiscal Years 2016/17 and 2017/18 Regional Operations and Maintenance (RO), Recycled Water (WC), and Non-Reclaimable Wastewater (NC) Funds, Professional Fees and Services Budget, to support the contract services related to the repair, rebuild, and refurbishments of rotating machinery.



Inland Empire
UTILITIES AGENCY

**AMENDMENT NUMBER 4600001868-001
TO
MASTER CONTRACT NUMBER 4600001868
FOR PROVISION OF
AS-NEEDED MECHANICAL EQUIPMENT REPAIR SERVICES**

THIS AMENDMENT, Number 460001868-001, to Contract Number 46000018648 between the Inland Empire Utilities Agency and Superior Electric Motor Service, Inc., of Los Angeles, California, for as-needed provision of mechanical equipment repair services, revises the Contract as follows:

Within the last paragraph of Article 6, PAYMENT, INVOICING AND COMPENSATION, replace the existing call-out of this Contract's "total aggregate price not-to-exceed \$240,000.00" with the superseding call-out of "total aggregate price not-to-exceed \$440,000.00." (This action represents a \$200,000.00 incremental increase to the not-to-exceed price limit of this Contract.)

ALL OTHER PROVISIONS OF CONTRACT NUMBER 4600001868 REMAIN UNCHANGED.

As evidenced by the signatures that follow, the Parties hereto mutually agree and covenant as to the above-stated amendment item(s) and in doing so designate this Amendment to become an integral part of the Contract Documents.

**INLAND EMPIRE UTILITIES AGENCY,
A Municipal Water District:**

SUPERIOR ELECTRIC MOTOR SERVICE, Inc :

P. Joseph Grindstaff
General Manager

(Date)



Chris Marachelian
Vice President

1/31/17
(Date)



Inland Empire
UTILITIES AGENCY

**AMENDMENT NUMBER 4600001864-001
TO
MASTER CONTRACT NUMBER 4600001864
FOR PROVISION OF
AS-NEEDED MECHANICAL EQUIPMENT REPAIR SERVICES**

THIS AMENDMENT, Number 460001864-001, to Contract Number 4600001864 between the Inland Empire Utilities Agency and Vaughan's Industrial Repair Company, Inc., of Paramount, California, for as-needed provision of mechanical equipment repair services, revises the Contract as follows:

Within the last paragraph of Article 6, **PAYMENT, INVOICING AND COMPENSATION**, replace the existing call-out of this Contract's "total aggregate price not-to-exceed \$240,000.00" with the superseding call-out of "total aggregate price not-to-exceed \$390,000.00." (This action represents a \$150,000.00 incremental increase to the not-to-exceed price limit of this Contract.)

ALL OTHER PROVISIONS OF CONTRACT NUMBER 4600001864 REMAIN UNCHANGED.

As evidenced by the signatures that follow, the Parties hereto mutually agree and covenant as to the above-stated amendment item(s) and in doing so designate this Amendment to become an integral part of the Contract Documents.

**INLAND EMPIRE UTILITIES AGENCY,
A Municipal Water District:**

VAUGHAN'S INDUSTRIAL REPAIR Co. :

P. Joseph Grindstaff
General Manager

(Date)


Keven Vaughan
Vice President

1-31-17
(Date)

**ACTION
ITEM
1C**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations and Water Resources Committee (3/8/2017)

From: P. Joseph Grindstaff
General Manager

Submitted by: *for* Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee
Manager of Planning & Environmental Resources

Subject: Energy Storage Agreement Amendment

RECOMMENDATION

It is recommended that the Board of Directors:

1. Approve the amendment to the Energy Management Services Agreement between Inland Empire Utilities Agency and Advanced Microgrid Solutions, Inc. (AMS); and
2. Authorize the General Manager to finalize and execute the agreement amendment subject to non-substantive changes.

BACKGROUND

On October 14, 2015, IEUA entered into a 10-year agreement with AMS for the installation, operation, and maintenance of 3.65 Mega Watts (MW) of energy storage at several treatment plants. The battery will efficiently integrate IEUA's renewable generation facilities, improve energy load management, and provide cost savings by shifting electricity use away from expensive peak hours. The project, currently under construction, will be implemented at no cost to IEUA; in exchange, IEUA will provide AMS monthly payments for the energy management services. Since the estimated savings is expected to be greater than the monthly payments for the existing contract, AMS provided a minimum net savings assurance to IEUA of \$55,000 per year for 10 years.

The existing agreement anticipates additional third party agreements, and the use of the energy storage for other opportunities (referred to as market products), such as demand response, wholesale energy

sales, generation of capacity credits, and installation of solar photovoltaic systems to increase the overall project revenues. All third-party agreements must be approved by both parties prior to execution; benefits will be assessed, negotiated, and distributed between AMS and IEUA on a case-by-case basis.

In October 2016, AMS proposed that IEUA share with Shell (IEUA's energy service provider of electricity for RP-1, RP-2, and CCWRF) 1 MW of the 3.65 MW of energy storage capacity. Subsequent to IEUA's approval, Shell would have operational rights of the battery system through AMS, up to 400 hours per year for 10 years, and would pay AMS up to \$90,000 per year based on the battery's performance.

Shell's project rights will not interfere with the IEUA's existing minimum savings of \$55,000 per year; furthermore, IEUA would receive from AMS 30% of the maximum payment from Shell, which is equivalent to an additional \$27,000 per year. Hence, staff recommends amending the existing agreement between AMS and IEUA to allow AMS to trade energy storage capacity with Shell. In exchange to sharing the savings with IEUA, the existing agreement with Shell for the purchase of electricity will be extended for three years; this term is consistent with the current Shell contract, main difference being that the current contract is extended year to year for another three years.

IEUA's General Counsel and Financial Consultant, Public Financial Management, Inc., reviewed the proposed agreement and provided comments that were incorporated into the final agreement amendment language.

The project meets IEUA's adopted Business goals for *Wastewater Management* by optimizing renewable resources, containing future energy costs, and progressing toward peak power independence with the proposed Energy Management strategy.

PRIOR BOARD ACTION

On May 18, 2016, the Board of Directors approved the electricity amendment with Shell Energy North America (SENA) US, L.P. through December 31, 2016, to purchase 1.5 megawatts (MW) of electricity per hour at a variable rate, and authorized the General Manager to finalize and execute the amended agreements, and negotiate further amendments for up to three additional years.

On October 14, 2015, the Board of Directors approved the Energy Storage Services Agreement between IEUA and AMS.

On August 19, 2015, the Board of Directors approved a revised MOU between IEUA and AMS for a Master Lease and Energy Services Agreement that was substantially different than the February 2015 MOU.

On February 18, 2015, the Board of Directors approved a Memorandum of Understanding (MOU) between IEUA and AMS for a Master Lease and Energy Services Agreement.

IMPACT ON BUDGET

If approved, IEUA will realize additional savings of up to \$27,000 per year for 10 years from AMS for energy load management through the batteries.

Attachment:

1. First Amendment to Energy Management Services Agreement

FIRST AMENDMENT TO ENERGY MANAGEMENT SERVICES AGREEMENT

This FIRST AMENDMENT TO ENERGY MANAGEMENT SERVICES AGREEMENT ("First Amendment") is made as of this ____ day of _____, 2017 ("Effective Date"), by and between ADVANCED MICROGRID SOLUTIONS, INC., a Delaware corporation ("Provider"), and INLAND EMPIRE UTILITIES AGENCY, a municipal water district ("Host Customer"), with reference to the following facts:

RECITALS

A. Host Customer and Provider are parties to those certain Special Terms and Conditions of Energy Management Services Agreement, dated October 14, 2015 ("Original Special Conditions"), which incorporate by reference those certain General Terms and Conditions of Energy Management Services Agreement, dated October 14, 2015 (the "Original General Conditions" and together with the other schedules and exhibits attached thereto and to the Original Special Conditions, the "Original Agreement," and as amended by this First Amendment, the "Agreement"). Capitalized terms used in this First Amendment, and not otherwise defined herein, shall have the meanings ascribed to them in the Original Agreement.

B. Pursuant to Section 18.3 of the Original General Conditions, Host Customer and Provider desire to amend the Original Agreement as set forth herein.

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Host Customer and Provider hereby amend the Original Agreement as follows:

1. Shell Utility Services Agreement. Prior to the date hereof, Provider has entered into a Utility Services Agreement (as applicable to the Project Sites, the "Shell Utility Services Agreement") with Shell Energy North America (US), L.P., a Delaware limited partnership ("Shell"), to sell and provide certain Market Products to Shell. In accordance with the last sentence of Recital C of the Original Special Conditions and Section 5.4 of the Original General Conditions, Provider and Host Customer agree to the following:

1.1. Subject to Section 1.2 below, within thirty (30) days following actual receipt of payment in full from Shell under the Shell Utility Services Agreement for any calendar month, Provider shall pay Host Customer a monthly amount (the "Monthly Shell Market Products Payment") equal to thirty percent (30%) of the revenue actually received by Provider from the sale of Market Products under the Shell Utility Services Agreement. Provider shall include the Monthly Shell Market Products Payment on the monthly invoices it provides to Host Customer under the Agreement, and shall have the right to deduct the Monthly Shell Market Products Payment from amounts otherwise owed by Host Customer to Provider. The Monthly Shell Market Products Payment shall be subject to proration, reduction, and adjustment as a result of the items, events, and circumstances identified in clauses (a) through (i) of Section 2 of Schedule 4 attached to the Original Special Conditions.

1.2. With respect to the Monthly Shell Market Products Payment, the Parties acknowledge and agree to the following: (a) no Monthly Shell Market Products Payment shall be made until Provider commences delivery of the Market Products to Shell under the Shell Utility Services Agreement, which will not occur until the occurrence of the Completion Date for a sufficient number (as reasonably determined by Provider) of Energy Storage Systems under the Agreement, (b) Provider's

obligation to pay the Monthly Shell Market Products Payment shall be subject to actual receipt by Provider of all amounts owed by Shell under the Shell Utility Services Agreement for such calendar month, with the amount of each such payment itemized and detailed in monthly statements by Provider to Host Customer , and (c) if, from time to time, for any reason the Shell Utility Services Agreement and/or the Agreement is suspended, terminated and/or expires, in whole or in part (including a termination of the Agreement with respect to individual Project Sites identified on Schedule 6 of the Original Specific Conditions) such that Provider is no longer able to satisfy its obligations under the Shell Utility Services Agreement and/or is no longer receiving payment from Shell under the Shell Utility Services Agreement, then, in each case, Provider's obligation to pay the Monthly Shell Market Products Payment shall likewise be suspended, terminated, or expired.

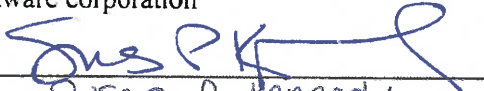
2. Miscellaneous. The terms of this First Amendment shall supersede and control to the extent of any conflicts or inconsistencies with the Original Agreement. The recitals set forth in the beginning of this First Amendment are incorporated herein as part of this First Amendment for all purposes. This First Amendment may be signed in one or more counterparts, each of which shall be considered an original and all of which taken together shall constitute one and the same instrument. This First Amendment may be duly executed by a Party, and delivered to the other Party, by electronic delivery of a "pdf" counterpart to this First Amendment.

[Signatures On Following Page]

IN WITNESS WHEREOF, Host Customer and Provider have caused this First Amendment to be executed as of the date first above written.

Provider:

ADVANCED MICROGRID SOLUTIONS, INC.,
a Delaware corporation

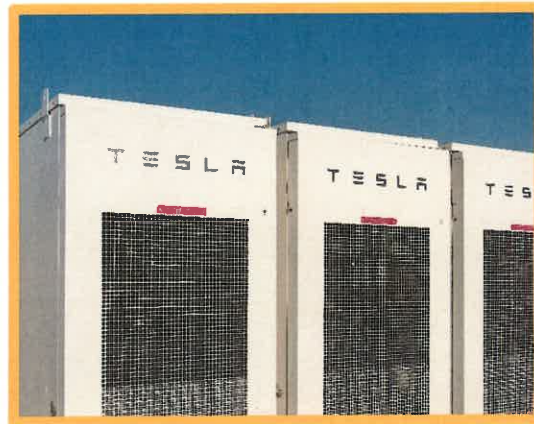
By: 
Name: Susan P. Kennedy
Title: Chief Executive Officer

Host Customer:

INLAND EMPIRE UTILITIES AGENCY,
a municipal water district

By: _____
Name: _____
Title: _____

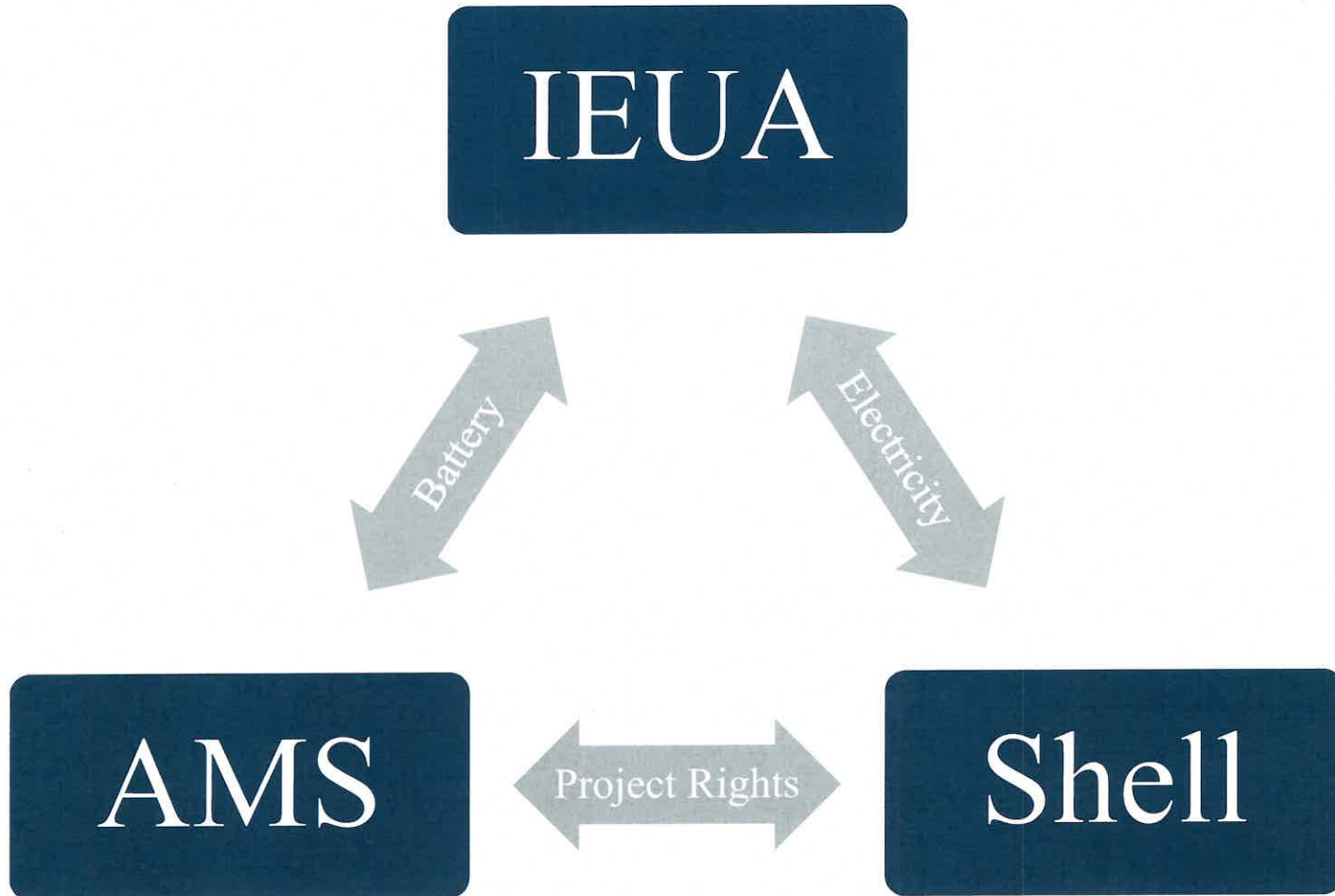
Energy Storage Agreement Amendment



Energy Management Service Agreement

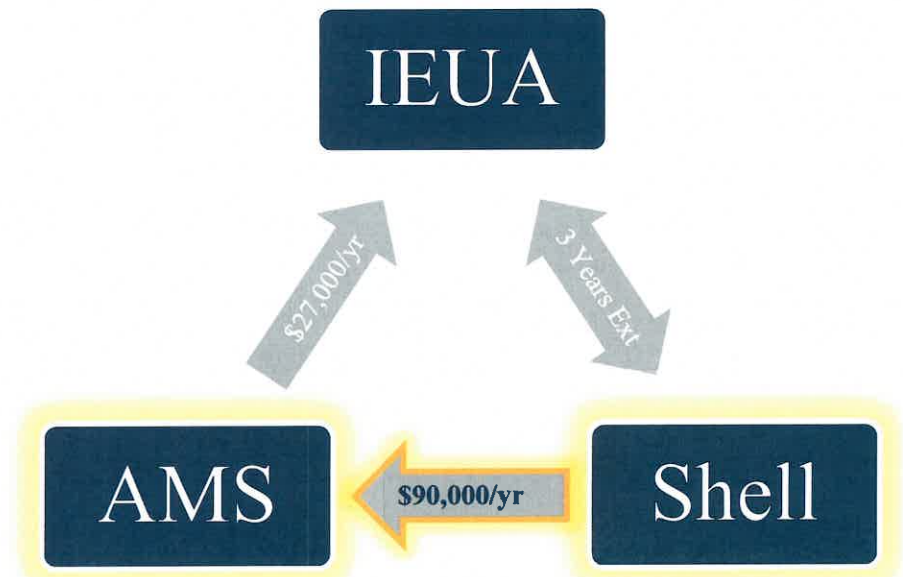
- 2015: Contract with Advanced Microgrid Solutions (AMS)
- 10-year term
- 3.65 Mega Watts (MW) of energy storage
- No capital cost to IEUA
- Net guaranteed savings \$55,000/year
- RP-5 installation complete

Public-Private Partnership



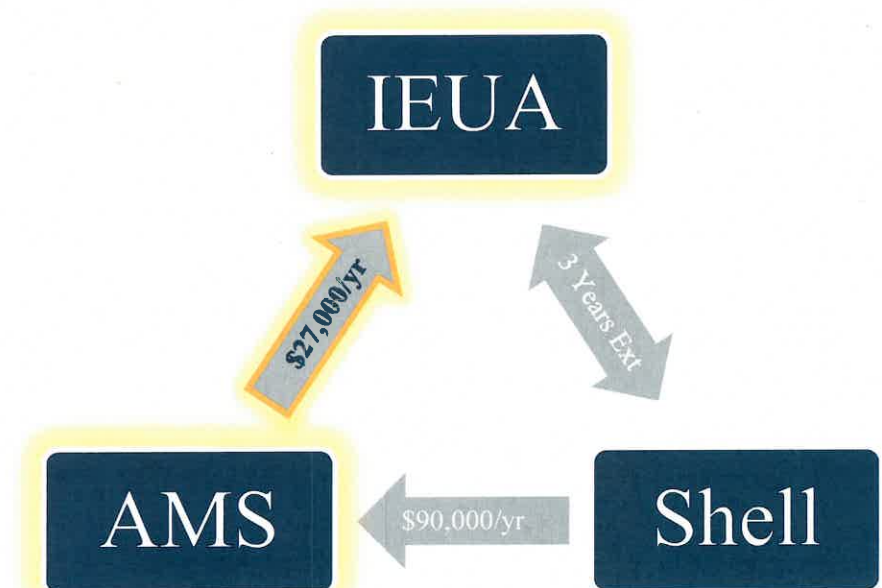
AMS – Shell Master Agreement

- 1 MW energy storage project rights to Shell
- Performance: <400 hrs/yr of load management
- Shell pays max \$90,000/yr to AMS
- 10-year term



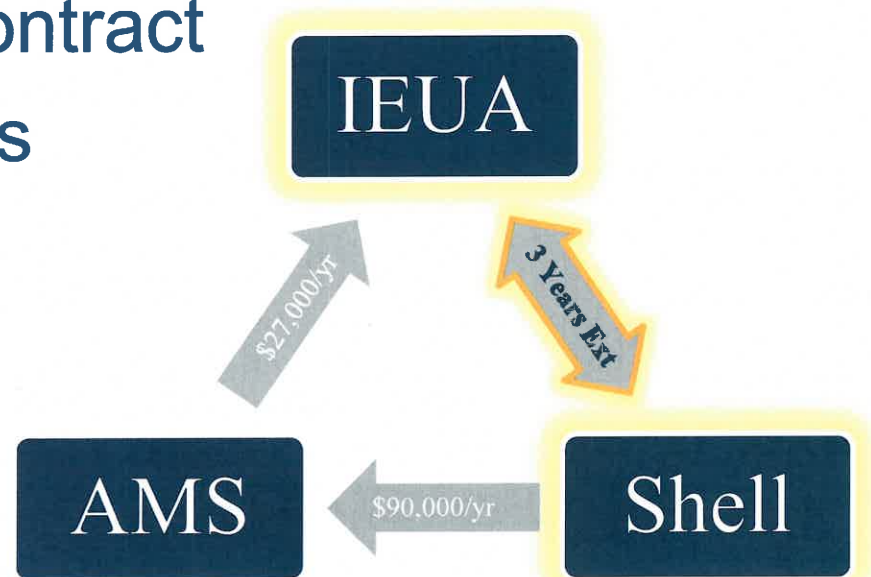
Energy Management Service Agreement Amendment

- IEUA and AMS agree 1 MW project rights to Shell
- AMS pays max \$27,000/yr to IEUA
- 10-year term
- Does not affect current contract



IEUA – Shell Amendment

- Current contract:
 - Provides energy to RP-1, RP-2, CCWRF
 - Annually renewed contract (max three years)
- Proposal: 3-year term
- Consistent with current contract
- Term for savings: 10 years



Recommendation

1. Approve the amendment to the Energy Management Services Agreement between Inland Empire Utilities Agency and Advanced Microgrid Solutions, Inc. (AMS); and
2. Authorize the General Manager to finalize and execute the agreement amendment subject to non-substantive changes.


*The amendment of the Energy Management Services Agreement between IEUA and AMS is consistent with IEUA's business goal for **Wastewater Management** by optimizing renewable resources, containing future energy costs, and progressing toward peak power independence with the proposed Energy Management strategy.*


**ACTION
ITEM
1D**


Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations and Water Resources Committee (3/8/2017)

From:  P. Joseph Grindstaff
General Manager

Submitted by:  Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee 
Manager of Planning and Environmental Resources

Subject: Program Environmental Impact Report (PEIR) Certification and Adoption of Planning Documents

RECOMMENDATION

It is recommended that the Board of Directors:

1. Adopt Resolution No. 2017-3-1, certifying the Final Program Environmental Impact Report as complete; and
2. Approve IEUA's Asset Management Plan (FY 2015/16), 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).

BACKGROUND

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 (FMP), which encompass IEUA's Asset Management Plan (FY 2015/16), 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 FMP and Capital Improvement Plan (FY 2016/17) would provide for future wastewater treatment, biosolids handling, recycled water, and reliable and sustainable energy infrastructure to support these activities within the IEUA service area.

PEIR Certification and Adoption of Planning Documents

March 15, 2017

Page 2 of 4

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 FMP. Many of the projects that make up the FMP 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. The implementation of the facilities proposed within the FMP consists of construction, operation, and maintenance. These potential facilities are separated into three project categories: treatment facility upgrades, conveyance systems and ancillary facilities, and groundwater recharge and extraction.

The environmental evaluation includes a project analysis and a cumulative analysis for potential impacts related to construction and operation of the proposed facilities before and after the implementation of mitigation measures in accordance with Appendix G of the CEQA Guidelines.

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, noise impacts associated with construction of proposed FMP projects, and secondary effects of growth. Impact to aesthetics, agriculture and forest resources, biological resources, geology soils and mineral resources, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, public services, recreation, traffic and transportation, and utilities are less than significant when mitigation measures are implemented.

Three alternatives (no project, reduced groundwater recharge, expanded advanced water treatment facility) were selected for a detailed analysis using a combination of projects that would avoid or lessen the significant environmental effects, while effectively meeting IEUA's goals. 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.

The environmental analysis of the six planning documents started in August 2015. An Initial Study and Notice of Preparation (NOP) of a PEIR were distributed on June 24, 2016, for public comments. A scoping meeting was held at IEUA's headquarter on July 21, 2016, to receive additional input on potential environmental issues. Comments from these solicitations were compiled into a draft PEIR that was circulated on December 20, 2016, for public review. The draft PEIR was distributed to over 76 interested parties for comment, a public meeting on the draft PEIR was held on January 25, 2016, and the closing date for final written comments was February 2, 2016.

IEUA received comment letters on the draft PEIR from the Department of Toxic Substances Control, the Metropolitan Water District of Southern California, the City of Rancho Cucamonga, the City of Ontario, Chino Basin Watermaster, the City of Chino, the San Bernardino County Department of Public Works, the Cucamonga Valley Water District, and the Native American Heritage Commission. Tom Dodson and Associates, Environmental Science Associates (ESA), and IEUA staff prepared

responses to all comments received. These responses were provided to the interested parties and were included into the final Program Environmental Impact Report.

The Facts, Findings, and Statement of Overriding Considerations for the PEIR discuss all significant adverse impact and the benefits related to implementing the proposed projects and programs included in the new Facilities Master Plans. As the Lead Agency under the CEQA guidelines, the Board's adoption of these Facts, Findings and Statement of Overriding Considerations for the final PEIR is required.

The Mitigation Monitoring and Reporting Program embodies the results of the PEIR, and the comments from the review by concerned parties, representing the framework under which the many projects of the FMP may go forward with more limited environmental review in the future. As the Lead Agency under the CEQA guidelines, the Board of Directors is required to adopt the Mitigation, Monitoring, and Reporting Program.

The certification of the PEIR is the final action by the Board of Directors prior to approval of the FMP for IEUA implementation. Certification of the PEIR reflects the Board's approval of the effort to fairly present the environmental effects of the projects of the FMP, the reason for such projects, the benefits to future wastewater treatment, biosolids handling, local and regional water supplies, recycled water, and reliable and sustainable energy infrastructure.

Certification also indicates that the Board, after due consideration of the mitigation measures, agrees that all negative impacts are likely to be reduced to a level of less than significant impact, except air quality, changes to historical resources, noise impacts, and secondary effects of growth. In the specific case of the PEIR, wherein a Statement of Overriding Consideration was developed, certification indicates that the Board concurs with the fact and findings regarding a negative impact that could not be mitigated to a level of less than significant. Resolution No. 2017-3-1 incorporates the Fact, Findings, and Statement of Overriding Consideration by reference. Adoption of Resolution No. 2017-3-1 by the Board will serve as the certification of the final FMP PEIR.

The proposed certification of the final PEIR, and approval of IEUA's Facilities Master Plans is consistent with the Agency's business goal of *Environmental Stewardship and Regulatory Compliance*, as approved by the Board of Directors in December 2016.

PRIOR BOARD ACTION

On February 17, 2016, the Board of Directors concurred with the proposed initiatives and findings as outlined in the Energy Management Plan.

On November 4, 2015, the Board of Directors and the Regional Policy Committee developed a consensus in support of the water supply strategies for the Integrated Water Resources Plan.

On August 19, 2015, the Board of Directors awarded a professional service contract for the preparation of a PEIR to Tom Dodson and Associates for a not-to-exceed amount of \$330,000.

On July 15, 2015, the Board of Directors concurred with the findings of the Wastewater Facilities Master Plan.

On June 17, 2015, the Board of Directors concurred with the findings of the recycled water program as outlined in the Recycled Water Program Strategy.

On October 16, 2013, the Board of Directors approved the 2013 Amendment to the 2010 Chino Basin Recharge Master Plan Update and adopted Resolution No. 2013-10-1, adopting the 2013 Amendment to the 2010 Chino Basin Recharge Master Plan Update.

IMPACT ON BUDGET

None.

Attachments:

- Resolution No. 2017-3-1
- Program Environmental Impact Report document can be found at:
<https://www.ieua.org/category/reports/>
- “Energy Management Plan (EMP)” Board letter (2/17/2016)
- “Integrated Water Resources Plan” Board letter (11/4/2015)
- “Wastewater Facilities Master Plan” Board letter (7/15/2015)
- “Recycled Water Program Strategy” Board letter (6/17/2015)
- “Approval of 2013 Chino Basin Recharge Master Plan Update” Board letter (10/16/2013)

RESOLUTION NO.2017-3-1

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE INLAND EMPIRE UTILITIES AGENCY CERTIFYING THE FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE ASSET MANAGEMENT PLAN (FY 2015/16), 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) (COLLECTIVELY FACILITIES MASTER PLANS) AND ADOPTION OF FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS

Whereas, the California Environmental Quality Act (CEQA) of 1970, as amended, requires that prior to approval of any project, the Lead Agency shall consider the potential impacts and effects of said project, consider alternatives to the project, and identify mitigation measures necessary to reduce or eliminate the impact of the project on the environment;

Whereas, the Inland Empire Utilities Agency (IEUA) is the Lead Agency for the Facilities Master Plans (FMP) and has caused to be prepared a Program Environmental Impact Report (PEIR) for the Facilities Master Plans in accordance with CEQA and its implementing guidelines;

Whereas, IEUA prepared and circulated a Notice of Preparation (NOP) to the public, responsible agencies and other interested parties for their review and comment, pursuant to CEQA Guidelines Section 15082;

Whereas, pursuant to comments received on the scope and content of the PEIR in response to the NOP document, IEUA prepared and circulated a draft PEIR assessing the project's environmental impact for public review;

Whereas, IEUA issued the Notice of Completion for the draft PEIR on December 20, 2016 and the draft PEIR was available for public review and comment from December 20, 2016 through February 2, 2017;

Whereas, IEUA received 10 letters with comments and concerns regarding the content of the draft PEIR for the Facilities Master Plans;

Whereas, the PEIR determined that the majority of potential adverse environmental impacts are less than significant with or without mitigation, including the following: aesthetics, agriculture and forest resources, biological resources, geology soils and mineral resources, hazards and hazardous materials, hydrology and water quality, land use planning, population and housing, public services, recreation, traffic and transportation, utilities;

Whereas, the PEIR identified significant and unavoidable environmental impact relating to air quality and greenhouse gas emissions, cultural resources, noise, and secondary effects of growth;

Whereas, IEUA provided a copy of the Responses to Comments to all Responsible Agencies on March 1, 2017, in accordance with CEQA;

Whereas, the Final Master Plan PEIR will be available for use as the base environmental document by any Responsible Agency proceeding to implement future site-specific projects under the Master Plan in accordance with programmatic procedures outlined in the State CEQA Guidelines Sections 15162 and 15168;

Whereas, the IEUA Board has received and has reviewed the Final Master Plan PEIR, consisting of the draft PEIR, all Responses to Comments, the Mitigation Monitoring and Reporting Program, Findings of Fact and Statement of Overriding Considerations, and all other material in the administrative record; and

Whereas, pursuant to duly given public notice, the IEUA Board has held a full and fair public hearing on March 15, 2017 concerning the Facilities Master Plans and the PEIR and has considered all written and oral comments and testimony relating thereto and is fully advised thereon.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED BY THE INLAND EMPIRE UTILITIES AGENCY AS FOLLOWS:

Section 1. A full and fair public hearing having been held on the PEIR prepared in connection with the Facilities Master Plans, as stated in the recitals herein, the IEUA hereby approves and certifies the PEIR for the Asset Management Plan (FY 2015/16), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan (2015), Integrated Water Resources Plan (2015) and Energy Management Plan (2015) (collectively Facilities Master Plans) before the IEUA Board at this time which incorporates the written comments incorporated herein by reference, and all as more fully described in the Final Master Plan PEIR, and adopts the Mitigation Monitoring and Reporting Program and Facts, Findings and Statement of Overriding Considerations.

IEUA further finds that all changes or alterations have been required in connection with the adoption of the Facilities Master Plans and have been incorporated in conjunction with the Master Plans which avoid or substantially lessen the significant environmental effects identified in the PEIR.

Pursuant to Public Resources Code Section 21081, IEUA further finds that where the responsibility for implementation of mitigation measures has been assigned to participating agencies, such mitigation measures are within the responsibility and jurisdiction of such other agencies and such changes can and should be adopted by such agencies when they carry out future site-specific projects under the Facilities Master Plan.

Section 2. IEUA hereby authorizes and directs the filing and posting of a Notice of Determination as required by Section 21152 of the Public Resources Code, the filing required pursuant to Section 21089 (b) of the Public Resources Code, and CEQA Guidelines section 15094 by the General Manager with the Clerk of the Board of Supervisors of San Bernardino County and the State Clearinghouse, Governor's Office of Planning and Research, as soon as possible after the adoption of this Resolution.

Section 3. IEUA hereby adopts the mitigation measures recommended as conditions of project approval in Table ES-1, Chapter 3 and Responses to Comments of the Final Facilities Master Plan PEIR, and the Mitigation Monitoring and Reporting Program prepared for the purpose of monitoring the changes which have been adopted or made a condition of project approval as described in Section 1 of this Resolution and all as more fully described in the Mitigation Monitoring and Reporting Program.

Section 4. IEUA hereby adopts the Asset Management Plan (FY 2015/16), Recycled Water Program Strategy (2015), Amendment to the 2010 Recharge Master Plan Update (2013), Wastewater Facilities Master Plan (2015), Integrated Water Resources Plan (2015) and Energy Management Plan (2015) (collectively Facilities Master Plans) as the guidance document for preparation of the Ten-Year Capital Improvement Program.

Section 5. This Resolution shall take effect upon adoption

ADOPTED, this 15 day of March, 2017.

President of the Inland Empire Utilities Agency and of the Board of Directors thereof

ATTEST:

Secretary/Treasurer of the Inland Empire Utilities Agency and of the Board of Directors thereof.

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 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
Aesthetics			
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before Construction</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before, During and After Construction</p>
<p>AES-3: Development of the proposed project and associated facilities shall comply with existing and future lighting ordinances.</p>	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before, During and After Construction</p>

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
AES-4: Structures with large facades shall not include highly reflective building materials.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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 	IEUA; Construction Contractor	Before and During Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<ul style="list-style-type: none"> Construction trucks shall be routed away from congested streets or sensitive receptor areas where feasible. 	file.		
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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.</p>	<ul style="list-style-type: none"> 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			
<p>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.</p>	<ul style="list-style-type: none"> 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

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>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.</p>	<ul style="list-style-type: none"> • 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
<p>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 <i>Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans</i> of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).</p>	<ul style="list-style-type: none"> • 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
<p>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.</p>	<ul style="list-style-type: none"> • 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
<p>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</p>	<ul style="list-style-type: none"> • 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 	IEUA; Construction Contractor	Before and During Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>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.</p>	<p>documentation in the project file.</p>		
<p>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.</p>	<ul style="list-style-type: none"> • Include mitigation measure in construction contractor specifications. • Retain copies of correspondence with any regulatory agencies. • Retain records in the project file. 	<p>IEUA; Construction Contractor</p>	<p>Before and During Construction</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before and During Construction</p>
<p>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</p>	<ul style="list-style-type: none"> • Include mitigation measure in construction contractor specifications. • Ensure BMPs are included in construction contractor 	<p>IEUA; Construction</p>	<p>Before and During Construction</p>

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
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.	specifications. <ul style="list-style-type: none"> • 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. 	Contractor	
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.	<ul style="list-style-type: none"> • 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
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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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;	<ul style="list-style-type: none"> • 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

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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
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.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • 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. 	IEUA; Construction Contractor	Before Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
	<ul style="list-style-type: none"> Perform site inspections to ensure contractor compliance with geotechnical report recommendations. 		
Hazards and Hazardous Materials			
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. Retain inspection forms in the project file. 	IEUA; Construction Contractor	Before and During Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>materials likely to be encountered at specific locations and the appropriate treatment and/or disposal methods.</p>			
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before and During Construction</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before and During Construction</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before and During Construction</p>
<p>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</p>	<ul style="list-style-type: none"> • Include mitigation measures in construction contractor specifications. 	<p align="center">IEUA</p>	<p align="center">Before, During and After Construction</p>

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>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.</p>	<ul style="list-style-type: none"> Retain copies of correspondence with vector control agencies. Site inspections shall be performed to ensure compliance with vector control mitigation measures. 		
Hydrology and Water Quality			
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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</p>	<ul style="list-style-type: none"> Include mitigation measure in construction contractor specifications. 	IEUA; Construction	Before and During Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">Contractor</p>	
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before Construction</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA</p>	<p align="center">Before Construction</p>
Noise			
<p>NOISE-1: IEUA shall implement the following measures during construction:</p> <ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before and During Construction</p>

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances..</p> <ul style="list-style-type: none"> 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. 			
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>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.</p>	<ul style="list-style-type: none"> 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
<p>NOISE-5: IEUA shall require the construction contractor(s) to implement the following measure:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Include mitigation measure in construction contractor specifications. Retain copies of contractor specifications in project files. Perform site inspections to verify contractor 	IEUA; Construction Contractor	During Construction

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>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.</p>	<p>compliance. Retain inspection records in the project file.</p>		
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before Construction</p>
Public Services			
<p>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.</p>	<ul style="list-style-type: none"> • Include mitigation measure in construction contractor specifications. • Initiate correspondence with local jurisdiction • Retain copies of the correspondence in the project file 	<p>IEUA; Construction Contractor</p>	<p>Before Construction</p>
Traffic and Transportation			
<p>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:</p> <ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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. 	<p>IEUA; Construction Contractor</p>	<p>Before and During Construction</p>

**TABLE 11-1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IEUA FMP PROGRAM EIR**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
activities.			
Utilities			
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p align="center">IEUA; Construction Contractor</p>	<p align="center">Before and During Construction</p>

IEUA FACILITIES MASTER PLANS PEIR

Environmental Findings and Statement of Overriding Considerations

Prepared for
Inland Empire Utilities Agency

February 2017



IEUA FACILITIES MASTER PLANS PEIR

Environmental Findings and Statement of Overriding Considerations

Prepared for
Inland Empire Utilities Agency

February 2017

626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300
www.esassoc.com

Irvine	Sacramento
Los Angeles	San Diego
Oakland	San Francisco
Orlando	Santa Monica
Pasadena	Seattle
Petaluma	Tampa
Portland	Woodland Hills

150283.07



OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

IEUA Facilities Master Plans PEIR Environmental Findings and Statement of Overriding Considerations

Section 1, Background and Introduction	1
1.1 Project Overview	1
1.2 Public Involvement and PEIR Scoping	1
1.3 PEIR Certification and Project Approval Process	2
1.3.1 Findings Required Under CEQA.....	2
1.3.2 Significant Effects and Mitigation Measures	3
1.3.3 Mitigation Monitoring and Reporting Program	3
1.3.4 Certification of the PEIR and Adoption of Findings	3
Section 2, Project Summary	4
2.1 Project Location.....	4
2.2 Project Description	4
2.3 Project Objectives	6
2.4 Record of Proceedings.....	7
2.5 Custodian and Location of Records.....	8
Section 3, Environmental Findings.....	8
3.1 Findings Regarding No Impact and Less than Significant Impacts Identified in the EIR.....	8
3.1.1 Project Impacts	8
3.1.2 Cumulative Impacts.....	38
3.2 Findings Regarding Environmental Impacts which Can Be Mitigated to Less than Significant	53
3.2.1 Project Impacts	53
3.2.2 Cumulative Impacts.....	88
3.3 Findings Regarding Environmental Impacts Not Fully Mitigated to Less Than Significant.....	109
3.3.1 Project Impacts	110
3.3.2 Cumulative Impacts.....	118
Section 4, Feasibility of Alternatives	123
4.1 Alternative 1: No Program.....	123
4.1.1 Description	123
4.1.2 Impact Analysis	124
4.1.3 Findings for Alternative 1	147
4.2 Alternative 2: Reduced Groundwater Discharge	127
4.2.1 Description	127
4.2.2 Impact Analysis	128
4.2.3 Findings for Alternative 2	132

	<u>Page</u>
4.3 Alternative 3: Expanded Advanced Water Treatment Facility	132
4.3.1 Description	132
4.3.2 Impact Analysis	134
4.3.3 Findings for Alternative 3	137
4.4 Environmentally Superior Alternative.....	137
Section 5, Statement of Overriding Considerations.....	138
5.1 Significant and Unavoidable Impacts.....	138
5.1.1 Air Quality and Greenhouse Gases	138
5.1.2 Cultural Resources.....	139
5.1.3 Noise	139
5.2 Program Benefits.....	139

IEUA FACILITIES MASTER PLANS PEIR

Environmental Findings and Statement of Overriding Considerations

1. Background and Introduction

1.1 Project Overview

The Inland Empire Utilities Agency (IEUA) has completed a Program Environmental Impact Report (PEIR) (State Clearinghouse Number 2016061064) for the IEUA Facilities Master Plans. The IEUA is the Lead Agency for the purposes of preparing and certifying the PEIR pursuant to Sections 15050 and 15367 of the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.)

The purpose of the PEIR is to evaluate the potential environmental impacts of the proposed program. In compliance with Section 21002.1 of CEQA and Section 15002 of the State CEQA Guidelines, the IEUA, as Lead Agency, has prepared the PEIR in order to (1) inform the general public, the local community, responsible and interested public agencies and the Agency's decision-making bodies and other organizations, entities, and interested persons of the potential environmental effects of the proposed program, feasible measures to reduce potentially significant environmental effects, and alternatives that could reduce or avoid the significant effects of the proposed program, (2) enable the Agency to consider environmental consequences when deciding whether to approve the proposed program and (3) to satisfy the substantive and procedural requirements of CEQA.

1.2 Public Involvement and PEIR Scoping

The PEIR complies with the provisions of CEQA (California Public Resources Code, Sections 21000 et seq.), the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.) and the Agency's Procedures for Implementing the State CEQA Guidelines. In compliance with CEQA, IEUA has solicited and considered comments from Responsible and Trustee Agencies, members of the public, and other interested parties during the proposed program's various environmental review processes:

- In accordance with CEQA Guidelines Sections 15063 and 15082, IEUA prepared and distributed a Notice of Preparation (NOP) of a PEIR. The NOP was distributed on June 29, 2016 to governmental agencies, organizations, and persons who may be interested in the project.

- In compliance with Section 21083.9 of CEQA and Section 15082 (c)(1) of the State CEQA Guidelines, IEUA held a public scoping meeting on July 21, 2016, to receive public and agency comments.
- Comments received from the public and agencies during the public review period for the NOP and the public scoping meeting were considered in the preparation of the PEIR prepared for the proposed program.
- In December 2016, a Draft PEIR was prepared for the proposed program in accordance with current CEQA regulations and guidelines. The Draft PEIR was circulated for a 45-day public review period on December 20, 2016. Notification was provided to the State Clearinghouse (SCH), to local, state, and federal agencies, and to all interested parties and jurisdictions pursuant to the requirements of Section 15087 of the State CEQA Guidelines. There were nine letters/correspondence received by IEUA during the 45-day review period. Comments within each letter/correspondence were evaluated and responded to in accordance with Section 15088 of the State CEQA Guidelines.

1.3 PEIR Certification and Project Approval Process

1.3.1 Findings Required Under CEQA

The IEUA will determine whether to certify the PEIR for the program. The PEIR, as required by State CEQA Guidelines Sections 15089 and 15132, consists of the Draft Program Environmental Impact Report (SCH No. 2016061064), the Final PEIR Document, and any other information added by IEUA. The Final PEIR Document includes an Introduction to Response to Comments; comments received on the Draft PEIR, a list of persons, organizations, and public agencies commenting on the Draft PEIR; the responses of the IEUA as “Lead Agency” to significant environmental points raised in the review and consultation process; Corrections and Additions made to the Draft PEIR after response to comments; and the Mitigation Monitoring and Reporting Program (MMRP). Because the Draft PEIR identified potentially significant environmental impacts, the IEUA must also make certain “findings” as part of its action to certify that the PEIR has been completed in compliance with CEQA and to approve the proposed program. Pursuant to CEQA Section 21081 and State CEQA Guidelines Section 15091, no public agency shall approve or carry out a project for which an environmental impact report has been certified, which identifies one or more significant effects on the environment that would occur if the program is approved or carried out, unless the public agency makes one or more findings for each of those significant effects, accompanied by a brief explanation of the rationale of each finding. The possible findings, which must be supported by substantial evidence in the record, are:

- (1) Changes or alterations have been required in or incorporated into, the program which avoid or substantially lessen the significant environmental effect as identified in the Final PEIR.
- (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

- (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or program alternatives identified in the Final PEIR.

1.3.2 Significant Effects and Mitigation Measures

The Draft PEIR identified several significant environmental effects (or “impacts”) resulting from implementation of the proposed program. Some of these significant effects can be fully avoided/mitigated through the adoption of feasible mitigation measures. For those significant impacts that cannot be mitigated to less than significant, IEUA is required to balance, as applicable, the economic, legal, social, technological, or other benefits of the proposed program against its unavoidable environmental risks when determining whether to approve the proposed program. The State CEQA Guidelines at Section 15093(a) provide that if specific economic, legal, social, technological, or other benefits of the proposed program outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered “acceptable” and IEUA may adopt a Statement of Overriding Considerations to that effect.

Three environmental topics that include a total of 12 program and cumulative environmental effects cannot be reduced to less than significant by the adoption of feasible mitigation measures. The potential project and cumulative significant and unavoidable impacts related to Air Quality, Cultural Resources, and Noise impacts have been identified as significant and unavoidable and require the preparation of a Statement of Overriding Considerations. Section 3.0, below, describes the program and cumulative effects and outlines IEUA’s findings with respect to each of these environmental effects of the proposed project.

1.3.3 Mitigation Monitoring and Reporting Program

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared to monitor and report the implementation of the mitigation measures identified for the proposed program. The MMRP will be adopted by IEUA concurrently with these findings, and will be implemented by IEUA during the proposed programs’ planning horizon; and through the project review, construction, and post-construction periods of individual development projects. To the extent that these findings conclude that all mitigation measures outlined in the PEIR are feasible and have not been modified, superseded, or withdrawn, IEUA hereby binds itself to implement these measures. These findings, in other words, are not merely informational, but rather constitute a binding set of obligations that will come into effect when IEUA formally approves the proposed program.

1.3.4 Certification of the PEIR and Adoption of Findings

IEUA will review and consider the information contained in the PEIR, as well as submissions from public officials, public agencies, and the general public. Prior to program approval, the IEUA shall certify that the PEIR reflects the Agency’s independent judgment and analysis. Having considered the foregoing information, as well as any and all other information in the record, IEUA shall make findings pursuant to CEQA Section 21081. In accordance with the

provisions of CEQA and the State CEQA Guidelines, IEUA shall adopt the Findings as part of its certification of the PEIR for the proposed program.

2. Project Summary

2.1 Project Location

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. 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.

2.2 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. 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.

2.3 Project Objectives

Section 15124(b) of the CEQA Guidelines states that the project description shall contain; “a statement of the objectives sought by the proposed project.” As set forth by the CEQA Guidelines, the list of objectives that IEUA seeks to achieve for the proposed program is provided below:

- Implement a program strategy that is consistent with the mission, vision, and core values of IEUA.
- Ensure that 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.

2.4 Record of Proceedings

For purposes of CEQA and these findings, the record before IEUA includes the following:

- The Draft PEIR and all appendices of the Draft PEIR;
- The Final PEIR and all appendices to the Final PEIR;
- The MMRP;
- All notices required by CEQA, staff reports, and presentation materials related to the proposed program;
- All studies conducted for the program and contained in, or referenced by, staff reports, the Draft PEIR, or the Final PEIR;
- All public reports and documents related to the program prepared for IEUA and other agencies;
- All documentary and oral evidence received and reviewed at public hearings, study sessions, and workshops and all transcripts and minutes of those hearings related to the program and the Final PEIR;
- For documentary and informational purposes, all locally adopted land use plans and ordinances, including, without limitation, general plans, specific plans and ordinances, master plans together with environmental review documents, findings, mitigation monitoring programs, and other documentation relevant to planned growth in the area;
- Any additional items not included above if otherwise required by law.

The Final PEIR is incorporated into these findings in its entirety. Without limitation, this incorporation is intended to elaborate on the scope and nature of mitigation measures, the basis for determining the significance of impacts, and the comparative analysis of alternatives.

2.5 Custodian and Location of Records

The documents and other materials that constitute the administrative record for the Agency's actions related to the program are located at the Inland Empire Utility Agency Headquarters, 6075 Kimball Avenue, Chino, CA 91708. The Agency is the custodian of the record of proceedings for the program. Copies of these documents, which constitute the record of proceedings, are, and at all relevant times, have been and will be available upon request at the Agency's headquarters. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2) and CEQA Guideline Section 15091(e).

3. Environmental Findings

3.1 Findings Regarding No Impact and Less than Significant Impacts Identified in the EIR

The PEIR found that the proposed program would have no impacts or less than significant impacts without the imposition of mitigation on a number of environmental topic areas. The no impact or less than significant environmental impact determination was made for each of the following topic areas listed below, based on the more expansive discussions contained in the PEIR.

3.1.1 Project Impacts

3.1.1.1 Aesthetics

- a. **Impact:** The proposed program could have significant effects on a scenic vista.

Facts in Support of Finding: 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 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.

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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon scenic vistas would be less than significant.

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

Facts in Support of Finding: 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.

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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon scenic resources within a State Scenic Highway would be less than significant.

- c. **Impact:** The proposed program could degrade the existing visual character or quality of the sites and their surroundings.

Facts in Support of Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon visual character would be less than significant.

- d. **Impact:** The proposed program could create new sources of substantial light or glare which could result in significant 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.

Facts in Support of Finding: 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 proposed facilities would not fall within a Runway Protection Zone (RPZ). Therefore proposed solar panel usage at treatment facilities would result in a less than significant related to the interference with flight paths of local airports.

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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon light and glare would be less than significant.

3.1.1.2 Agriculture and Forestry Resources

- a. **Impact:** The proposed program could result in significant 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.

Facts in Support of Finding: 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. No impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would not be significant.

- b. **Impact:** The proposed program could have significant impacts from conflicts with existing zoning for agricultural use, or a Williamson Act Contract.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon agricultural zoning and Williamson Act Contracts would not be significant.

- c. **Impact:** The program would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timber land zoned for Timberland Production.

Facts in Support of the Finding: 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. All program projects would occur within the IEUA service area.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon zoning or rezoning of Forest or Timberland would not be significant.

- d. **Impact:** The proposed program would not result in the loss of forest land or conversion of forest land to non-forest use.

Facts in Support of the Finding: 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. Because none of the FMP projects would be located within forest land, implementation projects would not result in the conversion of forest land to non-forest use. No impact would occur.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon loss or conversion of forest land would not be significant.

- e. **Impact:** The proposed program could have significant effects from conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Facts in Support of Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon conversion of Farmland to non-agricultural use would not be significant.

3.1.1.3 Air Quality and Greenhouse Gas Emissions

- a. **Impact:** The proposed program would have less than significant 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.

Facts in Support of Finding: 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. 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. The FMP would not conflict with, or obstruct, implementation of the AQMP, and this impact would be less than significant.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon an Air Quality Management Plan would be less than significant.

- b. **Impact:** The proposed program could result in significant effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.

Facts in Support of Finding:

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. The daily onsite construction emissions generated by construction of facilities would not exceed any of SCAQMD's applicable LSTs, and impacts to sensitive receptors would be less than significant.

Localized Operational Air Quality Impacts – Criteria Air Pollutants

Operational LSTs, like construction LSTs are only associated with the onsite emission of NO_x, CO, PM₁₀ and PM_{2.5}. As shown in Table 3.3-7 of the draft PEIR, 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. 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

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon sensitive receptors would be less than significant.

- c. **Impact:** The proposed program could result in significant effects from the creation of objectionable odors affecting a substantial number of people.

Facts in Support of Finding: 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 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon odors from construction would be less than significant.

- d. **Impact:** The proposed program would result in less than significant effects associated with greenhouse gas emissions.

Facts in Support of Finding: 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 CO₂e. As such, the FMP projects would not generate, either directly or indirectly, substantial GHG emissions. The proposed program would result in less than significant 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon greenhouse gas emissions would be less than significant.

- e. **Impact:** The proposed program would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Facts in Support of Finding:

Consistency with AB 32

The GHG emissions generated by the construction and operation of the proposed program would not exceed the SCAQMD's recommended threshold of 10,000 MTCO₂e/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

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. The proposed program would result in less than significant 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon a plan, policy, or regulation that reduces greenhouse gas emissions would be less than significant.

3.1.1.4 Biological Resources

- a. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon riparian habitat would be less than significant.

- b. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon federally protected wetlands would be less than significant.

- c. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: Implementation of the proposed treatment facility upgrades would occur within the boundaries of the existing treatment facilities that would not support migratory corridors. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon wildlife corridors and nursery sites would be less than significant.

- d. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon conservation plans would not be significant.

3.1.1.5 Cultural Resources

- a. **Impact:** The proposed program could have significant and effects on human remains.

Facts in Support of the Finding: All projects would be 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, IEUA 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. Compliance with state law provisions is required and potential impacts to human remains would be less than significant. Adherence to applicable regulations and implementing guidelines related to the inadvertent discovery of human remains would result in less than significant impacts.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon human remains would be less than significant.

3.1.1.6 Geology, Soils, and Mineral Resources

- a. **Impact:** The proposed program could potentially 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.

Facts in Support of Finding:

Fault Rupture

None of the proposed treatment facilities would be within the boundaries of 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 structural elements of projects 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.

Landslide

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon seismic groundshaking, fault rupture, and landslides would be less than significant.

- b. **Impact:** The proposed program would have less than significant effects from soil erosion or the loss of topsoil.

Facts in Support of the Finding: To prevent erosion associated with runoff from construction sites for each proposed project, 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). 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. Adherence to the SCAQMD Rule 403, CGP, SWPPP, and associated BMPs would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon soil erosion or topsoil loss would be less than significant.

- c. **Impact:** The proposed program would have no impact 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.

Facts in Support of the Finding: 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. The proposed program would have no impact 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon wastewater disposal systems would be less than significant.

- d. **Impact:** The proposed program would have a less than significant 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.

Facts in Support of the Finding: 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 for Project Category 1 activities.

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.

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. The proposed program would have a less than significant 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon mineral resources would be less than significant.

- e. **Impact:** The proposed program would have a less than significant impacts to locally important mineral resources and would not include facilities large enough to interfere with locally important mineral resources recovery sites as delineated on a local general plan, specific plan or other land use plan.

Facts in Support of the Finding: 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. The facilities implemented under Category 2 would not be large enough to interfere with locally important mineral resources recovery sites. Impacts would be less than significant. 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon the loss of mineral resources recovery sites would be less than significant.

3.1.1.7 Hazards and Hazardous Materials

- a. **Impact:** The proposed program would result in less than significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Facts in Support of the Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon routine use of hazardous materials would be less than significant.

- b. **Impact:** The proposed program would result in less than significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Facts in Support of the Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon accident conditions involving hazardous materials would be less than significant.

- c. **Impact:** The proposed program would result in less than significant 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.

Facts in Support of the Finding: 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.

Due to the potentially extensive nature of facilities associated with implementing the proposed pipelines and ancillary facilities under Project Category 2, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. 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.

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 to less than significant levels.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon schools due to release and handling of hazardous materials would be less than significant.

- d. **Impact:** 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 hazard impacts to the public or the environment.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon hazardous materials sites would not be significant.

- e. **Impact:** 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 safety hazards for people residing or working in the project area.

Facts in Support of Finding: 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 facilities would be located in zones that do not substantially expose short-term construction workers or long-term employees to risks. Impacts would be less than significant.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon treatment facility upgrades being located within an airport land use plan would be less than significant.

- f. **Impact:** 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 emergency impacts.

Facts in Support of Finding: The proposed projects would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon interference with emergency plans would be less than significant.

- g. **Impact:** The proposed program could have significant wildfire impact on people or structures due to the intermixing of urbanize areas with wildlands.

Facts in Support of Finding: Construction within existing IEUA footprints would not increase wildfire risks. Conveyance 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon wildland fires would be less than significant.

3.1.1.8 Hydrology and Water Quality

- a. **Impact:** The proposed program would have less than significant impacts to water quality standards or waste discharge requirements.

Facts in Support of the Finding: 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.

Compliance with the NPDES permit would ensure that discharge to all creeks would meet surface water quality objectives. Impacts 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. 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.

Discharge of the treated effluent into proposed Project Category 3 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon water quality standards and waste discharge requirements would be less than significant.

- b. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

Dry weather diversions would not deplete groundwater supplies or substantially reduce annual surface water flows reaching Prado Basin. Impacts would be less than significant. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon groundwater supplies and recharge would be less than significant.

- c. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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, 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon drainage patterns due to construction of program facilities would be less than significant.

- d. **Impact:** The proposed 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.

Facts in Support of the Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon placing housing within flood hazard areas would not be significant.

- e. **Impact:** The proposed program could have significant flooding impacts on structures because the program could place within a 100-year flood hazard area structures that could impede or redirect flood flows.

Facts in Support of Finding: RP-2 is the only IEUA asset located within a 100-year flood zone. 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon placing structures within flood hazard areas would be less than significant.

- f. **Impact:** The proposed program would have less than significant impacts regarding the 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.

Facts in Support of the Finding: All of IEUA assets are located outside of dam inundation zones, therefore flood impacts to those facilities and employees would not be significant.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon levee or dam failure would be less than significant.

- g. **Impact:** The proposed program would have not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Facts in Support of the Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon a seiche, tsunami or mudflows would not be significant.

3.1.1.9 Land Use and Planning

- a. **Impact:** The proposed program would not physically divide an established community.

Facts in Support of the Finding: The program 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon dividing an established community would not be significant.

- b. **Impact:** The proposed program would have a less than significant impacts associated with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

Facts in Support of the Finding: 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. 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. 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon conflicts with applicable plans, policies, or regulations would be less than significant.

3.1.1.10 Noise

- a. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: All treatment plant facility upgrades would be installed and implemented within the existing treatment plant footprints. 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. 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 of the Draft PEIR, 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon exceedance of established noise standards from treatment plant facility upgrades would be less than significant.

- b. **Impact:** The proposed program could have significant impacts on persons and structures from ground-borne vibration or ground-borne noise levels.

Facts in Support of Finding: The closest sensitive receptor to the treatment plants are 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. No impacts would occur.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon exposure to vibration levels would be less than significant.

- c. **Impact:** The proposed program could have a significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Facts in Support of Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon permanent increase in ambient noise levels would be less than significant.

- d. **Impact:** The proposed program could have a significant temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project.

Facts in Support of Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon temporary increases in ambient noise levels for treatment facility upgrades and operation of pipelines would be less than significant.

- e. **Impact:** The proposed program would have less than significant noise level impacts on people residing or working within two miles of a public airport, public use airport, or private airstrip.

Facts in Support of Finding: 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon public airport noise would be less than significant.

3.1.1.11 Population and Housing

- a. **Impact:** The proposed program would have less than significant population growth inducement impacts.

Facts in Support of the Finding: 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon population growth would be less than significant.

- b. **Impact:** The proposed program would have less than significant impacts to housing and would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Facts in Support of the Finding: 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.

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.

Impacts would be the same for Project Category 3 projects. Given the amount of future housing forecast to be developed over the next 25 years, the proposed project would not necessitate the construction of replacement housing elsewhere.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon displacement of housing would not be significant.

- c. **Impact:** The proposed program would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Facts in Support of Finding: The proposed FMP would not displace any housing; it also would not displace people or any other structures that are occupied by people.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon displacement of people would not be significant.

3.1.1.12 Public Services

- a. **Impact:** The proposed program would have no impact 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.

Facts in Support of the Finding: 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon fire and police protection would not be significant.

- b. **Impact:** The proposed program would have no impact 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon schools would not be significant.

- c. **Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon parks and other facilities from treatment facility upgrades would not be significant.

3.1.1.13 Recreation

- a. **Impact:** The proposed program would have less than significant 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

Facts in Support of the Finding: 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon increased use of recreational facilities would not be significant.

- b. **Impact:** The proposed program could have significant impacts on recreational facilities thus require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon recreational facilities physical effect on the environment from treatment facility upgrades would not be significant.

3.1.1.14 Utilities

- a. **Impact:** The proposed program would have a less than significant effects regarding wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Facts in Support of Finding: The project would include future upgrades at existing treatment facilities. 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. 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.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, IEUA hereby finds that the program's impacts upon wastewater treatment requires would be less than significant.

- b. **Impact:** The proposed program would have no 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon water or wastewater treatment facilities would not be significant

- c. **Impact:** The proposed program would have less than significant effects from new or expanded water supply resources or entitlements.

Facts in Support of Finding: Water demand and water supply are expected to increase incrementally from 2016 through 2035. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon water supplies would be less than significant.

- d. **Impact:** The proposed program would have less than significant effects on wastewater treatment capacity.

Facts in Support of the Finding: The project would upgrade existing treatment facilities. Wastewater generated during construction and operation of the proposed facilities would be minimal; therefore, impacts related to available wastewater treatment capacity would be less than significant

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon wastewater treatment capacity would be less than significant.

- e. **Impact:** The proposed program would have less than significant impacts on solid waste disposal facilities.

Facts in Support of Finding: 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon landfill capacity would be less than significant.

- f. **Impact:** The proposed program would have less than significant effects associated with solid waste federal, state, and local statutes and regulations.

Facts in Support of Finding: The proposed projects 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 statutes 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.

Impacts for Project category 2 and 3 projects would be the same. Project impacts related to potential noncompliance with solid waste statutes and regulations would be less than significant.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's impacts upon compliance with solid waste regulations and statutes would be less than significant.

3.1.2 Cumulative Impacts

3.1.2.1 Agriculture and Forestry Resources

- a. **Impact:** The proposed program would have no cumulative impact on existing zoning, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Facts in Support of the Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon existing zoning for forest land and timberland would not be significant.

- b. **Impact:** The proposed program would have no contribution to cumulative impacts regarding the loss of forest land or conversion of forest land to non-forest use.

Facts in Support of the Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon loss or conversions of forest land would not be significant.

3.1.2.2 Air Quality and Greenhouse Gas Emissions

- a. **Impact:** The proposed program would have 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.

Facts in Support of the Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon the SCAQMD Plan would be less than significant.

- b. **Impact:** The proposed program would result in 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.

Facts in Support of Finding: 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 projects would incrementally contribute to GHG emissions along with past, present and future activities. As such, impacts of GHG emissions are analyzed on a cumulative basis.

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 CO₂e. As such, the FMP projects would not generate, either directly or indirectly, substantial GHG emissions. Because the FMP projects would not generate substantial GHG emissions, the program would have no considerable contribution to cumulative effects to GHG emissions.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon greenhouse gas emissions would be less than significant.

- c. **Impact:** The proposed program would result in 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon greenhouse gas emissions plans, policies, or regulations would be less than significant.

3.1.2.3 Cultural Resources

- a. **Impact:** The proposed program could have cumulatively considerable effects on human remains because the program could disturb human remains.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon human remains would be less than significant.

3.1.2.4 Geology, Soils, and Mineral Resources

- a. **Impact:** The proposed program would have less than cumulatively considerable effects from soil erosion or the loss of topsoil.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon soil erosion or topsoil loss would be less than significant.

- b. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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. The proposed FMP projects would not result in impacts associated with soils incapable of supporting the use of septic tanks.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon wastewater disposal systems would not be significant.

- c. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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. The proposed FMP projects would not result in impacts to regionally significant minerals.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon mineral resources would be less than significant.

- d. **Impact:** The proposed program would have less than cumulatively considerable impacts to locally important mineral resources and would not interfere with locally important mineral resources recovery sites delineated on a local general plan, specific plan or other land use plan.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon mineral resources recovery site would be less than significant.

3.1.2.5 Hazards and Hazardous Materials

- a. **Impact:** The proposed program would have less than cumulatively considerable hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon routine use of hazardous materials would be less than significant.

- b. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon accidental release of hazardous materials would be less than significant.

- c. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon schools from release of hazardous materials would be less than significant.

3.1.2.6 Hydrology and Water Quality

- a. **Impact:** The proposed program would have less the cumulatively considerable water quality impacts when compared to water quality standards or waste discharge requirements.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon water quality standards and waste discharge requirements would be less than significant.

- b. **Impact:** The proposed program would not 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon placing housing within flood hazard areas would not be significant.

- c. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon levee or dam failure would be less than significant.

- d. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon seiches, tsunamis, or mudflows would not be significant.

3.1.2.7 Land Use and Planning

- a. **Impact:** The proposed program would not contribute to cumulative community impacts from physically dividing an established community.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon features that may divide an established community would not be significant.

- b. **Impact:** The proposed program would have less than cumulatively considerable environmental impacts associated with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

Facts in Support of Finding: 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.

Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon a land use plan, policy or regulation would be less than significant.

3.1.2.8 Noise

- a. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon people residing or working within proximity of public airports would not be significant.

3.1.2.9 Population and Housing

- a. **Impact:** The proposed program would have less than cumulatively considerable population growth inducement impacts.

Facts in Support of Finding: 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. The proposed FMP's contribution to population growth inducement would be less than cumulatively considerable, and thus a less than significant cumulative impact.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon population would be less than significant.

- b. **Impact:** The proposed program would have less than cumulatively considerable impacts to housing and would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon housing would be less than significant.

- c. **Impact:** The proposed program would have no contribution to cumulative impacts from the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon the displacement of people or housing would not be significant.

3.1.2.10 Public Services

- a. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon police and fire services would not be significant.

- b. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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. The proposed FMP projects would only result in nominal increases in school services (based on a future 35 new employees and homes); therefore, the programs contribution to cumulative impacts would be less than significant.

Because the proposed project would result in a nominal increase in school services, 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon school services would be less than significant.

3.1.2.11 Recreation

- a. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon recreational facilities would be less than significant.

3.1.2.12 Utilities

- a. **Impact:** The proposed program would have less than cumulatively considerable effects regarding wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Facts in Support of Finding: Future cumulative development could exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board and result in potential significant cumulative impacts. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon wastewater treatment requirements would be less than significant

- b. **Impact:** The proposed program would have 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.

Facts in Support of Finding: 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. However, the proposed FMP projects would not require new or expanded wastewater or water treatment facility capacity. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon water or wastewater treatment facilities would not be significant.

- c. **Impact:** The proposed program would have less than cumulatively considerable effects from new or expanded water supply resources or entitlements.

Facts in Support of Finding: 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon water supply would be less than significant.

- d. **Impact:** The proposed program would have less than cumulatively considerable effects on wastewater treatment capacity.

Facts in Support of Finding: 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. The program's contribution to cumulative impacts regarding wastewater treatment capacity is less than cumulatively considerable, and therefore, would be a less than significant cumulative impact.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon wastewater treatment capacity would be less than significant.

- e. **Impact:** The proposed program would have less than cumulatively considerable effects on solid waste disposal facilities.

Facts in Support of Finding: 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. The proposed FMP project would not substantially increase the generation of solid waste.

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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon solid waste disposal facilities would be less than significant.

- f. **Impact:** The proposed program would have less than cumulatively considerable effects associated with solid waste federal, state, and local statutes and regulations.

Facts in Support of Finding: 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 statutes 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. 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.

Finding: Based upon the analysis presented in the PEIR and considering the information contained in the Record of Proceedings, the IEUA hereby finds that the program's contribution to cumulative impacts upon solid waste regulations would be less than significant.

3.2 Findings Regarding Environmental Impacts which Can Be Mitigated to Less than Significant

Environmental impacts identified in the PEIR as potentially significant but which the IEUA finds can be mitigated to less than significant through the imposition of feasible mitigation measures identified in the PEIR and set forth herein, are described in this section.

3.2.1. Project Impacts

3.2.1.1 Aesthetics

- a. **Potentially Significant Impact:** The proposed program could have significant effects on a scenic vista.

Facts in Support of the Finding: 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. 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. The implementation of Mitigation Measure AES-1 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could result in significant impacts related to damage of scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Facts in Support of Finding: 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. In addition, there are 19 locally designated scenic roadways within the IEUA service area.

The implementation of Mitigation Measure AES-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could result in significant degradation of the existing visual character or quality of the sites and their surroundings.

Facts in Support of Finding: 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.

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.

The implementation of Mitigation Measure AES-1(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could create new sources of substantial light or glare which could result in significant 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.

Facts in Support of Finding: 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.

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.

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. Further, water storage reservoirs could be a source of glare due to highly reflective materials. Therefore, potentially significant impacts related to glare would occur.

The implementation of Mitigation Measures AES-2 and AES-3 (below) 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 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.2 Agriculture and Forestry Resources

- a. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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. 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.

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.

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, 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.

The implementation of Mitigation Measure AG-1 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could conflict with existing zoning for agricultural use, or a Williamson Act Contract.

Facts in Support of Finding: 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; however ancillary facilities such as storage tanks and pump stations, and recharge basins and wells could be constructed on land zoned as agriculture, and therefore, impacts could be potentially significant.

The implementation of Mitigation Measure AG-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could result in significant effects from conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Facts in Support of Finding: 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.

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.

The implementation of Mitigation Measure AG-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.3 Air Quality and Greenhouse Gas Emissions

- a. **Potentially Significant Impact:** The proposed program could result in significant effects from the creation of objectionable odors affecting a substantial number of people.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure AIR-4 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.4 Biological Resources

- a. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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.

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.

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.

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.

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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

Implementation of Mitigation Measures BIO-1 and BIO-3 (above) and BIO-5 (below) would reduce potential impacts to riparian habitat areas and special-status natural communities to less than significant through avoidance, minimization, and compensation.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

Implementation of Mitigation Measures BIO-5 (above) and BIO-6 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

The implementation of Mitigation Measure BIO-4 (above) 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 (below) would avoid or minimize impacts to wildlife corridors to less than significant.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- e. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

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.

Implementation of Mitigation Measure BIO-9 (below) would reduce impacts to biological resources protected by local policies or ordinances through compliance with the local regulations

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- f. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of Finding: 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.

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.

Implementation of Mitigation Measure BIO-10 (below) would reduce potential impacts to existing habitat conservation plan (HCP) areas to less than significance through either avoidance or compliance with HCP permitted activities.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.5 Cultural Resources

- a. **Potentially Significant Impact:** The proposed program could have significant effects on archaeological resources because the program could have result in substantial change in the significance of an archeological resource.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure CUL-1(below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have significant effects on paleontological resources because the program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure CUL-3 (below) would require a site-specific study to identify potentially significant paleontological resources. Additional studies would minimize potential impacts to paleontological resources.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.6 Geology, Soils, and Mineral Resources

- a. **Potentially Significant Impact:** The proposed program could potentially 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.

Facts in Support of the Finding:

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.

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.

Fault Rupture

Because not all proposed projects' locations 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.

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.

The implementation of Mitigation Measure GEO-1 (below) 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 (below) 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.

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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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.

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.

The implementation of Mitigation Measure GEO-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed 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.

Facts in Support of the Finding: 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.

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.

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.

The implementation of Mitigation Measure GEO-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.7 Hazards and Hazardous Materials

- a. **Potentially Significant Impact:** 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 hazard impacts to the public or the environment.

Facts in Support of the Finding: 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. 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 of the Draft PEIR. Impacts would be potentially significant.

The implementation of Mitigation Measures HAZ-1 and HAZ-2 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** 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 safety hazards for people residing or working in the project area.

Facts in Support of the Finding: 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.

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.

The implementation of Mitigation Measure HAZ-3 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** 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 considerable emergency impacts.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure HAZ-4 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could have significant wildfire impact on people or structures due to the intermixing of urbanize areas with wildlands.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure HAZ-5 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.8 Hydrology and Water Quality

- a. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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.

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.

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 (below), 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 (below) 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, HYDRO-4 and HYDRO-5 (below) would ensure that impacts to drainages would be less than 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have significant flooding impacts on structures because the program could place within a 100-year flood hazard area structures that could impede or redirect flood flows.

Facts in Support of the Finding: Portions of the IEUA are within 100-year flood zones. Not all of the proposed conveyance ancillary facilities, well housing, and recharge basin 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.

Implementation of Mitigation Measure HYDRO-6 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.9 Land Use and Planning

- a. **Potentially Significant Impact:** The proposed program could have significant effects on a conservation plan because the program could conflict with an applicable habitat conservation plan or natural community conservation plan.

Facts in Support of the Finding: 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.

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.

Implementation of Mitigation Measure BIO-10 (above) would reduce potential impacts to existing habitat conservation plan (HCP) areas to less than significance through either avoidance or compliance with HCP permitted activities.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.10 Noise

- a. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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. Nonetheless, impacts would be potentially significant.

To reduce the operational noise impacts of the FMP project's aboveground facilities on nearby or adjacent noise-sensitive receptors, Mitigation Measure NOISE-2 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have significant impacts on persons and structures from ground-borne vibration or ground-borne noise levels.

Facts in Support of the Finding: 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. 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.

Implementation of Mitigation Measure NOISE-5(below), 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 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could result in a permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Facts in Support of the Finding: 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. Nonetheless, the program's operational noise impact related to a permanent increase in ambient noise levels at nearby noise-sensitive receptors would be potentially significant.

Implementation of Mitigation Measure NOISE-2 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.11 Public Services

- a. **Potentially Significant Impact:** The proposed program could have significant 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure PS-1 (below) 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.12 Recreation

- a. **Potentially Significant Impact:** The proposed program could have significant impacts on recreational facilities and thus, could require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure PS-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.13 Traffic and Transportation

- a. **Potentially Significant Impact:** Implementation of the proposed program could have a significant 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.

Facts in Support of the Finding: 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. This impact is considered potentially significant.

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). This impact is considered potentially significant.

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. This impact is considered potentially significant.

The implementation of Mitigation Measure TT-1(below) would reduce the program's potential construction traffic impacts to less than significant. Mitigation Measure TT-1 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.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. Potentially Significant Impact:** Construction of the proposed program could result in hazard impacts due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Facts in Support of the Finding: 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, conveyance systems and ancillary facilities, and 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, 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.

The implementation of Mitigation Measure TT-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have result in a significant emergency access impact.

Facts in Support of the Finding: Because the proposed pipelines and some of the ancillary facilities, 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.

The implementation of Mitigation Measure TT-1(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.1.14 Utilities

- a. **Potentially Significant Impact:** The proposed program could result in significant environmental effects from the construction of new stormwater drainage facilities or expansion of existing facilities.

Facts in Support of the Finding: Implementation of the treatment facility upgrades, conveyance ancillary facilities, and extraction wells 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.

The implementation of Mitigation Measure U-1 (below) would ensure the reduction of peak concentration stormwater flows so that the capacities of the existing downstream drainage facilities are not exceeded.

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2 Cumulative Impacts

3.2.2.1 Aesthetics

- a. **Potentially Significant Impact:** The proposed program would have cumulatively considerable effects on a scenic vista.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure AES-1(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure AES-1(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have cumulatively considerable degradation of the existing visual character or quality of the sites and their surroundings.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure AES-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could create new sources of substantial light or glare which could result in 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.

Facts in Support of Finding: 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.

The implementation of Mitigation Measures AES-2, AES-3 and AES-4 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.2 Agriculture and Forestry Resources

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure AG-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have cumulatively considerable impacts from conflicts with existing zoning for agricultural use, or a Williamson Act Contract.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure AG-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects from conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure AG-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.3 Air Quality and Greenhouse Gas Emissions

- a. **Potentially Significant Impact:** The proposed program could result in cumulatively considerable effects from the creation of objectionable odors affecting a substantial number of people

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure AIR-4 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.4 Biological Resources

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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 ordinances, 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.

Implementation of Mitigation Measures BIO-1 through BIO-4 (listed above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

Implementation of Mitigation Measures BIO-1, BIO-3, and BIO-5 (listed above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

Implementation of Mitigation Measures BIO-5 and BIO-6 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure BIO-4 (above) 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 (listed above) would avoid or minimize impacts to wildlife corridors to less than significant.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- e. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

Implementation of Mitigation Measure BIO-9 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- f. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure BIO-10 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.5 Cultural Resources

- a. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects on archaeological resources because the program could cause a substantial change in the significance of an archeological resource.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure CUL-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects on paleontological resources because the program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Facts in Support of Finding: 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.

The implementation of Mitigation Measure CUL-3 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.6 Geology, Soils, and Mineral Resources

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure GEO-1 and GEO-2 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could result in 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure GEO-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure GEO-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.7 Hazards and Hazardous Materials

- a. **Potentially Significant Impact:** 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 cumulatively considerable hazard impacts to the public or the environment.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measures HAZ-1 and HAZ-2 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** 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 cumulatively considerable safety hazards for people residing or working in the project area.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measure HAZ-3(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** 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 cumulatively considerable emergency impacts.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure HAZ-4 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- d. **Potentially Significant Impact:** The proposed program could have cumulatively considerable wildfire impacts on people or structures due to the intermixing of urbanize areas with wildlands.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure HAZ-5 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.8 Hydrology and Water Quality

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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 use matches 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.

Implementation of Mitigation Measures HYDRO-1 and HYDRO-2 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measures HYDRO-3, HYDRO-4, and HYDRO-5 (listed above) would ensure that the proposed facilities' contribution to cumulative drainage pattern impacts would be less than cumulatively considerable.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measure HYDRO-6 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.9 Land Use and Planning

- a. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects on a conservation plan because the program could have conflicts with an applicable habitat conservation plan or natural community conservation plan.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measure BIO-10 (above) would reduce potential cumulative impacts to existing habitat conservation plan (HCP) areas to less than significance through either avoidance or compliance with HCP permitted activities. The program's contribution to cumulative impacts regarding confliction with HCPs would be less than cumulatively considerable.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.10 Noise

- a. **Potentially Significant Impact:** The proposed program could have cumulatively considerable impacts on persons and structures from ground-borne vibration or ground-borne noise levels.

Facts in Support of the Finding: 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.

Implementation of Mitigation Measures NOISE-5 and NOISE-6 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have a cumulatively considerable permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Facts in Support of the Finding: 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

Implementation of Mitigation Measure NOISE-2 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.11 Public Services

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure PS-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.12 Recreation

- a. **Potentially Significant Impact:** The proposed program could have 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

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure PS-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.13 Traffic and Transportation

- a. **Potentially Significant Impact:** Implementation of the proposed program could have a 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.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure TT-1(above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- b. **Potentially Significant Impact:** Construction of the proposed program could have cumulatively considerable hazard impacts due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure TT-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could have a cumulatively considerable emergency access impact.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure TT-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.2.2.14 Utilities

- a. **Potentially Significant Impact:** The proposed program could result in cumulatively considerable environmental effects from the construction of new stormwater drainage facilities or expansion of existing facilities.

Facts in Support of the Finding: 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.

The implementation of Mitigation Measure U-1 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the PEIR.

3.3 Findings Regarding Environmental Impacts Not Fully Mitigated to Less Than Significant

Environmental impacts identified in the PEIR as potentially significant but which the IEUA finds cannot be fully mitigated to less than significant, despite the imposition of all feasible mitigation measures identified in the PEIR and set forth herein, are described in this section. The significant and unavoidable impacts are associated with Air Quality, Cultural Resources and Noise.

3.3.1 Project Impacts

3.3.1.1 Air Quality and Greenhouse Gas Emissions

- a. **Potentially Significant Impact:** The proposed program could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Facts in Support of Finding: 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 PM₁₀ emissions. Mobile source emissions (use of diesel-fueled equipment onsite, and traveling to and from a construction site) would primarily generate NO_x 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. Ten 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). Implementation of the treatment facility upgrades in Category 1 would exceed the SCAQMD significance threshold for NO_x emissions and therefore, would result in a potentially significant impact.

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. Ten 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). Implementation of the conveyance and ancillary facilities in Category 2 would exceed the SCAQMD significance threshold for NO_x emissions and therefore, would result in a potentially significant impact.

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. 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). Implementation of the groundwater recharge basins and wells in Category 3 would exceed the SCAQMD significance threshold for NO_x emissions and therefore, would result in a potentially significant impact.

The implementation of Mitigation measures AIR-1 and AIR-2 (below) would reduce VOC and NO_x 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 NO_x emissions, the resulting emissions are still expected to exceed the SCAQMD thresholds for VOC and NO_x.

AIR-1: The following measures shall be incorporated to minimize emissions of NO_x 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could result in significant effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.

Facts in Support of Finding: Construction 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.

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 proposed projects under Scenario 1 (all three project categories) would exceed SCAQMD's applicable LSTs for NO_x and PM_{2.5} and under Scenario 2 (Project Categories 2 and 3) would exceed SCAQMD's applicable LSTs for NO_x, PM₁₀ and PM_{2.5}. Therefore, criteria pollutant impacts to sensitive receptors would be potentially significant.

Implementation of Mitigation Measures AIR-1 and AIR-2 (above) would reduce NO_x 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 NO_x. The implementation of Mitigation Measure AIR-3 (below) 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 PM_{2.5} emissions illustrated in Table 3.3-13, the combined PM_{2.5} emissions under Scenario 1 would require a reduction of 21 percent (38.79/32.0) to reduce the PM_{2.5} emissions to less than significant. The additional two times of watering per day would reduce the emissions by an additional 14 percent; therefore, PM_{2.5} emissions would remain significant under Scenario 1.

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 (PM₁₀ and PM_{2.5}) emissions consistent with Rule 403.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

3.3.1.2 Cultural Resources

- a. **Potentially Significant Impact:** The proposed program could have significant effects on historical resources because the program could cause a substantial adverse change in the significance of a historical resource.

Facts in Support of Finding: 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.

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.

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(above) and CUL-2 (below).

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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

3.3.1.3 Noise

- a. **Potentially Significant Impact:** The proposed program 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 ordinance, or applicable standards of other agencies.

Facts in Support of Finding: 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.

To reduce the construction noise impacts associated with the FMP projects, Mitigation Measure NOISE-1 (below) 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 (below) 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 (below) 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.

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-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: 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have a significant temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project.

Facts in Support of Finding: 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 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.

Although implementation of Mitigation Measures NOISE-1 and NOISE-4 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

3.3.2 Cumulative Impacts

3.3.2.1 Air Quality and Greenhouse Gas Emissions

- a. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects because the program could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Facts in Support of Finding: 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, PM₁₀, 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, NO_x, SO_x, PM₁₀, 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 NO_x. Therefore, the proposed program's contribution to air quality impacts during construction activities, specifically for VOC and NO_x emissions, would be cumulatively considerable, resulting in a potentially significant cumulative impact.

The implementation of Mitigation Measures AIR-1 and AIR-2 (above) would reduce VOC and NO_x emissions; however, the proposed facilities' contribution to cumulative impacts related to cumulative emissions of VOC and NO_x would be cumulatively considerable.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could result in a cumulatively considerable net increase of a criteria pollutant.

Facts in Support of Finding: 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, PM₁₀, 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, NO_x, SO_x, PM₁₀, 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 NO_x, resulting in a potentially significant cumulative impact.

The implementation of Mitigation Measures AIR-1 and AIR-2 (above) would reduce VOC and NO_x 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 NO_x emissions, the resulting emissions are still expected to exceed the SCAQMD thresholds for VOC and NO_x. The proposed facilities' contribution to cumulative impacts related to cumulative emissions of VOC and NO_x would be cumulatively considerable.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

- c. **Potentially Significant Impact:** The proposed program could result in cumulatively considerable effects associated with the exposure of sensitive receptors to substantial pollutant concentrations.

Facts in Support of Finding: Because the SCAB is currently classified as a state nonattainment area for ozone, PM₁₀, 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, NO_x, SO_x, PM₁₀, 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 NO_x and PM_{2.5} emissions, and implementation of Project Categories 2 and 3 could exceed the SCAQMD localized significance thresholds for NO_x, PM₁₀, 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.

The implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3 (above) would reduce the proposed facilities' generation of NO_x, PM₁₀ and PM_{2.5}; however, the program's contribution to cumulative NO_x, PM₁₀ and PM_{2.5} emissions remains cumulatively considerable.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

3.3.2.2 Cultural Resources

- a. **Potentially Significant Impact:** The proposed program could have cumulatively considerable effects on historical resources because the program could cause a substantial adverse change in the significance of a historical resource.

Facts in Support of Finding: 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.

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 (above).

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

3.3.2.3 Noise

- a. **Potentially Significant Impact:** The proposed program could have 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.

Facts in Support of Finding: 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.

To reduce the construction noise impacts associated with the FMP projects, Mitigation Measure NOISE-1 (above) 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 (above) 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 (above) 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 cumulatively considerable with mitigation incorporated.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

- b. **Potentially Significant Impact:** The proposed program could have cumulatively considerable temporary or periodic increase in ambient noise levels in the project vicinity above existing levels existing without the project.

Facts in Support of Finding: Future cumulative development could result in a substantial temporary or periodic increase in ambient noise levels throughout the IEUA 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.

The implementation of Mitigation Measures NOISE-1, NOISE-2, and NOISE-3 (above) 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.

Finding: Pursuant to CEQA Guidelines Section 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the PEIR.

4. Feasibility of Alternatives

CEQA requires that a PEIR include an analysis of a reasonable range of feasible alternatives to a proposed program capable of avoiding or substantially lessening any significant adverse

environmental impact associated with the program. The discussion of alternatives is required to include the “No Project” alternative. CEQA requires further that the IEUA identify an environmentally superior alternative. If the “No Project” alternative is the environmentally superior alternative, an environmentally superior alternative must be identified from among the other alternatives. (CEQA Guidelines, section 15126.6.)

As set forth in these Findings, the implementation of the proposed program will result in significant impacts that are considered unavoidable. Following are the alternatives to the project that were considered and evaluated.

4.1 Alternative 1: No Program

4.1.1 Description

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.

4.1.2 Impact Analysis

Aesthetics

The proposed projects would result in a less than significant impact to aesthetics with mitigation. 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. 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. 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. 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.

4.1.3 Findings for Alternative 1: No Project

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. 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.

4.2 Alternative 2: Reduced Groundwater Discharge

4.2.1 Description

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 NO_x 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.

4.2.2 Impact Analysis

Aesthetics

The proposed program was found to have less than significant impacts to aesthetics with mitigation. 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. 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. 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 NO_x, 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 (NO_x), 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. 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.

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. 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.

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.

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. 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.

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.

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.

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. 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. 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.

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.

4.2.3 Findings for Alternative 2: Reduced Groundwater Discharge

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. The remaining facilities that are part of the proposed FMP program would be implemented under Alternative 2.

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.

4.3 Alternative 3: Expanded Advanced Water Treatment Facility

4.3.1 Description

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 Sevaïne 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

4.3.2 Impact Analysis

Aesthetics

The proposed program was found to have less than significant impacts to aesthetics with mitigation. 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. 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. 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. 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.

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.

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.

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.

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. 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.

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.

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.

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. 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.

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.

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.

4.3.3 Findings for Alternative 3: Expanded Advanced Water Treatment Facility

Alternative 3 would include construction of an additional AWTF within an existing IEUA facility or other location that could produce up to 9 MGD of high-quality recycled water. The advanced treated 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. 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.

4.4 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 Environmentally Superior Alternative is the one that would result in the fewest or least significant impacts. If the Environmentally Superior Alternative is the No Project Alternative, then an Environmentally Superior Alternative must be selected from the remaining alternatives.

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.

5. Statement of Overriding Considerations

The California Environmental Quality Act (CEQA) requires the lead agency to balance the benefits of a proposed program against its unavoidable environmental risks in determining whether to approve the program. The IEUA proposes to approve the Facility Master Plans although significant and unavoidable impacts have been identified in the PEIR. Specifically, the significant and unavoidable project and cumulative impacts are described below.

5.1 Significant and Unavoidable Impacts

5.1.1 Air Quality and Greenhouse Gas Emissions

Air Quality Standard/Violation: The program would violate an air quality standard or contribute substantially to an existing or projected air quality violation. The program's increase in VOC and NOx emissions would exceed the South Coast Air Quality Management District threshold. This impact is both a project and cumulative significant unavoidable impact.

Criteria Pollutants: The program would result in a cumulatively considerable net increase of criteria pollutants for which the program region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Since NOx is a criteria pollutant, the program's increase in NOx emissions would result in a cumulatively considerable net increase in a region that is in non-attainment. This is a project and cumulative significant unavoidable impact.

Sensitive Receptors: The program would result in significant and cumulatively considerable impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations. Construction of the program components would 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. This impact is both a project and cumulative significant unavoidable impact.

5.1.2 Cultural Resources

Historical Resources: The program would result in significant and cumulatively considerable impacts on historical resources. There is a substantial lack of information available regarding historical resources within the IEUA service area; therefore, construction of the program components could unknowingly adversely affect historic resources. This impact is both a project and cumulative significant unavoidable impact.

5.1.3 Noise

Noise Standards: The proposed program would expose people to and/or generate noise levels in excess of standards established in local general plans, noise ordinances, and/or applicable standards of other agencies. It is anticipated that the noise levels from 24-hour well drilling would likely exceed the established local nighttime exterior noise levels for noise-sensitive land uses

that are located adjacent to a well-drilling sites. This impact is both a project and cumulative significant unavoidable impact for construction.

Temporary Noise Increase: The proposed program would temporarily or periodically increase ambient noise levels in the project vicinity above existing levels existing without the project. Temporary increases in ambient noise due to construction activities of conveyance systems, recharge basins and wells may be experienced over the course of the program planning period. In addition, some activities may require nighttime construction. This impact is both a project and cumulative significant unavoidable impact for construction.

5.2 Program Benefits

The IEUA has balanced the proposed program's benefits against the proposed program's significant and unavoidable impacts. The IEUA finds that each of the following benefits supports the overriding of the significant impacts identified above and in the PEIR.

1. **Meet Wastewater Treatment Demand** – Implementing the proposed program will 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.
2. **Recycled Water Production**– Implementing the proposed program will ensure that IEUA produces adequate recycled water supply to meet the objectives established in the Recycled Water Program Strategy through service area build out.
3. **Sustain Prado Basin Riparian/Wetland Habitat**– Implementing the proposed program will ensure that sufficient amounts wastewater discharge will meet IEUA's downstream discharge obligations to the Santa Ana River in order to sustain riparian and wetland habitat through service area build out.
4. **Biosolids Management**– Implementing the proposed program will ensure that sufficient processing capacity at the Inland Empire Regional Composting Facility will meet service area biosolids demands through service area build out.
5. **Energy Saving**– Implementing the proposed program will, 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.
6. **Localizing Water Supply**– Implementing the proposed program will provide new water resources to maintain the Chino Groundwater Basin aquifer for sources of potable water within the IEUA service area.
7. **Adapt to Variable Wet and Dry-Year Conditions**– Implementing the proposed program will allow key water resource supply vulnerabilities to be identified and evaluated. Developing water supply options could reduce and/or adapt to potential vulnerabilities.
8. **Power Independence and Carbon Neutrality**– Implementing the proposed program will support the organics diversion program and food waste co-digestion of member agencies and local businesses. The proposed program would comply with the State's organics diversion

requirements, and the IEUA could meet long term goals of peak power independence and carbon neutrality.

ATTACHMENTS

Date: February 17, 2016

To: The Honorable Board of Directors

Through: Public, Legislative Affairs, and Water Resources Committee (02/10/16)

From: P. Joseph Grindstaff
General Manager

Submitted by: Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee
Manager of Planning and Environmental Resources

Subject: Energy Management Plan (EMP)

RECOMMENDATION

It is recommended that the Board of Directors concur with the proposed initiatives and findings as outlined in the Energy Management Plan.

BACKGROUND

The primary objectives of the EMP is to benchmark the Agency's current energy performance and greenhouse gas emissions baseline; forecast future demands; and explore measures that will cultivate a reliable and sustainable energy infrastructure to achieve the objectives set forth in IEUA's Business Goals. This plan also aims to identify projects and business practices that can improve the Agency's Integrated Demand Side Management (IDSM) and work in concert with energy utilities whenever possible to benefit grid management.

The major initiatives discussed in the EMP are:

- Peak power independence
- Grid interdependence
- Organics diversion, and
- Carbon neutrality

As described in past planning documents, peak power independence has been a central goal for the Agency due to cost of this power. IEUA has progressed toward this goal by developing a diverse energy portfolio that includes energy efficiency, as well as solar, wind, and fuel cell generation. As more renewable energy comes into the state's power grid; however, the State

must cope with changing grid conditions. This means that assumptions about peak power demand periods will shift, as will the times when surplus power needs to be taken off the grid. IEUA's demand response and battery storage projects are at the cutting edge of addressing this emerging grid management issue. Additionally, environmental regulatory issues related to energy generation will require detailed studies to identify new technologies to address these issues.

In concert with peak power independence and grid interdependence, the EMP also introduces a new initiative to assist the member agencies in complying with the State's anticipated increase in organics diversion requirements, by diverting food waste to the Agency's anaerobic digesters and composting facility. The State has a target to reduce landfilling of solid waste by 75% by 2020, and this is expected, under the 2016 Short Lived Climate Pollutants Plan, to increase to 90% by 2025 in order to further reduce greenhouse gas emissions. Staff is currently conducting a feasibility study to estimate the amount of food waste available in the service area; the biogas generation potential; and the possible alternatives to beneficially use the digester gas generated in a cost effective manner.

A direct consequence of the implementation of the first two initiatives is the proposed carbon neutrality goal, which requires the Agency to acquire 100 percent of its electricity needs from carbon neutral sources by 2030. This will be accomplished through increased energy efficiency and renewable energy generation, and optimized interdependence with the State's power grid. In addition to greenhouse gas emissions voluntary reporting initiated in 2013 (with an audited carbon emissions baseline completed in 2016), staff will establish a carbon impact evaluation criteria to ensure future energy projects selected for implementation contribute to the Agency's achievement of the 100% carbon neutral goal.

The EMP relied on forecasting to evaluate the feasibility of site-specific energy projects. Forecasts were developed by incorporating projects from the Ten-Year Capital Improvement Plan (TYCIP) and findings from the Wastewater Facilities Master Plans, as well as, the anticipated performance of applicable self-generation installations. Wastewater flow projections were utilized to forecast anticipated seasonal demands at each IEUA facility. The EMP identified several potential energy projects, such as lighting upgrades and expansion of the solar installation at the IERCF, that are recommended to undergo more detailed analyses to determine whether they will be incorporated into the 2016/17 TYCIP.

Focused business practices, such as energy procurement strategies and improved energy monitoring were discussed within the plan, as cost saving measures can extend beyond conservation projects. Through prudent planning that considers past performance and anticipates regional needs, this EMP constructs a blueprint to shape a reliable and efficient energy profile for the Agency and an open communication with energy utilities to enhance the water-energy relationship.

The EMP will be reevaluated every two years. A Programmatic Environmental Impact Report (PEIR) is being prepared and will incorporate the findings of the EMP, along with the remainder of the Agency's planning documents, such as the Wastewater Facilities Master Plan and the Integrated Resources Plan. Following the Board approval of the PEIR, anticipated in summer

2016, each of these planning documents will be brought to the Board for final approval. Development of the EMP is consistent with the IEUA business goal of *Wastewater Management*, namely optimizing facility energy use, achieving state environmental sustainability and renewable energy goals, effectively managing renewable resources to achieve peak power independence, and providing for future rate stabilization.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

The EMP was entirely developed in-house. Projects recommended by the EMP will be included in the TYCIP to ensure they are properly funded.

Attachments:

Attachment 1: PowerPoint Presentation

Attachment 2: 2015 Energy Management Plan

Attachment 3: Fact Sheets

Date: November 4, 2015

To: The Honorable Board of Directors and
Regional Policy Committee

From: P. Joseph Grindstaff
General Manager

Submitted by: Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee
Manager of Planning and Environmental Resources

Subject: Integrated Water Resources Plan

RECOMMENDATION

It is requested that the Board of Directors and Regional Policy Committee develop a consensus in support of the following water supply strategies for the Integrated Water Resources Plan:

Recycled Water: Continue to invest in recycled water projects to maximize the beneficial reuse.

Groundwater: Acquire additional supplemental water to enhance groundwater recharge, sustain production and reduce basin salinity.

Conservation: Implement measures to reduce current urban demand at least 10% to enhance water supply resiliency. Outdoor water efficiency is the top priority.

Imported Water: Strategically maximize the purchase of imported water for recharge or in-lieu when available.

Stormwater: Continue to maximize stormwater recharge projects, including rainwater capture and infiltration.

Supplemental Water: Pursue external water supplies including exchanges, storage and water transfers to augment groundwater recharge and recycled water programs. External supplies include surface, imported and non-potable water.

BACKGROUND

Over the past 15 years, our agencies have successfully worked together to drought-proof the region by making significant investments in groundwater, recycled water, and conservation programs. These programs developed water supplies that supported and continued economic development and growth. These investments leveraged the region's ability to secure hundreds of millions of dollars in state and federal grants and loans. Over the next two years, more than a billion dollars of state and federal grants and loans will be available to support additional water supply development.

To ensure that the region is prepared for this next round of funding opportunities, IEUA in partnership with the member agencies have developed an Integrated Water Resources Plan (IRP) to guide the next round of proposed investments.

In order to meet the schedule for upcoming funding opportunities and establish planning priorities, the IRP process has been divided into two phases:

Phase 1 – Analysis and Recommendations: Phase 1 has focused on an extensive analysis of future projected water needs and water supply strategies under conditions of climate change and growth. The final report will summarize the recommended regional water resource strategies, corresponding ranges of costs for the various supply categories and a regionally developed, all-inclusive list of potential supply projects (local and regional). This report will be used to complete a Programmatic Environmental Impact Report (PEIR), which is critical for grant eligibility. Phase 1 will be completed by spring 2016.

Phase 2 - Implementation and CIP: Phase 2 will address additional detailed project level analysis including project scopes, costs, prioritization, and implementation schedule. Phase 2 will also include the disaggregation of the regional demand and supplies to the local, retail level. Continued discussions may be facilitated through a water forum. Phase 2 is anticipated to begin in May 2016.

Staff has made significant progress on Phase 1. Since June 2012, workshops have been conducted with member agencies to determine 2040 water demands, assess climate impact on local water supplies and stress test various water supply strategies. Key milestones made during this process in 2015 are summarized below.

- June - Established a projected regional urban demand range of 220,000 - 267,000 acre-feet per year (AFY) by 2040.
- July - Identified over 70 potential water supply projects and opportunities.
- August - Established IRP goals of “Resilience, Water Efficiency, Sustainability and Cost Effectiveness” with representatives from the Joint IEUA Board/Policy Committee.
- September - Performed climate change modeling of current water supplies and developed eight water supply strategies.
- October - Performed resiliency testing and analysis to identify the recommended water management strategies for the IRP.

GOALS

The overarching goals that guided the IRP process and analysis are:

1. **Resilience:** Regional water management flexibility to adapt to climate change and economic growth, and any changes that limit, reduce, or make water supplies unavailable.
2. **Water Efficiency:** Meet or exceed rules and regulations for reasonable water use.
3. **Sustainability:** Provide environmental benefits, including energy efficiency, reduced greenhouse gas emissions, and water quality improvements to meet the needs of the present without compromising the ability of future generations meeting their own needs.
4. **Cost-Effectiveness:** Supply regional water in a cost effective manner and maximize outside funding.

REGIONAL 2040 DEMAND PROJECTION

Based on the assumptions made through the IRP process, the estimated regional demand is 295,000 acre-feet (AF), which includes urban municipal and industrial demands of 267,000 AF, Santa Ana River discharge obligation of 17,000 AF, and the Chino Desalter replenishment requirement of 11,000 AF.

CLIMATE IMPACT ASSESSMENT

The IRP evaluated the impacts of climate change on our region’s future water needs. To do this, RAND Corp, the agency’s consultant, created a model for the region that included 106 climate and hydrology projections from the Intergovernmental Panel of Climate Change Assessment. Results indicate that the majority of the region’s local supplies will decrease by 2040 as shown in Table 1. The primary drivers for this reduction are projected temperature increases and the unpredictability of precipitation. On average, the availability of climate dependent water supplies, such as stormwater, local surface and imported water will reduce by approximately 30 percent over the next 20 years.ⁱ

Table 1: Local Supply Availability in year 2040

Supply Type	Supply Available	
	Baseline (Acre-Foot per Year)	Baseline under Climate Impact (% of Baseline) ⁽¹⁾
Recycled Water	64,700	100%
Groundwater	91,300	96%
Stormwater⁽²⁾	6,400	69%
Local Surface	22,100	63%
Imported Water⁽³⁾	69,750	77%
Notes:		
(1) Based on the range of supply that falls within 75 percent of the studied climate projections.		
(2) Only includes the projected increase in stormwater capture and recharge per the 2013 CBWM Recharge Master Plan Update. Supply availability to start in year 2020.		
(3) State Water Project supply availability is expected to decrease due to constraints on the Delta and projections of reduced snowfall in the Sierra Nevadas.		

WATER SUPPLY STRATEGIES

A water supply strategy is a combination of water supply and conservation projects or opportunities that the region could pursue to help achieve the goals of the IRP. A total of eight different water supply strategies were developed during the course of the IRP workshops for resiliency testing across the 106 climate projections. These strategies were as follows:

- **Strategy 1:** Maximize Chino basin groundwater, including prior stored groundwater
- **Strategy 2A:** Maximize recycled water (including external supplies) and local supply projects and implement minimal conservation
- **Strategy 2B:** Strategy 2A plus securing supplemental imported water from MWD and non-MWD sources
- **Strategy 3A:** Maximize recycled water (including external supplies) and implement moderate conservation
- **Strategy 3B:** Strategy 3A plus implement high conservation
- **Strategy 4:** Maximize supplemental water supplies and recycled water (including external supplies) and implement minimal-moderate level of conservation
- **Strategy 5A:** Maximize the purchase of imported water from MWD and implement minimal-moderate level of conservation
- **Strategy 5B:** Strategy 5A plus maximize local recycled water

RESILIENCY TESTING RESULTS

Strategies 2B, 3A, 3B, 4 and 5B performed well and were able to meet future demands. Strategies 3B and 4 had the added benefit of building storage reserves to help accommodate for future uncertainties or catastrophic events, such as a major facility/pipeline breaks or loss in supplies. Alternatively, these reserves could also be used to enhance supply reliability within the Santa Ana watershed and across Southern California.

Analysis of the performance of the eight water supply strategies resulted in the following recommendations:

- Continue investment in recycled water projects to maximize the beneficial reuse.
- Acquire supplemental water to enhance groundwater recharge and sustain production.
- Implement conservation measures to reduce current urban demand by at least 10 percent to enhance water supply resiliency. Outdoor water efficiency is the top priority.
- Strategically maximize the purchase of supplemental water for recharge or in-lieu when available.
- Include external supplies, such as surface, imported and non-potable water, strategically in combination with conservation to augment groundwater recharge, recycled water and build storage reserves.
- Continue to maximize stormwater recharge projects, including rainwater capture and infiltration.

IEUA staff greatly appreciated the engagement and assistance of member agency staff in the IRP discussion.

The Integrated Water Resources Plan is part of the Agency's Recycled Water and Groundwater Recharge Business Goal objectives that IEUA will develop and implement an integrated water resource management plan that promotes cost-effective, reliable and sustainable water use along with economic growth within the service area.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

Attachments:

1. August 26, 2015 IRP presentation – supply strategy building workshop
2. October 13, 2015 IRP presentation – supply strategy modeling results and lessons learned
3. Water supply strategy project summary table
4. Additional supplies and capacity summary table
5. IRP intent letter dated October 1, 2015
6. November 4, 2015 IRP presentation – Joint Policy workshop

ⁱ To note, the 2040 baseline supply availability includes no climate impacts and assumes projects adopted in the Agency's Fiscal Year 2015-16 Ten Year Capital Improvement Plan are constructed. Therefore, no additional investments are made after the year 2025.

Date: July 15, 2015

To: The Honorable Board of Directors

Through: Engineering, Operations & Biosolids Committee (07/08/15)

From: P. Joseph Grindstaff
General Manager

Submitted by: Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee
Manager of Planning and Environmental Resources

Subject: Wastewater Facilities Master Plan

RECOMMENDATION

It is recommended that the Board of Directors concur with the findings of the Wastewater Facilities Master Plan.

BACKGROUND

The purpose of the Wastewater Facilities Master Plan (WFMP) was to update the previous WFMP prepared in 2002 and updated in 2007 where the ultimate influent flow was estimated at 202 million gallons per day (mgd) and 110 mgd, respectively. Due to changes in economic conditions, water use efficiency practices, discharge permit requirements, and population growth projections, the influent wastewater flow and loading assumptions were re-evaluated to determine future facilities expansion needs. Based on the growth projections in the service area as identified in the Integrated Resources Plan (IRP), the revised ultimate influent flow was projected to be 88 mgd. Although the new influent flow was much less than previously reported, the wastewater strength had increased since 2002. In addition, the WFMP analyzed flow diversion alternatives in order to maximize recycled water supply in correlation with the Recycled Water Program Strategy program.

The planning period of the WFMP was for year 2035 and the ultimate year 2060. Capital projects were developed based on the expansion needs for each RWRP for the next 20 years. Table 1 identified the major capital projects required to meet projected capacities.

Table 1 – Major Capital Projects for next 20 Years

Project	Purpose	Estimated Cost (Million)
Whispering Lakes Pump Station Expansion	Increase pumping capacity for future wastewater flows to RP-1	\$6.1
RP-1 Solids Treatment Expansion	Increase solids treatment capacity for existing and future flows	\$24.9
RP-1 Liquid Treatment Expansion and Primary Effluent Equalization Elimination	Increase liquid treatment capacity for future flows; eliminate primary flow equalization for other uses	\$122.4
RP-4 Liquid Treatment Expansion	Increase liquid treatment capacity for future flows	\$6.6
RP-5 Solids Handling Facilities	Relocate RP-2 solids handling to RP-5; increase solids treatment capacity for existing and future flows; demolish RP-2 facilities	\$157.3
RP-5 Liquid Treatment Expansion	Increase liquid treatment capacity for future flows	\$125.5
Montclair Interceptor Upgrades	Upsize four segments to mitigate deficiencies	\$25.4

Preliminary design efforts for the expansion of RP-1 and RP-5 will begin in FY 2015/16 to identify treatment options consistent with the ultimate facility layouts provided within the WWFMP.

The WWFMP will be reevaluated once every ten years, or as major changes are identified. A Programmatic Environmental Impact Report (PEIR) will be prepared for the ultimate conditions provided in the WWFMP, along with the remainder of the Agency's planning documents such as the Recycled Water Program Strategy, Energy Management Plan and the Integrated Resources Plan. When the PEIR is adopted for the Agency's planning documents, staff will bring this WWFMP forward for the Board to formally adopt.

Development of the Wastewater Facilities Master Plan is consistent with the IEUA business goal of *Wastewater Management* where systems and facilities will be maintained to meet essential service demands and to protect public health and the environment.

PRIOR BOARD ACTION

On September 18, 2013, the IEUA Board of Directors awarded a Professional Engineering Services Master Contract for the Wastewater Facilities Master Plan to CH2M Hill.

IMPACT ON BUDGET

There is no impact on budget.

Attachments:

- Attachment A: CIP Forecast through 2035
- Wastewater Facilities Master Plan document can be found at:
<http://www.ieua.org/category/reports/other-reports/>

Date: June 17, 2015

To: The Honorable Board of Directors

Through: Engineering, Operations, and Biosolids Management Committee
(06/10/15)

From: P. Joseph Grindstaff
General Manager

Submitted by: Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee
Manager of Planning and Environmental Resources

Subject: Recycled Water Program Strategy

RECOMMENDATION

It is recommended that the Board of Directors concur with the findings of the recycled water program as outlined in the Recycled Water Program Strategy.

BACKGROUND

The purpose of the Recycled Water Program Strategy (RWPS) is to update the 2005 Recycled Water Implementation Plan and the 2007 Recycled Water Three Year Business Plan. The primary objective of the RWPS is to update supply and demand forecasts and prioritize projects to maximize the beneficial use of recycled water throughout the year. This is necessary as changes in the region's water resource priorities occur and increased water efficient landscape measures are adopted.

The planning period of the RWPS is through 2035, with a focus on the first ten years. As part of the RWPS, hydraulic modeling was performed for a variety of demand conditions, including changes in direct use and groundwater recharge. The modeling scenarios objectives can be summarized as:

- Achieve maximum beneficial reuse of the recycled water: maximize groundwater recharge to utilize supply when available (off-peak months).
- Identify the capability to increase groundwater recharge if additional supplies are available and/or if direct use demand patterns change.

The proposed RWPS projects address improvements necessary to achieve the goal of maximizing beneficial use of recycled water throughout the year. The recommended RWPS projects focus on either increasing the ability for groundwater recharge, or relieving capacity constraints to meet the

demand forecast. A comprehensive list of projects identified from the RWPS is provided as Attachments A and B. The RWPS prioritized projects by placing them into different implementation phases:

- The first and second phases of projects are included in the Agency’s Capital Improvement Plan (CIP) through 2035, and are included in the Ten Year Capital Improvement Plant (TYCIP).
- The third and fourth phases of projects identified from the RWPS will be reevaluated as changes in demand occur, or if more recycled water supply is identified. This could either be from reduced direct use demands caused by changes in landscape irrigation or if an external RW supply is provided into the region.

As RWPS updates are performed, the proposed projects included in the Agency’s TYCIP will be revised accordingly to reflect the approved RWPS. The RWPS projects were prioritized previously based on commitments received from the Region, such as the 2005 Implementation Plan, 2007 Three Year Business Plan, 2013 Recharge Master Plan Update (RMPU) and previously adopted Agency Ten Year CIP’s (TYCIP). At this time, new projects and concepts since previous commitments include initial feasibility studies for evaluating an external RW intertie with Western Riverside County Regional Wastewater Authority and conducting a RW Injection pilot study.

Table 1 identifies the maximum beneficial use that can be achieved with the projects included in the Agency’s CIP through 2035. A cost summary of the Agency’s CIP through 2035 for the RW Program is presented in Table 2 below. Attachments C and D provide a map identifying the locations of the recommended RWPS projects, with emphasis on the purpose, such as GWR capacity improvements, or improvements to meet direct use demands.

Table 1: RWPS summary of RW Supply and Demands in Acre-Feet per Year

	2015	2020	2025	2030	2035
RW Supply^(1, 2)	60,200	64,300	69,700	75,100	79,800
Direct Use⁽³⁾	24,655	28,730	30,640	33,650	35,825
Groundwater Recharge⁽⁴⁾	9,700- 16,300	10,200- 16,200	12,600- 19,200	13,800- 20,700	14,400- 22,600
RW Injection⁽⁵⁾	-	-	-	5,000	5,000
Total Beneficial Reuse	34,355- 40,955	38,930 – 44,930	43,240 – 49,840	47,450 – 59,350	50,225 – 63,425

Notes:

- (1) Regional supply per Wastewater Facilities Master Plan TM 4 - Table 4-4, includes 3% loss due to treatment waste streams.
- (2) Minimum discharge required by SAR Obligation is 16,850 AFY.
- (3) Represents approximately 90% of Member Agency direct use forecast. Planning assumption for increased water efficient landscapes.
- (4) Range of annual deliveries to GWR based upon available reuse supply and basin availability. **Estimated at 6-10 months.**
- (5) **Initial planning estimate, to be evaluated at a later time.**

Table 2: Cost summary of Agency’s Recycled Water Program CIP through 2035

	Project Source	2015 to 2025 (TYCIP)	2025 to 2035
Direct Use Improvements	RWPS	\$6,000,000	\$35,800,000
Groundwater Recharge ^(1,2)	RWPS/RMPU	\$8,615,000 ⁽²⁾	\$47,800,000
Existing Projects ⁽³⁾	TYCIP	\$13,825,000	\$0
Repair and Replacement (R&R) ⁽⁴⁾	AMP ⁽⁴⁾	\$8,905,000	\$15,625,000
Operational Needs ⁽⁵⁾	TYCIP	\$16,275,000	\$775,000
Total CIP Cost		\$53,800,000	\$100,000,000

Notes:

- (1) Includes distribution improvements, IEUA/CBWM cost share projects (Victoria, San Sevaime and RP-3 basin improvement projects).
- (2) IEUA/CBWM cost share projects only include the portion of the project cost funded by IEUA; therefore, includes \$181k for soft costs
- (3) Includes projects from the 2005 RW Implementation Plan, 2007 Three Year Business Plan & FY 14/15 TYCIP carried forward.
- (4) Agency’s Asset Management Plan.
- (5) Including: upgrades needed for reliability, planning, permitting and feasibility studies.

The RWPS will be reevaluated at a minimum once every five years. Additional studies are expected to be performed in the coming years to identify and present changes needed to accommodate the potential shift in recycled water use. A Programmatic Environmental Impact Report (PEIR) will be prepared for the ultimate conditions provided in the RWPS, along with the remainder of the Agency’s planning documents such as the Wastewater Facilities Master Plan and the Integrated Resources Plan. When the PEIR is adopted for the Agency’s planning documents, staff will bring this RWPS forward for the Board to consider formal adoption.

Development of the Recycled Water Program Strategy is consistent with the IEUA business goal of *Water Reliability*, namely development of new water supplies, recycled water and groundwater recharge.

PRIOR BOARD ACTION

On September 18, 2013, the Board of Directors awarded a Professional Engineering Services Master Contract for the Recycled Water Program Strategy to Stantec Consulting Inc.

IMPACT ON BUDGET

None.

Attachments:

- Attachment A: RWPS Project List
- Attachment B: CIP Forecast through 2035
- Attachment C: RWPS Project Map (2015 – 2025)
- Attachment D: RWPS Project Map (2025 – 2035)
- Recycled Water Program Strategy document can be found at:
<https://ieua.hostedftp.com/CxHCmCTTSxx5OwosZpImxf1sq>

Date: October 16, 2013

To: The Honorable Board of Directors

Through: Public, Legislative Affairs, and Water Resources Committee (10/09/13)
Finance, Legal, and Administration Committee (10/09/13)

From: P. Joseph Grindstaff
General Manager

Submitted by: Chris Berch
Manager of Planning and Environmental Compliance

Subject: Approval of 2013 Chino Basin Recharge Master Plan Update

RECOMMENDATION

It is recommended that the Board of Directors approve the 2013 Chino Basin Recharge Master Plan Update.

BACKGROUND

Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (CBWM), Chino Basin Water Conservation District (CBWCD), and their respective member agencies have prepared a 2013 Recharge Master Plan Update (Update) to the 2010 Recharge Master Plan, per the direction of the Court.

The Update evaluated 27 yield enhancement projects (i.e. capital projects) and recommends implementing 11 of the yield enhancement projects over the next 6 years. These 11 projects are estimated to develop approximately 6,781 AFY of stormwater recharge and 4,936 AFY of recycled water recharge, at an estimated capital cost of \$57 million. The Update also evaluated 9 production sustainability projects (i.e. in-lieu projects), and recommends individual parties develop the necessary agreements to implement these projects.

Both IEUA and CBWM are required to approve and submit the 2013 Update to the Court in October 2013. The CBWM Board of Directors approved the Update at their September 26, 2013 Board meeting. The full document can be found at www.cbwm.org.

Peace II Agreement, Article 8.1.b

Within the Peace II Agreement, there are provisions that describe cost sharing requirements between IEUA and CBWM, for projects identified in the Chino Basin Recharge Master Plan. Specifically, Article 8.1.b of the Peace II Agreement describes cost sharing on capital projects:

Mutually approved capital improvements for recharge basins that do or can receive recycled water constructed pursuant to the court approved Recharge Master Plan, if any, will be financed through the use of third party grants and contributions if available, with any unfunded balance being apportioned 50 percent each to IEUA and Watermaster.

Implementation and Financing Plan

Section 8 of the 2013 Update includes a detailed implementation schedule for both yield enhancement projects and sustainability projects. It also includes a detailed schedule and process on how a financing plan will be developed in order to fund the recommended yield enhancement projects.

As one of the first milestones in the schedule, IEUA and CBWM will be required to develop a yield enhancement project implementation agreement in 2014. This agreement will determine the implementation responsibilities of IEUA, such as developing preliminary design reports or preparing environmental documentation. The agreement will also determine the financing responsibilities, if any, by IEUA above and beyond the cost sharing requirements described in the Peace II Agreement. Currently, the 2013 Update does not require IEUA to finance any of the recommended yield enhancement projects.

Recommended Cost Sharing Projects

Attached is a memo addressed to the Steering Committee summarizing IEUA’s recommendations. The memo recommends that IEUA cost-share 3 of the 11 recommended yield enhancement projects, as they include a recycled water capital component (see table below). These 3 projects are estimated to yield 4,936 AFY of recycled water recharge at a capital cost of \$4.5 million. This equates to an average unit cost of \$273/AF for all 3 projects.

The memo also recommends that the region continues to evaluate and pursue the other cost-sharing projects with the intent of implementing them once the required proof-of-concept/investigative work determines the project is viable.

Recharge Master Plan Update – IEUA Cost-Sharing Projects

Project ID	Project Name	Included in IEUA FY 13/14 TYCIP	Management Zone	Estimated RW Yield (AF)	IEUA Funding Support
7	San Sevaire Basin	Yes	2	1,911	\$1,775,000
11	Victoria Basin	No	2	120	\$75,000
22	RP3 Basin Improvements	No	3	2,905	\$2,645,000
TOTAL				4,936	\$4,495,000

Staff vetted the attached memo with the IEUA water/wastewater member agencies at the July 2013 Water Managers/Technical Committee Workshop, with the Technical Committee at the August and October 2013 meeting, and with the IEUA Committee/Board in August and September 2013.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

None.

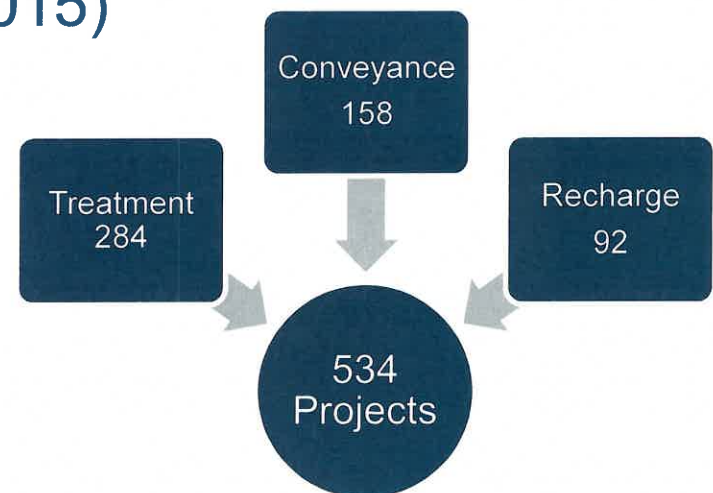
Attachments: 1. Resolution No. 2013-10-1
2. IEUA Memo to Chino Basin Recharge Master Plan Update Steering Committee

Program Environmental Impact Report (PEIR) Certification and Adoption of Planning Documents

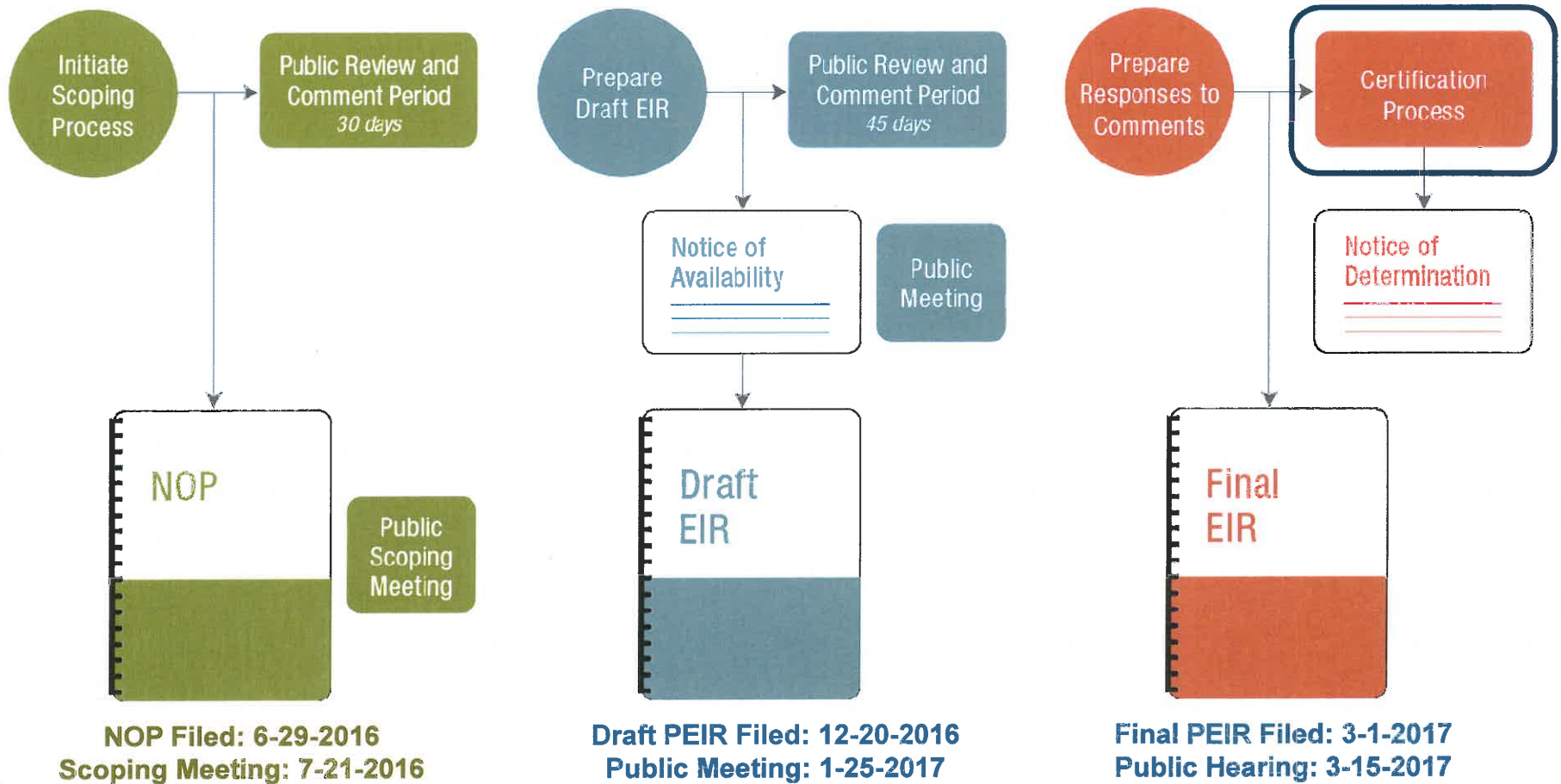


Facility Master Plans

- Wastewater Facilities Master Plan Update Report (2015)
- Amendment to the 2010 Recharge Master Plan Update (2013)
- IEUA Asset Management Plan (2015)
- Recycled Water Program Strategy (2015)
- Integrated Water Resources Plan (2015)
- Energy Management Plan (2015)



EIR Process



Environmental Impacts

Resource	Significance Determination
Aesthetics	Less than Significant with Mitigation (LSM)
Agriculture and Forest Resources	Less than Significant with Mitigation (LSM)
Air Quality and GHG Emissions	Significant and Unavoidable (SU)
Biological Resources	Less than Significant with Mitigation (LSM)
Cultural Resources	Significant and Unavoidable (SU)
Geology, Soils, and Mineral Resources	Less than Significant with Mitigation (LSM)
Hazards and Hazardous Materials	Less than Significant with Mitigation (LSM)
Hydrology and Water Quality	Less than Significant with Mitigation (LSM)
Land Use and Planning	Less than Significant with Mitigation (LSM)
Noise	Significant and Unavoidable (SU)
Population and Housing	Less than Significant (LS)
Public Services	Less than Significant with Mitigation (LSM)
Recreation	Less than Significant with Mitigation (LSM)
Traffic and Transportation	Less than Significant with Mitigation (LSM)
Utilities	Less than Significant with Mitigation (LSM)
Secondary Effects of Growth	Significant and Unavoidable (SU)

Project Alternatives

Resource	Proposed Project	Alternative 1 No Project	Alternative 2 Reduced GWR	Alternative 3 Expanded AWTF
Aesthetics	LSM	Less	Less	Similar
Agriculture and Forest Resources	LSM	Less	Less	Similar
Air Quality and GHG Emissions	SU	Greater	Greater	Greater
Biological Resources	LSM	Less	Similar	Similar
Cultural Resources	SU	Less	Less	Similar
Geology, Soils, and Mineral Resources	LSM	Less	Similar	Similar
Hazards and Hazardous Materials	LSM	Greater	Greater	Less
Hydrology and Water Quality	LSM	Less	Similar	Similar
Land Use and Planning	LSM	Similar	Less	Similar
Noise	SU	Less	Similar	Similar
Population and Housing	LS	Greater	Similar	Similar
Public Services	LSM	Less	Similar	Similar
Recreation	LSM	Less	Similar	Similar
Traffic and Transportation	LSM	Less	Similar	Similar
Utilities	LSM	Less	Greater	Greater
Secondary Effects of Growth	SU	Greater	Similar	Similar

Conclusion

The proposed program is the environmentally superior alternative

- provides for the careful planning,
- timed implementation of necessary public services, and
- minimizes environmental impacts.

Comment Letters received from

- Department of Toxic Substances Control
- Metropolitan Water District of Southern California
- Cities of Chino, Ontario, and Rancho Cucamonga
- Chino Basin Watermaster
- San Bernardino County Department of Public Works
- Native American Heritage Commission
- Cucamonga Valley Water District

Final comments and responses were incorporated into the PEIR

Recommendation

1. Adopt Resolution No. 2017-3-1, certifying the Final Program Environmental Impact Report as complete, and;
2. Approve IEUA's Facility Master Plans.

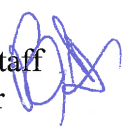
The certification of the Final Program Environmental Impact Report, and approval of IEUA's Facilities Master Plans is consistent with IEUA's business goal of ***Environmental Stewardship and Regulatory Compliance***.


**ACTION
ITEM
1E**


Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Biosolids Management Committee
(03/08/17)

From: P. Joseph Grindstaff
General Manager 

Submitted by: *for* Chris Berch 
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone 
Manager of Engineering

Subject: Utility Locating Services Contract Amendment

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a three-year contract amendment to UtiliQuest, LLC, for dig alert locating services for a not-to-exceed amount of \$440,000; and
2. Authorize the General Manager to execute the contract amendment.

BACKGROUND

Dig alert is a service utilized by contractors and utility owners as a means to allow contractors to inform agencies of construction projects requiring excavation. Upon notification by a contractor to Dig Alert Service Center, the limits of construction are marked by the contractor, which informs IEUA where work is being performed. Since 2013, IEUA has utilized UtiliQuest to manage the dig alert requests from contractors to determine and mark IEUA facilities in the contractor work areas. Utility marking is required by law and failure to mark said facilities could result in damage by the contractors, which would then be the responsibility of IEUA to correct and repair.

UtiliQuest is currently under contract with IEUA to perform dig alert marking services that will expire in March 2017. Prior to recommending an extension to UtiliQuest's contract, staff contacted six firms to see if there was interest in a general solicitation. Of the six firms contacted,

one firm, Pacific Locators, Inc., stated they would consider performing work for IEUA. Pacific Locators has only one current customer with telecommunication/digital lines in the City of Ontario. UtiliQuest currently performs marking for multiple utilities such as Southern California Edison, Frontier, AT&T, Time Warner, the City of Rancho Cucamonga, and the City of Corona. Because of UtiliQuest's number of local customers, they can mark all customer's lines efficiently during a single request, which allows them to share the cost amongst the different customers.

Based on UtiliQuest's past performance, knowledge of IEUA's GIS System, infrastructure, and fee price, it was determined that UtiliQuest is still the best qualified to continue to perform the work. UtiliQuest proposal includes an increase in the ticket management fee by an estimated 2% per year. Staff is requesting a contract extension to take UtiliQuest contract through 2020. An estimated cost of \$440,000 for this three-year extension was based on the ten-year capital improvement projection of new growth and the proposed unit cost for marking utilities.

UtiliQuest's recommended fees in current dollars is less than when originally solicited. Re-solicitation and training for a new vendor would cost between \$30,000 and \$50,000. Currently, cost for UtiliQuest are less than what would be expected if IEUA was to begin utility marking its facilities again. Staff feels that a contract extension would provide the best value to the IEUA.

The dig alert contract extension is consistent with *IEUA's Business Goal of Wastewater Management* specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

PRIOR BOARD ACTION

On August 20, 2014, the Board of Directors awarded a two-year extension with an optional renewal to UtiliQuest, LLC for dig alert locating services for a not-to-exceed amount of \$335,000.

On March 20, 2013, the Board of Directors awarded a two-year contract to UtiliQuest, LLC for dig alert locating services for a not-to-exceed amount of \$200,000.

IMPACT ON BUDGET

The yearly maintenance and support fees for dig alert services will continue to be paid through Professional Fees and Services budget in the Administrative Services (GG) Fund. There is no direct impact on the Agency's fiscal year budget as a result of this action.

Attachments:

1. Contract Amendment

PJG:CB:SS:mp



AMENDMENT NUMBER: 4600001401-003
FOR
UTILITY LOCATION SERVICES

THIS AMENDMENT NUMBER THREE is made and entered into this _____ day of _____, 2017, by and between the Inland Empire Utilities Agency, a Municipal Water District, organized and existing in the County of San Bernardino under and by virtue of the laws of the State of California (hereinafter referred to as "Agency") and UtiliQuest, LLC (hereinafter referred to as "Contractor") for utility location services, and shall revise the Contract as amended:

REVISE SECTION 5., TERM, TO READ AS FOLLOWS:

The term of the Contract shall extend from the Notice to Proceed and continue until March 30, 2020, unless agreed to by both parties, reduced to writing and amended to the Contract.

REVISE SECTION 6., COMPENSATION, TO ADD THE FOLLOWING:

In compensation for the additional term represented by this Contract Amendment, Agency shall pay Contractor a NOT-TO-EXCEED maximum total of **\$975,000.00** for all services provided, in accordance with the fee schedule below. This represents a net increase of **\$440,000.00** to the Contract.

March 31, 2017-March 30, 2018

Description	Price Schedule	Notes
Ticket Management Fee	\$4,635 per month	Plus screening fee below
Ticket Screening Fee—in office	\$2.50 per ticket	Verifying utilities in office
Ticket on site per 300 linear ft.	\$17.50 per 300 ft.	Truck rolls out to location
*Standard hourly billing on site	\$49.50 per hour	Mon-Fri. 7:00 am – 5:00 pm
Overtime hourly billing on site	\$59.50 per hour	Outside Standard hours / holidays

March 31, 2018 – March 30, 2019

Description	Price Schedule	Notes
Ticket Management Fee	\$4,727.70 per month	Plus screening fee below
Ticket Screening Fee—in office	\$2.50 per ticket	Verifying utilities in office
Ticket on site per 300 linear ft.	\$17.50 per 300 ft.	Truck rolls out to location
*Standard hourly billing on site	\$49.50 per hour	Mon-Fri. 7:00 am – 5:00 pm
Overtime hourly billing on site	\$59.50 per hour	Outside Standard hours / holidays

March 31, 2019 – March 30, 2020

Description	Price Schedule	Notes
Ticket Management Fee	\$4,822.25 per month	Plus screening fee below
Ticket Screening Fee—in office	\$2.50 per ticket	Verifying utilities in office
Ticket on site per 300 linear ft.	\$17.50 per 300 ft.	Truck rolls out to location
*Standard hourly billing on site	\$49.50 per hour	Mon-Fri. 7:00 am – 5:00 pm
Overtime hourly billing on site	\$59.50 per hour	Outside Standard hours / holidays

ALL OTHER PROVISIONS OF THIS CONTRACT REMAIN UNCHANGED.

WITNESSETH, that the parties hereto have mutually covenanted and agreed as per the above amendment items, and in doing so have caused this document to become incorporated into the Contract Documents.

INLAND EMPIRE UTILITIES AGENCY:
(A MUNICIPAL WATER DISTRICT)

UTILIQUEST, LLC:

P. Joseph Grindstaff
General Manager

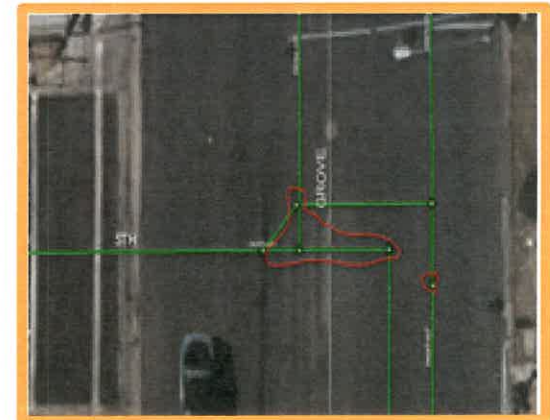
(Date)

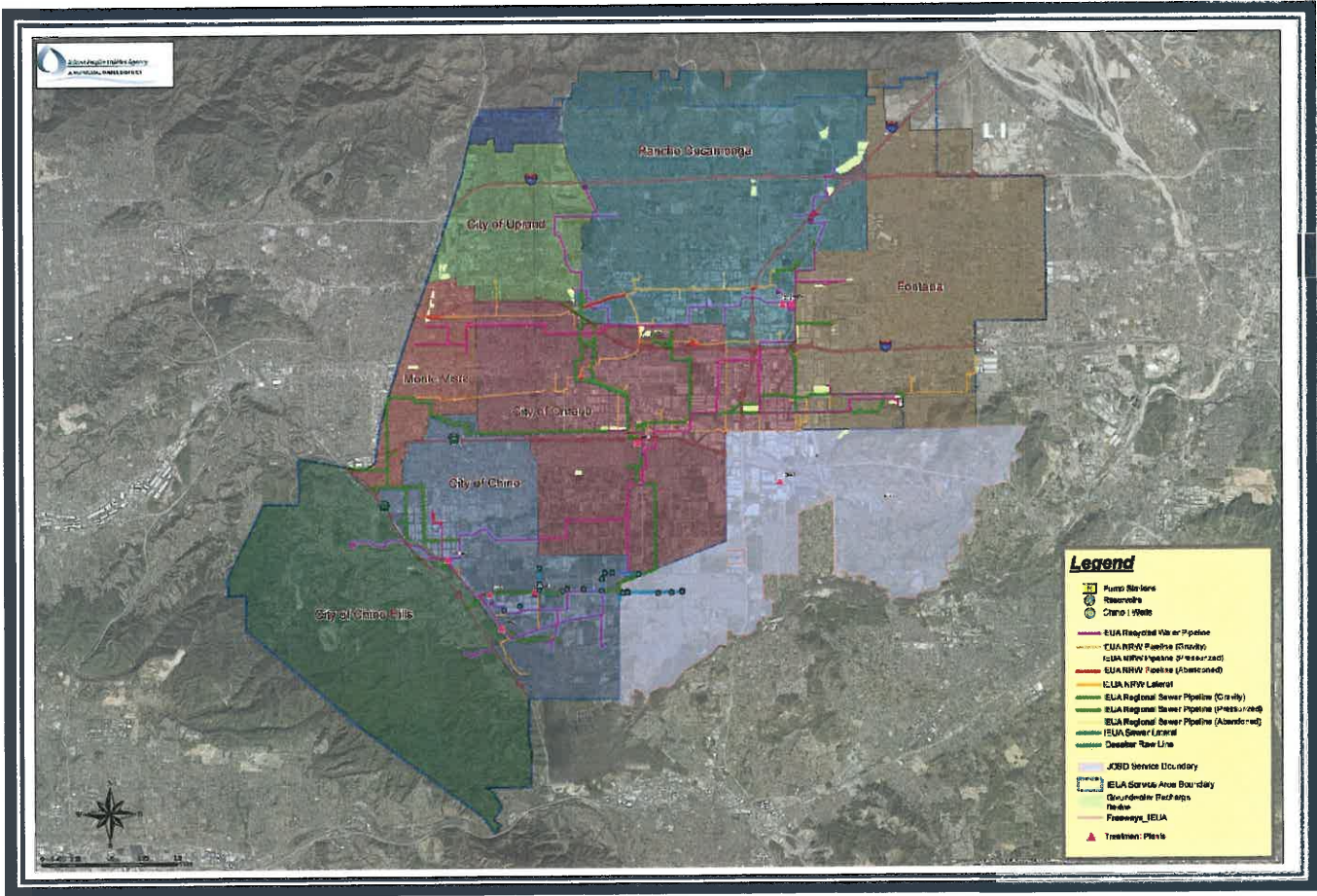
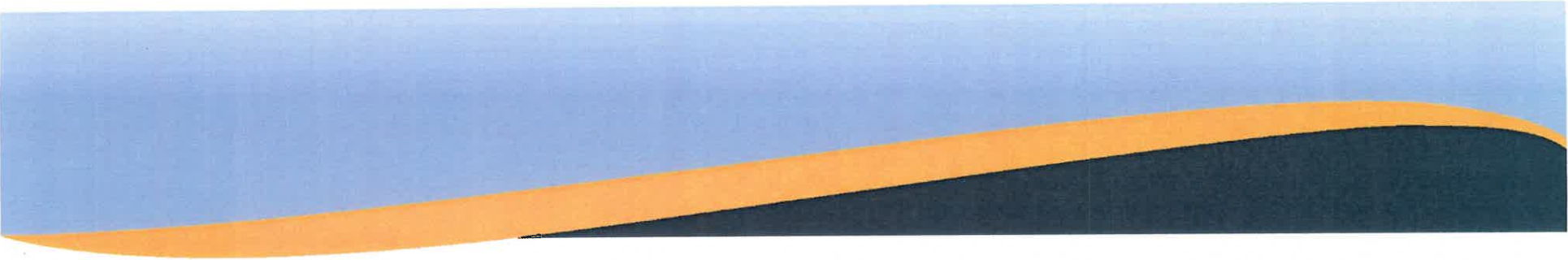
Dennis Tarosky
President

2/3/17
(Date)

Utility Locating Services Contract Amendment

Board Meeting





Contract Background

- IEUA utilizes UtiliQuest to mark utilities within 48-hours of notification
- Selected in 2013 by competitive solicitation
 - Amended in late 2014
- Failure to mark could result in damage to Agency facilities



Utiliquest Markings

Amendment

- Lack of local firms to perform the work
- Utilquest
 - Knowledge of IEUA systems
 - Quality Performance
 - Lower Cost
- Construction activity/amendment cost based on TYCIP projection
- Term Extension: March 2017 – March 2020
- Not-to-Exceed Amount: \$440,000
- Work performed at various locations as needed

Project Budget and Schedule

Milestone	Date
March 20, 2013 Original Contract Award	200,000
August 20, 2014 Amendment No. 1	335,000
March 15, 2017 Amendment No. 2	\$440,000
Total Contract Amount	\$975,000

Milestone	Date
Original Contract Award	March 20, 2013
Contract Term Extension	March 30, 2020

Recommendation

- Approve a three-year contract amendment to UtiliQuest, LLC, for dig alert services, for a not-to-exceed amount of \$440,000; and
- Authorize the General Manager to execute the contract amendment.


The Dig Alert contract amendment is consistent with *IEUA's Business Goal of Wastewater Management* specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

**ACTION
ITEM
1F**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (3/8/2017)

From: P. Joseph Grindstaff
General Manager 

Submitted by: *for* Chris Berch *SJS*
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone *SJS*
Manager of Engineering

Subject: RP-1 Consultant Task Order Amendment (Disinfection)

RECOMMENDATION

It is recommended that the Board of Directors:

1. Approve the consultant task order amendment for the RP-1 Disinfection Improvements, Project No. EN11039, to Carollo Engineers, Inc., for the not-to-exceed amount of \$398,324; and
2. Authorize the General Manager to execute the amendment.

BACKGROUND

The Regional Water Recycling Plant No. 1 (RP-1) tertiary treatment facility is required to treat and disinfect secondary effluent, prior to discharge to the environment. RP-1's Tertiary Plant 1 (TP-1) Disinfection System was constructed in 1971. The last major expansion occurred in 1987. The age of this facility is approaching 50 years old and requires substantial rehabilitation and replacement.

Currently, the disinfection system and sedimentation basin are in poor condition and must be rehabilitated to remain reliable. The Pre-Design Report (PDR) was developed through various meetings and site visits with project sponsors, stakeholders, and the RP-1 expansion team. It identified improvements which are required to increase the reliability and efficiency of the disinfection system and sedimentation basins to meet the current and future needs of this facility.

In February 2017, Carollo Engineers completed a PDR based on a Technical Services' needs analysis, as well as input from Operations, Maintenance and the Engineering Department. This work identified the below recommendations, expected cost and provided design to a 30% level. Recommendations included:

- Relocate and expand the disinfection storage system
- Replace disinfection pipelines
- Rehabilitate the sedimentation system
- Provide reliability improvements related to the disinfection system

Based on Carollo's current work on the PDR, the project team's qualifications and experience, understanding and development of the project scope, their 30% design drawings and ability to meet the project schedule, it is recommended that Carollo be selected to perform the final design work.

The following table is the anticipated project cost:

Description	Estimated Cost
Project Development and Preliminary Design	\$212,000
Consultant Engineer	\$398,324
Design Services (~5%)	\$172,000
Construction Services (~15%)	\$570,000
Construction	\$3,800,000
Contingency (~10%)	\$380,000
Total Project Cost	\$5,532,324
Total Project Budget	\$1,288,300*

**The total project budget will be amended during the Ten-Year Capital Improvement Plan process to account for additional scope identified.*

Given that this is the design scope of services, staff anticipates bringing forward for approval an additional task order amendment for additional services including engineering services during construction when the construction award is considered.

The following is the project schedule:

Project Milestone	Date
Consultant Task Order Amendment	March 2017
Design Completion	November 2017
Construction Contract Award	January 2018
Construction Completion	October 2018

The RP-1 Disinfection Improvements Project is consistent with IEUA's Business Goal of Wastewater Management specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

If approved, the amendment to the consulting engineering services contract for the RP-1 Disinfection Improvements, Project No. EN11039, for the not-to-exceed amount of \$398,324 will be within the total project budget of \$1,288,300 in the Regional Wastewater Capital (RC) Fund.

Attachments

1. Consultant task order amendment

PJG:CB:SS:mp



Date: January 25, 2017
Consultant: Carollo Engineers, Inc.

Amendment 1 to Task Order Number: 01
Contract Number: 4600002052

Project / Task Description: Regional Water Reclamation Plant No. 1 TP-1 Disinfection Pump Improvements

I. RECITALS

This Task Order Amendment is issued for the procurement of additional on-call engineering support services needed in conjunction with an Inland Empire Utilities Agency (interchangeably "IEUA" and "Agency") facilities Project EN11039.00.

Agency and Consultant previously entered into Master Services Contract No. 4600002052. Except as otherwise specified herein, the terms and conditions of that Agreement are incorporated into this Task Order via this reference.

II. TASK ORDER AMENDMENT AGREEMENTS

1. Scope Of Work Is Changed To Read: Consultant shall furnish the qualified personnel and equipment necessary to perform the additional work as outlined by IEUA staff and as listed in Task Order Amendment 1 Scope of Work, attached hereto and made a part hereof as **Exhibit B**.
2. Period Of Performance Is Changed To Read: The term of this Task Order shall extend from the date of the Notice to Proceed and terminate upon acceptance of the project's construction by the Agency's cognizant Project Manager, unless agreed to by both parties, reduced to writing, and amended to this Task Order.
3. Compensation Is Changed To Read: Authorized total payments to Consultant for performance of this Task Order shall sum to a **not-to-exceed maximum total of \$497,660.00** (NOTE: This represents an overall increase of **\$398,324.00** to the Task Order as outlined in Consultant's estimated Design Fee Schedule, attached hereto and made a part hereof as **Exhibit C**.)

[Signature Page Immediately Follows]

III. SIGNATURES

INLAND EMPIRE UTILITIES AGENCY:
(A MUNICIPAL WATER DISTRICT)

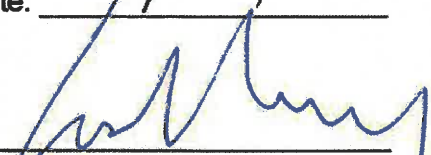
CAROLLO ENGINEERS, INC.:

P. Joseph Grindstaff
General Manager

for 

Robert S. Grantham
Vice President

Date: 1/26/17



Dr. Graham J. G. Juby, PE
Principal-in-Charge/Vice President

Date: 1/26/17

[Balance Of This Page Intentionally Left Blank]

Exhibit B

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

1.0 INTRODUCTION

The purpose of this Exhibit is to provide details of the scope of services for the final design of the Tertiary Plant 1 Disinfection Pump Improvements (Project EN 11039) at the Inland Empire Utilities Agency's (IEUA's) Regional Water Reclamation Plant No. 1 (RP-1).

The scope of work presented below is based on the following:

The development work carried out by Carollo Engineers, Inc. (Carollo) during preparation of the Preliminary Design Report (PDR) and 30% design, that included a business case analysis.

The Scope of Work that was presented in the RFP for Project EN 11039. Workshops and other work performed in order to develop the Phase I Plant Upgrade Project Development Report.

2.0 BACKGROUND

RP-1 is one of four regional reclamation facilities owned and operated by IEUA. It has a nominal treatment capacity of 40-mgd and treats domestic and industrial wastewater using conventional primary and secondary activated sludge processes.

Tertiary treatment takes place in TP-1 using coagulation and conventional dual media downflow filters. TP-1 was built in 1971 and originally used chlorine gas as the disinfectant. Major upgrades to the plant occurred in 1982 and 1987, and in 2004 the disinfection system was converted from chlorine gas to sodium hypochlorite.

Today there are a number of issues with the chemical storage, pumping and dosing systems that need to be addressed. For example, IEUA would like to move away from buried underground chemical dosing lines; do away with the pipe loop system; add a new secondary dosing point; replace leaking pipes and storage tanks; address piping congestion issues, and address other repair and maintenance issues. In addition, the sedimentation basins that treat filter backwash water that require rehabilitation.

In August 2016, Carollo was selected to prepare a PDR and 30% design for the proposed modifications to the TP-1 disinfection system and the other items included in the project. That work identified the need to construct a new sodium hypochlorite storage and pumping area closer to where the chemical is needed and more central to the plant facilities. This scope of work takes the design from 30% to 100% together with preparation of plans and specifications for bidding.

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

The following is a list of the major items that are proposed to be added, modified, or upgraded as part of the project. Details of these items are outlined in the PDR and 30% design referred to above; details are presented in Section B.

1. **Chemical Storage:** A new sodium hypochlorite chemical storage facility will be installed to replace the existing one. The new facility will include new sodium hypochlorite storage tanks, new chemical dosing pumps to deliver hypochlorite to required dosing points, facilities to allow for truck off-loading. The new facility will have a covered roof to protect the tanks and equipment from the sun.
2. **Chemical Lines:** The existing underground double-contained pump-loop system will be replaced with double contained chemical tubing to deliver hypochlorite to each dosing point directly.
3. **Sedimentation Tank:** The existing sedimentation tank will have repairs made to it that will include replacing the flocculation mixers, the tube-settlers, and some of the over-flow weirs.
4. **SBS System:** SBS power outage response valve to provide dosing capabilities when no power is available.
5. **Secondary Dosing Modifications:** Adding two new chlorine dosing locations with static mixers upstream of the Chlorine Contact Basins (CCBs) 1 and 2, and CCB 3.
6. **NES and OES Modifications:** Modifications to the New Effluent Structure (NES) and Old Effluent Structure (OES) to include demolishing of exiting chemical dosing equipment and piping and adding chemical mixing improvements.
7. **Out of Compliance Diversion:** Addition of motor operated gates at NES and OES and control system modifications for filter influent valves.
8. **Maintenance Trailer:** Relocate the maintenance trailer to the north side of the filter banks, and provide a separate pad and transformer for the trailer.
9. **New Parking:** Provide new paved and striped parking area to the east of the Sedimentation Basin.
10. **Geotechnical Work:** Hire the services of a Geotechnical sub-consultant to conduct a soils investigation for the new chemical storage facility.

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

B. SCOPE OF SERVICES

Perform the necessary engineering work to develop contract plans and technical specification documents for construction of the "TP-1 Pump Replacement Project" at RP-1, starting with the PDR and 30% design that has been completed by Carollo. Specific details are as follows:

Task 1 - Project Management and Meetings

1. Project management includes routine management activities for the duration of the project. It has been assumed that the project duration will be a total of 18-months, including approximately 7-months for the Final Design phase, which includes two-weeks for each submittal review by IEUA. The routine management activities include:
 - a. At the start of the project, a project plan will be developed that lays out the approach to completing the project. The plan will include work assignments, scope, schedule, and budget information. It will also include communications, quality management, and risk management approaches for the project.
 - b. Review and oversight of technical issues
 - c. Developing and tracking communication channels
 - d. Monitoring and overseeing the status of the schedule and budget
 - e. Monitoring and logging project decisions
 - f. Tracking out-of-scope work items
 - g. A monthly progress report will be completed and submitted to the IEUA project manager delineating the project progress in relation to scope, schedule, and budget for the past month and the plan for the next month.
2. Meet with IEUA staff approximately every 4 weeks or as needed to present design information, submit progress prints, and receive design review comments. It is anticipated that 7 meetings will be required. The meeting total includes meetings during the final design, and the bid period.
3. Hire and manage the services of a Geotechnical sub-consultant for a soils investigation.
4. Submit preliminary drawings and draft specifications for IEUA review at approximately 50, 85, and 100 percent level of completion. Five sets of 1/2 size drawings and 8.5 x 11 specifications will be provided at the 50%, and 85% review stages. Five sets of full size drawings, five sets of 1/2 size drawings and specifications will be provided at the 100% stage along with the Mylars and file copies described below.
5. Incorporate revisions from the District review comments in the drawings and specifications.

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

6. Complete a 90 percent in-house check of the plans and specifications by an independent in-house team, after incorporating comments from IEUA on the 85% design submittal.
7. Manage the delivery of sealed and photo-ready final drawings and specifications to IEUA ready for final reproduction and bidding by IEUA, following receipt of and incorporation of comments from IEUA on the 85% submittal. The final drawings will include a full size Mylar set, a pdf file of the drawings for 1/2 size reproduction by the District, and an unbound copy of the specifications for reproduction by the Agency.
8. Submit one electronic copy of final drawings and specifications on a flash drive.
9. Manage the preparation of the project's construction cost projection based on the 90 percent submittal and final drawings and specifications. Submit the estimate to the District within 3 weeks of the 90 percent and final submittal. Also, provide an updated cost estimate to the project development report estimate at the 30 percent and 60 percent design levels.
Manage the project during the bidding, construction and close-out phases of the project.

Task 2 - 50% Design

Take the design from 30% to the 50% design level and prepare a 50% design review package that shall include the following:

1. Prepare plans and specifications to a 50% completed level. Prepare technical specifications in CSI format (in MS Word 2013), drawings (in AutoCAD format), and typical details (in AutoCAD format) for construction of the following project elements. Drawings will be submitted in 1/2 size sheets and typical details will be submitted on 8.5-inch by 11-inch sheets for intermediate submittals. As part of the final submittal (100%), typical details will be put on the drawings. IEUA's front end documents will be used for the project. An updated drawing list is included in Attachment A.
2. Only facilities highlighted below will be included in the Final Design. All other facilities at the treatment plant are excluded from the Final Design.
3. Prepare full size double plan and profile drawing sheets at the horizontal scale of no smaller than 1"=40', include all utility information from IEUA, utility company records and field information. Plot all easements, property lines, and street pavement limits on the drawings, as applicable. The location, horizontal and vertical, of all new facilities to be constructed shall be called out by dimensions. This includes small underground pipeline and electrical conduits within process plants.
4. Obtain a soils report for the proposed location of the new chemical storage facility.
5. Submit a 50% design review package to IEUA, with the following contents:

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

- 11 x 17 Paper Drawings
- Plan and profile sheet – 50% complete
- Bleach pipeline detail sheet - 50% complete
- Structural plans and elevations – 50% complete
- Utility Research – include a list of utilities identified, contact persons, telephone numbers and any unusual requirements and specific reference to any utility which will significantly affect the proposed design.
- Design Survey – shall be incorporated into the Plan-set.
- Catalog sheets for equipment to be used in the project.
- List of all cities, agencies and/or individuals involved with each permit, including contacts, addresses, telephone numbers, requirements, and a schedule for obtaining each permit.
- Technical Specifications – 50% complete.
- Soils Report
- Pothole results
- Calculations- Include all calculations (hydraulic, structural, alignment, control, etc.) on pipes, flow control equipment and metering, jacked casing, etc.
- A discussion of any expected difficulty in the design or construction of the project.

Upon completion and submittal of the 50% design package, submit the package to the Agency for review. After a two-week review period by the Agency, attend a review meeting with the Agency staff to review the design status and receive Agency's input. Said review shall be presented in Power-Point. The Consultant shall summarize comments, following the meeting and submit said comments and response to comments to the Agency Project Manager for distribution, within 5-days, following the meeting.

Task 3 - 85% Design

Advance the design from 50% design level to 85% level completion and include the following:

1. Complete draft set of plans and specifications - The plans and specifications shall be completed. The plans and specifications shall reflect all past Agency and Regional Committee comments, and they shall include the contractual language and design required to implement the adopted environmental mitigation measures and the controlling agency permit requirements known at the time. There shall be no missing specification sections or missing plan details. The specification does not have to include the permitting Agency's final permits, however, the plans and specifications shall both be designed to include the permit requirements and sample permits are required.

Standard Specification comments - Review the Agency's Standard Specification

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

boilerplate and provide written comments on its adequacy for this project. Any changes the Consultant desire to make to these standard specifications shall be specifically noted.

2. Traffic Control plans are not required, but the Consultant shall ensure that proper traffic control is possible in relation to their proposed design.
3. Submit an 85% design review package with the following:
 - Design Drawings – 85% complete
 - Specifications – 85% complete
 - Standard specification comments
 - Final estimate of probable construction cost for the project.
 - Final calculation package – complete

Submit design calculations as part of the 85% design submittal. Calculations shall include all alignment, hydraulic, structural, and any other calculations as may be required.

Upon completion of the 85% design, submit the required copies to the Agency. After a two-week review period by the Agency, attend a review meeting with the Agency staff to review the design status and receive Agency's input. Review will include a Power-Point presentation. Summarize comments, following the meeting and submit said comments and response to comments to the Agency Project Manager for distribution, within 5-days, following the meeting.

Task 4 - 100% Design

Advance the level of design from 85% to 100%. Submit a review package to IEUA upon 100% completion of design which shall include the following:

1. Design Drawings and Specifications
2. The final design shall be a complete set of checked plans and specifications. The plans and specifications shall be fully checked and be ready to be advertised for construction bids. Carollo will complete an in-house check of the entire document package after incorporating the Agency's comments from the 85% design submittal. The updated plans will reflect all past IEUA and Regional Committee input and they shall include the contractual language and designs required to implement the controlling agency permit requirements during construction.
3. Final Engineer's Estimate - Update the construction cost estimate and provide an opinion of cost.

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

4. Final Calculation package - submit the final version of the calculations package if there have been changes since the 85% submittal.
5. Required Permits - As a part of the final design phase, provide IEUA with technical information needed to assist the Agency in obtaining all permits required to construct the project. If it is required or desirable to have the permit obtained by the contractor, the Consultant shall obtain review comments on contract documents from the permitting agencies, if applicable, and the draft permit conditions shall be reported in the project specifications. All required permits shall be addressed in the specifications.
6. Shop Drawing Submittal List - Provide the Agency a tabulated list of all submittals required from the contractor. The list shall include the Division, Section, Paragraph, Description, and Submittal name.
7. Arc-Flash - Provide the Agency a list of all electrical equipment the contractor will be working around/installing and whether the required arc-flash labeling is in place or provide the necessary arc-flash information in the specifications.
8. Attend a progress review meeting with the Agency staff to review the final design. Upon resolution of Agency comments, provide the Agency with three draft copies of the final plans and specifications for final review.

Upon acceptance of the plans and specifications, the Consultant shall submit to the Agency:

- (1) One set of master specifications on both 8.5" x 11" paper unbound and in digital form,
- (2) The original tracings of the plans, both on Mylar film and in digital form,
- (3) Final plans, specifications and bid documents for bidding purposes,
- (5) A complete set of project calculations bound for permanent storage,
- (6) Final Engineer's Opinion of Cost Estimate,
- (7) Control System Subcontractor Pre-qualification Package

Note: Request for pre-qualification applications and applicant evaluation will be performed by the Agency.

Task 5 - Control Philosophy / Programming Scope

Provide a General Operation and Control Philosophy for all PLC systems and DCS system Integration. A detailed control description is required to implement the general philosophy.

**Exhibit A
Scope of Services
Final Design**

**Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)**

Submit the control philosophy and P&IDs for review by the Agency once the P&IDs are 100% complete and the control philosophy has been developed. Attend a meeting with the Agency staff, address staff comments and submit a final version to be included in the construction bid documents.

Develop a separate scope of work for control programming which clearly identifies the work to be done by the control programmer. This scope of work must identify the current programs in use at the Agency (e.g. HMI, DCS, etc.), what changes are needed to the current programs, and the addition of any features, functions or new programming not currently existing.

The Construction DCS system integrator contract shall be pre-negotiated by the Agency and the information will be provided to Carollo to assign to the general contractor's construction contract.

C. OPTIONAL ITEMS NOT INCLUDED

1. The scope does not include effort for obtaining AQMD, NPDES, and any other permits required for the project, other than specific assistance as defined in Section B. We understand that the CEQA work is complete.
2. Potholing for the project will be carried out by IEUA.
3. Preparation of pre-qualification documentation for contractors.
4. Preparation of pre-purchase documentation packages for equipment.
5. Demolition and retrofit of existing facilities except for the Sedimentation Basin and the existing chemical storage facilities.
6. Preliminary design, preparation of preliminary P&IDs, and final design effort for facilities not specifically described above is not included.
7. Purchase of modeling software or licenses.
8. Work effort for other items not specifically listed in Tasks 1 through 5 in Section B.

ATTACHMENT A

Regional Water Reclamation Plant No. 1
TP-1 Disinfection Pump Improvements (EN 11039)
Inland Empire Utilities Agency
(January 23, 2017)

Updated Drawing List

SHEET NO. **GENERAL**

- 1 COVER SHEET
- 2 DRAWING INDEX
- 3 DRAWING SYMBOLOGY AND FILE NAMING CONVENTION
- 4 GENERAL ABBREVIATIONS
- 5 SITE PLAN - I
- 6 DESIGN CRITERIA
- 7 PROCESS FLOW DIAGRAM

SHEET NO. **CIVIL**

- 8 GENERAL CIVIL NOTES
- 9 OVERALL SITE PLAN
- 10 PAVING AND GRADING PLAN - Chemical Containment
- 11 PAVING AND GRADING PLAN - New Parking Area
- 12 YARD PIPING PLAN - I
- 13 YARD PIPING PLAN - II
- 14 RELOCATE MAINTENANCE TRAILER AND DETAILS
- 15 CONNECTION AND PIPING DETAILS

SHEET NO. **DEMOLITION**

- 16 DEMOLITION - OVERALL SITE PLAN
- 17 SODIUM HYPOCHLORITE STORAGE DEMO - PLAN
- 18 SODIUM HYPOCHLORITE STORAGE DEMO - SECTIONS
- 19 OES AND NES CHEMICAL METERING DEMO
- 20 DEMOLITION DETAILS

SHEET NO. **STRUCTURAL**

- 21 STRUCTURAL GENERAL NOTES - I
- 22 STRUCTURAL GENERAL NOTES - II
- 23 FOUNDATION PLAN
- 24 ROOF FRAMING PLAN
- 25 SECTIONS AND DETAILS

SHEET NO. **PROCESS MECHANICAL**

- 26 MECHANICAL NOTES
- 27 MECHANICAL ABBREVIATIONS
- 28 SODIUM HYPOCHLORITE STORAGE - PLAN
- 29 SODIUM HYPOCHLORITE STORAGE - SECTIONS
- 30 OES AND NES CHEMICAL METERING - PLAN
- 31 OES AND NES CHEMICAL METERING - SECTION
- 32 CCB SODIUM HYPOCHLORITE INJECTION AND MIXING - PLAN AND SECTION - I
- 33 CCB SODIUM HYPOCHLORITE INJECTION AND MIXING - PLAN AND SECTION - II
- 34 MECHANICAL DETAILS - I

35 MECHANICAL DETAILS - II

ELECTRICAL

36 LEGEND
37 ABBREVIATIONS
38 SODIUM HYPOCHLORITE STORAGE LAYOUT
39 OES AND NES SODIUM HYPOCHLORITE METERING
40 CCB SODIUM HYPOCHLORITE METERING
41 ONLINE AND RISER DIAGRAMS SHEET NO. 1
42 SCHEMATICS AND CONDUIT SIZES SCHEDULE
43 SCHEDULES
44 DETAILS

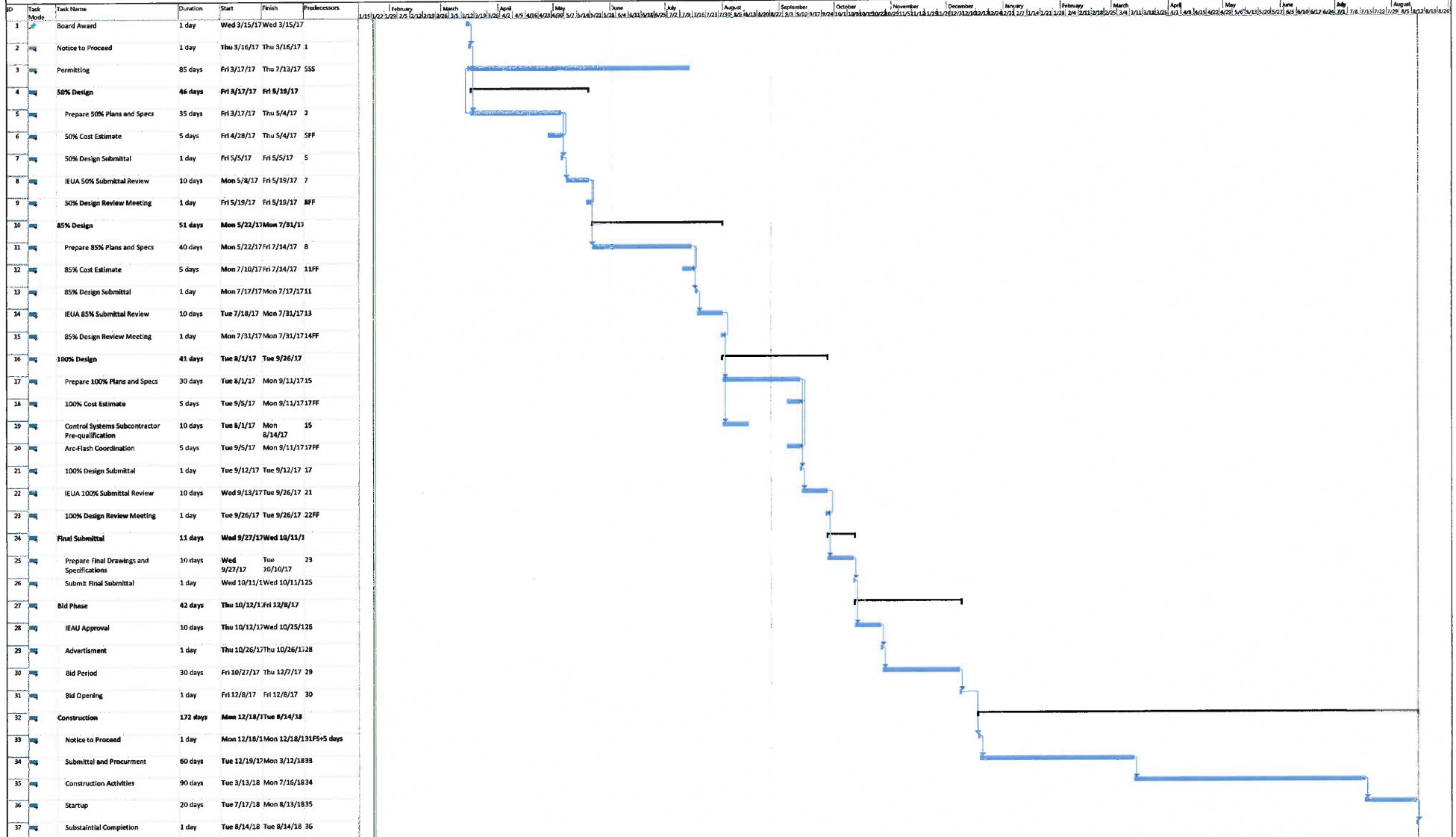
SHEET NO. INSTRUMENTATION

45 SYMBOLS & ABBREVIATIONS - I
46 SYMBOLS & ABBREVIATIONS - II
47 SYMBOLS & ABBREVIATIONS - III
48 SYMBOLS & ABBREVIATIONS - IV
49 SCHEMATIC SYMBOLS
50 SODIUM HYPOCHLORITE STORAGE - I
51 SODIUM HYPOCHLORITE STORAGE - II
52 SODIUM HYPOCHLORITE STORAGE - III
53 SODIUM HYPOCHLORITE STORAGE - IV
54 SODIUM HYPOCHLORITE METERING PUMP - I
55 SODIUM HYPOCHLORITE METERING PUMP - II
56 SODIUM HYPOCHLORITE METERING PUMP - III
57 SODIUM HYPOCHLORITE METERING PUMP - IV
58 SODIUM HYPOCHLORITE METERING PUMP - V
59 SODIUM HYPOCHLORITE METERING PUMP - VI
60 SODIUM HYPOCHLORITE METERING PUMP - VII
61 OES SODIUM HYPOCHLORITE INJECTION AND MIXING
62 NES SODIUM HYPOCHLORITE INJECTION AND MIXING
63 CCB SODIUM HYPOCHLORITE INJECTION AND MIXING - I
64 CCB SODIUM HYPOCHLORITE INJECTION AND MIXING - II
65 SBS INJECTION MODIFICATIONS

SHEET NO. TYPICAL DETAILS

66 CIVIL TYPICAL DETAILS - I
67 ELECTRICAL TYPICAL DETAILS - I
68 ELECTRICAL TYPICAL DETAILS - II
69 MECHANICAL TYPICAL DETAILS - I
70 INSTRUMENTATION TYPICAL DETAILS - I
71 INSTRUMENTATION TYPICAL DETAILS - II
72 PIPING TYPICAL DETAILS - I
73 PIPING TYPICAL DETAILS - II
74 STRUCTURAL TYPICAL DETAILS - I
75 STRUCTURAL TYPICAL DETAILS - II

TP-1 Disinfection Pump Improvements



Project: IEUA - Disinfection Pump Date: Tue 1/24/17

Task: S&I

Legend:

- Milestone (Blue diamond)
- Summary (Dotted line)
- Project Summary (Blue bar)
- Inactive Task (Grey bar)
- Inactive Milestone (Grey diamond)
- Inactive Summary (Dotted line)
- Manual Task (Green bar)
- Manual Summary Rollup (Green bar)
- Manual Summary (Green bar)
- Start-only (Green bar)
- Finish-only (Green bar)
- External Milestone (Green diamond)
- External Milestone (Green diamond)
- Deadline (Green bar)
- Progress (Green bar)
- Manual Progress (Green bar)

Exhibit C

Carollo Engineers, Inc.
 TP-1 - DISINFECTION PUMP IMPROVEMENTS PROJECT (EN 11093)
 Inland Empire Utilities Agency (IEUA)

LABOR AND COST ESTIMATE FOR FINAL DESIGN
 January 23, 2017

Task Description	Labor Costs														Task Total		
	Senior Project Professional	Lead Professional	Project Professional	Professional	Assistant Professional	CAD Technicians	Support Staff	Carollo Engineers		PECE	Travel		Other	ODCs incl PECE			
	\$273	\$249	\$230	\$194	\$159	\$140	\$109	Total Hours	Labor Cost	\$ 11.7	Trips	Amount	Cost	Cost			
Task 1: Project Management and Meetings																	
1.1 Kickoff Meeting, Agenda, and Minutes	4	4	4	4	8			24	\$ 5,056	\$ 281	2	\$ 30		\$341	\$ 5,397		
1.2 Coordination, Schedule and Budget Monitoring, and Administrator			12	4				16	\$ 3,536	\$ 187				\$187	\$ 3,723		
1.3 Obtain and Review Available Documents			4	4	4			12	\$ 2,332	\$ 140				\$140	\$ 2,472		
1.4 Monthly Progress Reports			8	4				12	\$ 2,616	\$ 140				\$140	\$ 2,756		
1.5 Monthly Progress Meetings, Agendas, and Minutes (< meetings)	15	15	18	18	8			74	\$ 16,734	\$ 866	6	\$ 30		\$1,046	\$ 17,780		
1.6 Submit Monthly Invoices	4		8					12	\$ 2,932	\$ 140				\$140	\$ 3,072		
Task 1 Subtotal	23	19	54	34	20	0	0	150	\$ 33,206	\$ 1,755				\$1,995	\$ 35,201		
Task 2: 50% Design																	
3.1 Prepare Plans and Specs to 50% Design Level	4	18	26	35	119	220	22	443	\$ 70,311	\$ 5,194			\$ 15,000	\$20,184	\$ 90,495		
3.2 50% Design Submittal	1		4	4	16	8	2	35	\$ 5,851	\$ 410	1	\$ 30	\$ 1,500	\$1,940	\$ 7,791		
3.3 50% Design Review Meeting	4	4	6	8	8		2	32	\$ 6,510	\$ 374	2	\$ 30		\$434	\$ 6,944		
3.4 Class 3 Cost Estimate	1		1	4	12			18	\$ 3,187	\$ 211				\$211	\$ 3,398		
Task 2 Subtotal	10	22	37	51	155	228	26	528	\$ 85,859	\$ 6,178				\$22,768	\$ 108,627		
Task 3: 85% Design																	
4.1 Prepare Plans and Specs to 85% Design Level	2	26	40	53	178	329	33	661	\$ 104,375	\$ 7,729				\$7,729	\$ 112,103		
4.2 Front End Document Review and Comment	2		24	24	24		8	58	\$ 11,594	\$ 679				\$679	\$ 12,273		
4.3 85% Submittal Preparation	1		4	4	16	8	2	35	\$ 5,851	\$ 410	1	\$ 30	\$ 1,500	\$1,940	\$ 7,791		
4.4 85% Design Review Meeting	4		4	8	8		2	26	\$ 5,054	\$ 304	2	\$ 30		\$364	\$ 5,418		
4.5 Class 2 Cost Estimates	1		1	4	12			18	\$ 3,187	\$ 211				\$211	\$ 3,398		
Task 3 Subtotal	10	26	73	93	214	337	45	798	\$ 130,061	\$ 9,331				\$10,921	\$ 140,992		
Task 4: 100% Design																	
5.1 Prepare Plans and Specs to 100% Design	2	11	16	22	74	137	14	276	\$ 43,808	\$ 3,294				\$3,294	\$ 47,042		
5.2 Control System Subcontractor Pre-qualification	4		24	24			8	36	\$ 6,620	\$ 421				\$421	\$ 7,041		
5.3 Arc-Flash Coordination	2		16	16				18	\$ 3,650	\$ 211				\$211	\$ 3,861		
5.4 100% Design Submittal	1		4	8	16	8	4	41	\$ 6,845	\$ 480	1	\$ 30	\$ 1,500	\$2,010	\$ 8,855		
5.5 100% Design Review Meeting	4		4	8	8		2	26	\$ 5,054	\$ 304	2	\$ 30		\$364	\$ 5,418		
5.6 Class 1 Cost Estimate	1		1	4	8			14	\$ 2,551	\$ 164				\$164	\$ 2,715		
5.7 Final Submittal	1	2	4	8	16	40	8	79	\$ 12,259	\$ 924		\$ 700	\$ 1,850	\$2,774	\$ 15,033		
Task 4 Subtotal	15	13	29	90	122	185	38	490	\$ 80,787	\$ 5,738				\$9,176	\$ 89,965		
Task 5: Control Philosophy / Programming																	
6.1 Prepare Detailed Control Description	2		24	16	24			66	\$ 12,986	\$ 772				\$772	\$ 13,758		
6.2 Attend Meeting with Agency to Discuss Control	4		4	4				12	\$ 2,788	\$ 140	1	\$ 30		\$170	\$ 2,958		
6.3 Develop Control Programming Scope	1		4	16	12		2	35	\$ 6,423	\$ 410				\$410	\$ 6,833		
Task 5 Subtotal	7	0	32	36	36	0	2	113	\$ 22,197	\$ 1,322				\$1,322	\$ 23,549		
NOT TO EXCEED TOTAL	65	80	225	304	546	750	108	2079	\$ 352,110	\$ 24,324				\$46,214	\$398,324		

RP-1 Disinfection Improvements Consultant Task Order Amendment Project No. EN11039

Board Meeting



Regional Water Recycling Plant No. 1 Project Location



Project Background

- RP-1 disinfection system is in poor condition and lacks redundancy
- Chlorination before filtration is inefficient
- The system has limited control from SCADA (Supervisory Control and Data Acquisition)
- The sedimentation basin has operational deficiencies



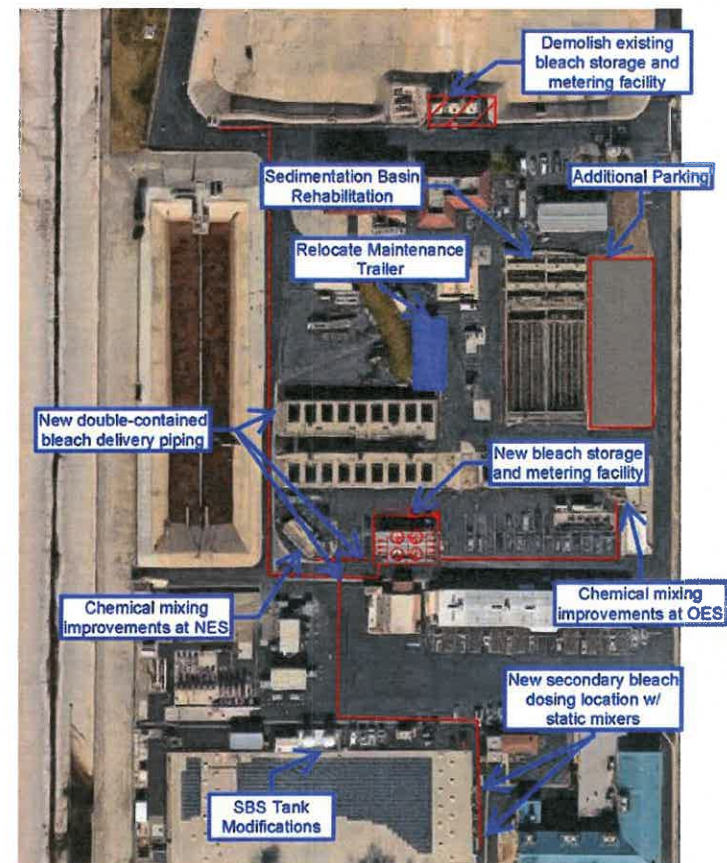
Bleach Loop Pumps



Sedimentation Basins

Project Scope

- Relocate the disinfection storage system
- Replace disinfection pipelines
- Rehabilitate the sedimentation system
- Provide reliability improvements related to the disinfection system



Project Budget and Schedule

Milestone	Date
Project Development and Preliminary Design	\$212,000
Consultant Engineer	\$398,324
Design Services (~5%)	\$172,000
Construction Services (~15%)	\$570,000
Construction	\$3,800,000
Contingency (~10%)	\$380,000
	Total Project Cost
	\$5,532,324
	Total Project Budget
	\$1,288,300*

**The total project budget will be amended during the Ten-Year Capital Improvement Plan process to account for additional scope identified.*

Milestone	Date
Consultant Contract Award	March 2017
Design Completion	November 2017
Construction Contract Award	January 2018
Construction Completion	October 2018

Recommendation

- Approve a consultant task order amendment for the RP-1 Disinfection Improvements, Project No. EN11039, to Carollo Engineers, Inc., for the not-to-exceed amount of \$398,324; and
- Authorize the General Manager to execute the amendment.

The RP-1, TP-1 Disinfection Improvements Project, is consistent with *IEUA's Business Goal of Wastewater Management* specifically the Asset Management objective that IEUA will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

**ACTION
ITEM
1G**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Biosolids Management Committee (03/08/17)

From: P. Joseph Grindstaff
General Manager

Submitted by: ^{for} Chris Berch ^{STS}
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone ^{STS}
Manager of Engineering

Subject: RP-1 Design-Build Contract Award (Solids)

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a design-build contract for the RP-1 Dewatering Building Safety Improvements and RP-1 Vertical Conveyor Housing Replacement, Project Nos. EN17047 & EN17048 respectively, to Baghouse & Industrial Sheet Metal Services, Inc., in the amount of \$392,800; and
2. Authorize the General Manager to execute the design-build contract.

BACKGROUND

The Regional Water Recycling Plant No. 1 (RP-1) has been in service for over 60 years. The existing Dewatering Building was expanded in 2011 in order to increase the facilities treatment capacity, reduce RP-1's dewatering operation time, and reduce hauling costs, and impact to the Inland Empire Regional Composting Facility. The dewatering process receives sludge from the digesters and removes water from the sludge. The remaining solids are then transferred to the screw conveyor where they are conveyed to the sludge hauling trucks.

Recently, IEUA Operations and Maintenance staff identified key areas throughout the Dewatering Building that require safety upgrades. There are existing elevation changes and overhead equipment that require marking. There are areas surrounding the existing vertical and horizontal screw

RP-1 Design-Build Contract Award (Solids)

March 15, 2017

Page 2 of 3

conveyors that require additional safety railing or foot entanglement protection. In addition to the safety upgrades, the two vertical conveyor screws housings have developed holes due to moving parts contacting the housings. These holes result in extensive labor and costly maintenance.

The scope of the project will address the Operations and Maintenance Staff's safety concerns throughout the Dewatering Building. Baghouse & Industrial Sheet Metal Services, Inc. will design and install safety railing, foot entanglement protection, and overhead/tripping caution signs where necessary. Additionally, they will design and install two vertical conveyor housings in kind. The housings will be designed with additional material and protection to prevent future wear.

On February 2, 2017, a request for bids was advertised to the public. On February 16, 2017, the following bid was received:

Bidder's Name	EN17047	EN17048	Total Price
Baghouse & Industrial Sheet Metal Services, Inc.	\$143,400	\$249,400	\$392,800
Engineer's Estimate	\$167,000	\$280,000	\$447,000

Baghouse & Industrial Sheet Metal Services, Inc. was the lowest responsive and responsible bidder with a bid price of \$392,800. Baghouse & Industrial Sheet Metal Services, Inc. has performed several successful projects for the IEUA past showing good workmanship and responsiveness. Due to the nature of the work, IEUA performed reach out efforts to qualified C-43 licensed contractors in Southern California. Baghouse & Industrial Sheet Metal Services, Inc. was the sole qualified contractor that attended the mandatory job walk and submitted a bid on the project.

The following table is the projected project cost:

Description	EN17047	EN17048	Estimated Cost
Project Development	\$4,600	\$7,500	\$12,100
Design Services (~10%)	\$14,500	\$25,000	\$39,500
Construction Services (~15%)	\$22,000	\$37,500	\$59,500
Construction	\$143,400	\$249,400	\$392,800
Contingency (~15%)	\$22,000	\$37,500	\$59,500
Total Project Cost	\$206,500	\$356,900	\$563,400
Total Project Budget	\$231,000	\$375,000	\$606,000

The following is the project schedule:

Project Milestone	Date
Construction Contract Award	March 2017
Construction Completion	July 2017

The RP-1 Dewatering Building Safety Improvements Project and the RP-1 Vertical Conveyor Housing Replacement Project are consistent with *IEUA's Business Goal of Wastewater Management and Work Environment* specifically the Water Quality and Staff Safety objectives that IEUA will ensure that Agency systems are planned, constructed and managed to protect public health, the

RP-1 Design-Build Contract Award (Solids)

March 15, 2017

Page 3 of 3

environment, meet anticipated regulatory requirements, and ensure a safe and healthy work environment, exceeding industry best practices.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

If approved, the design-build contract award for the RP-1 Dewatering Building Safety Improvements, Project No. EN17047, in the amount of \$143,400 will be within the total project budget of \$231,000 in the Regional Operations (RO) Fund.

If approved, the design-build contract award for the RP-1 Vertical Conveyor Housing Replacement, Project No. EN17048, in the amount of \$249,400 will be within the total project budget of \$375,000 in the Regional Operations (RO) Fund.

Attachments

1. Design-Build Contract

<https://www.dropbox.com/sh/zsvhl33jy6kpi78/AADhbPfUILRYY-KxocR2sXjza?dl=0>

PJG:CB:SS:rw

RP-1 Dewatering Building Safety Improvements & RP-1 Vertical Conveyor Housing Replacement Design-Build Contract Award Project Nos. EN17047 & EN17048

Board Meeting



Regional Water Recycling Plant No. 1 Project Location



Project Background

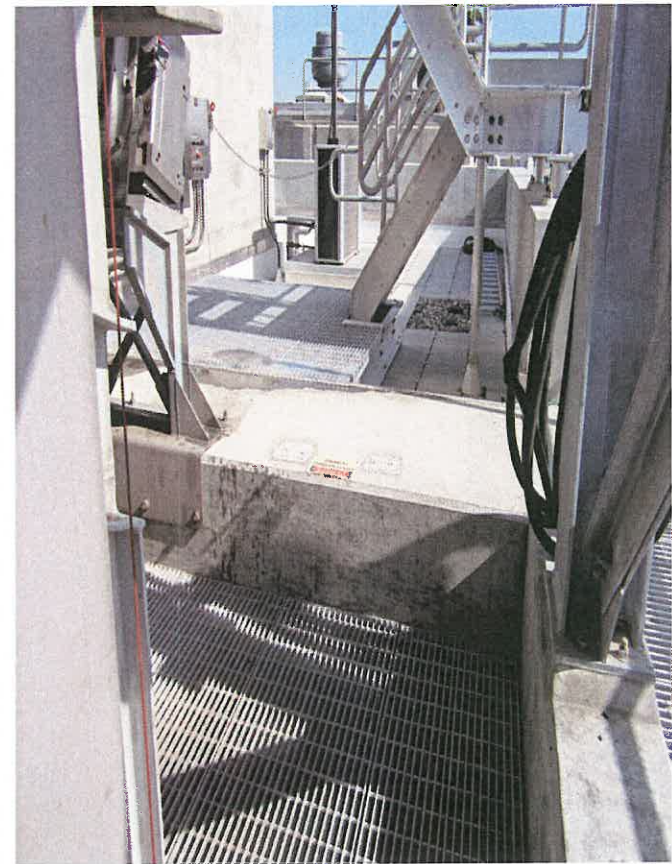
- **EN17047**
 - Safety upgrades were identified by Operations & Maintenance staff
 - Overhang, foot entanglement, and falling/tripping hazards
- **EN17048**
 - Two existing vertical conveyors are worn
 - Worn due to conveyor screw in contact with housing



Location of Additional Railing

Project Scope

- EN17047
 - Design and install hand railing and foot entanglement protection
 - Install overhead and elevation change warning signs
- EN17048
 - Design and install two vertical conveyor housings in kind
 - Line housings with additional wear protection



Potential Tripping Hazard

Consultant Selection

- Evaluation and Selection Committee
 - Contracts Department/Engineering & Construction Management Department
- Justification for unanimously selecting Baghouse & Industrial Sheet Metal Services, Inc.
 - Lowest Responsive, Responsible Bidder
 - Qualified C-43 licensed contractor
- One Proposal Received on February 16, 2017

Proposals Received

Bidder's Name	EN17047	EN17048	Total
Baghouse & Industrial Sheet Metal Services, Inc.	\$143,400	\$249,400	\$392,800
Engineer's Estimate	\$167,000	\$280,000	\$447,000

Project Budget and Schedule

Milestone	Estimated Cost EN17047	Estimated Cost EN17048	Estimated Total Cost
Project Development	\$4,600	\$7,500	\$12,100
Design Services (10%)	\$14,500	\$25,000	\$39,500
Construction Services (15%)	\$22,000	\$37,500	\$59,500
Construction	\$143,400	\$249,400	\$392,800
Contingency (15%)	\$22,000	\$37,500	\$59,500
Total Project Cost	\$206,500	\$356,900	\$563,400
Total Project Budget	\$231,000	\$375,000	\$606,000

Milestone	Date
Design/Build Contract Award	March 2017
Construction Completion	July 2017

Recommendation

- Award a design-build contract for the RP-1 Dewatering Building Safety Improvements and RP-1 Vertical Conveyor Housing Replacement, Project Nos. EN17047 and EN17048 respectively, to Baghouse & Industrial Sheet Metal Services, Inc. for the not-to-exceed amount of \$392,800;
- Authorize the General Manager to execute the design-build contract.


The RP-1 Dewatering Building Safety Improvements & RP-1 Vertical Conveyor Housing Replacement Projects are consistent with *IEUA's Business Goals of Wastewater Management and Work Environment* specifically the Water Quality and Staff Safety objectives that IEUA will ensure that Agency systems are planned, constructed and managed to protect public health, the environment, meet anticipated regulatory requirements, and ensure a safe and healthy work environment, exceeding industry best practices.

**ACTION
ITEM
1H**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (3/8/17)
Finance and Administration Committee (3/8/17)

From: P. Joseph Grindstaff 
General Manager

Submitted by: *FOIR* Chris Berch *SB*
Executive Manager of Engineering/Assistant General Manager

Shaun J. Stone *SJS*
Manager of Engineering

Subject: RP-1 Gas System Design-Build Contract Award

RECOMMENDATION

It is recommended that the Board of Directors:

1. Award a design-build contract for the RP-1 Iron Sponges Installation, Project No. EN17059, to W.A. Rasic in the amount of \$319,900;
2. Approve a total project budget amendment in the amount of \$200,000 for Project No. EN17059; and
3. Authorize the General Manager to execute the design-build contract and budget amendment.

BACKGROUND

The Regional Water Recycling Plant No. 1 (RP-1) has been in service for over 60 years. As part of the treatment process, the facility generates digester gas (DG). DG is produced within the digesters and conveyed via pipeline to processes within RP-1, such as hot water boilers and available power generation facilities. Major components of the RP-1 DG system include: one flare, seven digesters, control and relief valves, hydrogen sulfide removal system (iron sponges), SCADA/control instrument and devices, metering, miscellaneous piping, and auxiliary equipment.

South Coast Air Quality Management District (SCAQMD) requires that prior to flaring digester gas, its hydrogen sulfide (H₂S) concentration be reduced to allowable limits as stipulated by SCAQMD rules. Vessels are filled with media and used for hydrogen sulfide removal (Iron Sponges). Currently, there are two Iron Sponges serving the flare at the RP-1 facility. Neither of the Iron Sponges have a backup to maintain the desired gas quality when one is out for maintenance or service. The project is to provide redundant Iron Sponges to ensure continuous hydrogen sulfide removal and compliance with SCAQMD requirements.

In 2014, Inland Empire Utilities Agency's (IEUA) Maintenance Department procured two new Iron Sponges with accessories for \$150,000. In August 2016, the SCAQMD permit was secured for installation. IEUA staff prepared a request for proposal including a preliminary design, which will be used by the selected contractor as a guideline for designing and installing the Iron Sponges and necessary appurtenant facilities.

On January 19, 2017, IEUA advertised a request for bids to the prequalified contractors on the under \$2,000,000 list. Two contractors participated in the job walk on January 26, 2017. On February 14, 2017, the following bids were received:

Bidder's Name	Total Price
W.A. Rasic Construction	\$319,900
W.M. Lyles Co.	\$348,276
Engineer's Estimate	\$350,000

W.A. Rasic was the lowest responsive and responsible bidder with a bid price of \$319,900. In the past, W.A. Rasic has performed several successful projects for IEUA, showing good workmanship and responsiveness.

The following table is the anticipated project cost:

Description	Estimated Cost
Design	\$75,000
Construction Services (~ 15%)	\$50,000
Construction	\$319,900
Contingency (~ 15%)	\$50,000
Total Project Cost	\$494,900
Current Total Project Budget	\$300,000
Budget Amendment	\$200,000

Based on project final scope of work, bid results and the anticipated total project cost, staff is requesting a total project budget amendment in the amount of \$200,000 for the RP-1 Iron Sponges Installation, Project No. EN17059. The previously approved budget was estimated prior to the preliminary design phase of the project. Projected expenditures for Fiscal Year 2016/17 is within the current, approved fiscal year budget of \$300,000.

The following is the project schedule:

Project Milestone	Date
Construction Contract Award	March 2017
Construction Completion	January 2018

The RP-1 Iron Sponge Installation Project is consistent with *IEUA's Business Goals of Wastewater Management and Environmental Stewardship*, specifically the Water Quality and Regulatory Compliance objectives that IEUA will comply with all federal, state, local, and environmental laws and regulations to protect public health and the environment.

PRIOR BOARD ACTION

None.

IMPACT ON BUDGET

If approved, the construction award for the RP-1 Iron Sponges Installation, Project No. EN17059, in the amount of \$319,900 will be supported by the revised total project budget of \$500,000 in the Regional Wastewater Capital (RC) Fund. An estimated amount of \$250,000 will be spent on the project this fiscal year, with the remaining project costs to be spent in the future fiscal year. The future year's funding will be re-appropriated accordingly during the Fiscal Year 2017/18 review of the Ten Year Capital Improvement Plan.

Attachments

1. Design-Build Contract

<https://www.dropbox.com/sh/usma0abttfuhcxv/AAAIN3BcbE9pyKmlVhJz8Aasa?dl=0>

PJG:CB:SS:jz

RP-1 Iron Sponge Design-Build Contract Award Project No. EN17059

Board Meeting



Regional Water Recycling Plant No. 1 Project Location



Project Background

- Hydrogen sulfide is currently removed via iron sponges
- Two existing iron sponges with no backup
- Potential hydrogen sulfide exceedance during maintenance or shutdown
- IEUA Maintenance staff purchased two backup iron sponges for installation



Flare Iron Sponge Location



Acid Phase Digester Iron Sponge

Project Scope

- Design-build project
- Install two complete iron sponge systems including:
 - Interconnecting piping, valves, pads
 - Gas safety equipment
 - Electrical work for flare sponge regeneration air blower
- Enhance reliability and compliance with backup iron sponges installed



Acid Phase Digester Iron Sponge



Flare Iron Sponge

Bid Summary

- Two (2) bids received on February 14, 2017:

Bids Received

Bidder's Name	Total Price
W.A. Rasic Construction	\$319,900
W.M. Lyles Co.	\$348,276
Engineer's Estimate	\$350,000

Project Budget and Schedule

Milestone	Date
Design	\$75,000
Construction Services (~15%)	\$50,000
Construction – Design build (bid price)	\$319,900
Contingency (~15%)	\$50,000
Total Project Cost	\$494,900
Current Total Project Budget	\$300,000
Requested Budget Amendment	\$200,000

Milestone	Date
Construction Contract Award	March 2017
Construction Completion	January 2018

**ACTION
ITEM
11**

Date: March 15, 2017

To: The Honorable Board of Directors

Through: Engineering, Operations, and Water Resources Committee (3/8/17)

From: P. Joseph Grindstaff
General Manager

Submitted by: ^{for} Chris Berch *STT*
Executive Manager of Engineering/Assistant General Manager

Shaun Stone *STS*
Manager of Engineering

Subject: RP-1/RP-5 Expansion Preliminary Design Report

RECOMMENDATION

It is recommended that the Board of Directors concur with the findings of the RP-1/RP-5 Expansion Preliminary Design Report.

BACKGROUND

On January 20, 2016, the Inland Empire Utilities Agency (IEUA) Board of Directors approved the consulting engineering services contract award for the RP-1/RP-5 Expansion Preliminary Design Report (PDR) to Parsons Water & Infrastructure Inc. (Parsons) for the not-to-exceed amount of \$2,431,598. The major objectives for the PDR included evaluating the requirements for the RP-1 Liquids & Solids Rehabilitation, RP-5 Liquids Expansion, and RP-5 Solids Treatment Facility. IEUA and the Parsons project team promptly began working on the PDR, which has resulted in three Board Workshops conducted in May 2016, October 2016, and February 2017. Additionally, the project team provided updates to the Engineering, Operations, and Biosolids Management Committee in April 2016, August 2016, and November 2016 and conducted multiple staff workshops over the 14-month preliminary project phase. Based upon the collaborative efforts of the Board of Directors, Agency staff, and the Parsons project team throughout the development of the PDR, the RP-1/RP-5 Expansion Preliminary Design Report has been completed and provides the following recommendations for the above-stated major objectives.

RP-1 Liquids & Solids Rehabilitation (Volume I of PDR)

The goal of the RP-1 Liquids & Solids Rehabilitation Preliminary Design Report was to create a planning level document, setting the stage for a future project at RP-1 that extends beyond the current Ten Year Capital Improvement Plan (TYCIP), ensuring Agency-wide system efficiencies and standardization were planned in coordination with the near-term RP-5 Liquids Expansion and RP-5 Solids Treatment Facility. The RP-1 Liquids and Solids Rehabilitation Preliminary Design Report included 5 main evaluations, which are detailed in Table 1 below.

Table 1: RP-1 Liquids & Solids Rehabilitation PDR Main Evaluations

Number	Topic	Description
1	RP-1 Equalization	Elimination of RP-1 Primary Effluent Flow Equalization
2	Advanced Water Treatment	Analysis of Advanced Water Treatment at RP-1 for Total Dissolved Solids Reduction and Indirect Potable Reuse
3	Centrate Treatment	RP-1 Onsite Centrate Treatment Versus Discharge to the Non-Reclaimable Waste System
4	RP-1 Liquids Treatment	Headworks, Screening, Grit Removal, Primary Clarification, Secondary Treatment, Disinfection, Condition Assessment, & Odor Control
5	RP-1 Solids Treatment	Solids Thickening, Digestion, Dewatering, Digester Gas Utilization, & Odor Control

The major recommendations resulting from the main evaluations for the RP-1 Liquids & Solids Rehabilitation PDR included the following:

- Eliminate RP-1 primary effluent flow equalization and provide additional secondary system treatment capacity to allow for treatment of facility peak flows; thereby, reducing the potential for odors and meeting IEUA's Business Goals.
- Evaluate further advanced water treatment systems at RP-1 for total dissolved solids reduction and indirect potable reuse as this was the preferred location compared to RP-5.
- Provide additional secondary system treatment capacity to allow for onsite treatment of RP-1's centrate as this provided the lowest net present value cost to IEUA compared to discharge to the Non-Reclaimable Waste System.
- Rehab the RP-1 Liquids Treatment Systems to allow for the treatment of the ultimate influent sewer flow of 40 MGD.
- Rehab the RP-1 Solids Treatment Systems to allow for the treatment of the solids produced from both RP-1 & RP-4 at the total ultimate influent sewer flow of 60 MGD.

Based upon the major recommendations of the PDR, the RP-1 Liquids Rehabilitation, Project No. EN24001, is recommended to consist of the following major items:

- Replace and rehab major headworks equipment.
- Replace all primary clarifier components.
- Provide new primary clarifier covers including odor control.
- Expand the Intermediate Pump Station.
- Convert the existing conventional activated sludge secondary system to a membrane bio-reactor (MBR) system consistent with RP-5 recommendations.
- Modify Lagoon No. 3 to allow for secondary effluent equalization eliminating the requirement to expand the tertiary treatment process.
- Replace the existing odor control system.

The RP-1 Solids Expansion, Project No. EN24002, is recommended to consist of the following:

- Replace the existing solids thickening systems with new rotary drum thickeners to improve solids thickening.
- Construct three new smaller acid phase digesters to improve operational performance.
- Add recuperative thickening to the digestion process to increase performance and eliminate the need to construct one additional digester.
- Make minor modifications to the existing dewatering system.
- Replace the existing odor control system.

The project costs for the RP-1 Liquids Expansion and RP-1 Solids Expansion are provided in Table 2 and Table 3 below.

Table 2: Project No. EN24001, RP-1 Liquids Rehabilitation Cost

Major Systems	Estimated Cost
Headworks & Primary	\$10,250,000
Secondary	\$118,100,000
Tertiary	\$800,000
Odor Control	\$10,250,000
Estimated Construction Cost	\$139,400,000
Design & Project Management (20%)	\$27,900,000
Total Project Cost	\$167,300,000

Table 3: Project No. EN24002, RP-1 Solids Rehabilitation Cost

Major Systems	Estimated Cost
Thickening	\$20,150,000
Digestion	\$11,450,000
Dewatering	\$700,000
Odor Control	\$3,950,000
Estimated Construction Cost	\$36,250,000
Design & Project Management (20%)	\$7,250,000
Total Project Cost	\$43,500,000

Therefore, the total project cost for the RP-1 Liquids & Solids Expansion is approximately \$212,000,000.

RP-5 Liquids Expansion & RP-5 Solids Treatment Facility (Volume II & III of PDR)

The goal of the RP-5 Liquids Expansion and RP-5 Solids Treatment Facility Preliminary Design Report was to create a detailed report to immediately lead into the full final design of the project. This is to ensure the project is completed before southern service area sewer flows exceeded the current RP-5 treatment capacity and before the completion of the United States Army Corps of Engineers project to raise the elevation of the Prado Dam spillway, placing RP-2 into the extended Prado floodplain. The RP-5 Liquids Expansion and RP-5 Solids Treatment Facility Preliminary Design Report included 10 main evaluations, which are detailed in Table 4 below.

Table 4: RP-5 Liquids Expansion & RP-5 Solids Treatment Facility PDR Main Evaluations

Number	Topic	Description
1	CCWRF	Decommissioning of Carbon Canyon Water Recycling Facility
2	RP-5 Capacity	Expand RP-5 to Ultimate Capacity
3	RP-5 Secondary	RP-5 Liquids Treatment Alternative Technology, Secondary Treatment
4	Food Waste	Comparative Analysis of RP-1, RP-5, & RP-5 Solids Handling Facility including Receiving, Digestion, Dewatering, & Digester Gas Usage
5	Digester Gas Usage	Comparative Analysis of Internal Combustion Engines (Existing/New), Micro Turbines, Natural Gas Pipeline Injection, & CNG Vehicle Fuel including potential for future phasing
6	Advanced Water Treatment	Analysis of Advanced Water Treatment at RP-5 for Total Dissolved Solids Reduction
7	Centrate Treatment	RP-5 Onsite Centrate Treatment Versus Discharge to the Inland Empire Brine Line
8	RP-5 Liquids Treatment	Influent Pump Station, Screening, Grit Removal, Primary Clarification, Disinfection, Condition Assessment, & Odor Control
9	RP-5 Solids Treatment	Solids Thickening, Digestion, Dewatering, & Digester Gas Conveyance/Storage/Safety Flaring
10	RP-5 Offsite Facilities	Inland Empire Brine Line Discharge Station Relocation & Mountain Ave. Lift Station

The major recommendations resulting from the listed evaluations for the RP-5 Liquids Expansion and RP-5 Solids Treatment Facility PDR included the following major items:

- Maintain operations of CCWRF indefinitely and completing repair and refurbishment projects to ensure safe and compliant operation of the facility.
- Fully expand RP-5 to 30 MGD, ultimate flow of the facility with CCWRF in operation, as this approach provided the lowest lifecycle cost for the ultimate expansion of the facility.
- Develop a hybrid food waste system between RP-5 and RP-5 Solids Handling Facility that will allow for approximately 50,000 gallons per day of organics waste diversion through 2030.
- RP-5 digester gas will be utilized in the existing Renewable Energy Efficiency Project (REEP) internal combustion engines.
- Do not construct advanced water treatment at RP-5 at this time.
- Construct the RP-5 Solids Treatment Facility to allow for the treatment of the solids produced from both CCWRF & RP-5 and allow for the decommissioning of RP-2 and the RP-2 Lift Station.

Based upon the major recommendations of the PDR, the RP-5 Liquids Expansion, Project No. EN19001, is recommended to consist of the following major items:

- Expand the Influent Pump Station.
- Provide Headworks improvements including: bar screens, vortex grit chamber, fine screens for MBR, and a screenings/grit building.
- Two primary clarifiers and new primary clarifier covers.
- Provide improvements to the existing aeration basin including new aeration diffusers, mixed liquor pumps, and air headers.
- Demolish two secondary clarifiers and construct a 30 MGD MBR system for improved water quality.
- Construct a UV disinfection system for improved water quality.
- Construct a centralized odor control system for Solids and Liquids to meet the objectives of the IEUA's Business Goals.
- Provide an emergency overflow and storm water system.
- Construct the new Mountain Avenue Lift Station and modify the City of Chino Hills Butterfield Ranch Pump Station.

The RP-5 Solids Treatment Facility, Project No. EN19006, is recommended to consist of the following:

- Construct a rotary drum thickening building for primary and secondary solids thickening.
- Provide phased digestion including acid phase digesters and methane digesters.
- Provide digested sludge storage.
- Construct a centrifuge dewatering building, biosolids cake storage, and centrate equalization.

- Provide digester gas treatment, digester gas flaring and emissions control systems for the existing REEP engines.
- Construct a food waste receiving station and digestate transfer pump station at RP-5 Solids Handling Facility.

The project costs for the RP-5 Liquids Expansion & RP-5 Solids Treatment Facility are provided in Table 5 and Table 6 below.

Table 5: Project No. EN19001, RP-5 Liquids Expansion Cost

Major Systems	Estimated Cost
Influent Pump Station	\$6,750,000
Headworks & Primary	\$21,500,000
Secondary	\$61,250,000
Tertiary	\$15,000,000
Odor Control	\$9,850,000
Emergency Overflow and Storm Water System	\$5,500,000
Permanent and Standby Power System Expansion	\$9,100,000
Offsite Facilities (does not include RP-2 Decommissioning)	\$4,000,000
Estimated Construction Cost	\$132,950,000
Design & Project Management (20%)	\$26,600,000
Total Project Cost	\$159,550,000

Table 6: Project No. EN19006, RP-5 Solids Treatment Facility Cost

Major Systems	Estimated Cost
Thickening	\$9,850,000
Digestion	\$51,650,000
Dewatering	\$42,950,000
Odor Control	\$1,900,000
Digester Gas Treatment, Flaring, and Emissions Controls	\$10,000,000
Permanent Power System Expansion	\$2,100,000
Site Work	\$7,900,000
Food Waste System	\$9,450,000
Estimated Construction Cost	\$135,800,000
Design & Project Management (20%)	\$27,200,000
Total Project Cost	\$163,000,000

Therefore, the total project cost for the RP-5 Liquids Expansion and RP-5 Solids Treatment Facility is approximately \$325,000,000.

RP-5 Liquids Expansion & RP-5 Solids Treatment Facility Next Steps

The RP-5 Liquids Expansion & RP-5 Solids Treatment Facility full design is scheduled to immediately begin upon the completion of the PDR. As discussed with the Board of Directors in the February 2017 Committee Meetings, staff is preparing to bring a contract amendment with Parsons to complete the full design for the RP-5 Liquids Expansion & RP-5 Solids Treatment

Facility to the Board in April 2017. If the amendment is approved, the full design will begin in May 2017 and will have a duration of two years. Major design submittals are set at the 30% completion, 50% completion, 85% completion, 100% completion milestones, each requiring approximately six months each. It is anticipated that additional items will be brought to the Board for approval including a contract award for value engineering services and a Finding of Consistency with the Programmatic Environmental Impact Report. The design is scheduled to be completed in May 2019, with the construction contract award in October 2019.

The RP-1/RP-5 Expansion PDR and the RP-5 Expansion Project are consistent with the *IEUA's Business Goal of Wastewater Management* specifically the Water Quality objective that IEUA will ensure that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.

PRIOR BOARD ACTION

On January 20, 2016, the Board of Directors approved the consulting engineering services contract award for the RP-1/RP-5 Expansion PDR to Parsons Water & Infrastructure Inc. for the not-to-exceed amount of \$2,431,598.

IMPACT ON BUDGET

The approved TYCIP budgets for Project No. EN19001, RP-5 Liquids Treatment Expansion, and Project No. EN19006, RP-5 Solids Treatment Facility, are \$125,000,000 and \$136,000,000, respectively. With the recommendations provided in the PDR, the total project cost for the RP-5 Liquids Treatment Expansion is estimated to increase to \$160,000,000. In addition, the total project cost for the RP-5 Solids Treatment Facility is estimated to increase to \$165,000,000.

With the recommendations provided in the PDR, the total project cost for the RP-1 Liquids Rehabilitation, Project No. EN24001, is estimated to be \$168,000,000. In addition, the total project cost for the RP-1 Solids Rehabilitation, Project No. EN24002, is estimated to be \$44,000,000. The four project budgets will be adjusted during the TYCIP approval process.

There are no budget impacts to the current phase of the project.

Attachments:

1. RP-1/RP-5 Expansion Preliminary Design Report

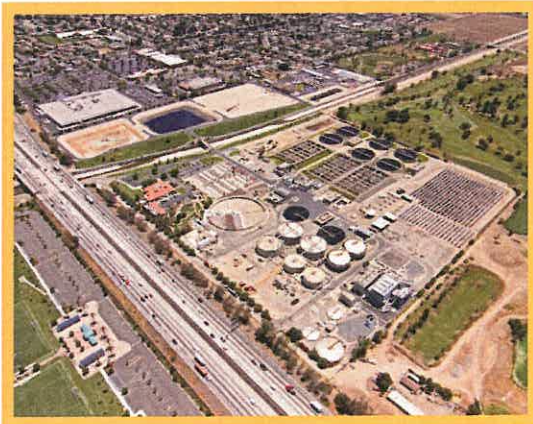
<https://www.dropbox.com/sh/6dqoyo2rqw70yrh/AACqpZOezdUfdHzIDHiNWxR8a?dl=0>

PJG:CB:SS:jm

RP-1 & RP-5 Expansion Preliminary Design Report

Project Nos. EN16025 and EN16028

Board Meeting



RP-1 & RP-5 Expansion PDR Scope of Work

One PDR with three separate volumes



RP-1 Liquids & Solids Treatment Rehabilitation



RP-5 Liquids Treatment Expansion



RP-5 Solids Treatment Facility

RP-1 Liquids & Solids Rehabilitation

- Major Treatment Systems:
 - Rehabilitation of Headworks & Primaries
 - Convert existing aeration system to a membrane bio-reactor (MBR)
 - New rotary drum solids thickening system
 - New acid phase digesters
 - Recuperative thickening for digestion



RP-1 Aerial

RP-1 Liquids & Solids Rehabilitation Cost

RP-1 Liquids Project Cost

Major Systems	Cost
Headworks & Primary	\$10.3M
Secondary	\$118.1M
Tertiary	\$0.8M
Odor Control	\$10.3M
Estimated Construction Cost*	\$139.5M
Design & Project Management (20%)	\$27.9M
Estimated Project Cost	\$167.4M

RP-1 Solids Project Cost

Major Systems	Cost
Thickening	\$20.2M
Digestion	\$11.5M
Dewatering	\$0.7M
Odor Control	\$4.0M
Estimated Construction Cost*	\$36.4M
Design & Project Management (20%)	\$7.3M
Estimated Project Cost	\$43.7M

Estimated RP-1 Rehabilitation Project Cost: \$212M

RP-5 Liquids Expansion & Solids Facility

- Major Treatment Systems:
 - Influent pumping and screening
 - Primary clarifiers
 - Convert existing aeration system to membrane bio-reactor (MBR)
 - UV disinfection system
 - Rotary drum solids thickening system
 - Phase digestion
 - Centrifuge dewatering system
 - Gas conditioning
 - Food waste at RP-5 Solids Handling Facility



RP-5 Liquids & Solids Treatment Systems

RP-5 Liquids Expansion & Solids Facility Cost

RP-5 Liquids Project Cost

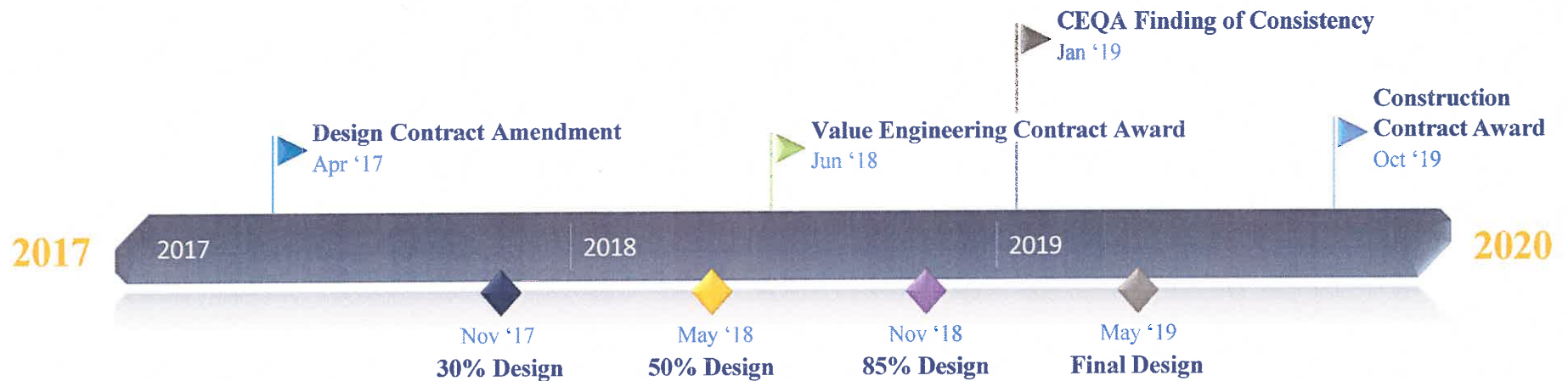
Major Systems	Cost
Headworks & Primary	\$28.2M
Secondary	\$61.3M
Tertiary	\$15.0M
Odor Control	\$9.9M
Overflow, Storm Water, & Electrical	\$14.6M
Offsite Facilities	\$4.0M
Estimated Construction Cost*	\$133.0M
Design & Project Management (20%)	\$26.6M
Estimated Project Cost	\$159.6M

RP-5 Solids Project Cost

Major Systems	Cost
Thickening	\$9.8M
Digestion	\$51.6M
Dewatering	\$43.0M
Odor Control & Digester Gas Treatment	\$11.9M
Food Waste System	\$9.5M
Electrical & Site Work	\$10.0M
Estimated Construction Cost*	\$135.8M
Design & Project Management (20%)	\$27.2M
Estimated Project Cost	\$163.0M

Estimated RP-5 Expansion Project Cost: \$325M

RP-5 Liquids Expansion & Solids Facility Next Steps



Recommendation

- It is recommended that the Board of Directors concur with the findings of the RP-1 & RP-5 Expansion Preliminary Design Report.

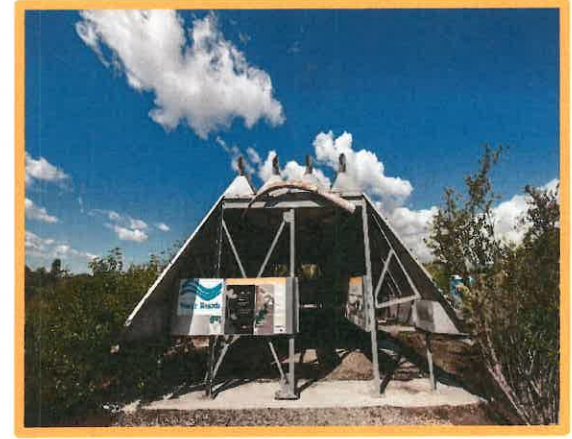
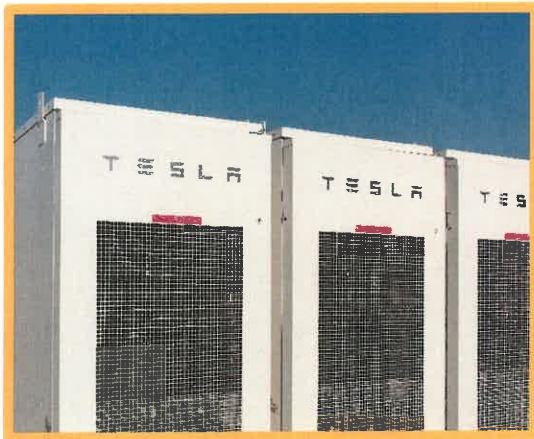
The RP-1 & RP-5 Expansion Preliminary Design Report is consistent with the **IEUA's Business Goal of Wastewater Management** specifically the Water Quality objective that IEUA will ensure that systems are planned, constructed, and managed to protect public health, the environment, and meet anticipated regulatory requirements.

INFORMATION

ITEM

2A

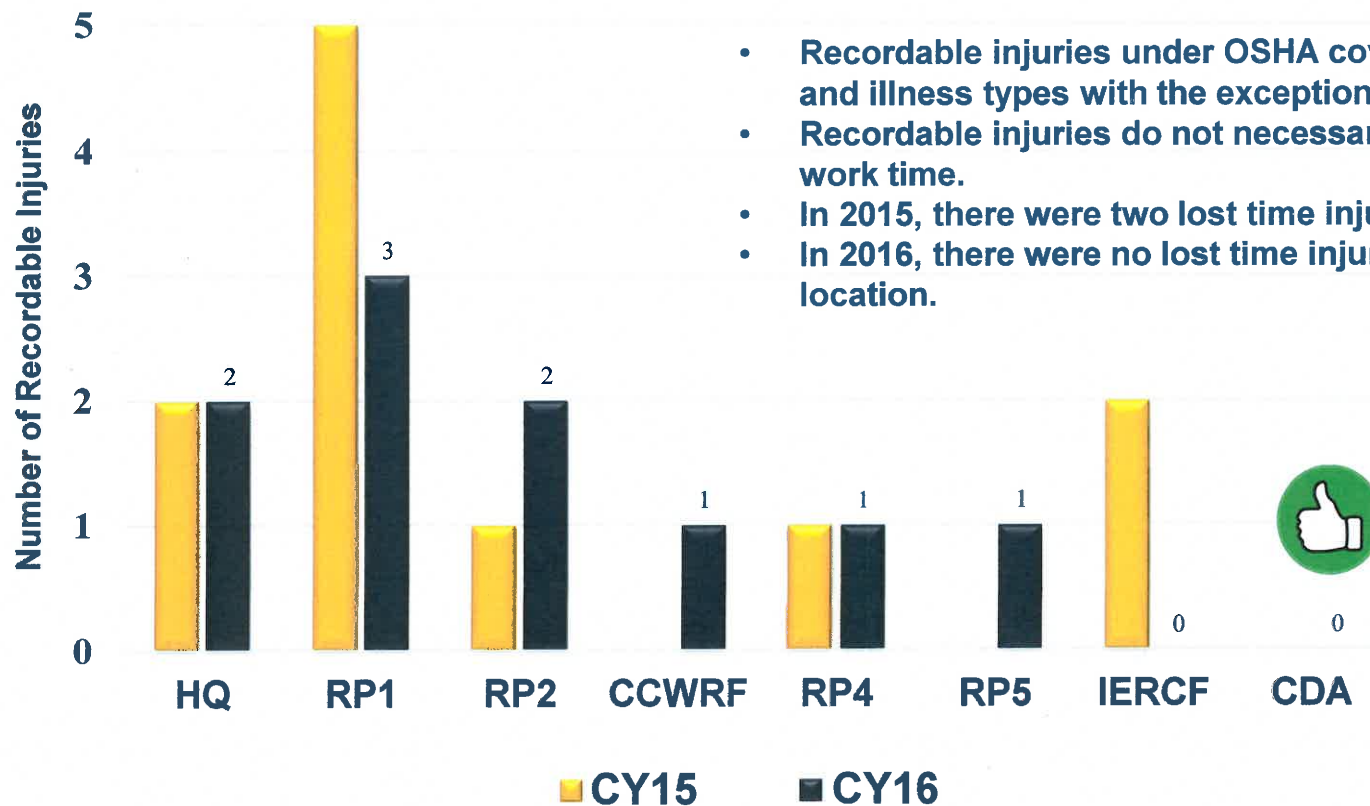
Operations Division Update



Randy Lee, Executive Manager of Operations/AGM
Board Meeting 3/15/17

Safety

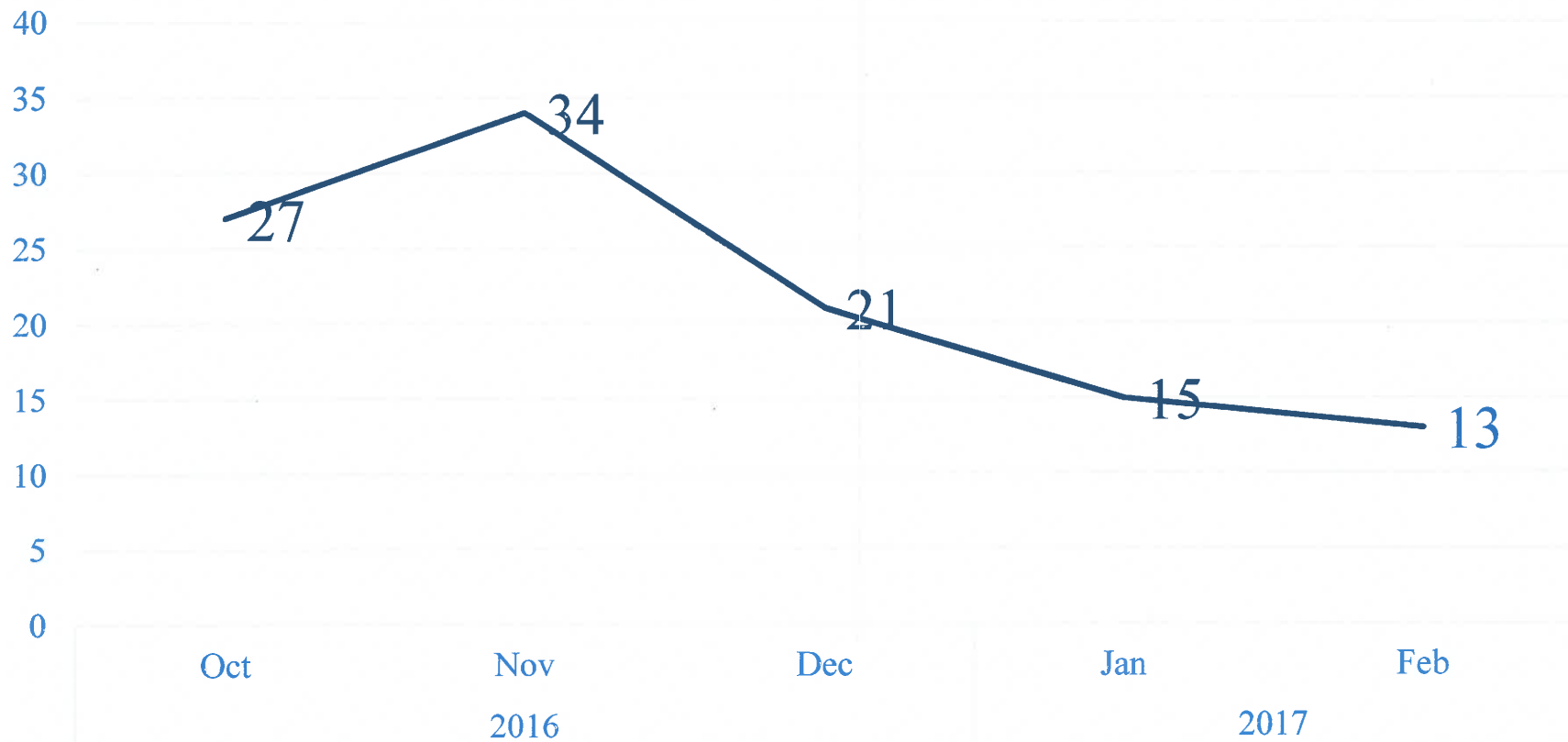
Injuries by Location



- Recordable injuries under OSHA cover all injury and illness types with the exception of first aid.
- Recordable injuries do not necessarily result in lost work time.
- In 2015, there were two lost time injuries at RP-1.
- In 2016, there were no lost time injuries at any location.

Phishing Campaign

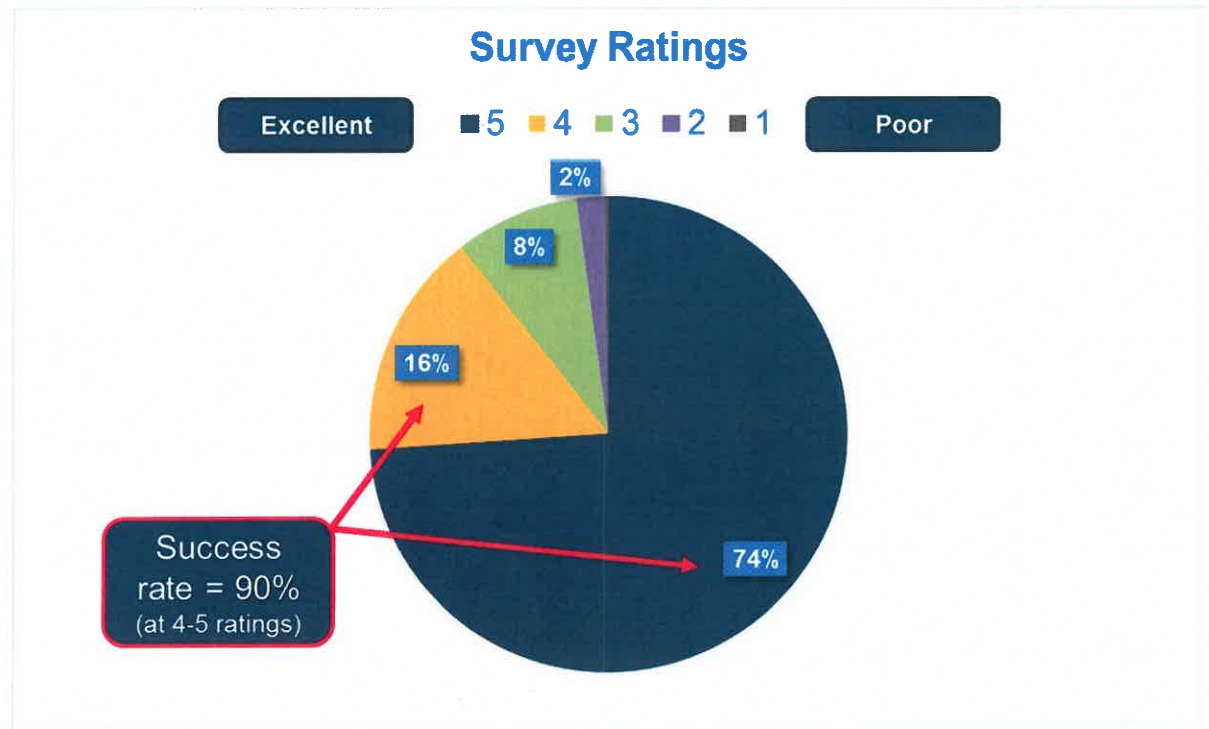
Number of Clicked Links



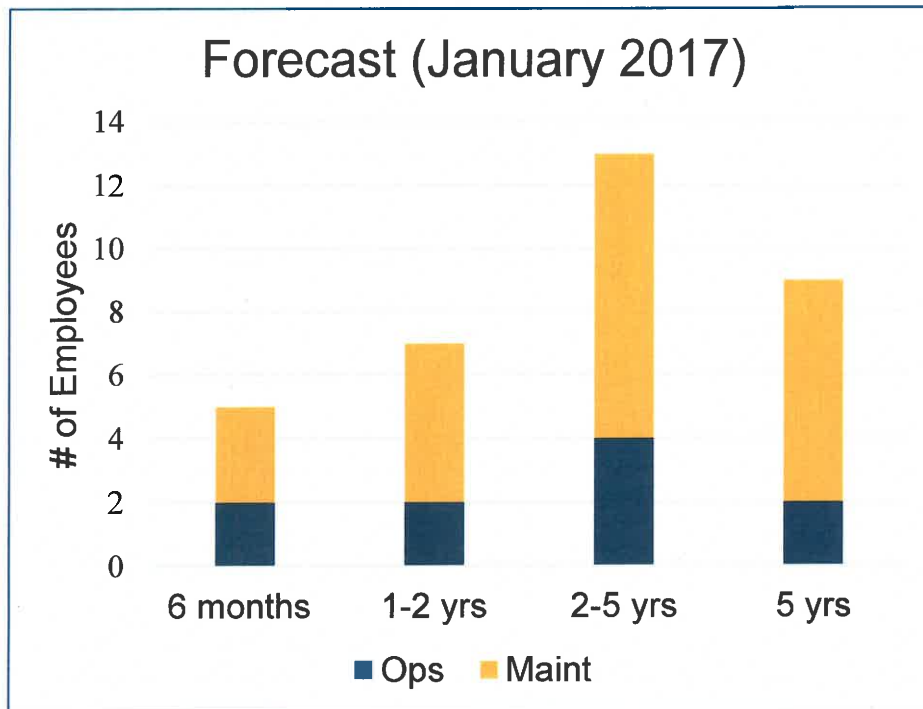
Maintenance Skills Training

Training Courses

- **Electrical & Instrumentation**
 - Transformers
 - Electrical Troubleshooting
 - Analytical Measurement
 - Basic Digital Circuits
- **Mechanical**
 - Bearings and Lubrication
 - Hydraulics & Pneumatics
 - Pumps and Pump Repair
 - Fans, Blowers, & Compressors



Operations & Maintenance Retirement Forecast



Our Succession Plan Includes:

- Intern/Volunteer Program in Ops
- Consider pre-hire before retirement occurs
- University, College, and Trade School relationships in development

Operator Staff Needs

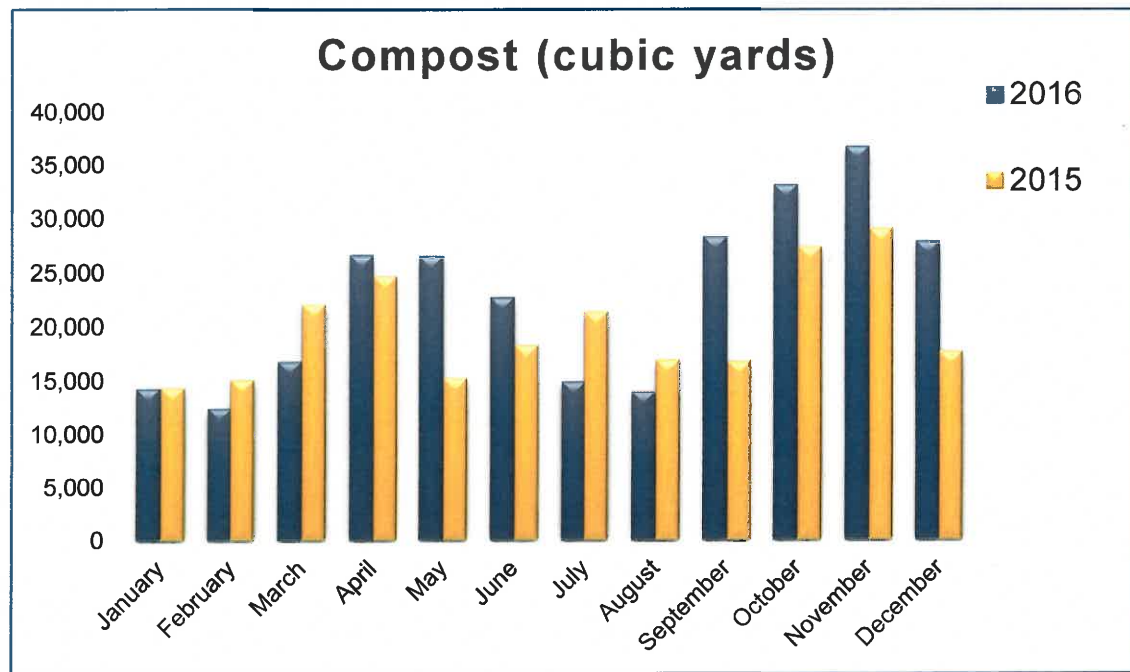
- Grade III Cert to work Call-Out Duty
- Depending on experience and qualifications it can take 1.5 to 5.5 years to get to a Grade III

Maintenance Staff Needs

- 12 months minimum to reach Level II

Inland Empire Regional Compost Facility Update

- 20% increase in sales vs. 2015 due to agricultural demand
- Sold all inventory leading into winter



Air Duct Failure:
Contractor secured and sealed the duct wall

Condition Based Monitoring

Success Stories: Infrared Thermography

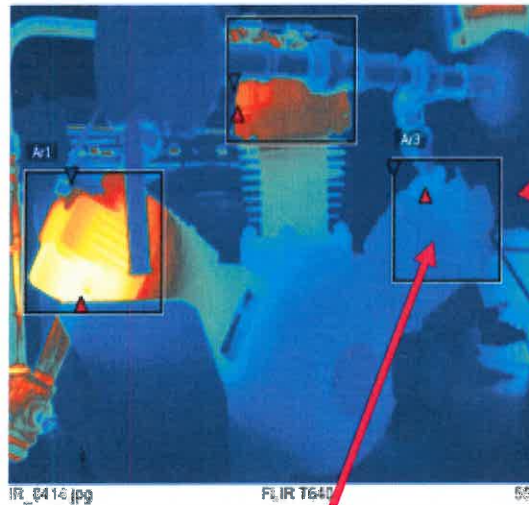
Equipment

- RP-1 Control Air Compressor
- Provides control air supply for the aeration basin's activated sludge process



Failure Analysis

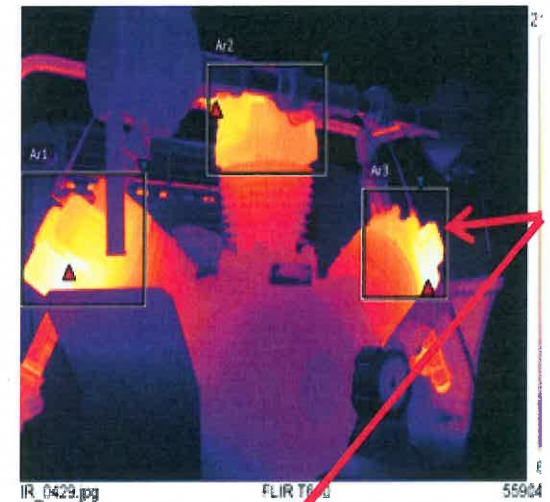
- Infrared thermography showed one of the cylinder head is not loading.
- Analysis found that one of the cylinder valve was stuck in open position.



Failed cylinder shows a relatively cooler temperature.

Failure Avoidance

- Replaced broken cylinder valve.
- Prevented frequent cycling of the air compressor.
- Savings: \$16,000 (cost of replacement air compressor + energy savings)




Properly working cylinder shows hotter temperature.


INFORMATION
ITEM
2B

Date: March 8, 2017

To: Engineering, Operations and Water Resources Committee

From: P. Joseph Grindstaff
General Manager

Submitted by:  Chris Berch
Executive Manager of Engineering/Assistant General Manager

Sylvie Lee 
Manager of Planning & Environmental Resources

Subject: Chino Basin Storage PEIR Addendum

RECOMMENDATION

This is an informational item for the Board of Directors to receive and file.

BACKGROUND

The Chino Basin Optimum Basin Management Program (OBMP) and the Peace Agreement were completed in 1999 and 2000, respectively. The purpose of the Peace Agreement was to implement the OBMP. The OBMP and the Peace Agreement were reviewed in a Programmatic Environmental Impact Report¹(PEIR) completed by the Inland Empire Utilities Agency (IEUA) in July 2000. Shortly thereafter a Subsequent Environmental Impact Report (SEIR) was completed in 2002, for the implementation of the OBMP. The document evaluated the effect of 500,000 acre-feet (AF) of water in storage accounts plus carryover within the Chino Basin. Subsequent investigations were undertaken in 2007, and almost continuously since 2011, that demonstrate that the stored water plus carryover has increased and will exceed the 500,000 (AF) volume threshold analyzed in these documents. Present analyses demonstrate that, accounting for the water resources management activities and conditions within the Basin since the time of prior analysis, storage in Chino Basin by parties and also by others as part of a conjunctive use program can exceed 500,000 AF without causing material physical injury to the basin or a party to the Judgment.

Given existing and expected water resources management activities, the volume of stored water and carryover by the Chino Basin parties will exceed the 500,000 AF limit established in the Peace

¹ *Optimum Basin Management Program Programmatic Environmental Impact Report*, July 2000. Prepared by IEUA by Tom Dodson and Associates. The document can be found here: <https://www.ieua.org/referenced-documents/>.

Agreement and the allowed storage needs to be increased. In anticipation of such exceedance to occur within the end of Fiscal Year 2016/17, and considering the approved Dry Year Yield Agreement with MWD which allows the Agency to store up to 25,000 AF per year in Chino Basin, the Chino Basin parties and Chino Basin Watermaster have recommended that the amount by which the original 500,000 AF volume can be exceeded be the subject of environmental analysis in light of the conclusions of the 2000 OBMP PEIR.

IEUA retained the services of Tom Dodson and Associates (TDA) to complete this analysis. The associated cost for the task order with TDA is \$9,000. Chino Basin Watermaster similarly retained the services of Wildermuth Environmental, Inc. (WEI) to complete the technical analysis of exceeding the 500,000 AF of identified storage in the Chino Basin. The associated task order for WEI with Chino Basin Watermaster is \$30,000. The costs are shared equally between Chino Basin Watermaster and IEUA.

The results of the analysis are expected to be received by the week of February 27, 2017. Preliminary analysis indicates that the operation of the basin at a storage of 585,000 AF will not result in any material physical injury to the basin or party to the Judgment. Because changes to the project are minor and will not have significant environmental impacts or require mitigation beyond that identified in the PEIR, it is appropriate to analyze storage up to 585,000 AF by way of an Addendum to the 2000 OBMP PEIR.

The final report along with the environmental analysis is expected to be provided to the Board of Directors on March 15, 2017.

The project meets IEUA's adopted Business goals for *Water Reliability* by promoting sustainable water use throughout the region by enhancing opportunities to increase groundwater storage.

PRIOR BOARD ACTION

On October 6, 2010, the IEUA Board of Directors approved the Peace II Subsequent Environmental Impact Report.

On July 12, 2000, the IEUA Board of Directors approved the Program Environmental Impact Report for the OBMP.

IMPACT ON BUDGET

There is no direct impact on the budget.

INFORMATION

ITEM

2C

Engineering and Construction Management Project Updates

Board Meeting



EN15055 – 1630 E. & W. Recycled Water Pump Station Surge Protection

- Contractor: J. R. Filanc
- Current Contract (Construction): \$766 K
- Total Project Budget: \$1.4 M
- Project Completion: March 2017
- Scope of Work:
 - Replace existing air compressors
 - Install surge tank
- Current Activities:
 - Distribute O&M Manuals
 - Document as-builts
 - Distribute Deliverables



Control Panel at 1630 West



New Compression System

EN18006 – RP-1 Flare Improvements

- Consultant: Lee & Ro, Inc.
- Current Contract (Design): \$378 K
- Total Project Budget: \$4 M
- Project Completion: March 2019
- Scope of Work:
 - Replacement of existing flare with three new high efficiency flares
 - Predesign to upgrade/replace existing underground digester gas piping
 - Evaluate existing iron sponges and provide recommendations
 - Upgrade control system
- Current Activities:
 - Design phase kickoff meeting on February 2, 2017
 - Predesign in progress
 - System assessment/investigation



Digester Gas Piping to the Flare



Existing Candlestick Flare

EN16049 – Conference Rooms Audio Visual Upgrades

- Contractor: New Millennium Construction
- Current Contract (Design-Build): \$894 K
- Total Project Budget: \$1.3 M
- Project Completion: December 2017
- Scope of Work:
 - Provide audiovisual and architectural upgrades
 - Phase 1: Board Room/Anza Conference Room
 - Phase 2: HQB Event Center
 - Phase 3: HQ Conference Rooms and RP-1 Lunch/Conference Room
- Current Activities:
 - Board Room construction
 - Complete Anza Conference Room upgrades



New Anza Projector



Smart Projector in Wetlands Interpretive Center

EN16071 – San Bernardino Avenue Gravity Sewer

- Contractor: Ferreira Construction
- Current Contract (Construction): \$1 M
- Total Project Budget: \$1.5 M
- Project Completion: April 2017
- Scope of Work:
 - Install 1,300 lf of gravity sewer pipe
- Current Activities:
 - Install 18-in VCP sewer pipe and manholes
 - Install 15-in VCP sewer pipe inside Prologis WWTP
 - Connect CSI, Speedway, and Prologis laterals to 18-in sewer pipe



New 18-in Manhole Base



18-in Pipeline Between Manholes

EN14019 – RP-1 Headworks Primary and Secondary Upgrades

- Contractor: RMC Water and Environment
- Current Contract (Design): \$819 K
- Total Project Budget: \$10.4 M
- Project Completion: April 2018
- Scope of Work:
 - Rehabilitate the grit removal systems
 - Install submersible scum pumps & Mixer
 - Design a bypass for System C flow meter
- Current Activities:
 - Complete final design



Grit Processing Equipment



Corroded Concrete