Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

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

WEDNESDAY, NOVEMBER 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 of October 11, 2017.

B. CONTRACT AWARD FOR UNIFORMS AND RELATED SERVICES

Staff recommends that the Committee/Board:

1. Award a three-year service contract with additional two, one-year options, to Cintas Corporation, for uniforms and related services for a not-to-exceed amount of $600,000, and

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

C. CONTRACT AWARD FOR BOILER CLEANING AND TUNE-UP SERVICES

Staff recommends that the Committee/Board:

1. Award a three-year service contract for the RP-1 and RP-2 boilers semi-annual cleaning and annual tune-up services to R.F. MacDonald, in the amount of $122,154; and

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

D. RP-4 TRIDENT FILTERS CONSTRUCTION CONTRACT AWARD

Staff recommends that the Committee/Board:

1. Award a contract for the RP-4 Trident Filters, Project No. EN17110.01, to J.F. Shea Construction, Inc. in the amount of $3,799,000;

2. Approve a contract amendment to Carollo Engineers for engineering services, project management, and construction management for a not-to-exceed amount of $454,858; and

3. Authorize the General Manager to execute the construction contract and consulting engineering services amendment subject to non-substantive changes.

E. RP-4 REHABILITATION CONSULTANT CONTRACT AMENDMENT

Staff recommends that the Committee/Board:

1. Approve a consulting engineering services contract amendment for the RP-4 Rehabilitation, Projects Nos. EN17043 and EN17110, to Carollo Engineers for a not-to-exceed amount of $356,236; and

2. Authorize the General Manager to execute the consulting engineering services amendment subject to non-substantive changes.

F. **RP-1 TRAINING ROOM CONSTRUCTION CONTRACT AWARD**
Staff recommends that the Committee/Board:

1. Award a construction contract for the RP-1 Maintenance Building Training Room, Project No. EP17003, to New Millennium Construction in the amount of $266,890; and

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

G. **FLOW EQUALIZATION AND EFFLUENT MONITORING CONSTRUCTION CHANGE ORDER**
Staff recommends that the Committee/Board:

1. Approve a construction contract change order to SCW Contractors for the Flow Equalization and Effluent Monitoring, Project No. EN11031, in the amount of $108,655; and

2. Authorize the General Manager to execute the construction contract change order.

H. **CHINO BASIN WATER BANK PLANNING AUTHORITY: JOINT POWERS AUTHORITY AGREEMENT**
Staff recommends that the Committee/Board:

1. Approve the Chino Basin Water Bank Planning Authority Joint Powers Authority Agreement; and

2. Authorize the General Manager to execute the Agreement, subject to non-substantive changes.

2. **INFORMATION ITEM**

A. **REGIONAL WATER USE EFFICIENCY PROGRAMS ANNUAL REPORT – FY 2016/17 (WRITTEN/POWERPOINT)**

B. **FY 2016/17 RECYCLED WATER ANNUAL REPORT (WRITTEN/POWERPOINT)**

C. **SARCCUP UPDATE (POWERPOINT)**

RECEIVE AND FILE INFORMATION ITEM

D. **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: JR

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, November 2, 2017.

April Woodruff

ACTION ITEM 1A

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

MINUTES

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

WEDNESDAY, OCTOBER 11, 2017
9:45 A.M.

COMMITTEE MEMBERS PRESENT

Kati Parker, Chair
Paul Hofer

STAFF PRESENT

P. Joseph Grindstaff, General Manager
Chris Berch, Executive Manager of Engineering/AGM
Kathy Besser, Executive Manager of External Affairs & Policy Development/AGM
Randy Lee, Executive Manager of Operations/AGM
Christina Valencia, Executive Manager of Finance & Administration/AGM
Jerry Burke, Deputy Manager of Engineering
Jason Gu, Grants Officer
Sylvie Lee, Manager of Planning & Environmental Resources
David Mendez, Deputy Manager of Capital Improvement Program
Shaun Stone, Manager of Engineering
Teresa Velarde, Manager of Internal Audit
April Woodruff, Board Secretary/Office Manager

OTHERS PRESENT

None

The meeting was called to order at 9:45 a.m. There were no public comments received or additions to the agenda.

ACTION ITEMS

The Committee:

- Approved the Engineering, Operations, and Water Resources Committee meeting minutes of September 13, 2017.

- Recommended that the Board:

    1. Award a construction contract for the RP-1 Headworks, Primary, and Secondary Upgrades, Project No. EN14019, to Myers & Sons Construction LP in the amount of $5,690,000;

    2. Approve a contract amendment to RMC Water and Environment for engineering services during construction for the not-to-exceed amount of $510,558; and

3. Authorize the General Manager to execute the contract and contract amendment;

as an Action Item on the October 18, 2017 Board meeting agenda.

- Recommended that the Board:

1. Approve a three-year master service contract for construction inspection and soils/material testing services on an "as needed" basis to RMA Group, for the not-to-exceed amount of $1,000,000;

2. Approve a three-year master service contract for construction inspection and soils/material testing services on an "as needed" basis to CTE Inc., for the not-to-exceed amount of $1,000,000;

3. Approve a three-year master service contract for coating inspection services on an "as needed" basis to CSI Services, for the not-to-exceed amount of $300,000; and

4. Authorize the General Manager to execute the master service contracts;

as an Action Item on the October 18, 2017 Board meeting agenda.

- Recommended that the Board:

1. Award a consultant contract for the RP-1 Mechanical Restoration and Improvements, Project No. EN17082, to Stantec Consulting Services Inc., for the not-to-exceed amount of $459,024; and

2. Authorize the General Manager to execute the consultant contract subject to non-substantive changes;

as a Calendar Consent Item on the October 18, 2017 Board meeting agenda.

INFORMATION ITEMS

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

- Planning and Environmental Resources Annual Reports (10-Year Growth Forecast, Water Use, and Energy)
- 1st Quarter Planning & Environmental Resources Update
- Policy Principles on Water Storage and Purchase Opportunities
- Engineering and Construction Management Projects Updates

GENERAL MANAGER'S COMMENTS

General Manager P. Joseph Grindstaff stated that Mr. Ed Means will be the consultant for the Chino Basin Water Bank; he has been and will be going out to meet with the member agencies and other parties in the Chino Basin as we move ahead with storage.

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 Parker adjourned the meeting at 10:34 a.m.

Respectfully submitted,

April Woodruff
Board Secretary/Office Manager

*A Municipal Water District

APPROVED: NOVEMBER 8, 2017

ACTION ITEM 1B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources Committee *11/08/17*

Executive Contact: Randy Lee, Executive Manager of Operations/AGM

Subject: Contract Award for Uniforms and Related Services

Executive Summary:

Uniforms and related items are required and utilized throughout the Agency for staff protection while working in wastewater treatment and laboratory environments, on construction sites, as well as public right-of-ways. Approximately 130 employees wear Agency-issued uniforms. In addition to uniforms, bath towels and floor mats are provided to the Agency under the service contract.

The Agency has elected to participate in the Master US Communities agreement with Cintas, which will provide the Agency the best overall supplier government pricing through a national purchasing cooperative program, with an overall reduction of approximately 5 percent. US Communities aggregates the purchasing power of more than 90,000 public agencies nationwide by offering to make purchases through existing, competitively solicited contracts.

The Uniforms and Related Services Contract Number 4600002433 to Cintas Corporation will be for a not-to-exceed amount of $600,000.

Staff's Recommendation:

1. Award a three-year service contract with additional two, one-year options, to Cintas Corporation, for uniforms and related services for a not-to-exceed amount of $600,000; and

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

Budget Impact: Y *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Requested Amount:*

Account/Project Name:

Item is budgeted annually under Regional Operations and Maintenance (RO) Fund, Uniforms/Throw Rugs Account.

Fiscal Impact (explain if not budgeted):

Full account coding (internal AP purposes only): 10800 - 128100 - 503000 - 512140 Project No.:

Prior Board Action:

June 21, 2017 - Adoption of the Agency's Biennial Budget for fiscal years 2017/18 and 2018/19.

November 14, 2012 - Contract No. 4600001334 for Uniforms and Related Services awarded to Cintas Corporation.

Environmental Determination:

Not Applicable

Business Goal:

Fiscal Responsibility - IEUA is committed to safeguarding the Agency's fiscal health to effectively support short term and long term needs, while providing the best value for our customers.

Attachments:

Attachment 1 - Contract No. 4600002433
Attachment 2 - US Communities Agreement 12-JLH-011C

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

CONTRACT NUMBER: 4600002433

FOR CONTRACTOR SERVICES

UNIFORMS, TOWELS, FLOOR MATS RENTAL AND LAUNDERING SERVICES

THIS CONTRACT (the "Contract"), is made and entered into this _____ day of _____, 20____, 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" or "IEUA"), and Cintas of Ontario, California (hereinafter referred to as "Contractor"), for the supply and delivery of garments and related items.

NOW, THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties agree as follows:

1. Contract Administrator: All generall direction related to this Contract shall come from the designated Contract Administrator. Details of the Agency's assignment are listed below.

Project Manager:	Torres Water-Leiva
Address:	6075 Kimball Avenue Chino, California, 91708
Telephone:	(909) 993-1777
Facsimile:	(909) 993-1978 (FAX)
Email:	tleiva@ieua.org

2. CONTRACTOR ASSIGNMENT: Special inquiries related to this Contract and the effects of this Contract shall be referred to the following:

Contractor:	Paul DiVincenzo
Address:	2150 S. Proforma Ave. Ontario, California 91761
Telephone:	(909) 930-9096
Facsimile:	(909) 930-0348 (FAX)
Email:	divincenzop@cintas.com

3. ORDER OF PRECEDENCE: The documents referenced below represent the Contract Documents. Where any conflicts exist between the General Terms and Conditions the governing order of precedence shall be as follows:

1. Amendment(s) to Contract Number 4600002433.
2. Contract Number 4600002433 General Terms and Conditions.
3. Supplier's Proposal dated October 06, 2017.

4. SCOPE OF WORK AND SERVICES: Supplier services and responsibilities shall include and be in accordance with the Facilities Solutions Agreement (Attachment A) and the Technical Provisions/Scope of Work (Attachment B).

A. Cure Procedure:

1. For a Cure Notice deemed by the Agency to be **urgent**, Contractor shall correct any error of the Work within three (3) calendar days after Contractor's receipt of a Cure Notice, as directed by the Project Manager.

2. For a Cure Notice deemed by the Agency to be **important**, Contractor shall correct any error of the Work within seven (7) calendar days after Contractor's receipt of a Cure Notice, as directed by the Project Manager.

3. If the Project Manager rejects all, or any part of, the Work as unacceptable and agreement to correct such Work cannot be reached without modification to the Contract, Contractor shall notify the Project Manager, in writing, detailing the dispute and the reason(s) for the Contractor's position. Any dispute that cannot be resolved between the Project Manager and Contractor shall be resolved in accordance with the provisions of this Contract.

B. The Agency may, at any time, make changes to this Contract's Scope of Work; including additions, reductions, and other alterations to any or all of the Work. However, such changes shall only be made via written amendment to this Contract. The Contract compensation and Schedule of Work and Services shall be equitably adjusted, if required, to account for such changes and shall be set forth within the mutually approved Contract Amendment.

5. TERM OF CONTRACT: The term of this Contract shall be for an initial three years term. The successful Supplier shall agree to allow the Agency, at the Agency's sole discretion, to extend this Contract, in two twelve-month increments, for an additional period not-to-exceed twenty-four months, for a total Contract term of five years. In the event the Agency desires to exercise any or all of the Contract extension options provided for in this Section, the Agency shall provide at least 30 calendar day's written notice to the Supplier, prior to the expiration of the original Contract term or any extension thereof.

6. PAYMENT, INVOICING, AND COMPENSATION:

A. The Contractor may submit an invoice not more than once per month during the term of this Contract to the Agency's Accounts Payable Department. Agency shall pay Contractor's properly executed invoice, approved by the Project Manager, within thirty (30) days following receipt of the invoice.

B. As compensation for the Work performed under this Contract, Agency shall pay Contractor's monthly invoice, for a total contract price NOT-TO-EXCEED **$600,000** for all services satisfactorily provided during the term of this Contract.

C. Additionally, to qualify for payment, the Contractor shall prominently display, on the first page of the invoice, contract number:

1. The Contract Number – 4600002433.

If Contractor submits invoice by email, such invoice shall be submitted as follows:

APGroup@ieua.org
Scan the invoice as a PDF file.
Attach the scanned file to an email.

If Contractor submits invoice by mail, such invoice shall be submitted as follows:

Inland Empire Utilities Agency
Re: Contract Number: 4600002433
P.O. Box 9020
Chino Hills, CA 91709

D. Concurrent with the submittal of the original invoice to the Agency's Accounts Payable Department, the Contractor shall forward (mail, fax, or email) a copy of the invoice to the designated Project Manager, identified in Section 1, on Page 1 of this Contract.

E. No Additional Compensation: Nothing set forth in this Contract shall be interpreted to require payment by Agency to Contractor of any compensation specifically for the assignments and assurances required by the Contract, other than the payment of expenses as may be actually incurred by Contractor in complying with this Contract, as approved by the Project Manager.

F. Commencing on November 1, 2020, and continuing each November/1st thereafter, the Contractor may propose modifications to the prices provided in the Price Schedule of this contract. The Price Schedule may be adjusted, plus or minus, by a sum equal to the percentage change in the Consumer Price Index for All Urban Consumers (CPI-U), within the Los Angeles-Anaheim-Riverside, California index area. The basis for computing the adjustment to the contract prices shall reflect the percentage change for the twelve-month period from (November) to (November), starting with the period of November 2019, to November 2020, and continuing every twelve months thereafter. Despite any changes in the CPI-U for any given twelve-month adjustment period, adjustments to the prices provided in the Proposed Price Schedule shall not increase or decrease more than five (5) percent during any single twelve-month adjustment period.

In the event the CPI-U is changed so that the base period differs from 1982-84=100, then the index applied, as provided for above, shall be corrected in accordance with the conversion factor published by the United States Department of Labor, Bureau of Labor Statistics, or their successor. If the CPI-U is discontinued or revised, such other government index or computation with which it is replaced shall be used to obtain, substantially, the same results as would have been obtained if the CPI-U had not been discontinued or revised.

G. Contractor may request taking advantage of the Agency's practice of offering an expedited payment protocol to a Contractor who has proposed accepting an invoice amount reduction in exchange for early payment; (CONTRACTOR) has proposed, and the Agency has accepted, applying a (1%, 2%, or 5%) discount (invoice amount reduction) to monthly invoices in exchange for payment of all invoices within (20, 15, or 10) days, respectively, of the date the invoice is received at the Agency's APGroup@ieua.org email address.

7. CONTROL OF THE WORK: The Contractor shall perform the Work in compliance with the Schedule of Work and Services. If performance of the Work falls behind schedule, the Contractor shall accelerate the performance of the Work to comply with the Schedule of Work and Services as directed by the Project Manager. If the nature of the Work is such that Contractor is unable to accelerate the Work, Contractor shall promptly notify the Project Manager of the delay, the causes of the delay, and submit a proposed revised Schedule of Work and Services.

8. INSURANCE: During the term of this Contract, the Contractor shall maintain, at Contractor's sole expense, the following insurance.

   a. Minimum Scope of Insurance: Coverage shall be at least as broad as:

1. Commercial General Liability ("CGL"): Insurance Services Office ("ISO") Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than $1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.

2. Automobile Liability: ISO Form Number CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, covering hired, (Code 8) and non-owned autos (Code 9), with limit no less than $1,000,000 per accident for bodily injury and property damage.

3. Workers' Compensation and Employers Liability: Workers' compensation limits as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.

b. Deductibles and Self-Insured Retention: Any deductibles or self-insured retention must be declared to and approved by the Agency. At the option of the Agency, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Agency, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

c. Other Insurance Provisions: The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. Commercial General Liability and Automobile Liability Coverage

a. Additional Insured Status: The Agency, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment supplied in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10 11 85; or **by either** CG 20 10, CG 20 26, CG 20 33, or CG 20 38 **and** CG 20 37 forms if later revisions are used).

b. Primary Coverage: The Contractor's insurance coverage shall be primary insurance coverage at least as broad as ISO CG 20 01 04 13 as respects the Agency, its officer, officials,

employees and volunteers. Any insurance or self-insurance maintained by the Agency, its officers, officials, employees, volunteers, property owners or engineers under contract with the Agency shall be excess of the Contractor's insurance and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Agency, its officers, officials, employees or volunteers.

d. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

e. The Contractor may satisfy the limit requirements in a single policy or multiple policies. Any additional policies written as excess insurance shall not provide any less coverage than that provided by the first or primary policy.

2. Workers' Compensation and Employers Liability Coverage

Contractor hereby grants to Agency a waiver of any right to subrogation which any insurer of the Contractor may acquire against the Agency by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the Agency has received a waiver of subrogation endorsement from the insurer.

3. All Coverages

Each insurance policy required by this Contract shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, or reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Agency pursuant to Section 14, page 12 of this Contract.

d. Acceptability of Insurers: Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A minus: VII, and who are admitted insurers in the State of California.

e. Verification of Coverage: Contractor shall provide the Agency with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Agency before work commences. However, failure to obtain the required documents prior to the

work beginning shall not waive the Contractor's obligation to provide them. The Agency reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

f. Submittal of Certificates: Contractor shall submit all required certificates and endorsements to the following:

Risk Management
c/o Warren Green
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, California 91709

9. FITNESS FOR DUTY:

a. Fitness: Contractor and its Subcontractor personnel on the Jobsite:

1. Shall report to work in a manner fit to do their job;

2. Shall not be under the influence of or in possession of any alcoholic beverages or of any controlled substance (except a controlled substance as prescribed by a physician so long as the performance or safety of the Work is not affected thereby); and

3. Shall not have been convicted of any serious criminal offense which, by its nature, may have a discernible adverse impact on the business or reputation of the Agency.

b. Compliance: Contractor shall advise all personnel and associated third parties of the requirements of this Contract ("Fitness for Duty Requirements") before they enter on the Jobsite and shall immediately remove from the Jobsite any employee determined to be in violation of these requirements. Contractor shall impose these requirements on its Subcontractors. Agency may cancel the Contract if Contractor violates these Fitness for Duty Requirements.

10. LEGAL RELATIONS AND RESPONSIBILITIES:

a. Professional Responsibility: The Contractor shall be responsible, to the level of competency presently maintained by other practicing professionals performing the same or similar type of work.

b. Status of Contractor: The Contractor is retained as an independent Contractor only, for the sole purpose of providing the services described herein, and is not an employee of the Agency.

c. Observing Laws and Ordinances: The Contractor shall keep itself fully informed of all existing and future state and federal laws and all county and city ordinances and regulations which in any manner affect the conduct of any services or tasks performed under this Contract, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees, and shall protect and indemnify, as required herein, the Agency, its officers, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor, its employees, or subcontractors.

d. Subcontract Services: Any subcontracts for the performance of any services under this Contract shall be subject to the written approval of the Project Manager and shall comply with State of California, Department of Industrial Relations, SB 854 requirements.

e. Hours of Labor: The Contractor shall comply with all applicable provisions of California Labor Code Sections 1810 to 1815 relating to working hours. The Contractor shall, as a penalty to the Agency, forfeit $25.00 for each worker employed in the completion of the Contract by the Contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of the Labor Code.

f. Travel and Subsistence Pay: The Contractor shall make payment to each worker for travel and subsistence payments which are needed to complete the work and/or service, as such travel and subsistence payments are defined in an applicable collective bargaining agreements with the worker.

g. Liens: Contractor shall pay all sums of money that become due from any labor, services, materials or equipment provided to Contractor on account of said services to be rendered or said materials to be provided under this Contract and that may be secured by any lien against the Agency. Contractor shall fully discharge each such lien at the time performance of the obligation secured matures and becomes due.

h. Indemnification: Contractor shall indemnify the Agency, its directors, employees, and assigns, and shall defend and hold them harmless from all liabilities, demands, actions, claims, losses and expenses, including reasonable attorneys' fees, which arise out of, or are related to, the negligence, recklessness or willful misconduct of the Contractor, its directors, employees, agents, and assigns, in the performance of work under this contract.

i. Conflict of Interest: No official of the Agency, who is authorized in such capacity and on behalf of the Agency to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving this Contract, or any subcontract relating to services or tasks to be performed pursuant to this Contract, shall become directly or indirectly personally interested in this Contract.

j. Equal Opportunity: During the performance of this Contract, the Contractor shall not unlawfully discriminate against any employee or employment applicant because of race, color, religion, sex, age, marital status, ancestry, physical or mental disability, sexual orientation, veteran status or national origin. The Agency is committed to creating and maintaining an environment free from harassment and discrimination.

k. Disputes:

1. All disputes arising out of or in relation to this Contract shall be resolved in accordance with this section. The Contractor shall pursue the work to completion in accordance with the instruction of the Agency's Project Manager notwithstanding the existence of a dispute. By entering into this Contract, both parties are obligated, and hereby agree, to submit all disputes arising under or relating to the Contract which remain unresolved after the exhaustion of the procedures provided herein, to independent arbitration. Except as otherwise provided herein, arbitration shall be conducted under California Code of Civil Procedure Sections 1280, et seq., or their successor.

2. Any and all disputes prior to the work starting shall be subject to resolution by the Agency's Project Manager; and the Contractor shall comply, with the Agency Project Manager instructions. If the Contractor is not satisfied with the resolution directed by the Agency Project Manager, they may file a written protest with the Agency Project Manager within seven (7) calendar days after receiving written directive of the Project Manager's decision. Failure by Contractor to file a written protest within seven (7) calendar days shall constitute waiver of protest, and acceptance of the Project Manager's resolution. The Project Manager shall submit the Contractor's written protests to the General Manager, together with a copy of the Project Manager's written decision, for his or her consideration within seven (7) calendar days after receipt of the protest-related documents. The General Manager shall make his or her determination with respect to each protest filed with the Project Manager within ten (10) calendar days after receipt of the protest-related documents. If Contractor is not satisfied with any such resolution by the General Manager, they may file a written request for arbitration with the Project Manager within seven (7) calendar days after receiving written notice of the General Manager's decision.

3. In the event of arbitration, the parties to this contract agree that there shall be a single neutral Arbitrator who shall be selected in the following manner:

   a. The Demand for Arbitration shall include a list of five names of persons acceptable to the Contractor to be appointed as Arbitrator. The Agency shall determine if any of the names submitted by Contractor are acceptable and, if so, such person will be designated as Arbitrator.

   b. In the event that none of the names submitted by Contractor are acceptable to Agency, or if for any reason the Arbitrator selected in Step (a) is unable to serve, the Agency shall submit to Contractor a list of five names of persons acceptable to Agency for appointment as Arbitrator. The Contractor shall, in turn, have seven (7) calendar days in which to determine if one such person is acceptable.

   c. If after Steps (a) and (b), the parties are unable to mutually agree upon a neutral Arbitrator, the matter of selection of an Arbitrator shall be submitted to the San Bernardino County Superior Court pursuant to Code of Civil Procedure Section 1281.6, or its successor. The costs of arbitration, including but not limited to reasonable attorneys' fees, shall be recoverable by the party prevailing in the arbitration. If this arbitration is appealed to a court pursuant to the procedure under California Code of Civil Procedure Section 1294, et seq., or their successor, the costs of arbitration shall also include court costs associated with such appeals, including but not limited to reasonable attorneys' fees which shall be recoverable by the prevailing party.

4. Association in Mediation/Arbitration: The Agency may join the Contractor in mediation or arbitration commenced by a contractor on the Project pursuant to Public Contracts Code Sections 20104 et seq. Such association shall be initiated by written notice from the Agency's representative to the Contractor.

l. Workers' Legal Status: For performance against this Contract, Contractor shall only utilize employees and/or subcontractors that are authorized to work in the United States pursuant to the Immigration Reform and Control Act of 1986.

11. OWNERSHIP OF MATERIALS AND DOCUMENTS/CONFIDENTIALITY: The Agency retains ownership of any, and all, partial or complete reports, drawings,

plans, notes, computations, lists, and/or other materials, documents, information, or data prepared by the Contractor and/or the Contractor's subcontractor(s) pertaining to this Contract. Said materials and documents are confidential and shall be available to the Agency from the moment of their preparation, and the Contractor shall deliver them to the Agency whenever requested to do so by the Project Manager and/or Agency representative. The Contractor agrees that all documents shall not be made available to any individual or organization, private or public, without the prior written consent of an Agency representative.

12. NOTICES: Any notice may be served upon either party by delivering it in person, or by depositing it in a United States Mail deposit box with the postage thereon fully prepaid, and addressed to the party at the address set forth below:

Agency: Warren T. Green
Manager of Contracts and Procurement
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, CA 91709

Contractor: Paul DiVincenzo
Senior Executive
2150 S. Proforma Ave.
Ontario, California 91761

Any notice given pursuant to this section shall be deemed effective in the case of personal delivery, upon receipt thereof, or, in the case of mailing, at the moment of deposit in the course of transmission through the United States Postal Service.

13. SUCCESSORS AND ASSIGNS: All of the terms, conditions and provisions of this Contract shall take effect to the benefit of and be binding upon the Agency, the Contractor, and their respective successors and assigns. No assignment of the duties or benefits of the Contractor under this Contract may be assigned, transferred, or otherwise disposed of, without the prior written consent of the Agency; and any such purported or attempted assignment, transfer, or disposal without the prior written consent of the Agency shall be null, void, and of no legal effect whatsoever.

14. PUBLIC RECORDS POLICY: Information made available to the Agency may be subject to the California Public Records Act (Government Code Section 6250 et seq.) The Agency's use and disclosure of its records are governed by this Act. The Agency shall use its best efforts to notify Contractor of any requests for disclosure of any documents pertaining to this work. In the event of litigation concerning disclosure of information Contractor considers exempt from disclosure; (e.g., Trade Secret, Confidential, or Proprietary) Agency shall act as a stakeholder only, holding the information until otherwise ordered by a court or other legal process. If Agency is required to defend an action arising out of a Public Records Act request for any of the information Contractor has marked

"Confidential," "Proprietary," or "Trade Secret," Contractor shall defend and indemnify Agency from all liability, damages, costs, and expenses, in any action or proceeding arising under the Public Records Act.

15. RIGHT TO AUDIT: The Agency reserves the right to review and/or audit all Contractor's records related to the Work. The option to review and/or audit may be exercised during the term of the Contract, upon termination, upon completion of the Contract, or at any time thereafter up to twelve (12) months after final payment has been made to the Contractor. The Contractor shall make all records and related documentation available within three (3) working days after said records are requested by the Agency.

16. INTEGRATION: The Contract Documents represent the entire Contract made and entered into by and between the Agency and the Contractor as to those matters contained in this contract. No prior oral or written understanding shall be of any force or effect with respect to those matters covered by the Contract Documents. This Contract may not be modified, altered, or amended except by written mutual agreement by the Agency and the Contractor.

17. GOVERNING LAW: This Contract is to be governed by and constructed in accordance with the laws of the State of California, in the County of San Bernardino.

18. TERMINATION FOR CONVENIENCE: The Agency reserves and has the right to immediately suspend, cancel or terminate this Contract at any time upon written notice to the Contractor. In the event of such termination, the Agency shall pay Contractor for all authorized and Contractor-invoiced services up to the date of such termination, as approved by the Project Manager.

19. FORCE MAJEURE: Neither party shall hold the other responsible for the effects of acts occurring beyond their control; e.g., war, riots, strikes, natural disasters, etcetera.

20. LIQUIDATED DAMAGES: Liquidated Damages, in the amount of $500.00 per day, may be assessed by the Agency for each calendar day that the Contractor fails to complete the services in accordance with the Work Schedule. Any and all Liquidated Damages assessed by the Agency will be taken as a direct credit against the Contractor's invoice for the missed services. The Contractor's acceptance of this contract, shall serve to indicate acceptance of this Liquidated Damages clause, and the daily assessment of damages expressed in this section.

21. NOTICE TO PROCEED: No services shall be performed or provided under this Contract unless and until this document has been properly signed by all responsible parties and a notice to proceed has been issued to the Contractor by the Project Manager.

22. AUTHORITY TO EXECUTE CONTRACT: The Signatories, below, each represent, warrant, and covenant that they have the full authority and right to enter into this Contract on behalf of the separate entities shown below.

23. DELIVERY OF DOCUMENTS: The Parties to this Contract and the individuals named to facilitate the realization of its intent, with the execution of the Contract, authorize the delivery of documents via facsimile, via email, and via portable document format (PDF) and covenant agreement to be bound by such electronic versions.

The parties hereto have caused the Contract to be entered as of the day and year written above.

INLAND EMPIRE UTILITIES AGENCY: ***A MUNICIPAL WATER DISTRICT***		**CINTAS CORPORATION**	
P. Joseph Grindstaff General Manager	(Date)	Paul DiVincenzo Senior Executive	(Date)

Attachment A

FACILITIES SOLUTIONS AGREEMENT

Location No._____
Contract No._____
Customer No._____

Main Corporate Code **50716**
Tile & Carpet Corporate Code **50717**

Date 10.09.2017

Customer/Participating Agency **Inland Empire Utilities Agency** Phone_____

Address 6075 Kimball Ave City Chino State CA Zip 91708

UNIFORM PRODUCT RENTAL PRICING:

Item #	Description	Unit Price
	SEE SECTION A	

- This agreement is effective as of this date 10.9.2017, for a minimum term of 36 months. Any negotiations of price, terms or discounts must be approved by Harford County Public Schools, with any such changes taking effect on the anniversary date of the contract. All requests for price changes must be justified and based upon verifiable criteria which may include the Bureau of Labor Statistics Consumer Price Index (CPI-U) US City Average, Baltimore Region (Washington-Baltimore).
- Name Emblem $_1.50 _____ea • Company Emblem $___2.50_____ea
- Customer Emblem $_2.50 _____ea • Embroidery $___4.95_____ea
- COD Terms $__N/A_____per week charge for prior service (if Amount Due is Carried to Following Week)
- Credit Terms – Charge Payments due 30 Days After End of Month
- Automatic Lost Replacement Charge: Item____TOWELS_____ % of Inventory_____3_____ $_LISTED RATE SECTION B_Ea.
- Automatic Lost Replacement Charge: Item_____ % of Inventory_____ $_____Ea.
- Minimum Charge $___35.00_____per delivery.
- Make-Up charge $___1.95_____per garment.
- Non-Standard/Special Cut Garment (i.e., non-standard, non-stocked unusually small or large sizes, unusually short or long sleeve or length, etc.) premium $___.156 _____per garment.
- Seasonal Sleeve Change $____1.95 _____per garment.
- Under no circumstances will the Company accept textiles bearing free liquid. Shop towels may not be used to clean up oil or solvent spills. Shop towel container $__N/A_____per week.
- Artwork Charge for Logo Mat $__0.00_____
- Uniform Storage Lockers: $__3.628_____ea/week, Laundry Lock-up: $_0.00 -2.50__ea/week Shipping: $___F.O.B._____
- Service Charge $__0.00_____per delivery.
  This Service Charge is used to help Company pay various fluctuating current and future costs including, but not limited to, costs directly or indirectly related to the environment, energy issues, service and delivery of goods and services, in addition to other miscellaneous costs incurred or that may be incurred in the future by Company.
- Size Change: Customer agrees to have employees measured by a Cintas representative using garment "size samples". A charge of $_____1.95_____ per garment will be assessed for employee's size changed within 4 weeks of installation.
- Other_____

FACILITY SERVICES PRODUCTS PRICING:

Bundle*	Item #	Description	Rental Freq.	Inventory	Unit Price
		SEE SECTION B			

*Indicated bundled items/services

__/__☐ ____ Initial and check if Unilease. All Garments will be cleaned by customer
Date

__/__☒ ____ Initial and check if receiving Linen Service. Company will take periodic physical inventories of items in possession or under control Date customer.

__/__☐ ____ Initial and check if receiving direct embroidery. If service is discontinued for any employee or Customer deletes any of the garments Date direct embroidery for any reason, or terminates this agreement for any reason or fails to renew this agreement, Customer will purchase all direct embroidered garments at the time they are removed from service at the then current replacement values.

Cintas Loc. No:___150_____ CUSTOMER: Please Sign Name_____

By: _Paul DiVincenzo_____ Please Print Name _____

Title: Global Accounts: Major Account Manager Please Print Title_____

Accepted-GM: _____ Email_____

FACILITIES SOLUTIONS AGREEMENT

US Communities Participating Public Agencies Terms

1. Participating Public Agencies: Supplier agrees to extend the same terms, covenants agreed to under the Master Agreement with Lead Public Agency Harford County Public Schools to other government agencies ("Participating Public Agencies") that, in their discretion, desire to access the Master Agreement in accordance with all terms and conditions contained herein or attached hereto. Each participating Public Agency will be exclusively responsible and deal directly with Supplier on matters relating to length of agreement, ordering, delivery, inspection, acceptance, invoicing, and payment for products and services in accordance with the terms and conditions of the Master Agreement. Any disputes between a Participating Public Agency and Supplier will be resolved directly between them in accordance with and governed by the laws of the State in which the Participating Public Agency exists.
2. Master Agreement available at www.uscommunities.org

Supplier General Service Terms Section

3. **Prices** Customer agrees to rent from Company, and Company agrees to provide to Customer, the Merchandise, inventory and services described on Exhibit A, "Merchandise & Pricing" at the prices set forth in Exhibit A. There will be a minimum charge of thirty-five dollars ($35.00) per week for each Customer location required to purchase its rental services from Company as set forth in this Agreement.
4. **Buyback of Non-Standard Garments** Customer has ordered from Company a garment rental service requiring embroidered garments that may not be standard to Company's normal rental product line. Those non-standard products will be designated as such under Garment Description in Exhibit C. In the event Customer deletes a non-standard product, alters the design of the non-standard product, fails to renew the Agreement, or terminates the Agreement for any reason other than documented quality of service reasons which are not cured, Customer agrees to buy back all remaining non-standard products allocated to Customer that the Company has in service and out of service at the then current Loss/Damage Replacement Values.
5. **Garments' Lack of Flame Retardant Or Acid Resistant Features** Unless specified otherwise in writing by the Company, the garments supplied under this Agreement are not flame retardant or acid resistant and contain no special flame retardant or acid resistant features. They are not designed for use in areas of flammability risk or where contact with hazardous materials is possible. Flame resistant and acid resistant garments are available from Company upon request. Customer warrants that none of the employees for whom garments are supplied pursuant to this Agreement require flame retardant or acid resistant clothing.
6. **Logo Mats** In the event that Customer decides to delete any mat bearing the Customer's logo (Logo Mat) from the rental program, changes the design of the Logo Mats, terminates this agreement for any reason or fails to renew this Agreement, the Customer will purchase at the time of deletion, design change or termination, all remaining Logo mats that the Company has in service and out of service held in inventory at the then current Loss/Damage Replacement Value.
7. **Adding Employees** Additional employees and Merchandise may be added to this Agreement at any time upon written or oral request by the Customer to the Company. Any such additional employees or Merchandise shall automatically become a part of and subject to the terms of this Agreement. If such employees are employed at a Customer location that is then participating under this Agreement, the Customer shall pay Company the one-time preparation fee indicated on Exhibit A. Customer shall not pay Company any one-time preparation fee for garments for employees included in the initial installation of a Customer location. There will be a one-time charge for name and/or company emblems when employees are added to the program in garments requiring emblems.
8. **Emblem Guarantee** Customer has requested that Company supply emblems designed exclusively for Customer featuring Customer's logo or other specific identification (hereinafter "Customer Emblems"). Company will maintain a sufficient quantity of Customer Emblems in inventory to provide for Customer's needs and maintain a low cost per emblem through quantity purchases.
9. In the event Customer decides to discontinue the use of Customer Emblems, changes the design of the Customer Emblems, terminates this Agreement for any reason or fails to renew this Agreement, the Customer will purchase at the time of deletion, design change, termination or expiration, all remaining Customer Emblems that the Company allocated to Customer at the price indicated on Exhibit A of this Agreement. In no event shall the number of Customer Emblems allocated to Customer exceed the greater of (a) twelve (12) months' volume for each unique Customer Emblem or (b) a quantity agreed to by Company and Customer and noted on Exhibit A.
10. **Terminating Employees** Subject to the provisions of this Agreement, the weekly rental charge attributable to any individual leaving the employ of the Customer, or on a temporary leave of absence of three (3) weeks or more, shall be terminated upon oral or written notice by the Customer to the Company but only after all garments issued to that individual, or value of same at the then current Loss/Damage Replacement Values, are returned to Company.
11. **Replacement** In the event any Merchandise is lost, stolen or is not returned to Company, or is destroyed or damaged by fire, welding damage, acid, paint, ink, chemicals, neglect or otherwise, the Customer agrees to pay for said Merchandise at the then current Loss/Damage Replacement Values.
12. **Indemnification** To the fullest extent permitted by law, Company agrees to defend, indemnify, pay on behalf of and save harmless the Participating Public Agency, its elected and appointed officials, agents, employees and authorized volunteers against any and all claims, liability, demands, suits or loss, including reasonable attorneys' fees and all other costs connected therewith, arising out of or connected to the services provided by Company under this Contract, but only to the extent of Company's negligence.
13. **Additional Items:** Additional customer employees, products and services may be added to this agreement and shall automatically become a part of and subject to the terms hereof and all of its provisions. If this agreement is terminated early for convenience, the parties agree that the damages sustained by Company will be substantial and difficult to ascertain. Therefore, if this agreement is terminated by Customer prior to the applicable expiration date for any reason other than documented quality of service reasons which are not cured, or terminated by Company for non-payment by Customer at any time Customer, will pay to Company, as liquidated damages and not as a penalty based upon the following schedule:

    If this agreement is cancelled for convenience in the first twelve months of the term, Customer shall pay as liquidated damages equal to

50 weeks of rental service.

If this agreement is cancelled for convenience in months thirteen (13) through eighteen (18) of the term, Customer shall pay as liquidated damages equal to 36 weeks of rental service.

If this agreement is cancelled for convenience in months nineteen (19) through twenty-four (24) of the term, Customer shall pay as liquidated damages equal to 23 weeks of rental service.

If this agreement is cancelled after 24 months of service, Customer shall pay as liquidated damages of 10 weeks of rental service.

Customer shall also be responsible to return all of the Merchandise allocated to such Customer locations terminating this Agreement at the then current Loss/Damage Replacement Values and for any unpaid charges on Customer's account prior to termination.

Addendum To Facilities Solutions Agreement

Flame Resistant Garments

Cintas Corporation agrees to provide services to the agreed upon locations of

_____ as governed by the Facility Solutions Agreement entered into on _____by and between Cintas Corporation and _____. Both parties agree to the terms below.

• Customer bears full responsibility for selecting the fabrics under this agreement. Customer acknowledges that Company has made no warranty or covenant with respect to the flame-resistant qualities of the fabrics or garments or with respect to the fitness or suitability of the fabrics or garments for this purpose. Customer acknowledges that numerous manufacturers market fabrics represented to be flame-resistant. Company makes no independent representation as to the flame-resistant qualities of the fabric selected by Customer as compared to other available fabrics or fabrics which may become available in the future. Customer agrees to notify all employees of Customer who will be wearing the flame-resistant garments that the garments are not designed for long term high heat exposure or for use around open flames and that no representation is made as to the garment's ability to protect users from injury or death.

• Customer agrees to defend and hold the Company harmless from claims or other expenses resulting from personal injury or property damage from the use of the flame-resistant garments, except to the extent such personal injury or property damage results from or is contributed to by the negligence of the Company. Further, Customer releases Company from any and all liability that results or may result from the failure of the garments to function as flame resistant. Company shall pass through to the Customer the benefit of any manufacturers warranties related to any flame-resistant garments provided hereunder. Company warrants, represents and covenants that it shall clean and maintain the uniform merchandise provided hereunder according to industry standards on care and in a manner, that will not affect the flame-resistant quality of the uniforms or negate, void or negatively impact any such manufacturer's warranty.

• In consideration of the sizeable investment Company is making in flame-resistant garments, Customer guarantees Company minimum weekly revenue equal to 70% of the initial invoice; provided, however, the minimum weekly revenue amount will increase by an amount equal to 70% of any increases in the weekly invoice.

_____ _____

Cintas Corporation

Inland Empire Utilities Agency

SECTION A

Item	Item Number	Rental Unit Pricing	Loss Rate
Men's Long Sleeve Shirt	935	$0.186	$15.55
Men's Short Sleeve Shirt	935	$0.186	$15.55
Men's Long Sleeve Shirt (Cotton)	330	$0.249	$17.62
Men's Short Sleeve Shirt (Cotton)	330	$0.249	$17.62
Men's Long Sleeve Shirt (Oxford)	374	$0.259	$21.76
Men's Short Sleeve Shirt (Oxford)	374	$0.259	$21.76
Men's Polo Shirt	259/262	$0.276	$20.47
Men's Pants	945	$0.213	$18.39
Men's Pants (cotton)	340	$0.350	$24.61
Men's Pants (Jeans)	394	$0.301	$20.21
Men's Cargo Pants	270	$0.332	$27.46
Women's Long Sleeve Shirt	205	$0.176	$17.00
Women's Short Sleeve Shirt	205	$0.176	$17.00
Women's Long Sleeve Shirt (Oxford)	66528	$0.238	$22.07
Women's Short Sleeve Shirt (Oxford)	66528	$0.238	$22.07
Women's Polo Shirt	298	$0.276	$21.76
Women's Pants	395/390	$0.280	$21.76
Women's Pants (Jeans)	394	$0.301	$20.21
Chef Coats	82670	$0.238	$23.58
Chef Pants	71125	$0.332	$26.94
Aprons	67627	$0.147	$13.21
T-Shirts	268	$0.197	$16.06
Jacket (Lightweight) (per jacket)	677	$0.443	$32.13
Jacket (Heavyweight) (per jacket)	970	$0.425	$30.57
Coveralls (Poly Cotton Blend)-Per Coverall	912	$0.311	$30.57
Coveralls (Cotton)-Per Coverall	910	$0.425	$41.97
Coveralls (Insulated)-Per Coverall	914	$0.777	$75.64
Coveralls (FR)-Per Coverall	82302	$0.798	$81.87
FR Shirts (per shirt)	60694	$0.394	$43.53
FR Pants (per pant)	70644	$0.394	$40.42
Lab Coats (per coat)	925	$0.249	$30.57
Smocks	833	$0.166	$13.47
PLEATED PANTS	865	$0.289	$22.80
Women's Comfort Shirt	271	$0.192	$17.00
PREMIUM PRO-KNIT POLO SHIRTS	299	$0.320	$24.35
HIGH IMAGE JACKETS	366	$0.462	$51.82
00 White Polyester Butcher Coat	82497	$0.282	$24.87
80 Light Blue Polyester Butcher Coat	82497	$0.315	$27.98
CARHARTT SHIRT	384	$0.415	$24.87
CARHARTT 5 POCKET JEAN	381	$0.380	$26.00
CARHARTT CARPENTER JEAN	382	$0.420	$26.00
CARHARTT WORK PANT	383	$0.477	$26.94
CARHARTT FR SHIRT	294	0.360	$49.00
CARHARTT FR PANT	371	0.350	$44.00
CARHARTT FR COVERALL	391	0.760	$84.00
CARHARTT FR CARPENTER JEAN	290	0.500	$49.00
CARHARTT FR JEAN	280	0.500	$49.00
CARHARTT FR COVERALL - HIGH VISIBILITY	63686	1.053	$109.00
HI PERFORMANCE POLO	275	$0.382	$41.33
WOM HI IMAGE WORK SH	66273	$0.281	$32.26
POLO WMNS POLY SS	66275	$0.382	$41.33
Hi Visibility Shirt	59935	0.430	$28.43
Hi Visibility Shirt 100% Cotton	59330	0.640	$32.43
Hi Visibility Jacket	59970	0.418	$48.43
Soiled Hamper	N/A	N/A	N/A
Emblem (waived on initial install for first 30 days)	N/A	$2.500	N/A
Make Up Charge-waived on initial installation and for the first 30 days of service.	N/A	$1.950	N/A
Name Tag	N/A	$1.500	N/A
Delivery Fee	N/A	N/A	N/A
Size Premium	Price Per Garment	$0.156	
Lockers		$3.628	

SECTION B

	Item	Rental Unit Pricing	Loss Rate
	Automotive Parts Washer	$30.50	$0.00
2160	Cotton Towels	$0.06	$0.47
7432	Microfiber Towels	$0.16	$1.35
843XX	3x5 Carpet Mat	$2.07	$46.64
844XX	4x6 Carpet Mat	$2.56	$72.54
840XX	3x10 Carpet Mat	$3.05	$93.27
2477	3X5 Scraper Mat	$2.22	$46.64
1801	2X3 Spring Mat	$1.58	$51.82
1810	3X5 Duralite Mat	$2.41	$51.82
84301	3X5 Logo Mat	$2.40	$82.91
2570	24" Dust Mop	$0.83	$10.36
1946	24" Dust Mop Frame	$0.00	$8.29
2590	36" Dust Mop	$0.98	$10.36
1947	36" Dust Mop Frame	$0.00	$10.36
2604	48" Dust Mop	$1.30	$10.36
1948	48" Dust Mop Frame	$0.00	$12.44
2610	60" Dust Mop	N/A	N/A
1045	60" Dust Mop Frame	N/A	N/A
2650	Wet Mop	$1.43	$10.36
6998	11" Microfiber Mop	$0.28	$12.44
6999	11" Microfiber Mop Handle	$0.00	$5.18
7000	20" Microfiber Mop	$0.47	$7.25
7002	20" Microfiber Mop Handle	$0.00	$10.36
8704	3x5 Treadlock Mat	$5.27	$107.00
8705	4x6 Treadlock Mat	$5.74	$141.64
8706	3x10 Treadlock Mat	$7.96	$213.99
1802	3X5 SPRING STEP	$2.68	$66.24
84302	3X5 SAFETY MAT	$3.71	$66.24
1800	3X5 COFFEE MAT	$3.71	$66.24
84401	4X6 LOGO MAT **(requires buyback)**	$6.81	$180.00
84001	3X10 LOGO MAT **(requires buyback)**	$8.46	$229.28
1946	24' MOP FRAME	N/A	$10.19
1947	36" MOP FRAME	N/A	$10.19
1948	48" MOP FRAME	N/A	$10.19
1045	60" MOP FRAME	N/A	$10.19
6924	WOOD DUST MOP HANDLE	N/A	$10.19
6913	24OZ SYNTH WET MOP	$1.86	$15.29
6922	WOOD WET MOP HANDLE	N/A	$10.19
		$0.00	
6999	12" MICROFB MOP FRAME	N/A	$9.68
7002	20" MICROFB MOP FRAME	N/A	$10.19
7001	36" MICROFBR MOP	$0.58	$12.23
7003	36" MICROFB MOP FRAME	N/A	$15.29
6930	MICROFBR MOP CONTAIN	$13.76	$91.71
7432	12"x12" MICROFIBER WIPER (BLUE)	$0.17	$2.45
7433	12"x12" MICROFIBER WIPER (Orange)	$0.17	$2.45
7717	16" x 16" MICROFIBER WIPER (WHITE)	$0.17	$1.32
8020	MICROFIBER TUBE MOP	$2.29	$20.38
9338	ALCOHOL FOAM SANITIZER SERVICE - 1000 ml	$5.04	$25.48
9329	ALCOHOL FOAM SANITIZER REFILL - 1000 ml	N/A	N/A
9314	HEAVY DUTY SOAP SCRUB SERVICE - 1000 ml	$2.37	$25.48
9315	HEAVY DUTY SOAP SCRUB REFILL - 1000 ml	N/A	N/A
9326	ANTIBACTERIAL FOAM SOAP SERVICE - 800 ml	$2.27	$25.48
9327	ANTIBACTERIAL FOAM SOAP REFILL - 800 ml	N/A	N/A
9312	MOISTURIZING SOAP SERVICE - 1000 ml	$1.82	$25.48
9313	MOISTURIZING SOAP REFILL - 1000 ml	N/A	N/A
9330	PAINT REMOVER HAND SCRUB SERVICE - 1000 ml	$3.03	$25.48
9331	PAINT REMOVER HAND SCRUB REFILL - 1000 ml	N/A	N/A
9332	ANTIBACTERIAL GEL SOAP SERVICE (FOOD SVC) - 1000 ml	$1.82	$25.48
9333	ANTIBACTERIAL GEL SOAP REFILL (FOOD SVC) - 1000 ml	N/A	N/A
9320	HAIR & BODY WASH SERVICE - 1000 ml	$2.04	$25.48
9321	HAIR & BODY WASH REFILL - 1000 ml	N/A	N/A

9322	INSTANT HAND SANITIZER SERVICE - 1000 ml	$2.81	$25.48
9323	INSTANT HAND SANITIZER REFILL - 1000 ml	N/A	N/A
9348	ANTIBACTERIAL SPRAY SOAP SERVICE - 800 ml	$3.72	$25.48
9349	ANTIBACTERIAL SPRAY SOAP REFILL - 800 ml	N/A	N/A
9980	SOAP DISPENSER - WHITE	$0.00	$25.48
9982	AUTO SOAP DISPENSER - WHITE	$0.00	$35.67
2161	SM SHOP TWL-WHT	$0.13	$0.46
2169	SM SHOP TWL-BLUE	$0.11	$0.46
9025	C PULL TOWEL RFL (Bill by Roll)	$6.42	$20.38
9110	JRT TOILET PAPER RFL (Bill by Roll)	$4.59	$20.38
9023	C PULL TOWEL SVC (Only for Flat Bill*)	$1.97	$20.38
9025	C PULL TOWEL RFL (Flat Billing Refill)	N/A	N/A
9109	JRT TOILET PAPER SVC (Only for Flat Bill*)	$1.27	$20.38
9110	JRT TOILET PAPER RFL (Flat Billing Refill)	N/A	N/A
9305	ELECTRONIC PAPER DISPENSER	N/A	$112.09
9019	ELECTRONIC PAPER RFL (Flat Billing Refill)	$6.88	$20.38
7699	C PULL TOWEL CASE (Qty 6)	$43.10	N/A
7702	JRT TOILET PAPER CASE (Qty 12)	$47.69	N/A
2864	BIB APRON - WHITE	$0.33	$4.48
2873	BIB APRON - BLACK	$0.33	$4.48
2861	BIB APRON - RED	$0.33	$4.48
2700	TERRY TOWEL	$0.13	$1.32
2964	STRIPE SWIPE TOWEL	$0.17	$1.32
2750	RIBBED TERRY TOWEL	$0.13	$1.32
2702	BLUE TERRY TOWEL	$0.13	$1.32
2921	STRIPE GLASS TOWEL	$0.17	$1.32
2701	#2 TERRY TOWEL	$0.13	$1.32
3035	GRILL PAD	$0.11	$2.00
6116	MM AIR FRESHENER SVC	$2.93	$25.48
6123	MM AIR FRESHENER RFL	N/A	N/A
6122	MM AIR FRESHENER REFILL - MANGO PARADISE	N/A	N/A
6119	MM AIR FRESHENER REFILL - CITRUS SLICE	N/A	N/A
9295	MM AIR FRESHENER REFILL - CLEAN BREEZE	N/A	N/A
6124	MM AIR FRESHENER REFILL - CINNAMON	N/A	N/A
9231	AUTO DRIP CLEAN SVC	$2.81	$35.67
9232	AUTO DRIP MANGO RFL	N/A	N/A
6515	AUTO FLUSH CLAMP SERVICE	$2.81	$229.28
9154	TOILET SEAT CLNR SVC	$1.86	$15.29
9155	TOILET SEAT CLNR RFL	N/A	N/A
9214	URINAL SCREEN RFL - CINNAMON	N/A	N/A
9210	URINAL SCREEN SVC	$1.04	N/A
7420	SAFWASHR FLD RFL SW4	$0.00	$14.78
7524	SAFEWASHER FILTER	N/A	$14.27
7643	SAFEWASHER SW23 L/R	N/A	$1,681.35
7644	SAFEWASHER SW25 L/R	N/A	$1,681.35
7645	SAFWASHR FLD SW3 L/R		$14.78
7600	2 or 3 BUTTON DISPENSER INSTALL FEE* (ONE TIME CHARGE)	$50.95	N/A
7619	FOAMER DISPENSER INSTALL FEE (ONE TIME CHARGE)	$25.48	N/A
7500	CLEANING CHEMICAL DISPENSER MAINTENANCE FEE*	$2.75	$377.03
7550	3 COMPART SINK CHEMICAL DISPENSER MAINTENANCE FEE*	$2.75	$341.37
2294	FOAMING CHEMICAL DISPENSER MAINTENANCE FEE*	$2.75	$203.80
2271	FC1 - HEAVY DUTY FLOOR CLEANER	$1.28	N/A
2274	FC2 - BIO-BASED FLOOR CLEANER	$1.56	N/A
2282	FC3 - INDUSTRIAL FLOOR CLEANER/DEGREASER	$2.57	N/A
2272	FC4 - NEUTRAL FLOOR CLEANER	$0.73	N/A
2295	RR1 - HVY DTY RESTRM CLNR / DISINFECT - MOP BUCKET	$1.42	N/A
2275	GL1 - GLASS & MULTI-SURFACE CLEANER	$1.83	N/A
2276	RR1 - HVY DTY RESTRM CLNR / DISINFECT - BOTTLE	$2.80	N/A
2277	OC1 - ODOR COUNTERACTANT / FABRIC FRESHENER	$5.50	N/A
7544	FC1 - HEAVY DUTY CLEANER - BOTTLE	$1.28	N/A
7513	Z1 - HARD SURFACE SANITIZER	$3.07	N/A
2281	DG1 - HVY DTY FOAMING DEGREASER - BOTTLE / FOAMER	$1.38	N/A
2278	SK1 - POT & PAN DETERGENT	$1.10	N/A

2279	SK2 - THREE COMPARTMENT SINK SANITIZER	$1.10	N/A
7670	TRIGGER SPRAYER	$5.10	$5.10
7574	TRIGGER SPRAYER LABELS		$2.04
7716	QUAT STRIPS		$7.08
	*** Required for all Chemical Customers**		
7587	CINTAS DRAIN SERVICE	$31.59	$290.42
8523	DLM - DRAIN COVERS 2 INCH		$11.21
8524	DLM - DRAIN COVERS 3 INCH		$11.21
8526	DLM - DRAIN COVERS 4 INCH		$11.21
7705	SANIS ULTRACLEAN BASE CHARGE*	$30.57	N/A
7706	SANIS ULTRACLEAN SQ FT CHARGE*	$0.18	N/A
	* Weekly or EOW Billing Example: 4 restrooms measure 400 sq ft; 400 sq ft x $.183 = $73.20 + $30.57 Base Charge = $103.77		
	* Monthly Billing Example: 4 restrooms measure 400 sq ft; 400 sq ft x $.183 = $73.20 + $50.95 Base Charge = $124.15		
8000	8 COMPARTMENT HANGER LOCKER	$3.57	$504.41
8004	SOIL LOCK-UP	$3.01	$402.51
10196	3X5 TRAFFIC MAT - GRANITE	$4.05	$67.50
10197	4X6 TRAFFIC MAT - GRANITE	$5.18	$99.00
10198	3X10 TRAFFIC MAT - GRANITE	$6.30	$135.00
10199	4X8 TRAFFIC MAT - GRANITE	$7.43	$162.00

Attachment B

TECHNICAL PROVISONS/SCOPE OF WORK

Offerors services and responsibilities shall include and be in accordance with the following:

1. The Agency has approximately 130 employees who are required to wear Agency-provided uniforms. Offeror is required to provide a minimum of 11 sets of uniforms for each employee. The majority of employees will require five changes per week. A limited number of employees may require six changes per week. Approximately 100 employees will also require three coveralls per week. Approximately 13 employees will require eight lab coats, wearing four lab coats per week.

   Approximately: 130 employees who are required to wear Agency-provided uniforms.

   - 6 need yellow reflective safety shirts/cotton pants
   - 20 need fire resistant shirt/pant (HRC 2)
   - 22 need oxford shirt/dress pant
   - 75 need cotton button-up shirt/pant
   - 13 need lab coats

   Approximately 1,000 towels/week

   Additionally, the Agency utilizes approximately 150 various size floor mats and runners, throughout the Operations and Administrative office facilities. Floor mats/runners will require bi-weekly cleaning/changing.

2. All quantities indicated in the specification are approximations based on the Agency's current number of employees at the time of Contract execution. Actual quantities may vary during the Contract term.

SPECIFICATIONS:

1. The Agency will not be charged any additional fees inclusive, but not limited to, start-up costs, set-up or measuring fees, preparation charges, minimums, environmental fees or minor repair fees or fuel surcharge fees. No cost differential will be allowed for *petite, small, extra-large, extra-extra-large, or triple X sizes.*

2. Garments: All specifications shall apply to male and female, Offeror provided garments. **To ensure garments meet the Agency's requirements, the Agency may request samples of each type of garment, including proposed colors and material, be delivered to the Agency's Administrative Headquarters for review and approval.**

3. Quantity: The Offeror shall, at all times, be able to provide all required Agency personnel with the required amount of uniforms. Extra uniforms should be kept on-hand for emergency use/replacement at the Offeror's local warehouse, allowing for same day delivery or within a 24-hour time period.

4. Pants:

a. Standard Work Pants - Pants shall be available in **100% cotton** and/or **poly/cotton blend**, color(s) to be determined.

b. Supervisor Pants – Pants shall be available in a **cotton/poly blend**, with a pleated front. Color(s) to be determined.

c. Fire Resistant Work Pants – Pants shall be available which meet the National Fire Protection Association 70E requirements for **(HRC 2)**, color to be determined.

5. Shirts:

a. Standard Work Shirts - Shirts shall be available in **100% cotton** and/or **poly/cotton blend**, short or long sleeve, color(s) to be determined.

b. Fire Resistant Shirts - Shirts shall be available which meet the National Fire Protection Association 70E requirements for **(HRC 2)**, color to be determined.

c. Supervisor Shirt-Oxford Shirts shall be oxford style, short or long sleeve, **cotton/poly blend**, color(s) to be determined.

d. Reflective Safety Shirt – Shirt shall be available with reflective striping meeting California Manual Uniform Traffic Control Devices (MUTCD) Class III requirements.

6. Coveralls: All coveralls shall be available in full length, **100% cotton and poly/cotton blend,** long sleeve, color(s) to be determined. All coveralls are to be billed on an as-used basis.

7. Lab Coats: All lab coats shall be available in full length, poly/cotton blend, long sleeve, in white and blue.

8. Jackets: Agency owned jackets are to be laundered by successful Offeror on an as needed basis, and returned in the same condition as picked up. Should a jacket be damaged or lost during the laundering process, it shall be replaced with a like-quality garment by the Offeror within 14 calendar days of notification, at no charge to the Agency. Jackets for new employees may be purchased from the successful Offeror.

9. Offeror will make arrangements to have new employees measured at his/her delivery site as required. Measurements will be taken within seven calendar days of request. All required garments shall be provided within 14 calendar days of size submittal.

10. Garment Exchange: When requested by the Agency, Offerors shall exchange garments within 14 calendar days due to size or style changes, damages, or excessive wear and tear at no additional charge to the Agency.

11. Garment Identification: Each garment shall be labeled with the individual employee name which will be utilized in identifying respective Offeror charges on invoices.

12. Laundering: Each garment received by the Offeror during the regular delivery schedule, shall be laundered and returned no later than seven calendar days from pick-up. Offerors shall provide commercial quality "laundry bins", as necessary, at each delivery location for depositing soiled garments.

13. Towels:

    a. Bath: Offerors shall make available five towels per employee per week, better than "hotel quality", white, 100% cotton, 36" x 24" or larger. Towels shall be delivered clean, sterilized, lint-free and laundered in such a way as to keep them soft and free of foul odors; e.g., petroleum, solvent, etc. There shall be no stains, holes, ragged edges, or tears in any towels. The successful Offeror will be required to submit towel samples. All towels shall be invoiced on an as-used basis.

    b. Reserves: Offeror shall make available for each towel delivery location, a minimum reserve quantity of towels ranging from 50 to 100 each, depending upon demand and as determined by the Agency. There shall be no charge for supply of the reserve towels.

14. Repairs: All determinations regarding quality shall be made solely by the Agency. Offeror shall provide bags, repair tags, etc. for use with garments in need of repairs. Mending tape may be used to repair garment with rips and tears of less than one inch. Should repairs be extensive enough to affect the appearance of the garment, Offeror shall replace said garment with a new garment, in accordance with 15.b, below.

    a. Garments: Offeror shall provide bags, repair tags, etc. for garments requiring repair. Garments shall be returned fully-repaired within seven calendar days of request.

    b. Floor Mats/Runners: Any floor mat/runner requiring repair shall be replaced with same, in a "like-new" condition, within seven calendar days of request.

15. Replacement: Unless specified below, all determinations regarding quality issues shall be made solely by the Agency.

    a. Garments: The date the garment is first provided shall be noted on the uniform label. Offeror shall track, and replace garments, at no charge to the Agency, which are 24 months in age, within 14 calendar days of the 24-month period. Should the Agency consider garments to be in good repair, the 24-month period may be extended at the Agency's sole discretion. Garments will be replaced, at no charge to the Agency, prior to 24 months, if the Agency determines the garments to be excessively worn or damaged by the Offeror.

Any garment in need of replacement, as a result of an employee's unforeseen mishap, prior to the 24-month replacement period, shall be replaced at the Agency's sole expense, at the depreciated rate outlined under 15.b, below. All determinations regarding garment replacement shall be made solely by the Agency.

b. Any garments "lost" or damaged beyond repair by Agency staff shall be replaced, at the Agency's sole expense, at a depreciated rate as follows. It will be the Offeror's responsibility to prove that "lost" garments were newer than those garments originally provided.

- Garments less than six months old will be paid for at 75% of their value.
- Garments six months to one-year old will be paid for at 50% of their value.
- Garments one year to 18 months old will be paid for at 25% of their value.
- Garments 18 months and older will be replace at no charge to the Agency.

The Agency assumes no responsibility for garments "lost" by the Offeror, regardless of age.

c. Towels: Any towels requiring replacement shall be replaced with new towels, at no cost to the Agency.

16. Loaner Garments: In the event an employee is shorted garments during the regular delivery date, loaner garments in a quantity necessary to carry them over until the next regular delivery date, in like color and style, will be delivered to the employee's delivery location within 24 hours of notification, at no additional charge to the Agency.

17. Additions/Deletions: The Agency reserves the right to add or remove employee names, delivery locations, and floor mat/runner designations to or from the service roster as needed. The Agency will advise the Offeror of such additions/deletions in writing, and the date of such notification shall prevail. The Agency shall not incur any charges for changes.

18. Floor Mats/Runners: Offeror shall make available rubber backed, anti-skid, floor mats/runners, new or in like-new condition, in the following sizes, colors and safety style will be determined per location.

<u>Approximate Size</u>

3'x5' scraper mats
3'x5' black mats
4'x6' black mats
3'x10' black mats

Agency-owned logo mats will be included in the cleaning schedule. Logo mats damaged during the laundering process will be replaced with like mats by the Offeror at no charge to the Agency within 14 calendar days of notification.

19. Delivery:

a. Garments/Towels: The Agency shall establish a schedule whereas soiled garments and towels are picked up by the Offeror, and laundered items are delivered to respective Agency locations. The schedule shall be in seven calendar day intervals.

All garments shall be delivered on non-returnable wire hangers. Should the Offeror desire recycling of wire hangers, the Offeror shall provide an appropriate receptacle at each delivery location. The Agency shall not be responsible for the return of any hangers.

b. Floor Mats/Runners: The Agency and Offeror shall establish a schedule whereas floor mats/runners are received by the Offeror, and clean replacements are delivered to respective Agency locations. Agency-owned logo mats will be included in the cleaning schedule. Said schedules shall be in 14 calendar day intervals, as required. The Agency will adjust the quantities of floor mats/runners as required.

20. Weekly Reports: Offeror will provide the Agency with a weekly report on the number of soiled garments picked up from each person, at each location and the amount of clean garments delivered to each person, at each location. This may be reflected on the invoice or on a separate document.

D. DELIVERY LOCATIONS AND DAYS: The following delivery locations shall be included for service.

Delivery Location	**Delivery day**	**Estimated No. of Employees**
Administrative Headquarters/RP-5 6075 Kimball Ave. Chino, California	Thursday	32
Regional Plant No. 1, Complex 2450 E. Philadelphia St. Ontario, California	Thursday	37
Regional Plant No. 1, Warehouse/Maintenance 2662 E. Walnut Avenue Ontario, California	Thursday	29
Regional Plant No. 2 16400 El Prado Road Chino, California	Thursday	3

Regional Plant No. 4 12811 6th St. Rancho Cucamonga, California	Tuesday	12
Carbon Canyon Water Reclamation Facility 14950 Telephone Ave. Chino, California	Thursday	9
Chino Desalter Authority (CDA) 6905 Kimball Ave. Chino, California	Thursday	6
Inland Empire Reg. Composting Authority (RCA) 12645 6th St. Rancho Cucamonga, California	Tuesday	23

E. RECONCILIATION: The Offeror is required to provide the Agency with account reconciliation every three calendar months (hereinafter known as the "Reconciliation Anniversary"). Said reconciliation shall detail deficiencies in quantities of garments and related items, if any. The Offeror shall coordinate reconciliation activities with the Agency and provide a detailed list of any deficiencies. Failure of Offer to provide such listing within fourteen calendar days following the Reconciliation Anniversary, shall indicate that no deficiencies exist, that all required garments and related items are fully accounted for, and that the Offeror waives all rights to recovery from the Agency for potentially related undetermined losses. Offeror shall return all quantities of Agency employee garments to full complement, at no expense to the Agency, upon completion of reconciliation activities, and subject to Offeror finding no deficiencies. The total of all deficiencies for the last six-month reconciliation period prior to contract term-end, shall be limited to not greater than five percent of all issued quantities per individual employee inventory, towel inventory by location, or floor mat inventory by location.

Should the Offeror provide a listing of deficiencies to the Agency within the prescribed time, the Agency reserves the right to review and respond to the findings within 60 calendar days. Payments for approved deficiencies will be paid within 30 calendar days of approval by the Agency.

F. UNIFORM COORDINATORS: The Agency will provide the name of the employee who will serve as "Uniform Coordinator" for each delivery location. Each Uniform Coordinator shall have the authority, on behalf of the Contract Administrator, to make unilateral decisions for respective Agency locations, regarding garment repairs, replacements, size changes, maintenance of towel inventories, and coordination of reconciliation procedures. To the extent possible, Uniform Coordinators shall coordinate resolution of disputes/problems directly with Offeror's representative(s).

G. OTHER MATTERS: All other matters (e.g., Agency employee roster additions/deletions, etc.) related to this Contract, shall be at the direction of the Contract Administrator.

H. INVOICING: Invoices will be submitted weekly, or a minimum of bi-monthly to the Agency for payment. A separate invoice shall be provided for each delivery location and shall list

the delivery date, quantity of items picked up per employee, total per employee, quantity of items delivered per employee, and a grand total for the delivery location.

Charges for items that have been acknowledged by the Agency to be lost shall be itemized, by employee name, on a separate invoice.

I. RECORDS: Offeror must maintain a record of all Agency employee sizes and garment styles per employee and delivery location.

Attachment 2

MASTER AGREEMENT:
By and between:
HARFORD COUNTY PUBLIC SCHOOLS, MARYLAND
102 S. Hickory Avenure
Bel Air, MD 21014
AND
Cintas Corporation
6800 Cintas Blvd.
Mason, OH 45040

Contract #12-JLH-011C

THIS MASTER AGREEMENT made and entered into this 1st day of April, 2012, by and between Harford County Public Schools, Maryland (hereinafter referred to as "School District", "HCPS", or "District"), and Cintas Corporation, a corporation authorized to conduct business in the State of Maryland (hereinafter referred to as "Supplier").

This agreement is made on behalf of Harford County Public Schools, Maryland and other participating governmental agencies, through the U.S. Communities Government Purchasing Alliance.

WITNESSETH:

WHEREAS, pursuant to a request by the District, Supplier has submitted a proposal to provide a master agreement for a National Award covering the following: furnish, supply and deliver facilities solutions including the rental and service of uniforms, mats, mops and towels, and other related products and services in accordance with the scope, terms and conditions of Request for Proposal, RFP #12-JLH-011, addenda, amendments, appendices and related correspondence. The Request for Proposal is incorporated in its entirety and included as part of this agreement.

WHEREAS, HCPS desires to engage Supplier to perform said services; and

WHEREAS, HCPS and Supplier desire to state the terms and conditions under which Supplier will provide said services to Harford County Public Schools (Lead Agency) and participating public agencies who have registered with U.S. Communities.

NOW, THEREFORE, in consideration of the mutual covenants, condition and promises contained herein, the parties hereto agree as follows:

A. **Services:** Supplier will provide Facilities Solutions as detailed in the referenced RFP and related services for HCPS in its response to the heretofore referenced RFP to HCPS, which is attached hereto and incorporated herein as a part of this Master Agreement.

B. **Term:** The initial term of this Master Agreement shall be three (3) years from on or about April 1, 2012. This Master Agreement may then be renewed by mutual written agreement of the parties for two (2) additional, two (2) year periods.

C. **Compensation:** HCPS agrees to pay and Supplier agrees to accept as compensation for the

products provided pursuant to this Master Agreement, the following:

1. The price proposal set forth in the best and final RFP Response, dated March 15, 2012 and marked Amendment 1.

D. **Invoicing:** Supplier agrees to invoice HCPS as deliveries are completed or charge purchases to an authorized HCPS Visa credit card. Invoices shall be delivered to HCPS accounts payable. Each invoice shall include – as applicable – the following data: Item Number, Purchase Order Number, Item Description, Quantity purchased, Unit Price, Extended price and Delivery location. All purchase orders will be invoiced separately. Each invoice submitted by Supplier shall be paid by HCPS within thirty (30) days after approval. The Supplier has agreed to accept payment via a procurement credit card (i.e. Visa, MasterCard, etc.) which is the preferred method of payment.

E. **Insurance:** Supplier shall maintain at its own cost and expense (and shall cause any Subcontractor to maintain) insurance policies in form and substance acceptable to HCPS as detailed in the Request for Proposal.

F. **Termination of Contract:** This contract may be terminated as per the General Information of the RFP, Section 1, K (page 5) and General Requirements, Attachment G, VIII (page 85-86).

G. **Notification:** Notices under this Master Agreement shall be addressed as follows:

Jeffrey LaPorta, Supervisor of Purchasing
Harford County Public Schools
102 S. Hickory Avenue
Bel Air, MD 21014

Supplier:	Cintas Corporation
Attn:	Craig Jackson, Senior Global Account Manager
Address:	6800 Cintas Blvd
	Mason, OH 45040
Phone:	513-459-1200

The effective date of any notice under this Master Agreement shall be the date of receipt by the addressee. The failure of either party to give notice of default, or to strictly enforce or insist upon compliance with any of the terms or conditions of this Master Agreement, the waiver of any term or condition of this Master Agreement, or the granting of an extension of time for performance shall not constitute the permanent waiver of any term or condition of this Master Agreement. This Master Agreement and each of its provisions shall remain at all times in full force and effect until modified by the parties in writing.

H. **Governing Law:** This contract shall be interpreted under and governed by the laws of the State of Maryland. Disputes will be settled as per the stipulations contained within the Request for Proposal.

I. **Incorporation of Appendices:** All provisions of Appendices and Amendments are hereby incorporated herein and made a part of this Master Agreement. In the event of any

apparent conflict between any provisions set forth in the main body of the Master Agreement and any provision set forth in the Appendices and Amendments the provisions shall be interpreted, to the extent possible, as if they do not conflict. In the event that such an interpretation is not possible, the provisions set forth in the main body of this Master Agreement shall control.

J. **Entire Master Agreement:** This Master Agreement including the entire RFP solicitation and the Appendices attached hereto contain all the terms and conditions agreed upon by both parties. No other understandings, oral or otherwise, regarding the subject matter of this Master Agreement shall be deemed to exist or to bind any of the parties hereto. Any agreement not contained herein shall not be binding on either party, nor of any force or effect. The revised Best and Final Offer contained within Amendment 1 is also included and becomes part of the Master Agreement.

K. **Participating Public Agencies:** Supplier agrees to extend the same terms, covenants and conditions available to HCPS under this Master Agreement to other government agencies ("Participating Public Agencies") that, in their discretion, desire to access this Master Agreement in accordance with all terms and conditions contained herein or attached hereto. Each participating Public Agency will be exclusively responsible and deal directly with Supplier on matters relating to ordering, delivery, inspection, acceptance, invoicing, and payment for products and services in accordance with the terms and conditions of this Master Agreement. Any disputes between a Participating Public Agency and Supplier will be resolved directly between them in accordance with and governed by the laws of the State in which the Participating Public Agency exists.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS AGREEMENT IN THE YEAR AND DAY AS NOTED:

HARFORD COUNTY PUBLIC SCHOOLS, MARYLAND

by _____ 4/2/12
Superintendent of Schools **Date**

by _____ 4/10/12
Date

(Signature) President (Date)
Board of Education of Harford County

Attest: Kornelia M. Wilmoth

Cintas Corporation

by _____ 3/23/12
Senior Global Account Manager **Date**

Attest: Sandy Fiedelday 3/23/12

To access pricing information, please use your login at www.uscommunities.org.

HARFORD COUNTY
PUBLIC SCHOOLS
Inspire • Prepare • Achieve

Barbara P. Canavan, Superintendent of Schools
102 S. Hickory Avenue, Bel Air, Maryland 21014
Office: 410-838-7300 • www.hcps.org • fax: 410-893-2478

Purchasing Department
Jeffrey LaPorta, Supervisor of Purchasing
410-638-4083, jeff.laporta@hcps.org

CONTRACT #12-JLH-011C RENEWAL
April 1, 2017 – March 31, 2019

This contract renewal is made and entered into this 23rd day of March, 2016, by Harford County Public Schools, 102 South Hickory Avenue, Bel Air, Maryland (hereafter referred to as Owner) and Cintas, of 6800 Cintas Boulevard, Cincinnati, Ohio (hereafter referred to as Contractor).

WHEREAS, Owner and the Contractor have entered into an Agreement dated April 1, 2012 (hereafter referred to as the Contract), for the Contractor to furnish rental of uniforms and related facility solutions in accordance with RFP #12-JLH-011.

WHEREAS, the parties hereto desire to set the terms of the renewal to writing;

THEREFORE, for and in consideration of the mutual promises to each other, the parties do mutually agree to renew the Contract as per the conditions set forth in the original Contract, as follows:

1. Owner chooses to exercise its option to renew this contract for two (2) years for the time period from April 1, 2017 through March 31, 2019.
2. Current pricing structures, all other terms, conditions and provisions of the Contract remain in effect unless revised by formal Contract Amendment.

This is the last renewal option available for this contract.

IN WITNESS WHEREOF, Owner and the Contractor have executed the renewal agreement in duplicate originals, one of which is retained by each party the day and year written above.

HARFORD COUNTY PUBLIC SCHOOLS

By: Jeffrey LaPorta
Signature

Name: Jeffrey LaPorta

Title: Supervisor of Purchasing

Date: 3/28/16

CINTAS

By: _____
Signature

Name: Craig Jackson

Title: Global Account Manager

Date: 3/25/16

APPROVED
3-30-16
Finance Committee

ACTION ITEM 1C

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources Committee *11/08/17*

Executive Contact: Randy Lee, Executive Manager of Operations/AGM

Subject: Contract Award for Boiler Cleaning and Tune-Up Services

Executive Summary:

On September 7, 2017, a competitive Request for Proposal (RFP-RH-17-832) to provide semi-annual cleaning and annual tune-up for two boilers at Regional Water Recycling Plant No. 1 (RP-1) and two boilers at Regional Plant No. 2 (RP-2) over a three-year contract was issued to 22 prospective contractors through the PlanetBids Network. Two contractors participated in a non-mandatory job-walk and the same two were the only contractors to submit proposals.

The most comprehensive proposal, and determined to be the best value for the Agency, was submitted by R.F. MacDonald. This determination was based on past performance, current service at RP-1, and on the details R.F. MacDonald provided in meeting factory specifications and tolerances in their proposal.

Staff's Recommendation:

1. Award a three-year service contract for the RP-1 and RP-2 boilers semi-annual cleaning and annual tune-up services to R.F. MacDonald, in the amount of $122,154; and

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

Budget Impact: N *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Requested Amount:*

Account/Project Name:

Operations and Maintenance Professional Fees and Services

Fiscal Impact (explain if not budgeted):

Full account coding (internal AP purposes only): 10800 - 144155 - 503000 - 521010 Project No.: N/A

Prior Board Action:

None

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 as defined in Section 15301(b) of the State CEQA Guidelines.

Business Goal:

Asset Management - 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.

Attachments:

Attachment 1 - Service Contract No. 4600002432

Inland Empire
UTILITIES AGENCY

CONTRACT No. 4600002432

For Provision of Boiler Cleaning and Tune Up Services at

At

Regional Plant No. 1 and Regional Plant No. 2

THIS CONTRACT (the "Contract") 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 R.F. MacDonald Company of Santa Fe Springs, California (hereinafter referred to as "Contractor") for provision of the boiler maintenance services described herein.

NOW, THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties agree as follows:

1. PROJECT MANAGER ASSIGNMENT: All technical direction related to this Contract shall come from the designated Project Manager. Details of the Agency's assignment are listed below.

Agency's Project Manager:	David Correia
Address:	6075 "B" Kimball Ave.
	Chino, CA 91708
Telephone:	(909) 993-1734
E-mail:	dcorreia@ieua.org

2. CONTRACTOR ASSIGNMENT: Special inquiries related to this Contract and the effects of this Contract shall be referred to the following:

Contractor's Project Manager:	Michael Ricci
Address:	10261 Matern Place
	Santa Fe Springs, CA 90670
Telephone:	(714) 257-0900
E-mail:	mike.ricci@RFMacDonald.com

3. ORDER OF PRECEDENCE: The documents referenced below represent the Contract Documents; each of which is hereby incorporated as an integral part of this Contract. Where any conflicts exist between the General Terms and Conditions, or addenda attached, then the governing order of precedence shall be as follows:

    1. Amendments to Contract No. 4600002432
    2. Contract No. 4600002432 including Exhibit A
    3. Agency Request for Proposal No. RFP-RH-17-832
    4. Contractor's Proposal, dated September 26, 2017

4. SCOPE OF WORK AND SERVICES: Contractor services and responsibilities shall include and be in accordance with the Exhibit A - Statement of Work which appears at the end of this document.

5. TERM: The term of this Contract shall extend from the date of its bi-lateral execution and terminate December 31, 2020, unless an extension is agreed to by both parties, reduced to writing, and formally incorporated as an amendment to this Contract.

6. PAYMENT, INVOICING AND COMPENSATION: Contractor may submit its invoice after completion of each individual boiler cleaning and/or tune up event. Agency shall pay Contractor's properly executed invoice, approved by the Project Manager, within thirty (30) days following receipt of the invoice. Payment will be withheld for any service which does not meet the requirements of this Contract, until such service is revised, the invoice resubmitted and accepted by the Project Manager. As of January 1, 2016, all public works contractors and subcontractors must submit certified payroll records to the Labor Commissioner using the DIR's electronic certified payroll reporting (eCPR) system.

Throughout the term of this Contract, Contractor's invoices shall be formulated and submitted in accordance with the below-listed price schedule.

Annual Cleaning & Tune-Up of Boiler #1 at RP-1	$ 5,542.00 *
Annual Cleaning & Tune-Up of Boiler #2 at RP-1	$ 5,542.00 *
Annual Cleaning & Tune-Up of Boiler #1 at RP-2	$ 6,264.00 *
Annual Cleaning & Tune-Up of Boiler #2 at RP-2	$ 5,542.00 *
6 month Cleaning of Boiler #1 at RP-1 (No Tune-Up)	$ 4,457.00 *
6 month Cleaning of Boiler #2 at RP-1 (No Tune-Up)	$ 4,457.00 *
6 month Cleaning of Boiler #1 at RP-2 (No Tune-Up)	$ 4,457.00 *
6 month Cleaning of Boiler #2 at RP-2 (No Tune-Up)	$ 4,457.00 *

* Price includes all applicable taxes

Contractor's invoices shall be submitted as follows:

Inland Empire Utilities Agency
Attention: Accounts Payable Department
P.O. Box 9020
Chino Hills, CA 91709

OR invoices may be submitted electronically via: APGroup@ieua.org

Concurrent with invoice submittal to the Agency's Accounts Payable Department, the Contractor shall e-mail a copy of the submitted invoice to the Agency's designated Project Manager identified on page 1 of this Contract.

As compensation for all hardware and services satisfactorily provided under this Contract, Agency shall pay Contractor, on a **fixed unit price basis,** a total price not-to-exceed of **$ 122,154.00.**

7. LIQUIDATED DAMAGES: Liquidated Damages are not applicable to this contract.

8. CONTROL OF THE WORK: Contractor shall perform the Work in compliance with the Work Schedule established by the Agency's Project Manager. If performance of the Work falls behind schedule, the Contractor shall accelerate the performance of the Work to comply with the Work Schedule as directed by the Project Manager. If the nature of the Work is such that Contractor is unable to accelerate the Work, Contractor shall promptly notify the Project Manager of the delay, the causes of the delay, and submit a proposed revised Work Schedule.

9. FITNESS FOR DUTY:

   A. Fitness: Contractor and its Subcontractor personnel on the Jobsite:

      1. shall report for work in a manner fit to do their job;

      2. shall not be under the influence of or in possession of any alcoholic beverages or of any controlled substance (except a controlled substance as prescribed by a physician so long as the performance or safety of the Work is not affected thereby); and

      3. shall not have been convicted of any serious criminal offense which, by its nature, may have a discernible adverse impact on the business or reputation of Agency.

   B. Compliance: Contractor shall advise all contractor and subcontractor personnel and associated third parties of the requirements of this Contract ("Fitness for Duty Requirements") before they enter on the Jobsite and shall immediately remove from the Jobsite any employee determined to be in violation of these requirements. Contractor shall impose these requirements on its Subcontractors. Agency may cancel the Contract if Contractor violates these Fitness for Duty Requirements.

10. INSURANCE: During the term of this Contract, the Contractor shall maintain at Contractor's sole expense, the following insurance.

   A. Minimum Scope of Insurance:

   1. General Liability: $ 1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. Coverage shall be at least as broad as Insurance Services Office form number GL 00 01 10 01 covering Commercial General Liability. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location, or the general aggregate limit shall be twice.

   2. Automobile Liability: $ 300,000 combined single limit per accident for bodily injury and property damage. Coverage shall be at least as broad as Insurance Services Office form number CA 00 01 10 01, covering Automobile Liability, including "any auto."

   3. Workers' Compensation and Employers Liability: Workers' compensation limits as required by the Labor Code of the State of California and employers Liability limits of $1,000,000 per accident.

B. Deductibles and Self-Insured Retention: Any deductibles or self-insured retention must be declared to and approved by the Agency. At the option of the Agency, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Agency, its officers, officials, employees and volunteers; or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

C. Other Insurance Provisions: The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverage

a. The Agency, its officers, officials, employees, volunteers, property owners and any engineers under contract to the Agency are to be covered as insureds, endorsements CG2010 1185 as respects: liability arising out of activities performed by or on behalf of the Consultant, products and completed operations of the Consultant, premises owned, occupied or used by the Consultant, or automobiles owned, leased, hired or borrowed by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to the Agency, its officers, officials, employees or volunteers. If Form CG 2010 10 93 or CG 2010 03 97 are issued in place of the CG 2010 11 85 form, then it is necessary to issue Form CG 2037 10 01 in addition to the 10 93 or 03 97 Forms.

b. The Consultant's insurance coverage shall be primary insurance as respects the Agency, its officer, officials, employees and volunteers. Any insurance or self-insurance maintained by the Agency, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Agency, its officers, officials, employees or volunteers.

d. The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

e. The Consultant may satisfy the limit requirements in a single policy or multiple policies. Any Such additional policies written as excess insurance shall not provide any less coverage than that provided by the first or primary policy.

2. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Agency, its officers, officials, employees and volunteers for losses arising from work performed by the Consultant for the Agency.

3. All Coverages

Each insurance policy required by this contract shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the Agency.

D. Acceptability of Insurers: All insurance is to be placed with insurers with a Best's rating of no less than A minus:VII, and who are admitted insurers in the State of California.

E. Verification of Coverage: Consultant shall furnish the Agency with certificates of insurance and with original endorsements effecting coverage required by the Agency for themselves and all subcontractors prior to commencing work or allowing any subcontractor to commence work under any subcontract. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be approved by the Agency before work commences. The Agency reserves the right to require complete, certified copies of all required insurance policies, at any time.

F. Submittal of Certificates: Consultant shall submit all required certificates and endorsements to the following:

Roger Hughbanks, Contracts Administrator
Inland Empire Utilities Agency (via)
E-mail address: rhughbanks@ieua.org

11. LEGAL RELATIONS AND RESPONSIBILITIES

A. Professional Responsibility: The Contractor shall be responsible, to the level of competency presently maintained by other practicing professionals performing the same or similar type of work.

B. Status of Contractor: The Contractor is retained as an independent Contractor only, for the sole purpose of rendering the services described herein, and is not an employee of the Agency.

C. Observing Laws and Ordinances: The Contractor shall keep itself fully informed of all existing state and federal laws and all county and city ordinances and regulations which in any manner affect the conduct of any services or tasks performed under this Contract, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees, and shall protect and indemnify, as required herein, the Agency, its officers, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor or its employees.

D. Subcontract Services: Any subcontracts for the performance of any services under this Contract shall be subject to the written approval of the Agency's Project Manager.

E. Hours of Labor: The Contractor shall comply with all applicable provisions of California Labor Code Sections 1810 to 1817 relating to working hours

F. Travel and Subsistence Pay: The Contractor shall make payment to each worker for travel and subsistence payments which are needed to execute the work and/or service, as such travel and subsistence payments are defined in the applicable collective bargaining agreements with the worker.

G. Liens: Contractor shall pay all sums of money that become due from any labor, services, materials or equipment furnished to Contractor on account of said services to be rendered or said materials to be furnished under this Contract and that may be secured by any lien against the Agency. Contractor shall fully discharge each such lien at the time performance of the obligation secured matures and becomes due.

H. Conflict of Interest: No official of the Agency who is authorized in such capacity and on behalf of the Agency to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving this Contract, or any subcontract relating to services or tasks to be performed pursuant to this Contract, shall become directly or indirectly personally interested in this Contract.

I. Equal Opportunity and Unlawful Discrimination: During the performance of this Contract, the Contractor shall not unlawfully discriminate against any employee or employment applicant because of race, color, religion, sex, age, marital status, ancestry, physical or mental disability, sexual orientation, veteran status or national origin. The Agency is committed to creating and maintaining an environment free from harassment and discrimination. To accomplish these goals the Agency has established procedures regarding the implementation and enforcement of the Agency's Harassment Prohibition and Equal Employment Opportunity commitments. Please refer to Agency Policies A-29 (Equal Employment Opportunity) and A-30 Harassment Prohibition for detailed information or contact the Agency's Human Resources Administrator. A copy of either of these Policies can be obtained by contacting the Project Manager for your respective Contract. Please advise any of your staff that believes they might have been harassed or discriminated against while on Agency property, to report said possible incident to either the Project Manager, or the Agency's Human Resources Administrator. Please be assured that any possible infraction will be thoroughly investigated by the Agency.

J. Non-Conforming Work and Warranty: Contractor represents and warrants that the Work and Documentation shall be adequate to serve the purposes described in the Contract. For a period of not less than one (1) year after acceptance of the completed Work, Contractor shall, at no additional cost to Agency, correct any and all errors in and shortcomings of the Work or Documentation, regardless of whether any such errors or shortcoming is brought to the attention of Contractor by Agency, or any other person or entity. Contractor shall within three (3) calendar days, correct any error or shortcoming that renders the Work or Documentation unusable and shall correct other errors within thirty (30) calendar days after Contractor's receipt of notice of the error. Upon request of Agency, Contractor shall correct any such error deemed important by Agency in its sole discretion to Agency's continued use of the Work or Documentation within seven (7) calendar days after Contractor's receipt of notice of the error. If the Project Manager rejects all or any part of the Work or Documentation as unacceptable and agreement to correct such Work or Documentation cannot be reached without modification to the Contract, Contractor shall notify the Project Manager, in writing, detailing the dispute and reason for the Contractor's position. Any dispute that cannot be resolved between the Project Manager and Contractor shall be resolved in accordance with the provisions of this Contract.

K. Disputes:

1. All disputes arising out of or in relation to this Contract shall be determined in accordance with this section. The Contractor shall pursue the work to completion in accordance with the instruction of the Agency's Project Manager notwithstanding the existence of dispute. By entering into this Contract, both parties are obligated, and hereby agree, to submit all disputes arising under or relating to the Contract, which remain unresolved after the exhaustion of the procedures provided herein, to independent arbitration. Except as otherwise provided herein, arbitration shall be conducted under California Code of Civil Procedure Sections 1280, et. seq, or their successor.

2. Any and all disputes during the pendency of the work shall be subject to resolution by the Agency Project Manager and the Contractor shall comply, pursuant to the Agency Project Manager instructions. If the Contractor is not satisfied with any such resolution by the Agency Project Manager, they may file a written protest with the Agency Project Manager within seven (7) calendar days after receiving written notice of the Agency's decision. Failure by Contractor to file a written protest within seven (7) calendar days shall constitute waiver of protest, and acceptance of the Agency Project Manager's resolution. The Agency's Project Manager shall submit the Contractor's written protests to the General Manager, together with a copy of the Agency Project Manager's written decision, for his or her consideration within seven (7) calendar days after receipt of said protest(s). The General Manager shall make his or her determination with respect to each protest filed with the Agency Project Manager within ten (10) calendar days after receipt of said protest(s). If Contractor is not satisfied with any such resolution by the General Manager, they may file a written request for arbitration with the Project Manager within seven (7) calendar days after receiving written notice of the General Manager's decision.

3. In the event of arbitration, the parties hereto agree that there shall be a single neutral Arbitrator who shall be selected in the following manner:

   a. The Demand for Arbitration shall include a list of five names of persons acceptable to the Contractor to be appointed as Arbitrator. The Agency shall determine if any of the names submitted by Contractor are acceptable and, if so, such person will be designated as Arbitrator.

   b. In the event that none of the names submitted by Contractor are acceptable to Agency, or if for any reason the Arbitrator selected in Step (a) is unable to serve, the Agency shall submit to Contractor a list of five names of persons acceptable to Agency for appointment as Arbitrator. The Contractor shall, in turn, have seven (7) calendar days in which to determine if one such person is acceptable.

   c. If after Steps (a) and (b), the parties are unable to mutually agree upon a neutral Arbitrator, the matter of selection of an Arbitrator shall be submitted to the San Bernardino County Superior Court pursuant to Code of Civil Procedure Section 1281.6, or its successor. The costs of arbitration, including but not limited to reasonable attorneys' fees, shall be recoverable by the party prevailing in the arbitration. If this arbitration is appealed to a court pursuant to the procedure under California Code of Civil Procedure Section 1294, et. seq., or their successor, the costs of arbitration shall also include court costs associated with such appeals, including but not limited to reasonable attorneys' fees which shall be recoverable by the prevailing party.

4. Joinder in Mediation/Arbitration: The Agency may join the Contractor in mediation or arbitration commenced by a contractor on the Project pursuant to Public Contracts Code Sections 20104 et seq. Such joinder shall be initiated by written notice from the Agency's representative to the Contractor.

L. Workers' Legal Status: For performance against this Contract, Contractor shall only utilize employees and/or subcontractors that are authorized to work in the United States pursuant to the Immigration Reform and Control Act of 1986.

M. Prevailing Wage Requirements: Pursuant to Section 1770 and following, of the California Labor Code, the Contractor shall not pay less that the general prevailing wage rates, as determined by the Director of the State of California Department of Industrial Relations for the locality in which

the work is to be performed and for each craft or type of worker needed to execute the work contemplated under the Contract. The Contractor or any subcontractor performing part of said work shall strictly adhere to all provisions of the Labor Code, including, but not limited to, minimum wages, work days, nondiscrimination, apprentices, maintenance and availability of accurate payroll records and any other matters required under all Federal, State and local laws related to labor. Per Senate Bill #854, Contractors must register and meet public works/prevailing wage requirements using the on-line application/registration found at: www.dir.ca.gov/dlse/dlsepublicworks.html.

N. Department of Industrial Relations Compliance - Public Works Projects

- No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]. Registration with the Department of Industrial Relations is to be accomplished on-line via: www.dir.ca.gov/dlse/dlsepublicworks.html.
- No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. Registration with the Department of Industrial Relations is to be accomplished on-line via: www.dir.ca.gov/dlse/dlsepublicworks.html.
- As of January 1, 2016, all public works contractors and subcontractors must submit certified payroll records to the Labor Commissioner using the DIR's electronic certified payroll reporting (eCPR) system.
- This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

12. INDEMNIFICATION: Contractor shall indemnify and hold harmless and defend as permitted by law, the Agency, its directors, officers, employees, or authorized volunteers, each of them from and against:

A. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind or nature whatsoever for, but not limited to, injury to or death of any person including Agency and/or Contractor, or any directors, officers, employees, or authorized volunteers of Agency or Contractor, and damages to or destruction of property of any person, including but not limited to, Agency and/or Contractor or their directors, officers, employees, or authorized volunteers, arising out of or in any manner directly or indirectly connected with the work to be performed under this agreement, however caused, except for the sole negligence or willful misconduct or active negligence of the Agency or its directors, officers, employees, or authorized volunteers;

B. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, or every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of the Contractor;

C. Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respects to the failure, neglect, or refusal or Contractor to faithfully perform the work and all of the Contractor's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

13. OWNERSHIP OF MATERIALS AND DOCUMENTS/CONFIDENTIALITY: The Agency retains ownership of any and all partial or complete reports, drawings, plans, notes, computations, lists, and/or other materials, documents, information, or data prepared by the Contractor and/or the Contractor's subcontractor(s) pertaining to this Contract. Said materials and documents are confidential and shall be

available to the Agency from the moment of their preparation, and the Contractor shall deliver same to the Agency whenever requested to do so by the Project Manager and/or Agency. The Contractor agrees that same shall not be made available to any individual or organization, private or public, without the prior written consent of the Agency.

14. TITLE AND RISK OF LOSS:

A. Documentation: Title to any/all Documentation shall pass to Agency when prepared; however, a copy may be retained by Contractor for its records and internal use. Contractor shall retain such Documentation in a controlled access file, and shall not reveal, display or disclose the contents of the Documentation to others without the prior written authorization of Agency or for the performance of Work related to the Project.

B. Material: Title to all Material, equipment, procured or fabricated under the Contract shall pass to Agency when delivered to the Agency's job-site and such title shall be free and clear of any and all encumbrances. Contractor shall have risk of loss of any Material or Agency-owned equipment of which it has custody.

C. Disposition: Contractor shall dispose of items to which Agency has title as directed in writing by the Agency.

15. PROPRIETARY RIGHTS:

A. Rights and Ownership: Agency's rights to inventions, discoveries, trade secrets, patents, copyrights, and other intellectual property, including the Information and Documentation, and revisions thereto (hereinafter collectively referred to as "Proprietary Rights"), used or developed by Contractor in the performance of the Work, shall be governed by the following provisions:

1. Proprietary Rights conceived, developed, or reduced to practice by Contractor in the performance of the Work shall be the property of Agency, and Contractor shall cooperate with all appropriate requests to assign and transfer same to Agency.

2. If Proprietary Rights conceived, developed, or reduced to practice by Contractor prior to the performance of the Work are used in and become integral with the Work or Documentation, or are necessary for Agency to have complete enjoyment of the Work or Documentation, Contractor shall grant to Agency a non-exclusive, irrevocable, royalty-free license, as may be required by Agency for the complete enjoyment of the Work and Documentation, including the right to reproduce, correct, repair, replace, maintain, translate, publish, use, modify, copy or dispose of any or all of the Work and Documentation and grant sublicenses to others with respect to the Work and Documentation.

3. If the Work or Documentation includes the Proprietary Rights of others, Contractor shall procure, at no additional cost to Agency, all necessary licenses regarding such Proprietary Rights so as to allow Agency the complete enjoyment of the Work and Documentation, including the right to reproduce, correct, repair, replace, maintain, translate, publish, use, modify, copy or dispose of any or all of the Work and Documentation and grant sublicenses to others with respect to the Work and Documentation. All such licenses shall be in writing and shall be irrevocable and royalty-free to Agency.

B. No Additional Compensation: Nothing set forth in this Contract shall be deemed to require payment by Agency to Contractor of any compensation specifically for the assignments and assurances

required hereby, other than the payment of expenses as may be actually incurred by Contractor in complying with this Contract.

16. INFRINGEMENT: Contractor represents and warrants that the Work and Documentation shall be free of any claim of trade secret, trade mark, trade name, copyright, or patent infringement or other violations of any Proprietary Rights of any person.

Contractor shall defend, indemnify and hold harmless, Agency, its officers, directors, agents, employees, successors, assigns, servants, and volunteers free and harmless from any and all liability, damages, losses, claims, demands, actions, causes of action, and costs including reasonable attorney's fees and expenses arising out of any claim that use of the Work or Documentation infringes upon any trade secret, trade mark, trade name, copyright, patent, or other Proprietary Rights.

Contractor shall, at its expense and at Agency's option, refund any amount paid by Agency under the Contract, or exert its best efforts to procure for Agency the right to use the Work and Documentation, to replace or modify the Work and Documentation as approved by Agency so as to obviate any such claim of infringement, or to put up a satisfactory bond to permit Agency's continued use of the Work and Documentation.

17. NOTICES: Any notice may be served upon either party by delivering it in person, or by depositing it in a United States Mail deposit box with the postage thereon fully prepaid, and addressed to the party at the address set forth below:

Agency: Warren T. Green
Manager of Contracts & Procurement
Inland Empire Utilities Agency, a Municipal Water District
P.O. Box 9020
Chino Hills, California 91709

Contractor: Mike Ricci
Service Department Representative
R.F. MacDonald Co.
10261 Matern Place
Santa Fe Springs, CA 90670

Any notice given hereunder shall be deemed effective in the case of personal delivery, upon receipt thereof, or, in the case of mailing, at the moment of deposit in the course of transmission with the United States Postal Service.

18. SAFETY AND PROTECTION:

A. Precautions and Programs:

1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and safety programs in connection with the work or the activities of its employees, subcontractors and suppliers at the work site.

2. The Contractor and all its subcontractors shall comply with the provisions of the Safety and Health Regulations for Construction promulgated by the Secretary of Labor under Section 107 of the "Contract Work Hours and Safety Standards Act", as set forth in Title 29 C.F.R.

If the Agency is notified of an alleged violation of the Occupational Safety and Health Standards referred to in this Section and it is established that there has been a violation, for the period of time (duration) the violation occurred, the Contractor shall be subject to the daily liquidated damages defined elsewhere in this Contract.

3. The Contractor and all its subcontractors shall comply with the provisions of the Occupational Safety and Health Standards promulgated by the United States Secretary of Labor under the "Occupational Safety and Health Act of 1970', as set forth in Title 29, C.F.R. Where an individual state act related to occupational safety and health standards has been approved by a federal authority, then the provisions of said state act shall control.

4. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary supervision, control and direction to prevent damage, injury or loss to:

   a. All employees performing the work or on the work site and other persons and organizations who may be effected thereby;
   b. All the work, and materials and equipment to be incorporated therein, whether in storage on or off the work site; and
   c. All other property at the work site.

5. Contract work requiring confined space entry must follow Cal-OSHA Regulation 8 CCR, Sections 5157 – 5158. This regulation requires the following to be submitted to IEUA for approval prior to the Contractor's mobilization to the work site:

   a. Proof of training on confined spaced space procedures, as defined in Cal-OSHA Regulation 8 CCR, Section 5157.

   This regulation also requires the following to be submitted to IEUA for approval prior to entry of a confined space:

   b. A written plan that includes identification of confined spaces within the work site, alternate procedures where appropriate, Contractor provisions and specific procedures for permit-required and non-permit required spaces and a rescue plan.

6. The Contractor must also submit a copy of their Safety Program or IIPP for approval by the IEUA Safety and Risk Department prior to the start of the project at the work site.

19. SUCCESSORS AND ASSIGNS: All of the terms, conditions and provisions of this Contract shall inure to the benefit of and be binding upon the Agency, the Contractor, and their respective successors and assigns. Notwithstanding the foregoing, no assignment of the duties or benefits of the Contractor under this Contract may be assigned, transferred or otherwise disposed of without the prior written consent of the Agency; and any such purported or attempted assignment, transfer or disposal without the prior written consent of the Agency shall be null, void and of no legal effect whatsoever.

20. PUBLIC RECORDS POLICY: Information made available to the Agency may be subject to the California Public Records Act (Government Code Section 6250 et seq.) The Agency's use and disclosure of its records are governed by this Act. The Agency shall use its best efforts to notify Contractor of any requests for disclosure of any documents pertaining to Contractor.

In the event of litigation concerning disclosure of information Contractor considers exempt from disclosure; (e.g., Trade Secret, Confidential, or Proprietary) Agency shall act as a stakeholder only, holding the information until otherwise ordered by a court or other legal process. If Agency is required to defend an action arising out of a Public Records Act request for any of the information Contractor has marked

"Confidential," "Proprietary," or "Trade Secret, " Contractor shall defend and indemnify Agency from all liability, damages, costs, and expenses, including attorneys' fees, in any action or proceeding arising under the Public Records Act.

21. RIGHT TO AUDIT: The Agency reserves the right to review and/or audit all Contractor's records related to the Work. The option to review and/or audit may be exercised during the term of the Contract, upon termination, upon completion of the Contract, or at any time thereafter up to twelve (12) months after final payment has been made to Contractor. The Contractor shall make all records and related documentation available within three (3) working days after said records are requested by the Agency.

22. INTEGRATION: The Contract Documents represent the entire Contract of the Agency and the Contractor as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered by the Contract Documents. This Contract may not be modified, altered or amended except by written mutual agreement by the Agency and the Contractor.

23. GOVERNING LAW: This Contract is to be governed by and interpreted in accordance with the laws of the State of California.

24. TERMINATION FOR CONVENIENCE: The Agency reserves and has the right to immediately suspend, cancel or terminate this Contract at any time upon written notice to the Contractor. In the event of such termination, the Agency shall pay Contractor for all authorized and Contractor-invoiced services up to the date of such termination.

25. FORCE MAJEURE: Neither party shall hold the other responsible for the effects of acts occurring beyond their control; e.g., war, riots, strikes, natural disasters, etcetera.

26. CHANGES: The Agency may, at any time, make changes to this Contract's Scope of Work; including additions, reductions and other alterations to any or all of the work. However, such changes shall only be made via written amendment to this Contract. The Contract Price and Work Schedule shall be equitably adjusted, if required, to account for such changes and shall be set forth within the Contract Amendment.

27. NOTICE TO PROCEED: No services shall be performed or furnished under this Contract unless and until this document has been properly signed by all responsible parties and a Notice to Proceed order has been issued to the Contractor.

AS WITNESS HEREOF, the parties hereto have caused the Contract to be entered as of the day and year written above.

INLAND EMPIRE UTILITIES AGENCY,
A Municipal Water District:

P. Joseph Grindstaff (Date)
General Manager

R.F. MacDONALD COMPANY:

~~Chris Sellner~~ John Curcio 10/16/2017 (Date)
~~Vice President~~ General Manager

Subject to Attachment "A"

EXHIBIT A
STATEMENT OF WORK

Requestor	Tom Swezey	Request Date	9/7/2017
Project Manager	David Correia	Prepared By	David Correia
Department	Maintenance	Approved BY	Ken Monfore

PROJECT DESCRIPTION

Cleaning and Tune Up of two (2) boilers at Regional Plant No.1. (Hurst and Powerflame)
Cleaning and Tune Up of two (2) boilers at Regional Plant No.2. (Hurst and Burnham)

PROJECT LOCATIONS

Regional Plant No. 1: 2662 E. Walnut St., Ontario, CA 91761
Regional Plant No. 2: 16400 El Prado Road, Chino, CA 91708

SCOPE OF WORK

The selected contractor shall provide all labor, equipment and materials to perform the below-listed tasks per the frequency listed within the Project Schedule listed on Page 2 of this document upon boilers #1 and #2 at Regional Plant No.1, as well as boilers #1 and #2 at Regional Plant No. 2:

6 Month Boiler Inspection and Cleaning Tasks:

1. Lockout/tagout boiler from energy source.
2. Drain boiler and open waterside – hand holes, low water cut-offs, boiler connections for water columns, blowdown and feedwater inlet.
3. Wash all mud and scale out of belly of boiler and low water cut-off bowls. Clean fireside box and waterside, punch fireside tubes to remove debris and scale.
4. Sweep fire box clean.
5. Close-up waterside and fireside using new gaskets.
6. Inspect burner, tighten and lubricate all linkages.
7. Check and replace worn linkage ball joints, as needed.
8. Clean air damper.
9. Inspect pilot and adjust ignition electrode arc gap.
10. Remove lockout/tagouts and energize system.
11. Test operating controls for proper operation.
12. Generate and submit written report on overall condition of boiler.
13. Leave work area clean.

Annual Boiler Inspection, Cleaning and Tune-Up Tasks :

1. Lockout/tagout boiler from energy source.
2. Drain boiler and open waterside – hand holes, low water cut-offs, boiler connections for water columns, blowdown and feedwater inlet.
3. Wash all mud and scale out of belly of boiler and low water cut-off bowls. Clean fireside box and waterside, punch fireside tubes to remove debris and scale.
4. Sweep fire box clean.
5. Close-up waterside and fireside using new gaskets.
6. Inspect burner, tighten and lubricate all linkages.
7. Check and replace worn linkage ball joints, as needed.
8. Clean air damper.
9. Inspect pilot and adjust ignition electrode arc gap.
10. Remove lockout/tagouts and energize system.
11. Test operating controls for proper operation.
12. Tune-up on natural gas using electronic analyzer to adjust combustion for lowest emissions and maximum efficiency.
13. Tune-up on digester gas using electronic analyzer to adjust combustion for lowest emissions and maximum efficiency.
14. Generate and submit written combustion emission test results for SCAQMD referencing.
15. Generate and submit written report on overall condition of boiler.
16. Leave work area clean.

PROJECT SCHEDULE
Inspect and clean each of four boilers every six (6) months. Inspect, clean and perform TUNE-UP upon each of four boilers once per year.

PROJECT ASSUMPTIONS & APPLICABLE SPECIFICATIONS
Comply with all confined space regulations, PPE, OSHA

SINGLE/SOLE SOURCE?	☐ YES	☑ NO

PROJECT JUSTIFICATION
SCAQMD requirements

Inland Empire Utilities Agency
Boiler Cleaning and Tune Up Services
Regional Plant #1 and Plant #2
Contract # 4600002432
October 16, 2017

"R. F. MacDonald Co Attachment A"

The following agreed modifications apply to the general conditions printed on the Contract/Purchase order form:

Section 10: Insurance
Contractual liability coverage is per the insured contract wording included on ISO Form CG0001 (04/13) which excludes breach of contract.

Insurable Risks - Each party shall be liable for personal injury and property damage to the extent of the direct results of its negligence.

Section 11 (J) Warranty
Customer relies solely on the warranty provided by the manufacturer which is 18 months from shipment or 12 months from start-up, whichever occurs first.

R.F. MacDonald Co. warrants that labor performed will be free from defect for a period of one year from the completion of work. This limited warranty excludes remedy for damage or defect caused by accident, misuse, abuse, modifications not executed by R.F. MacDonald Co., improper or insufficient maintenance, or improper operation.

Fitness for purpose and merchantability shall be determined by conformance to the agreed contract specifications. Installation, operation, and maintenance shall be in accordance with the product manuals provided by Vendor. There are no implied or expressed warranties.

Section 12: Indemnification
Neither party shall be liable under this Agreement for indirect, incidental, special, environmental, liquidated, punitive or consequential damages howsoever arising under contract, tort, or any other theory of law: this provision shall govern where in conflict with any other provision of this Agreement.

Section 20: Audit
R.F. MacDonald is a privately owned and closely held corporation. Financial related records will only be released when legally required.

Seller _____ Date 10/16/2017

Purchaser _____ Date _____

ACTION ITEM 1D

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources *11/08/17*

Finance & Administration *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: RP-4 Trident Filters Construction Contract Award

Executive Summary:

In November 2016, IEUA awarded a consultant design contract to Carollo Engineers to manage the RP-4 Rehabilitation Projects from development to construction completion. During the project charter phase, it was determined that the trident filter system was in need of rehabilitation as three of the eight units are not functioning and a fourth is problematic. Due to the severity of the situation, the RP-4 Trident Filter Repair and Rehabilitation, Project No. EN17110.01, was created as an urgency project to rehabilitate the filters to improve the reliability and performance as well as maintain compliance with the NPDES permit.

On September 12, 2017, IEUA received four construction bids from pre-qualified contractors. J.F. Shea Construction, Inc., was the lowest responsive, responsible bidder with a bid price of $3,799,000. The construction contract was unanimously recommended for IEUA Board approval by the Regional Technical and Policy Committees.

Staff requests the existing contract with Carollo be amended by $454,858 to include engineering services, project management, and construction management, increasing the contract from $1,288,858 to $1,743,716.

Staff's Recommendation:

1. Award a contract for the RP-4 Trident Filters, Project No. EN17110.01, to J.F. Shea Construction, Inc. in the amount of $3,799,000;

2. Approve a contract amendment to Carollo Engineers for engineering services, project management, and construction management for a not-to-exceed amount of $454,858; and

3. Authorize the General Manager to execute the construction contract and consulting engineering services amendment subject to non-substantive changes.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:*

Account/Project Name:

EN17110/RP-4 Process Improvements Project

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 10800 - 127154 - 590000 Project No.: EN17110

Prior Board Action:

On November 16, 2016, the Board of Directors awarded a contract to Carollo Engineers for the project management and design services for the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and the RP-4 Process Improvements, Project No. EN17110, for a not-to-exceed amount of $1,288,858.

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 as defined in Section 15301(b) of the State CEQA Guidelines.

Business Goal:

The RP-4 Trident Filters Project is consistent with the Agency's Business Goal of Wastewater Management specifically the Asset Management objective that IEUA will ensure that 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.

Attachments:

Attachment 1 - Background
Attachment 2 - Powerpoint
Attachment 3 - Construction Contract
Attachment 4 - Consultant Engineering Amendment

Background

Subject: RP-4 Trident Filters Construction Contract Award

Regional Water Recycling Plant No. 4 (RP-4) began operation in July 1997, with an average daily liquid treatment capacity of seven million gallons per day (MGD) which was later expanded to 14 MGD in 2009. After over 20 years in service, some areas within the plant require rehabilitation due to the general deterioration of process components. IEUA's Asset Management Plan and a 2014 Condition Assessment Report recommended the Primary Clarifier Rehabilitation Project and the Process Improvement Project be implemented to mitigate the issues in the plant system infrastructure.

Due to the schedule and critical nature of these projects, the Engineering and Construction Management Department proposed an alternative project delivery approach for Project Management; using the services of a consulting firm to manage the project from development to construction completion. The goal of this approach was to create a seamless integration of the consulting project manager with IEUA staff to create a more efficient link between the project engineers and IEUA stakeholders. In November 2016, Carollo Engineers was awarded a contract for the project management and design services on the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and the RP-4 Process Improvement, Project No. EN17110.

Carollo began the process of preparing the project charter by coordinating meetings and plant walks with the Operations and Maintenance Department. During this process, a significant problem was discovered related to the trident filters in the tertiary treatment system. Three of the eight units are not functioning and a fourth is problematic. Staff re-directed Carollo to focus their team on preparing a fast track design/repair of the trident filter system.

This new scope item resulted in additional engineering and future construction management services. IEUA staff carefully reviewed all additional scope during the preparation of the project charter and agree that this work is necessary to keep the plant operating efficiently as well as within the limits of the National Pollutant Discharge Elimination System (NPDES) permit.

On August 8, 2017, IEUA pre-qualified five general contractors to bid on the project. On August 21, 2017, a request for bids was advertised to the pre-qualified contractors through PlanetBids. On September 12, 2017, the following four bids were received:

Bidder's Name	**Total Price**
J.F. Shea Construction, Inc.	$ 3,799,000
PCL Construction, Inc.	$ 3,809,757
SCW Contracting Corporation	$ 4,238,467
J.R. Filanc Construction Company, Inc.	$ 4,300,000
Engineer's Estimate	**$ 4,500,000**

J.F. Shea Construction, Inc., was the lowest responsive and responsible bidder with a bid price of $3,799,000. J.F. Shea Construction, was pre-qualified by presenting the required experience on performing similar projects with other utilities and cities and showing good workmanship and responsiveness. Additionally, J.F. Shea Construction has shown good performance on other IEUA projects.

In addition to the construction contract award, staff requests that the existing contract with Carollo Engineers be amended by $454,858 to include engineering services, project management, and construction management, increasing the contract from $1,288,858 to $1,743,716.

The following table is the anticipated project cost:

Description	Estimated Cost
Design Services	**$1,069,073**
Consultant Design	$657,594
Project Management	$189,346
Trident Filter Consultant Amendment (this action)	$167,441
IEUA Design Services	$54,692
Construction Services Estimate	**$2,763,561**
Trident Filter Engineering Services During Construction (this action)	$287,417
Remaining Engineering Services During Construction	$1,708,671
Construction Management	$298,113
IEUA Construction Services (2.5%)	$469,360
Construction Estimate	**$20,652,948**
Trident Filter Construction (this action)	$3,799,000
Remaining Construction	$14,976,408
Contingency (10%)	$1,877,540
Total Project Cost	**$24,485,582**
Total Project Budget	**$24,027,753**
Remaining Budget	**($457,829)**

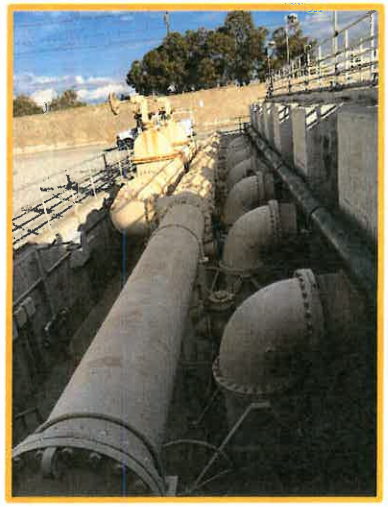
The following table is the project schedule:

Project Milestone	Date
Design Completion	August 2017
Construction Contract Award	November 2017
Construction Completion	March 2019

Fiscal Impact:

If approved, the construction contract award and consultant contract amendment for the RP-4 Rehabilitation, Project No. EN17110, for the combined amount of $4,253,858, will be within the total project budget of $17,466,763 in the Regional Wastewater Operations and Maintenance (RO) Fund. An estimated amount of $2,420,000 will be spent this fiscal year. The future year funding will be re-appropriated accordingly during the FY 2017/18 review of the Ten-Year Capital Improvement Plan.

RP-4 Trident Filters Rehabilitation and Replacement Construction Contract Award and Consultant Amendment Project No. EN17110.01



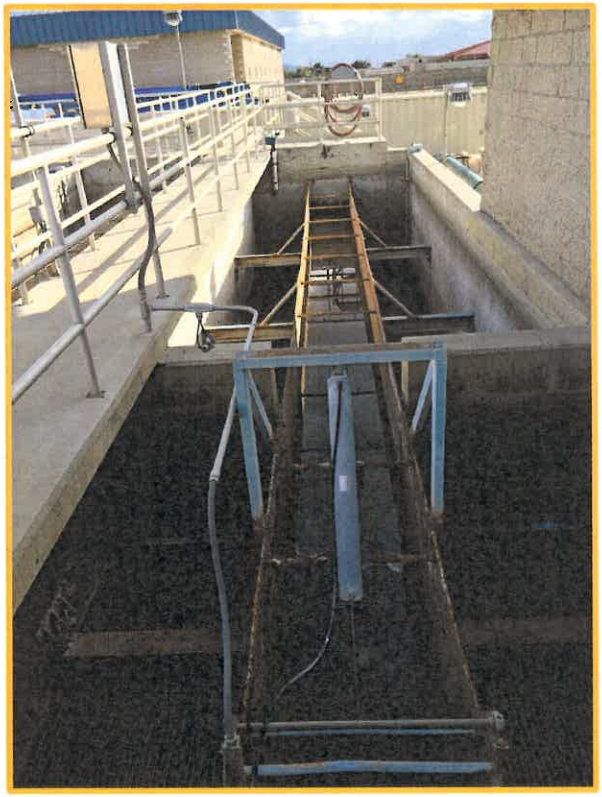
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Shaun J. Stone, P.E.
November 2017

The Project

- **Project Background**
  - Urgency project
  - Meet RP-4 operational and permit requirements
  - Three of eight filter units currently out of service
  - Fourth filter bay showing signs of failure
- **Project Scope**
  - Add weir covers, replace filters, and add backwash pumps

Weir Covers



Out of Service Filter Bay

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Contractor Selection

Four bids received on September 12, 2017

Bids Received

Bidder's Name	Total Price
J.F. Shea Construction, Inc.	$3,799,000
PCL Construction, Inc.	$3,809,757
SCW Contracting Corporation	$4,238,467
JR Filanc Construction	$4,300,000
Engineer's Estimate	**$4,500,000**

Project Budget and Schedule

Description	Estimated Cost
Design Services	**$1,069,073**
Consultant Design	$657,594
Project Management	$189,346
Trident Filter Consultant Amendment	$167,441
IEUA Design Services	$54,692
Construction Services Estimate	**$2,763,561**
Trident Filter Engineering Services During Construction	$287,417
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Construction Estimate	**$20,652,948**
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Remaining Construction	$14,976,408
Contingency (10%)	$1,877,540
Total Project Cost	**$24,485,582**
Total Project Budget	**$24,027,753**
Remaining Budget	**($457,829)**

Project Milestone	Date
PDR Completion	April 2018
Design Completion	October 2018
Construction Contract Award	February 2019
Construction Completion	March 2021

Recommendation

- Award a contract for the RP-4 Trident Filters, Project No. EN17110.01, to J.F. Shea Construction, Inc. in the amount of $3,799,000;
- Approve a contract amendment to Carollo Engineers for engineering services, project management, and construction management for a not-to-exceed amount of $454,858; and
- Authorize the General Manager to execute the construction contract and consulting engineering services amendment subject to non-substantive changes.

The RP-4 Trident Filters Project is consistent with the ***IEUA's Business Goal of Wastewater Management*** specifically the Asset Management objective that IEUA will ensure that 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.

CONTRACT

THIS CONTRACT, made and entered into this 15th day of November 2017, by and between J.F.Shea, hereinafter referred to as "Contractor," and The Inland Empire Utilities Agency, a Municipal Water District, located in San Bernardino County, California, hereinafter referred to as "Agency".

WITNESSETH:

That for and in consideration of the promises and agreements hereinafter made and exchanged, the Agency and the Contractor agree as follows:

1. Contractor agrees to perform and complete in a workmanlike manner, all work required under the bidding schedule of said Agency's specifications entitled SPECIFICATIONS FOR THE CONSTRUCTION OF THE RP-4 TRIDENT FILTER REHABILITATION AND REPAIR, PROJECT NO. EN17110.01, in accordance with the specifications and drawings, and to furnish at their own expense, all labor, materials, equipment, tools, and services necessary, except such materials, equipment, and services as may be stipulated in said specifications to be furnished by said Agency, and to do everything required by this Contract and the said specifications and drawings.

2. For furnishing all said labor, materials, equipment, tools, and services, furnishing and removing all plant, temporary structures, tools and equipment, and doing everything required by this Contract and said specifications and drawings; also for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise during the prosecution of the work until its acceptance by said Agency, and for all risks of every description connected with the work; also for all expenses resulting from the suspension or discontinuance of work, except as in the said specifications are expressly stipulated to be borne by said Agency; and for completing the work in accordance with the requirements of said specifications and drawings, said Agency will pay and said Contractor shall receive, in full compensation therefore, the price(s) set forth in this Contract.

3. That the Agency will pay the Contractor progress payments and the final payment, in accordance with the provisions of the contract documents, with warrants drawn on the appropriate fund or funds as required, at the prices bid in the Bidding and Contract Requirements, Section C - Bid Forms and accepted by the Agency, and set forth in this below.

Total Bid Price $ Three Million, Seven Hundred Ninety-Nine Thousand Dollars

and Zero Cents.

If this is not a lump sum bid and the contract price is dependent upon the quantities constructed, the Agency will pay and said Contractor shall receive, in full compensation for the work the prices named in the Bidding and Contract Requirements, Section C - Bid Forms.

4. The Agency hereby employs the Contractor to perform the work according to the terms of this Contract for the above-mentioned price(s), and agrees to pay the same at the time, in the manner, and upon the conditions stipulated in the said specifications; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.

5. The Notice Inviting Bids, Instructions to Bidders, Bid Forms, Information Required of Bidder, Performance Bond, Payment Bond, Contractors License Declaration, Specifications, Drawings, all General Conditions and all Special Conditions, and all addenda issued by the Agency with respect to the foregoing prior to the opening of bids, are hereby incorporated in and made part of this Contract, as if fully set forth.

6. The Contractor agrees to commence work under this Contract on or before the date to be specified in a written "Notice To Proceed" and to complete said work to the satisfaction of the Agency within four hundred and ten (410) calendar days after award of the Contract. All work shall be completed before final payment is made.

6. Time is of the essence on this Contract.

7. Contractor agrees that in case the work is not completed before or upon the expiration of the contract time, damage will be sustained by the Agency, and that it is and will be impracticable to determine the actual damage which the Agency will sustain in the event and by reason of such delay, and it is therefore agreed that the Contractor shall pay to the Agency the amount of three thousand ($3,000) dollars for each day of delay, which shall be the period between the expiration of the contract time and the date of final acceptance by the Agency, as liquidated damages and not as a penalty.

8. All work shall be completed before final payment is made. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by the Agency, and the Contractor agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, the Contractor agrees that the Agency may deduct the amount thereof from any money due or that may become due to the Contractor by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount per Item No. 7 of this Contract.

9. In addition to the liquidated damages, which may be imposed if the Contractor fails to complete the work within the time agreed upon, the Agency may also deduct from any sums due or to become due to the Contractor, penalties and fines for violations of applicable local, state, and federal law.

10. That the Contractor will pay, and will require subcontractors to pay, employees on the work a salary or wage at least equal to the prevailing salary or wage established for such work as set forth in the wage determinations and wage standards applicable to this work, contained in or referenced in the contract documents.

11. That, in accordance with Section 1775 of the California Labor Code, Contractor shall forfeit to the Agency, as a penalty, not more than Fifty ($50.00) Dollars for each day, or portion thereof, for each worker paid, either by the Contractor or any subcontractor, less than the prevailing rates as determined by the Director of the California Department of Industrial Relations for the work.

12. That, except as provided in Section 1815 of the California Labor Code, in the performance of the work not more than eight (8) hours shall constitute a day's work, and not more than forty (40) hours shall constitute a week's work; that the Contractor shall not require more than eight (8) hours of labor in a day nor more than forty hours of labor in a week from any person employed by the Contractor or any subcontractor; that the Contractor shall conform to Division 2, Part 7, Chapter 1, Article 3 (Section 1810, et seq.) of the California Labor Code; and that the Contractor shall forfeit to the Agency, as a penalty, the sum of Twenty-Five ($25.00) Dollars for each worker employed in the execution of the work by Contractor or any subcontractor for each day during which any worker is required or permitted to labor more than eight (8) hours in violation of said Article 3.

13. That the Contractor shall carry Workers' Compensation Insurance and require all subcontractors to carry Workers' Compensation Insurance as required by the California Labor Code.

14. That the Contractor shall have furnished, prior to execution of the Contract, two bonds approved by the Agency, one in the amount of one hundred (100) percent of the contract price, to guarantee the faithful performance of the work, and one in the amount of one hundred (100) percent of the contract price to guarantee payment of all claims for labor and materials furnished.

15. The Contractor hereby agrees to protect, defend, indemnify and hold the Agency and its employees, agents, officers, directors, servants and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of the Agency and the Contractor) and damage to property, arising directly or indirectly out of the obligation herein undertaken or out of the operations conducted by the Contractor, its employees agents, representatives or subcontractors under or in connection with this Contract to the extent permitted by law.

The Contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit at the sole expense of the Contractor.

IN WITNESS WHEREOF, The Contractor and the General Manager of Inland Empire Utilities Agency*, thereunto duly authorized, have caused the names of said parties to be affixed hereto, each in duplicate, the day and year first above written.

Inland Empire Utilities Agency,*
San Bernardino County, California.

By _____
General Manager

Contractor

By _____
Title

*A Municipal Water District

Bond Number _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, THAT, WHEREAS, the Inland Empire Utilities Agency, a Municipal Water District, hereinafter designated as the "Agency," has, on November 15, 2017, awarded to J.F. Shea, hereinafter designated as the "Principal," the Contract for the construction of:

RP-4 Trident Filter Rehabilitation and Replacement, Project No. EN17110.01

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the faithful performance of said Contract:

NOW, THEREFORE, WE, the Principal, and _____, as Surety, are held and firmly bound unto the Agency the penal sum of _____ dollars($_____) lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and will and truly keep and faithfully perform the covenants, conditions, and agreements in the said Contract and any alterations made as therein provided, on its or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless, Agency and engineer, their officers, agents, and employees as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and virtue and Principal and Surety, in the event suit is brought on this bond, will pay to Agency such reasonable attorney's fees as shall be fixed by the court.

As a condition precedent to the satisfactory completion of the said Contract, the above obligation in the said amount shall hold good for a period of one (1) year after the completion and acceptance of said Contract, during which time if the above bounden Principal, its heirs, executors, administrators, successors, or assigns shall fail to make full, complete, and satisfactory repair and replacements or totally protect said Agency from loss or damage made evident during said period of one year from the date of acceptance of the work under said Contract, and resulting from or caused by defective materials or faulty workmanship in the execution of the work done, the above obligation in the said amount shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligation of the Surety hereunder shall continue so long as any obligation of the Principal remains.

Bond Number _____

SECOND PAGE OF PERFORMANCE BOND

Said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed there under or the specifications accompanying the same shall, in any way, affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications. Said Surety hereby waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.

As a part of the obligation secured hereby and in addition to the amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by Agency in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their seals this_____day of _____, 20__, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

_____
Principal (print name)

_____
Signature for Principal (Corporate Seal)

Bond Number _____

THIRD PAGE OF PERFORMANCE BOND

_____
Surety (print name)

_____
Signature for Surety (Surety Seal)

Surety address

_____

_____

_____

ATTACH POWER-OF-ATTORNEY AND NOTARIAL ACKNOWLEDGEMENT OF SURETY BELOW

Bond Number _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT, WHEREAS, the Inland Empire Utilities Agency, hereinafter designated as the "Agency", has, on November 15, 2017, awarded to J.F. Shea, hereinafter designated as the "Principal," a Contract for the construction of:

RP-4 Trident Filter Repair and Rehabilitation, Project No. EN17110.01

WHEREAS, said Principal is required under the terms of said Contract to furnish a payment bond providing that if said Principal, or any of their subcontractors, shall fail to pay for any materials, provisions, or other supplies used in, upon, for, or about the performance of the work under said Contract, or for any work or labor done thereon of any kind, the Surety of this bond will pay the same to the extent hereinafter set forth:

NOW, THEREFORE, WE, the Principal, and_____, as Surety, are held and firmly bound unto the Agency the penal sum of _____ dollars ($ _____) lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, or its heirs, executors, administrators, successors, or assigns, shall fail to pay any person specified in California Civil Code Section 3181, or for any materials, provisions, or other supplies used in, upon, for, or about the performance of the work under said Contract, or for any work or labor thereon of any kind or for amount due under the Unemployment Insurance Code with respect to work or labor performed under said Contract, or for any amounts due, or to be withheld pursuant to Sections 18806 of the Revenue and Taxation Code of the State of California, or with respect to any work or labor for which a bond is required by the provisions of Sections 3247 through 3252 of the California Civil Code, and provided that the persons, companies, or corporations so furnishing said materials, provisions, or other supplies, appliances, or power use, in, upon, for, or about the performance of the work under said Contract, or any person who performs work or labor upon same, or any person who supplies both work and materials, thereto, shall have complied with the provisions of said Civil Code, then said surety will pay the same in or to an amount not exceeding the amount herein before set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fees to Agency as shall be fixed by the court.

Bond Number _____

SECOND PAGE OF PAYMENT BOND

This bond shall inure to the benefit of Agency and any and all persons, companies, and corporations and their respective assigns entitled to file claims under applicable State law, including but not limited to, California Civil Code Section 3181, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of said Contract or to the work to be performed there under or the specifications accompanying the same shall, in any way, affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications. Said Surety hereby waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.

As a part of the obligation secured hereby and in addition to the amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by Agency in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their seals this_____ day of _____, 2017, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

_____
Principal (print name)

_____
Signature for Principal

(Corporate Seal)

Bond Number _____

THIRD PAGE OF PAYMENT BOND

_____
Surety (print name)

_____
Signature for Surety (Surety Seal)

Surety address

_____

_____

_____

ATTACH POWER-OF-ATTORNEY AND NOTARIAL ACKNOWLEDGEMENT OF SURETY BELOW

WAIVER/RELEASE OF LIABILITY

I, the undersigned, on behalf of _____(hereinafter called Firm) fully understand that the storage or leaving of _____ at the Agency's _____ facility, located at _____ _____California, during the period of _____ to_____ exposes Firm to the risk of, but not limited to, theft, fire damage, vandalism, water damage, wind damage, and possible personal injury to Firm's employees. For the privilege of storing/leaving _____at said location, Firm agrees to assume any and all such risk.

In consideration of being able to store/leave said item(s) at said location, Firm hereby releases, agrees not to sue, or bring any action against, the Inland Empire Utilities Agency, its officers, employees, agents, representatives, and volunteers for any and all liability, claims, or actions for injury or death to Firm's employees, or damage or theft of said property arising out of, or in connection with, the storage or leaving of said item(s) at Inland Empire Utilities Agency's facility for whatever cause, excluding the purposeful actions or active negligence of the Inland Empire Utilities Agency, its officers, employees, agents, representatives, and volunteers.

I have carefully read this Waiver/Release of Liability and covenant not to sue, and fully understand its contents, and the possible exposures that Firm is agreeing to assume. I am aware that this Waiver/Release of Liability is a full release of any and all liability. I am signing such as the authorized agent of Firm, and of my own free will.

_____
Name of Firm

By: _____ _____
Representative's signature Date

_____ _____
Print Name Title

Approved: _____ _____
Date

Department Manager of Engineering signature

Distribution: Department Manager of Engineering, Construction Manager; Construction Project Manager; Supervisor; Risk Manager; Contractor, Subcontractor, Supplier, or Repair Person

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

CONTRACT AMENDMENT NUMBER: 4600002243-001

FOR

PROJECT MANAGEMENT AND DESIGN SERVICES

FOR THE RP-4 PRIMARY CLARIFIER REHABILITATION PROJECT NO. EN17043

AND RP-4 PROCESS REHABILITATION PROJECT Nos. EN17110 and EN17110.01

THIS CONTRACT AMENDMENT ONE 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 interchangeably as "IEUA" and "Agency") and Carollo Engineers, Inc. with offices located in Riverside, Irvine, and Los Angeles, California (hereinafter referred to as "Consultant") for Project Management and Design Services for the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and RP-4 Process Rehabilitation, Project Nos. EN17110 and EN17110.01, and shall revise the Contract as herein amended:

SECTION THREE, SCOPE OF WORK AND SERVICES, IS REVISED TO ADD THE FOLLOWING PARAGRAPH: Additional services and responsibilities shall include and be in accordance with **Exhibit C**, which is incorporated herein, attached hereto, and made a part hereof by this reference.

SECTION FIVE, COMPENSATION, REVISES THE SECOND PARAGRAPH AS FOLLOWS: As compensation for additional work performed under this Contract Amendment, Agency shall pay Consultant a ***NOT-TO EXCEED maximum of*** **$1,743,716.00, which represents an increase of $454,858.00 to the Contract**.

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.

[Signature Page Immediately Follows]

INLAND EMPIRE UTILITIES AGENCY:
(A Municipal Water District)

P. Joseph Grindstaff (Date)
General Manager

CAROLLO ENGINEERS, INC.:

Dr. Graham Juby, P.E. (Date)
Principal-in-Charge / Vice President

Eric M. Mills, P.E. (Date)
Senior Vice President

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Exhibit C

carollo
Engineers...Working Wonders With Water®

3400 Central Avenue, Suite 205, Riverside, California 92506
P. 951.776.3955 F. 951.776.4207

October 9, 2017

Mr. Jerry Burke
Deputy Manager of Engineering
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Subject: RP-4 Primary Clarifier and Process Rehabilitation Projects (EN17043, EN17110, EN17110.01) - Amendment No. 1 Justification and Request for Design, Project Management, Construction Management and Engineering Services during Construction for the Trident Filter Emergency Project (EN17110.01).

Dear Mr. Burke:

Carollo Engineers, Inc. (Carollo), is currently providing engineering services for the RP-4 Primary Clarifier and Process Rehabilitation projects (EN17043, EN17110, EN17110.01). In the execution of these projects it was decided to accelerate the portion of the work associated with the replacement of the Trident Filters emergency project (EN17110.01). This letter details the background of the project and describes additional services that are required to perform design, project management, construction management and engineering services for this accelerated project element. The intent of this letter is to provide the justification for an amendment of our current Agreement to provide the services that are detailed in this letter.

Background

In October 2016, Carollo was selected by the Inland Empire Utilities Agency (IEUA) for the RP-4 Primary Clarifier and Process Rehabilitation project identified in RFP-RW-16-021, which incorporated two separate projects EN17043 and EN17110. The project development phase for these two projects kicked-off in January 2017. As project development progressed for these projects, it became apparent around April/May 2017 that repair and rehabilitation work associated with the Trident Filters at RP-4 needed to be completed in an expedited manner in order to continue meeting plant operational and permit requirements. Project EN17110.01 was created as a sub project to EN17110 for this expedited emergency work.

Carollo, under the direction of IEUA, proceeded with expedited design services for EN17110.01.

The Trident Filter emergency project (EN17110.01) is currently in the bid phase, with anticipated construction award date in November 2017. In order for Carollo to continue providing services for this project (EN17110.01), the Carollo Agreement requires an amendment to include construction management, and engineering services during construction, as well as the design and project management services that were not included in the original Agreement.

Additional Scope of Work Items

Additional scope of work items for the Trident Filters project (EN17110.01) are presented below. These items were not included with the Agreement's original scope of work.

- Remove material (sand, gravel, anthracite) and inspect/refurbish/replace underdrains, and load new material – sand, gravel and anthracite for Trident Filters (EN17110.01).

- Replace/refurbish deteriorated steel components and elements for Trident Filters (EN17110.01).
- Following a backwash event for the Trident Filters, currently an air column will develop in the backwash header. When the system goes to backwash the filters they initially blow air onto the filter media blowing off media unintentionally. This wastes filter media unnecessarily adding operational cost to the facility. Check valves leak, may need to add additional air valves to header and/or replace check valves (EN17110.01).
- Install wiring and SCADA control logic and screens for Trident Filters to allow for operations to open/modulate/close control valves through SCADA (EN17110.01).
- Upgrade Trident Filter instrument air compressors. Ensure compressors have the capability to share load in auto for even load sharing (EN17110.01).
- Upgrade Trident Filter compressed air driers and add higher capacity air tank receiver(s). Preferred if air driers are disposable/replaceable. Preferred if air tank receivers are outside of the building to allow for easier access for maintenance to building inside and outside components (EN17110.01).
- Provide local and SCADA control of Trident Filter instrument air compressors Nos. 1 and 2. Air compressors currently have limited local control requiring use of screw drivers for set points, etc. (EN17110.01).
- Provide new eight new multi-wash backwash troughs for the Trident Filters (EN17110.01).
- Replace quills for mixers downstream of chlorine injections (EN17110.01).
- For air distribution system and influent water distribution system at clarifier zone, replace rubber gaskets and victaulic couplings. Inspect 2-inch air laterals, and replace air laterals, as needed. Assume ten percent replacement of 2-inch air laterals (EN17110.01).
- Replace basket screens on AC drain pipes, including associated hardware and gaskets (EN17110.01).
- For filter underdrain system, replace all the tri-seals, hold down nuts and washers. Order 10 percent of PVC Triton underdrains to replace broken/damaged underdrains. Inspect underdrains and replace, as needed (EN17110.01).
- Remove all remnants of ultrasonic level transducers in filter zone - one per filter (eight total). Replace existing filter pressure level transducers with ultrasonic level transmitters, and replace filter level switches (EN17110.01).
- Install pressure transmitters at clarifier side - one per clarifier (eight total). Also install flush connections to prevent pressure transmitters from clogging (EN17110.01).
- Install new low rate backwash pumps. Replace existing 6-inch gate valves, 6-inch check valves, and 6-inch magmeter. Replace 6-inch pump columns and strainers. Run new electrical and control wiring to pumps and meter (EN17110.01).
- At 6-inch low rate backwash pipeline, replace 6-inch pneumatic butterfly valve and actuator. Also install 6-inch butterfly valve at the end of this pipe per drawings and connect it back with low rate backwash pump discharge line (EN17110.01).
- On high rate backwash pumps discharge lines, replace existing 16-inch check valves (EN17110.01).

- Add one 2-inch air release valve on 20-inch backwash header (EN17110.01).
- Replace filter air scour 6-inch and 8-inch butterfly valves and actuators and 8-inch check valves in filter air scour system (EN17110.01).
- Replace 12-inch influent plug valves and actuators. Also replace 12-inch influent plug valve for filter number eight immediately downstream of influent header (EN17110.01).
- Replace 20-inch pneumatic butterfly valve and actuator located at backwash water header (EN17110.01).
- Provide new secondary clarifier effluent channel weir covers for three secondary clarifiers (EN17110.01).
- Add additional utility water connections for secondary clarifiers (EN17110.01).
- Provide rolling access scaffolding for secondary clarifiers, one for each clarifier (EN17110.01).

Effort expended for Design and Project Management

The majority of the design work and project management effort for the Trident Filer project was not included in the Agreement's original Scope of Work. For project management, the major effort was expended for project development and for participation in four separate workshops specific to the Trident Filters project. These four workshops are described as follows:

- A three-hour workshop and site walk with IEUA operations and maintenance staff to better understand Trident Filter issues.
- A three-hour workshop and site walk with West Tech and IEUA operations and maintenance staff to develop scoping for the Trident Filter project.
- A three-hour workshop and site walk with West Tech technical staff and IEUA operations and maintenance staff to develop design for the Trident Filter project.
- A three-hour workshop to present and obtain feedback from IEUA operations and maintenance staff on draft design/bid documents for the Trident Filter project.

The majority of design effort expended for the Trident Filter project consisted of drawing development, specification development, and full IEUA front-end document development for the additional scope of work items noted above, including:

- Preparation of one hundred and eight (108) marked-up record drawings, fabrication (submittal) drawings, bill of material drawings, and manufacturer cut sheet drawings to construction bid level for construction purposes.
- Preparation forty-two (42) specification sections to construction bid level for construction purposes.
- Preparation of a full IEUA front-end document to construction bid level for construction purposes.

Project design was delivered on a fast track schedule considering the emergency nature of this project. The planning and design work began in May, 2017 and the bid package was issued to prospective construction bidders on August 21, 2017.

Level-of-Effort Approach for Construction Management and Engineering Services during Construction

Our level-of-effort approach and fee estimate for construction management (CM) and engineering services during construction (ESDC) for the Trident Filter emergency project (EN17110.01) is summarized below.

The low bid for the Trident Filter emergency project (EN17110.01) was $3.8M, with a construction duration of approximately twelve months through substantial completion. The majority of the equipment for this project, which will be supplied by West Tech, is anticipated to arrive on site in approximately six to seven months after notice of construction award. Therefore, the majority of construction management and inspection work will occur during the final six months of the construction phase. Level-of-effort man loading for CM services has been budgeted accordingly.

Carollo is proposing to use **Brian Wilson** as our construction manager for this expedited project, and his services will be needed throughout the construction phase. During initial stages of construction, Brian will be involved with submittal review, schedule review, setting up document control procedures, attending and leading construction meetings, etc. During the latter stages of construction, Brian will be more heavily involved with construction oversight activities. We anticipate Brian will need to support the project with approximately 25 percent (1/4 time) of his time over the 12-month project duration.

Tim VanDamme is our proposed general inspector for this project. Tim will provide general inspection services covering civil, structural, and mechanical works. We anticipate that Tim will need to support the project full-time for a four to five-month period during the latter stages of the project, once the majority of the equipment has been delivered.

John Benusik is our proposed electrical inspector for this project and he will provide electrical and I&C inspection services. We anticipate that that John will need to support the project for about 180 hours during the latter stages of construction.

Miscellaneous materials testing services are also anticipated for this project with an estimated upper limit of $6,500. Additional assumptions related to construction management services include:

- Inspectors are paid prevailing wage rate.
- Contractor labor compliance is not included.
- Contractor, or IEUA, will furnish field office space for the construction manager and general inspector, including computers, printers, paper, etc.
- Construction management staffing is based on the baseline project schedule. If the actual construction duration deviates from the baseline project schedule, then a mutually agreeable revision to the construction management fee estimate will be necessary to account for the revised level-of-effort needed to support an extended construction duration. The baseline project schedule construction duration is 11.5 months through substantial completion, and two months are allocated for project closeout after substantial completion up until final completion.

Carollo also intends to support the project with engineering services during the construction phase. These services consist of submittal review, response to Contractor RFIs and RFCs that cannot be addressed by the

construction manager, change order review technical support, preparation of design document clarifications, and preparation of record drawings. Level-of-effort assumptions for engineering services during construction include:

- Review twelve submittals and ten re-submittals.
- Respond to twenty Contractor RFIs/RFCs.
- Technical support for two Contractor change order requests.
- Prepare two design document clarifications.
- Update twenty drawings for record drawing purposes. It is assumed that the record drawings would be a modification of the marked-up sheets used for bidding. New CAD drawings are not included.

Fee Estimate

Our proposed fee for design, project management, construction management and engineering services during construction for the RP-4 Trident Filter emergency project (EN17110.01) is summarized below and shown in detail in the attached fee estimate.

Table 1 Amendment No. 1 Fee Estimate

Project Scope Item	Fee
Project EN17110.01	
PM and Workshops	**$ 53,466**
Engineering Services	**$ 113,975**
Environmental Document Coordination	*$ 3,665*
Design and Bid Package Development	*$ 102,312*
Bid Support	*$ 7,998*
Construction Management (CM)	**$ 218,210**
Engineering Services During Construction (ESDC)	**$ 69,207**
EN17110.01 TOTAL	***$ 454,858***
TOTAL ORIGINAL AGREEMENT	**$ 1,288,858**
TOTAL AMENDMENT No. 1 (EN17110.01)	**$ 454,858**
NEW CONTRACT TOTAL	**$ 1,743,716**

Carollo requests that IEUA review the described level-of-effort and the assumptions contained in this letter for discussion purposes. Once IEUA and Carollo have an agreed level-of-effort and associated fee, an amendment to the existing Agreement (Amendment No. 1) will need to be executed.

We appreciate the opportunity to continue providing services to IEUA. Please contact either of the undersigned should you have any questions or require any further clarifications or additional information on the contents of this letter.

Sincerely,

CAROLLO ENGINEERS, INC.

Graham J.G. Juby, Ph.D., P.E.
Vice President

Roland Pilemalm, P.E.
Associate Vice President

GJ/RPI:jrb

Encl: Detailed Labor Hour Breakdown and Fee Estimate

Inland Empire Utilities Agency

RP-4 Primary Clarifier Rehabilitation and Process Rehabilitation, Project Nos. EN17043, EN17110 and EN17110.01

Work Breakdown Structure and Fee Estimate - Amendment No. 1 (EN17110.01)

Task Description	ESTIMATED LABOR HOURS													SUBS	TOTAL COSTS			
	Senior Professional	Lead Project Professional	Project Professional	Professional	Assistant Professional	Senior Technician	Technician (CAD)	Construction Manager	General Inspector	Scheduler	Electrical Inspector	Document Processing	Total Hours (incl sub hours)	Geotechnical, Survey and Materials Test	Labor Cost	PECE	Other Direct Costs	Total Costs
Hourly Rate	$265	$252	$230	$194	$159	$167	$119	$160	$145	$175	$145	$110						
EN17110.01																		
Task 7 - Project Management (EN17110.01)																		
7.1: Project Management	12	52		22						12			98		$22,652	$1,147	$350	$24,149
7.1.1: Scoping and Design Workshops	16	28	28	28	28								128		$27,620	$1,498	$200	$29,318
Sub-total - Task 7	**28**	**80**	**28**	**50**	**28**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**226**	**$0**	**$50,272**	**$2,644**	**$550**	**$53,466**
Task 8 - Design Services (EN17110.01)																		
8.1: Verify Existing Condiditions			4	4	4								12		$2,332	$140	$100	$2,572
8.2: Environmental Documentation Coordination		8		4	4								16		$3,428	$187	$50	$3,665
8.4: Bid Package																		$0
8.4.2: Draft Drawings and Technical Specifications	8	40	60		120							24	252		$47,720	$2,948	$200	$50,868
8.4.3: Draft Front End Specs (Standard IEUA Bid Form)	4	32	32		8							4	80		$18,196	$936	$50	$19,182
8.4.4: Final Bid Package	4	24	40		64							12	144		$27,804	$1,685	$200	$29,689
8.5: Bid Support Period		8	10		10	2	10						40		$7,430	$468	$100	$7,998
8.6: Engineering Services During Const.																		
8.6.1: Construction Meetings		16											16		$4,032	$187	$150	$4,369
8.6.2: Submittal Review		32	48		80								160		$31,824	$1,872	$50	$33,746
8.6.3: Respond to RFIs/RFCs		16	24		40								80		$15,912	$936	$50	$16,898
8.6.4: Change Order Technical Support		2	4		10								16		$3,014	$187	$50	$3,251
8.6.5: Prepare Document Clarifications		2	5		5	2	6						20		$3,497	$234	$50	$3,781
8.6.6: Record Drawings			4		36								40		$6,644	$468	$50	$7,162
Sub-total - Task 8	**16**	**180**	**231**	**8**	**381**	**4**	**16**	**0**	**0**	**0**	**0**	**40**	**876**	**$0**	**$171,833**	**$10,249**	**$1,100**	**$183,182**
Task 9 - Construction Management & Inspection (EN17110.01																		
9.0.1: Pre-Construction Meeting								8	8				16		$2,440		$50	$2,490
9.0.2: Conduct Bi- Weekly Meetings								96	10				106		$16,810		$50	$16,860
9.0.3: Material Testing													60	$7,150	$0		$50	$7,200
9.0.4: General Inspection									620				620		$89,900		$2,900	$92,800
9.0.5: Electrical Inspection											180		180		$26,100		$1,100	$27,200
9.0.6: Schedule Review								48		40			88		$14,680		$50	$14,730
9.0.7: Review Progress Payment								48					48		$7,680		$50	$7,730
9.0.8: Document Management (RFIs, Submittals, COs)								110					110		$17,600		$50	$17,650
9.0.9: Change Order Review								80					80		$12,800		$50	$12,850
9.1: Post Construction Assistance								60	40				100		$15,400		$50	$15,450
9.2: Training								20					20		$3,200		$50	$3,250
Sub-total - Task 9	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**470**	**678**	**40**	**180**	**0**	**1428**	**$7,150**	**$206,610**	**$0**	**$4,450**	**$218,210**
Total EN17110.01	44	260	259	58	409	4	16	470	678	52	180	40	2,530	$7,150	$428,715	$12,893	$6,100	$454,858

Engineering, Operations, and Water Resources Committee

ACTION ITEM 1E

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: RP-4 Rehabilitation Consultant Contract Amendment

Executive Summary:

In November 2016, IEUA awarded a consultant design contract to Carollo Engineers to manage the RP-4 Rehabilitation Projects from development to construction completion. During the project charter preparation with Operations and Maintenance staff, additional deficiencies were identified beyond what was originally planned. As a result, the project scope increased substantially. The added scope requires additional work by the design consultant. A contract amendment is requested for an amount of $356,236 to cover the additional preliminary engineering design services, increasing the contract from $1,743,716 to $2,099,952.

Staff's Recommendation:

1. Approve a consulting engineering services contract amendment for the RP-4 Rehabilitation, Projects Nos. EN17043 and EN17110, to Carollo Engineers for a not-to-exceed amount of $356,236; and

2. Authorize the General Manager to execute the consulting engineering services amendment subject to non-substantive changes.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:*

Account/Project Name:

EN17043.00 RP-4 Primary Clarifier Rehabilitation
EN17110.00 RP-4 Process Improvements Project

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 10800 - 127154 - 590000 Project No.: EN17043/EN17110
1000 - 10800 - 127154 - 590000

Prior Board Action:

On November 16, 2016, the Board of Directors awarded a contract to Carollo Engineers for the project management and design services on the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and RP-4 Process Improvements, Project No. EN17110, for a not-to-exceed amount of $1,288,858.

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 as defined in Section 15301(b) of the State CEQA Guidelines.

Business Goal:

The RP-4 Rehabilitation Projects are consistent with the Agency's Business Goal of Wastewater Management specifically the Asset Management objective that IEUA will ensure that 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.

Attachments:

Attachment 1 - Background
Attachment 2 - Powerpoint
Attachment 3 - Consultant Contract Amendment

Background

Subject: RP-4 Rehabilitation Consultant Contract Amendment

Regional Water Recycling Plant No. 4 (RP-4) began operation in July 1997, with an average daily liquid treatment capacity of seven million gallons per day (MGD) which was later expanded to 14 MGD in 2009. After over 20 years in service, some areas within the plant require rehabilitation due to the general deterioration of process components. IEUA's Asset Management Plan and a 2014 Condition Assessment Report recommended the Primary Clarifier Rehabilitation Project and the Process Improvement Project be implemented to mitigate the issues in the plant system infrastructure.

Due to the schedule and critical nature of these projects, the Engineering and Construction Management Department proposed an alternative project delivery approach for Project Management; using the services of a consulting firm to manage the project from development to construction completion. The goal of this approach was to create a seamless integration of the consulting project manager with IEUA staff to create a more efficient link between the project engineers and IEUA stakeholders. In November 2016, Carollo Engineers was awarded a contract for the project management and design services on the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and the RP-4 Process Improvement, Project No. EN17110.

Carollo began the process of preparing the project charter by coordinating meetings and plant walks with the Operations and Maintenance Department. During the project evaluation phase, additional areas at RP-4 were recognized as requiring additional investigation (Technical Memorandums) due to deterioration and process challenges. The following are the additional areas identified:

- Influent Pipe Slip Lining Evaluation
- Coating System Evaluation
- Influent Pump Station Evaluation
- Grit Chamber No. 1 Options Evaluation
- ML/RAS Wasting Evaluation
- Secondary Clarifier Catwalk Evaluation
- Odor control System Evaluation
- Aeration Basins Drainage Options Evaluation
- Chlorine Contact Basins Interconnection Evaluation
- Automation Evaluation

The additional technical memorandums are necessary to make a determination of the areas that should be added to the current design project and those that can be included in the next Ten-Year Capital Improvement Plan (TYCIP) update.

Staff requests that the existing contract with Carollo Engineers be amended by $356,236 for investigation of the additional areas at RP-4. This amendment would increase the value of the consultant contract from $1,743,716 to $2,099,952.

The following table is the anticipated project cost:

Description	Estimated Cost
Design Services	**$1,425,309**
Consultant Design	$771,569
Consultant Design Amendment #2 (this action)	$356,236
Project Management	$242,812
IEUA Design Services	$54,692
Construction Services Estimate	**$2,763,561**
Engineering Services During Construction	$1,777,878
Construction Management	$516,323
IEUA Construction Services (2.5%)	$469,360
Construction Estimate	**$20,652,948**
Construction	$18,775,408
Contingency (10%)	$1,877,540
Total Project Cost	**$24,841,818**
Total Project Budget	**$24,027,753**
Remaining Budget	**($814,065)**

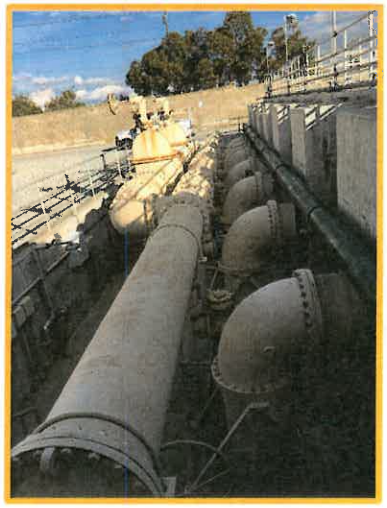
The following table is the project schedule:

Project Milestone	Date
PDR Completion	April 2018
Design Completion	October 2018
Construction Contract Award	February 2019
Construction Completion	March 2021

Fiscal Impact:

If approved, the consultant contract amendment for the RP-4 Rehabilitation, Project Nos. EN17043 and EN17110, for the not-to-exceed amount of $356,236, will be within the combined total project budgets of $24,027,753 in the Regional Wastewater Operations and Maintenance (RO) Fund. An estimated combined amount of $2,660,000 will be spent on both projects this fiscal year. The future year funding will be re-appropriated accordingly during the FY 2017/18 review of the Ten-Year Capital Improvement Plan.

RP-4 Primary Clarifier Rehabilitation, Project EN17043
RP-4 Process Improvement, Project EN17110
Consultant Amendment



Shaun Stone, P.E.
November 2017

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Project Location

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

The Project

- Rehab portions of all process areas
- Significant Improvements/Rehab:
  - Abandon south pump station
  - Grit chambers repair and rehab
  - Primary clarifier rehab
  - Blower replacement
  - Secondary clarifier catwalk evaluation
  - Odor control evaluation

Clogged Grit Chamber

Project Budget and Schedule

Description	Estimated Cost
Design Services	**$1,425,309**
Consultant Design	$771,569
Consultant Design Amendment #2	$356,236
Project Management	$242,812
IEUA Design Services	$54,692
Construction Services Estimate	**$2,763,561**
Engineering Services During Construction	$1,777,878
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Construction Estimate	**$20,652,948**
Construction	$18,775,408
Contingency (10%)	$1,877,540
Total Project Cost	**$24,841,818**
Total Project Budget	**$24,027,753**
Remaining Budget	**($814,065)**

Project Milestone	Date
PDR Completion	April 2018
Design Completion	October 2018
Construction Contract Award	February 2019
Construction Completion	March 2021

Recommendation

- Approve a consulting engineering services contract amendment for the RP-4 Rehabilitation Projects, EN17043 and EN17110, to Carollo Engineers for a not-to-exceed amount of $356,236; and
- Authorize the General Manager to execute the consulting engineering services amendment subject to non-substantive changes.

The RP-4 Rehabilitation Projects are consistent with the ***IEUA's Business Goal of Wastewater Management*** specifically the Asset Management objective that IEUA will ensure that 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.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

CONTRACT AMENDMENT NUMBER: 4600002243-002

FOR

PROJECT MANAGEMENT AND DESIGN SERVICES

FOR THE RP-4 PRIMARY CLARIFIER REHABILITATION PROJECT NO. EN17043

AND RP-4 PROCESS REHABILITATION PROJECT Nos. EN17110 and EN17110.01

THIS CONTRACT AMENDMENT TWO 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 interchangeably as "IEUA" and "Agency") and Carollo Engineers, Inc. with offices located in Riverside, Irvine, and Los Angeles, California (hereinafter referred to as "Consultant") for Project Management and Design Services for the RP-4 Primary Clarifier Rehabilitation, Project No. EN17043, and RP-4 Process Rehabilitation, Project Nos. EN17110 and EN17110.01, and shall revise the Contract as herein amended:

SECTION THREE, SCOPE OF WORK AND SERVICES, IS REVISED TO ADD THE FOLLOWING PARAGRAPH: Additional services and responsibilities shall include and be in accordance with **Exhibit D**, which is incorporated herein, attached hereto, and made a part hereof by this reference.

SECTION FIVE, COMPENSATION, REVISES THE SECOND PARAGRAPH AS FOLLOWS: As compensation for additional work performed under this Contract Amendment, Agency shall pay Consultant a ***NOT-TO EXCEED maximum of*** **$2,099,952.00, which represents an increase of $356,236.00 to the Contract.**

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.

[Signature Page Immediately Follows]

INLAND EMPIRE UTILITIES AGENCY:
(A Municipal Water District)

P. Joseph Grindstaff (Date)
General Manager

CAROLLO ENGINEERS, INC.:

Dr. Graham Juby, P.E. (Date)
Principal-in-Charge / Vice President

Eric M. Mills, P.E. (Date)
Senior Vice President

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Exhibit D

carollo
Engineers...Working Wonders With Water®

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P. 951.776.3955 F. 951.776.4207

October 9, 2017

Mr. Jerry Burke
Deputy Manager of Engineering
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Subject: RP-4 Primary Clarifier and Process Rehabilitation Projects (EN17043, EN17110, EN17110.01) - Amendment No. 2 Justification and Request for Preliminary Design for EN17043 and EN17110

Dear Mr. Burke:

As requested, Carollo Engineers, Inc. (Carollo), has drafted an amendment request for the RP-4 Primary Clarifier and Process Rehabilitation Project (EN17043, EN17110, EN17110.01) for preliminary design services for the additional scope of work that was identified through the Project Charter development and approval process for EN170143 and EN17110.

Background

In October 2016, Carollo was selected by the Inland Empire Utilities Agency (IEUA) for the RP-4 Primary Clarifier and Process Rehabilitation Project identified in RFP-RW-16-021, which incorporated two separate projects EN17043 and EN17110. At that time, the Project Charter for these two projects had not been finalized nor had it been approved. The construction cost for the scope identified in the RFP for the two rehabilitation projects was estimated to be $5.5 million. Carollo's engineering fee for both projects, including development of the Project Charter, Project Management, Design and Construction Management and Inspection services totaled $1.29 million.

The project kick-off meeting was in January 2017 after which Carollo began working with IEUA staff to prepare and to finalize the Project Charter. During development of the Project Charter a significant number of new scope items were added to both projects and a portion of Project EN17110, related to the Trident tertiary filters, was bifurcated from the main project and became a fast-tracked project (EN17110.01) due to impending failure of the equipment and its long fabrication time.

The Project Charter is complete and was approved on Monday, June 26th, 2017. The combined estimated construction cost for the rehabilitation projects is now $20.7 million, more than 3.5 times the construction cost estimate for the scope that was identified in the RFP. The increased construction cost estimate is a result of additional process/equipment rehabilitation work that was added through the Project Charter process. Table 1 below compares the construction cost estimate for the rehabilitation work that was identified in the RFP to the work that is included in the approved Project Charter.

Table 1 Project Initial and Current Construction Cost Estimates

Description	Project EN17043	Project EN17110/.01
Initial Construction Cost Estimate	$ 1.46 M	$ 4.00 M
Current Construction Cost Estimate	$ 6.28 M	$ 14.38 M
Increase based on Add'l Work	$ 4.82 M	$ 10.38 M
Total Estimated Construction Cost	**$ 20.66 M**	

The increased scope and schedule of the projects will result in additional engineering services. This letter documents the additional project scope, and identifies the additional engineering services necessary to complete preliminary design for EN17043 and EN17110.

Additional Scope of Work Items

The additional scope of work for each project is presented below.

Project EN17043

- Rehabilitate influent piping manhole risers. Manholes riser bricks located within air space are exposed/deteriorated and in need of repair (EN17043).
- Headworks screenings enclosure currently does not have an emergency manual access door. Install a manual entry doorway on headworks screening enclosure, and/or investigate manual capability of existing roll-up doors. The manual door would be available if both motorized doors were to fail (EN17043).
- Clean, repair and coat interior wet well concrete surfaces. Existing concrete walls in fair condition with exposed aggregate (EN17043).
- Rehabilitate/recoat submerged and partially submerged wet well ductile iron and steel piping (EN17043).
- Clean, repair and coat visible damage to exposed concrete in Grit Chamber No. 2 and to Grit Chambers influent channel and splitter box - clean, repair and coat interior concrete surfaces (EN17043).
- Provide temporary bypass during construction required for Grit Chambers common influent channel rehab (EN17043).
- Repair/rehabilitate aeration basins concrete where cracking and spalling have occurred. Perform a high pressure, high solids epoxy crack injection sealing process to all leaking cracks in the concrete walls. Perform rehabilitation of concrete substrates where spalling has occurred and exposed rebar is visible (EN17043).
- Rehabilitate aeration basins coating system for deteriorated ductile iron pipe (EN17043).
- Perform rehabilitation of concrete for secondary clarifiers where spalling has occurred (EN17043).

- For secondary clarifiers repair pits on the center column, remove existing coating material on carbon steel components and replace with a new high-performance coating system (EN17043).
- Condition of influent sewer is being assessed by IEUA operations/maintenance using video technology. Based on these findings, relining of this pipeline may be required. Relining of influent sewer currently included as part of project charter. This work would also require temporary bypass during construction (EN17043).
- Provide permanent structure for existing influent sample station, including concrete slab on grade (EN17043).
- Review existing fine screens design and installation. If possible, make improvements to prevent solids, rags, etc. from passing fine screens and negatively impacting downstream processes (EN17043).
- Provide temporary bypass during construction of north and south pump station necessary for wet well recoating efforts and for new pumping configuration (EN17043).
- Add H2S ventilation for channel/chamber air spaces for grit chamber channels and primary influent splitter box (EN17043).
- Clean or replace interconnecting pipeline between Grit Chamber No. 1 and Grit Chamber No. 2 (EN17043).

Project EN17110

- Install a flow meter on the passive overflow bypass. Consider simple meter installed within existing manhole, accuracy not a significant concern. The flow meter will be able to record flow that is bypassed upstream of the preliminary treatment process. The flow meter shall be tied into the plant SCADA for instantaneous reading and data collection (EN17110).
- Replace Aqua Disk Filter effluent covers with solid covers to reduce sunlight. The aqua disk effluent covers shall be able to be removed by a single person, covered for UV protection, and designed for foot traffic (EN17110).
- Abandon south pump station and add two VFD submersible pumps to north pump station for better operational flexibility and mixing. Existing south pump station constant speed pumps are 20 plus years old and have reached their useful life. Solids settling is also an issue in south pump station considering current operations where south pump station does not operate on average six hours per day. Flow diversion structure downstream of fine screens and below grade pipeline to north pump station required. Abandoned south pump station to be backfilled with fill/sand material (EN17110).
- Add sump drains and sump pumping system and piping for leaky air valves for primary sludge and scum valve station (EN17110).
- Install 2-inch utility water connection to scum line for back flushing scum box. Provide double check backflow preventer to prevent backflow (EN17110).
- Rehab/reconfigure primary sludge wasting station flow meters and piping to eliminate "empty pipe" meter alarm. Consider installation of sludge and scum pumps (EN17110).

- High speed turbo blowers to be considered as part of preliminary design. Project includes costs for replacing two existing Turblex blowers and one existing Kawasaki blower with three high speed turbo blowers. Replacement of existing Kawasaki blower with new blower similar to existing Turblex blowers also to be considered as part of preliminary design. Business case evaluation to be performed (EN17110).
- Provide local and SCADA control of aeration basins instrument air compressors Nos. 1 and 2 (EN17110).
- Consider relocating mixed liquor wasting station flow meter to secondary influent splitter box as part of preliminary design (EN17110).
- Addition of pumping capability likely needed for pipeline to Etiwanda Avenue sewer. Add central flow meter to monitor all flows leaving the facility via new connection to Etiwanda Avenue sewer (EN17110).
- Provide design only options for new drainage system for existing aeration basins. Currently, existing aeration basins very difficult to fully drain for maintenance purposes (EN17110).
- Replace tipping trough in all three clarifiers and associated hardware, include replacement/refurbishment of wooden skimmers and metal framing (EN17110).
- Automate middle gate in secondary effluent splitter box to aid in emergency operations associated with tertiary disk filtration system (EN17110).
- Evaluate the possibility of installing underground piping to interconnect existing chlorine contact basins (CCBs). In the future we may need to operate only one CCB treating effluent from both filters (EN17110).
- Install wiring and SCADA logic for CCB1A and CCB2 chlorine analyzers sample pumps to allow for monitoring through SCADA, thereby reducing number of regular operator trips to the field (EN17110).

Amendment Estimate

Carollo has identified the additional engineering services to develop and deliver preliminary design for the additional project scope of work for EN17043 and EN17110. We developed estimates for additional design services for each project using a bottoms-up approach. This approach includes identification of project elements and tasks necessary to complete preliminary design of the project followed by level-of-effort hours estimate for each project element and task. General preliminary design project elements and tasks for the bottoms-up level-of-effort estimation approach include:

- Additional Technical Memoranda - listed below for this project amendment.
- Preliminary Design Report.
- Construction cost estimates.
- Additional preliminary design workshops - listed below for this project amendment.

Through the Project Charter process additional project Technical Memoranda (TMs) incorporating Business Case Evaluations have been identified for preparation as part of the preliminary design process. These memoranda were not included in the original scope and are in addition to the three already included in the current Agreement's scope of work, and described as follows:

- TM No. 4 - Influent Pipe Slip Lining Evaluation.
- TM No. 5 - Coating Systems Evaluation.
- TM No. 6 - Influent Pump Station Evaluation.
- TM No. 7 - Grit Chamber No. 1 Options Evaluation.
- TM No. 8 - ML/RAS Wasting Evaluation.
- TM No. 9 - Secondary Clarifier Catwalk Evaluation.
- TM No. 10 - Odor Control System Evaluation.
- TM No. 11 - Aeration Basins Drainage Options Evaluation.
- TM No. 12 - Chlorine Contact Basins Interconnection Evaluation.
- TM No. 13 - Automation Evaluation.

In order to effectively convey preliminary design and technical memoranda concepts and to obtain valuable feed-back from IEUA operations and maintenance staff additional preliminary design workshops are included, and described as follows:

- A three-hour workshop to present technical memorandum group No. 2 followed by a three-hour workshop to obtain operations and maintenance feedback on technical memorandum group No. 1. This will be day long workshop consisting of two three hour sessions.
- A three-hour workshop to present technical memorandum group No. 3 followed by a three-hour workshop to obtain operations and maintenance feedback on technical memorandum group No. 2. This will be day long workshop consisting of two three hour sessions.
- A three-hour workshop to present preliminary design report (PDR) followed by a three-hour workshop to obtain operations and maintenance feedback on technical memorandum group No. 3. This will be day-long workshop consisting of two three hour sessions.

Our proposed preliminary design fee for the additional scope of work described above is summarized below and shown in detail in the attached fee estimate.

Table 2 summarizes the additional fee required to complete preliminary design for EN17043 and EN17110 considering the additional scope of work described above. The table shows a breakdown of what was included in our current Agreement based on the scope in the RFP and what has been added as a result of the additional scope items. Level-of-effort for additional project management, detailed design, engineering services during construction (ESDC) and construction management (CM) have not been included; other than what was already included in the Agreement's original scope of work.

Table 2 Amendment No. 2 Budget

Project Scope Item	Fee Based on RFP-RW-16_021 October 2016	ADDITIONAL Preliminary design fee for full Project Charter	Total Amounts for EN17043 & EN17110
Project EN17043			
PM [2] and Design Workshops	**$ 61,562**	**$ 18,420**	**$ 79,982**
Engineering Services	**$ 178,189**	**$ 69,270**	**$ 247,459**
Environmental Document Coordination [2]	*$ 5,171*	*$ - [2]*	*$ 5,171*
Survey, Potholing, and Geotech [2]	*$ -*	*$ - [2]*	*$ -*
Predesign	*$ 39,829*	*$ 69,270*	*$ 109,099*
Contract Documents Development [2]	*$ 78,587*	*$ - [2]*	*$ 78,587*
Drawings and Specs (sheets) [2]	*14*	*$ - [2]*	*14*
Bid Support [2]	*$ 5,857*	*$ - [2]*	*$ 5,857*
ESDCs [1] [2]	*$ 48,745*	*$ - [2]*	*$ 48,745*
Construction Management [2]	**$ 96,907**	**$ - [2]**	**$ 96,907**
EN17043 SUBTOTAL	***$ 336,658***	***$ 87,690***	**$ 424,348**
Project EN17110			
PM [2] and Design Workshops	**$ 181,250**	**$ 42,980**	**$ 224,230**
Engineering Services	**$ 593,380**	**$ 225,566**	**$ 818,946**
Environmental Document Coordination [2]	*$ 5,171*	*$ - [2]*	*$ 5,171*
Survey, Potholing, and Geotechnical [2]	*$ -*	*$ - [2]*	*$ -*
Predesign	*$ 99,040*	*$ 225,566*	*$ 324,606*
Contract Documents Development [2]	*$ 277,146*	*$ - [2]*	*$ 277,146*
Drawings and specification [2]	*60*	*$ - [2]*	*60*
Bid Support [2]	*$ 8,275*	*$ - [2]*	*$ 8,275*
ESDCs [1] [2]	*$ 203,748*	*$ - [2]*	*$ 203,748*
Construction Management [2]	**$ 177,570**	**$ - [2]**	**$ 177,570**
EN17110 TOTAL	***$ 952,200***	***$ 268,546***	**$ 1,220,746**
EN17043 and EN17110 TOTALS	**$ 1,288,858**	**$ 356,236**	**$ 1,645,094**

Notes:
(1) Engineering Services During Construction
(2) Additional PM, Detailed Design, ESDC and Construction Management Services not included at this time.

TOTAL ORIGINAL AGREEMENT	**$ 1,288,858**
TOTAL AMENDMENT No. 1 (EN17110.01)	**$ 454,858**
TOTAL AMENDMENT No. 2 (EN17043 & EN17110)	**$ 356,236**
NEW CONTRACT TOTAL	**$ 2,099,952**

Based on our review of the additional scope of work, Carollo requests that IEUA review the attached document and scope of work for discussion. Once the final scope of work and fee has been agreed upon, an amendment to the existing Agreement will need to be issued.

Please let the undersigned know if you have any questions, information requests, or if you would like to sit down and review the scope of work and fee.

Sincerely,

CAROLLO ENGINEERS, INC.

Graham Juby, Ph.D., P.E.
Vice President

Roland Pilemalm, P.E.
Associate Vice President

GJ/RPI:jrb

Inland Empire Utilities Agency

RP-4 Primary Clarifier Rehabilitation and Process Rehabilitation, Project Nos. EN17043, EN17110 and EN17110.01

Work Breakdown Structure and Fee Estimate - Amendment No. 2 (EN17043 & EN17110)

Task Description	ESTIMATED LABOR HOURS													SUBS	TOTAL COSTS			
	Senior Professional	Lead Project Professional	Project Professional	Professional	Assistant Professional	Senior Technician	Technician (CAD)	Construction Manager	General Inspector	Scheduler	Electrical Inspector	Document Processing	Total Hours (incl sub hours)	Geotechnical, Survey and Materials Test	Labor Cost	PECE	Other Direct Costs	Total Costs
Hourly Rate	$265	$252	$230	$194	$159	$167	$119	$160	$145	$175	$145	$110						
EN17043																		
Task 1 - Project Management (EN17043)																		
1.1.1: Preliminary Design Workshops	8	16	30	8	16							2	80		$17,368	$936	$116	$18,420
Sub-total - Task 1	**8**	**16**	**30**	**8**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**80**	**$0**	**$17,368**	**$936**	**$116**	**$18,420**
Task 2 - Design Services (EN17043)																		
2.1: Verify Existing Condiditions			4	4	4								12		$2,332	$140	$50	$2,522
2.3.1: Draft TMs																		$0
TM 4: Influent Pipe Slip Lining Evaluation	2	8	16		24							4	54		$10,482	$632	$50	$11,164
TM 5: Coating Systems Evaluation	2	8	16		24							4	54		$10,482	$632	$50	$11,164
2.3.2: Final TMs	2	4	6		16							4	32		$5,902	$374	$50	$6,326
2.4.1: 30% Design	6	7	11	11	42	13	65						154		$24,389	$1,797	$50	$26,236
2.4.1.1: Draft PDR	2	4	6	2	12	2	4					4	36		$6,464	$421	$50	$6,935
2.4.1.2: Final PDR	2	4	4	2	6	2	2					2	24		$4,592	$281	$50	$4,923
Sub-total - Task 2	**16**	**35**	**63**	**19**	**128**	**17**	**71**	**0**	**0**	**0**	**0**	**18**	**366**	**$0**	**$64,643**	**$4,278**	**$350**	**$69,270**
Sub-Total EN17043	24	51	93	27	144	17	71	0	0	0	0	20	446	$0	$82,011	$5,214	$466	$87,690
EN17110																		
Task 4 - Project Management (EN17110)																		
4.1.1: Preliminary Design Workshops	18	36	74	18	36							2	184		$40,298	$2,153	$528	$42,979
Sub-total - Task 4	**18**	**36**	**74**	**18**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**184**	**$0**	**$40,298**	**$2,153**	**$528**	**$42,979**
Task 5 - Design Services (EN17110)																		
5.1: Verify Existing Condiditions			8	8	8								24		$4,664	$281	$150	$5,095
5.3.1: Draft TMs																		$0
TM 6: Influent Pump Station Evaluation	4	12	20		60		8					4	108		$19,616	$1,264	$50	$20,930
TM 7: Grit Chanmer No. 1 Options Evaluation	2	8	16		40		4					4	74		$13,502	$866	$50	$14,418
TM 8: ML/RAS Wasting Evaluation	2	8	12		40		4					4	70		$12,582	$819	$50	$13,451
TM 9: Secondary Clarifier Catwalk Evaluation	2	8	16		24		4					4	58		$10,958	$679	$50	$11,687
TM 10: Odor Control System Evaluation	2	4	12		32		4					4	58		$10,302	$679	$50	$11,031
TM 11: Aearations Basins Drainage Options Evaluation	2	8	16		24		4					4	58		$10,958	$679	$50	$11,687
TM 12: CCB Interconnection Evaluation	2	4	12		32		4					4	58		$10,302	$679	$50	$11,031
TM 13: Automation Evaluation	2	8	16		24		4					4	58		$10,958	$679	$50	$11,687
5.3.2: Final TMs	8	16	12		32		8					12	88		$16,272	$1,030	$50	$17,352
5.4.1: 30% Design	20	24	33	33	134	39	164						446		$72,493	$5,218	$50	$77,761
5.4.1.1: Draft PDR	4	8	16	2	24	2	4					4	64		$12,210	$749	$50	$13,009
5.4.1.2: Final PDR	2	4	6	2	12	2	2					2	32		$6,006	$374	$50	$6,430
Sub-total - Task 5	**52**	**112**	**195**	**45**	**486**	**43**	**214**	**0**	**0**	**0**	**0**	**50**	**1196**	**$0**	**$210,823**	**$13,993**	**$750**	**$225,566**
Sub-Total EN17110	70	148	269	63	522	43	214	0	0	0	0	52	1,380	$0	$251,121	$16,146	$1,278	$268,545
TOTAL	94	199	362	90	666	59	284	0	0	0	0	72	1,826	$0	$333,132	$21,360	$1,744	$356,236

October 9, 2017

ACTION ITEM 1F

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: RP-1 Training Room Construction Contract Award

Executive Summary:

The Maintenance Department is responsible for the maintenance and reliability of all facilities owned and operated by IEUA. In 2014, a Workforce Development Program was developed to serve as a foundation for a competency based learning process for the Maintenance Department staff. There is currently no formal training site at any of the IEUA facilities to accommodate the Workforce Development Program. The scope of work for the Regional Water Recycling Plan No. 1 (RP-1) Maintenance Building Training Room Project is to convert the unoccupied paint room in the Maintenance Building into a two-room training center consisting of a formal classroom and hands-on laboratory.

On September 20, 2017, IEUA posted an invitation for bids on PlanetBids. On October 17, 2017, IEUA received three bids. New Millennium Construction was deemed the lowest responsive and responsible bidder, with a bid price of $266,890.

Staff's Recommendation:

1. Award a construction contract for the RP-1 Maintenance Building Training Room, Project No. EP17003, to New Millennium Construction in the amount of $266,890; and

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

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:*

Account/Project Name:

EP17003/RP-1 Maintenance Building Training Room

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 10200 - 127100 - 105000 Project No.: EP17003

Prior Board Action:

None.

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 as defined in Section 15301(b) of the State CEQA Guidelines.

Business Goal:

The RP-1 Maintenance Building Training Room Project is consistent with IEUA's Business Goal of Work Environment that IEUA is committed to providing a dynamic work environment with a highly skilled and dedicated workforce.

Attachments:

Attachment 1 - Background
Attachment 2 - PowerPoint
Attachment 3 - Construction Contract

Background

Subject: RP-1 Training Room Construction Contract Award

The Maintenance Department is responsible for the maintenance and reliability of all facilities owned and operated by IEUA. In 2014, a Workforce Development Program was developed to serve as a foundation for a competency based learning process for the Maintenance Department staff. There is currently no formal training site at any of the IEUA facilities to accommodate the Workforce Development Program. The scope of work for the Regional Water Recycling Plant No. 1 (RP-1) Maintenance Building Training Room Project is to convert the unoccupied paint room in the Maintenance Building into a two-room training center consisting of a formal classroom and hands-on laboratory.

In January 2014, IEUA retained RM Architecture for engineering and design services for the RP-1 Maintenance Building Training Room Project. The project was advertised in October 2014 resulting in three proposals. The proposals exceeded the Maintenance Department's budget and the project was shelved. The Engineering Department received the project for execution in October 2016. In November 2016, IEUA amended RM Architecture's contract for engineering and design services.

On September 20, 2017, a request for bids was advertised to qualified contractors through PlanetBids. On October 17, 2017, the following three bids were received:

Bidder's Name	Total Price
New Millennium Construction	$266,890
Braughton Construction	$300,000
Allison Mechanical	$348,640
Engineer's Estimate	**$240,000**

New Millennium Construction was the lowest responsive and responsible bidder with a bid price of $266,890. New Millennium Construction has performed similar projects with other utilities and cities with good workmanship and responsiveness.

The following table is the anticipated project cost:

Description	Estimated Cost
Design Services	**$42,683**
Design Contract (actual cost)	$8,200
IEUA Design Services (actual cost)	$34,483
Construction Services	**$26,689**
IEUA Construction Services (10%)	$26,689
Construction	**$306,890**
Construction Contract (this action)	$266,890
Contingency (~15%)	$40,000
Total Project Cost:	**$376,262**
Total Project Budget:	**$425,000**
Remaining Budget:	**$48,738**

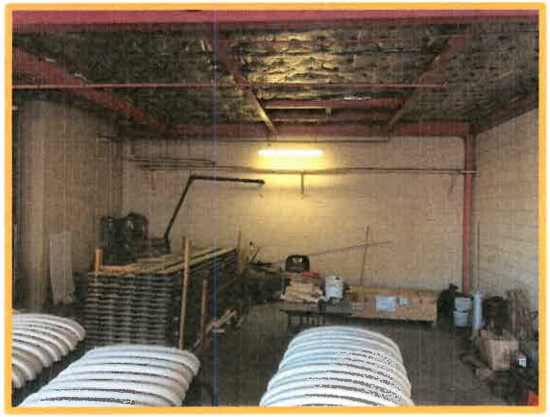
The following is the project schedule:

Project Milestone	Date
Construction Contract Award	November 2017
Construction Completion	October 2018

Fiscal Impact:

If approved, the construction contract award for the RP-1 Maintenance Building Training Room, Project No. EP17003, for the not-to-exceed amount of $266,890, will be within the total project budget of $425,000 in the Administration Services (GG) Fund. Staff anticipates amount of $280,000 will be spent on the project this FY 2017/18, with the remaining contract value to be spent in FY 2018/19.

RP-1 Training Room Project
Construction Contract Award
Project No. EP17003



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Josh Biesiada
November 2017

Project Location

Regional Water Recycling Plant No. 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

The Project

- Background
  - 8,000 labor hours of staff training for FY 2016/17
  - Existing training room lacks equipment and space
  - 2014 Workforce Development Program requires formal training site
  - 35% of Maintenance staff eligible for retirement in next five years
    - Requires training to backfill positions
    - Requires workforce with cross functional competency
- Scope
  - Convert existing paint room into two new training rooms
    - One classroom with desks and IEUA network access
    - One computer laboratory with micro simulators
  - Install safety requirements including fire sprinkler system
  - Install new electrical, plumbing and cabinets

Existing Temporary Training Room

Existing Paint Room

Contractor Selection

Bids received on October 17, 2017:

Bidder's Name	Total
New Millennium Construction	$266,890
Braughton Construction	$300,000
Allison Mechanical	$348,640
Engineer's Estimate	**$240,000**

Project Budget and Schedule

Description	Estimated Cost
Design Services	**$42,683**
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Contingency (15%)	$40,000
Total Project Cost:	**$376,262**
Total Project Budget:	**$425,000**
Remaining Budget:	**$48,738**

Project Milestone	Date
Construction Contract Award	November 2017
Construction Completion	October 2018

Recommendation

- Award a construction contract for the RP-1 Maintenance Building Training Room, Project No. EP17003, to New Millennium Construction in the amount of $266,890; and

- Authorize the General Manager to execute the construction contract.

The RP-1 Maintenance Building Training Room Project is consistent with ***IEUA's Business Goal of Work Environment*** that IEUA is committed to providing a dynamic work environment with a highly skilled and dedicated workforce.

CONTRACT

THIS CONTRACT, made and entered into this ____day of November, 2017, by and between New Millennium Construction Services, Inc., hereinafter referred to as "Contractor," and The Inland Empire Utilities Agency, a Municipal Water District, located in San Bernardino County, California, hereinafter referred to as "Agency".

WITNESSETH:
That for and in consideration of the promises and agreements hereinafter made and exchanged, the Agency and the Contractor agree as follows:

1. Contractor agrees to perform and complete in a workmanlike manner, all work required under the bidding schedule of said Agency's specifications entitled SPECIFICATIONS FOR **RP-1 Maintenance Building Training Room, Project No. EP17003**, in accordance with the specifications and drawings, and to furnish at their own expense, all labor, materials, equipment, tools, and services necessary, except such materials, equipment, and services as may be stipulated in said specifications to be furnished by said Agency, and to do everything required by this Contract and the said specifications and drawings.

2. For furnishing all said labor, materials, equipment, tools, and services, furnishing and removing all plant, temporary structures, tools and equipment, and doing everything required by this Contract and said specifications and drawings; also for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise during the prosecution of the work until its acceptance by said Agency, and for all risks of every description connected with the work; also for all expenses resulting from the suspension or discontinuance of work, except as in the said specifications are expressly stipulated to be borne by said Agency; and for completing the work in accordance with the requirements of said specifications and drawings, said Agency will pay and said Contractor shall receive, in full compensation therefore, the price(s) set forth in this Contract.

3. That the Agency will pay the Contractor progress payments and the final payment, in accordance with the provisions of the contract documents, with warrants drawn on the appropriate fund or funds as required, at the prices bid in the Bidding and Contract Requirements, Section C - Bid Forms and accepted by the Agency, and set forth in this below.

   Total Bid Price $ Two Hundred Sixty-Six Thousand Eight Hundred Ninety Dollars

   and Zero Cents.

   If this is not a lump sum bid and the contract price is dependent upon the quantities constructed, the Agency will pay and said Contractor shall receive, in full

compensation for the work the prices named in the Bidding and Contract Requirements, Section C - Bid Forms.

4. The Agency hereby employs the Contractor to perform the work according to the terms of this Contract for the above-mentioned price(s), and agrees to pay the same at the time, in the manner, and upon the conditions stipulated in the said specifications; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.

5. The Notice Inviting Bids, Instructions to Bidders, Bid Forms, Information Required of Bidder, Performance Bond, Payment Bond, Contractors License Declaration, Specifications, Drawings, all General Conditions and all Special Conditions, and all addenda issued by the Agency with respect to the foregoing prior to the opening of bids, are hereby incorporated in and made part of this Contract, as if fully set forth.

6. The Contractor agrees to commence work under this Contract on or before the date to be specified in a written "Notice to Proceed" and to complete said work to the satisfaction of the Agency **two hundred and twenty (220) calendar days** after award of the Contract. All work shall be completed before final payment is made.

7. Time is of the essence on this Contract.

8. Contractor agrees that in case the work is not completed before or upon the expiration of the contract time, damage will be sustained by the Agency, and that it is and will be impracticable to determine the actual damage which the Agency will sustain in the event and by reason of such delay, and it is therefore agreed that the Contractor shall pay to the Agency the amount of **two hundred and fifty dollars ($250)** for each day of delay, which shall be the period between the expiration of the contract time and the date of final acceptance by the Agency, as liquidated damages and not as a penalty. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by the Agency, and the Contractor agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, the Contractor agrees that the Agency may deduct the amount thereof from any money due or that may become due to the Contractor by progress payments or otherwise under the Contract, or if said amount is not sufficient, recover the total amount.

   In addition to the liquidated damages, which may be imposed if the Contractor fails to complete the work within the time agreed upon, the Agency may also deduct from any sums due or to become due the Contractor, liquidated damages in accordance with the Bidding and Contract Requirements, Section B - Instruction to Bidders, Part 5.0 “Liquidated Damages", for any violation of the General Conditions, Section D - Contractor's Responsibilities, Part 8, "Law and

Regulations"; Bidding and Contract Requirements Contract Section D – Contract and Relevant Documents, Part 1.0, Paragraphs 9 through 11; General Conditions, Section D – Contractor's Responsibilities, Part 4.0, "Labor, Materials and Equipment"; General Conditions Section D – Contractor's Responsibilities, Part 12.0, "Safety and Protection" or General Conditions Section H – Legal Responsibilities, Part 8.0, "Disturbance of the Peace".

9. That the Contractor will pay, and will require subcontractors to pay, employees on the work a salary or wage at least equal to the prevailing salary or wage established for such work as set forth in the wage determinations and wage standards applicable to this work, contained in or referenced in the contract documents.

10. That, in accordance with Section 1775 of the California Labor Code, Contractor shall forfeit to the Agency, as a penalty, not more than Fifty ($50.00) Dollars for each day, or portion thereof, for each worker paid, either by the Contractor or any subcontractor, less than the prevailing rates as determined by the Director of the California Department of Industrial Relations for the work.

11. That, except as provided in Section 1815 of the California Labor Code, in the performance of the work not more than eight (8) hours shall constitute a day's work, and not more than forty (40) hours shall constitute a week's work; that the Contractor shall not require more than eight (8) hours of labor in a day nor more than forty hours of labor in a week from any person employed by the Contractor or any subcontractor; that the Contractor shall conform to Division 2, Part 7, Chapter 1, Article 3 (Section 1810, et seq.) of the California Labor Code; and that the Contractor shall forfeit to the Agency, as a penalty, the sum of Twenty-Five ($25.00) Dollars for each worker employed in the execution of the work by Contractor or any subcontractor for each day during which any worker is required or permitted to labor more than eight (8) hours in violation of said Article 3.

12. That the Contractor shall carry Workers' Compensation Insurance and require all subcontractors to carry Workers' Compensation Insurance as required by the California Labor Code.

13. That the Contractor shall have furnished, prior to execution of the Contract, two bonds approved by the Agency, one in the amount of one hundred (100) percent of the contract price, to guarantee the faithful performance of the work, and one in the amount of one hundred (100) percent of the contract price to guarantee payment of all claims for labor and materials furnished.

14. The Contractor hereby agrees to protect, defend, indemnify and hold the Agency and its employees, agents, officers, directors, servants and volunteers free and harmless from any and all liability, claims, judgments, costs and demands, including demands arising from injuries or death of persons (including employees of the Agency and the Contractor) and damage to property, arising directly or

indirectly out of the obligation herein undertaken or out of the operations conducted by the Contractor, its employees agents, representatives or subcontractors under or in connection with this Contract.

The Contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands or suit at the sole expense of the Contractor.

IN WITNESS, WHEREOF, The Contractor and the General Manager of Inland Empire Utilities Agency*, thereunto duly authorized, have caused the names of said parties to be affixed hereto, each in duplicate, the day and year first above written.

Inland Empire Utilities Agency, *
San Bernardino County, California.

By _____
General Manager

Contractor

By _____
Title

ACTION ITEM 1G

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: Flow Equalization and Effluent Monitoring Construction Change Order

Executive Summary:

The Flow Equalization and Effluent Monitoring, Project No. EN11031, comprises various process improvements at RP-5, including a replacement of existing dechlorination chemical pumps. In December 2016, SCW Contractors was awarded the construction contract for the project. The pump replacement was initiated in June 2017. During startup, it was determined that the pump controls were malfunctioning. Diagnostic analysis of the system found that the pump controls were experiencing electrical interference from the power wiring between the pump and the electrical switchgear.

IEUA staff evaluated several solutions to eliminate the electrical interference through troubleshooting in the field. Staff is recommending a change order to install a remote fiber optic control panel that will ensure sustainable operation and simplify maintenance of the new chemical pumps and associated controls in the future. The change order in the amount of $108,655 has been evaluated and justified as fair and reasonable, and is within the total project budget of $3,397,200.

Staff's Recommendation:

1. Approve a construction contract change order to SCW Contractors for the Flow Equalization and Effluent Monitoring, Project No. EN11031, in the amount of $108,655; and

2. Authorize the General Manager to execute the construction contract change order.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:*

Account/Project Name:

EN11031/Flow Equalization and Effluent Monitoring

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 10900 - 127155 - 595000 Project No.: EN11031

Prior Board Action:

On December 21, 2016, the Board of Directors awarded a contract to SCW Contractors in the amount of $945,029.

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 as defined in Section 15301(b) of the State CEQA Guidelines.

Business Goal:

The RP-5 Flow Equalization & Effluent Monitoring Project No. EN11031 is consistent with the IEUA's Business Goal of Wastewater Management that systems will be master planned, managed, and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible, and cost effective manner.

Attachments:

Attachment 1 - Background
Attachment 2 - Construction Contract Change Order

Background

Subject: Flow Equalization and Effluent Monitoring Construction Change Order

Regional Water Recycling Plant No. 5 (RP-5) has been in operation for the past twelve years. Over the course of time, demands on the use of Recycled Water (RW) have increased. Currently, operations staff has limited ability to match process flows with RW demand, which results in unnecessary RW discharges into the Chino Creek. The Flow Equalization and Effluent Monitoring Project No. EN11031 was developed to establish control of the bypass and storage of primary effluent flows greater than the RW pump station capacity of 10 (million gallons per day) MGD.

The project added new automation and flow measurement points within the process to control the plant flow. As a result of these additional measurement points and operational changes, both the disinfection and chlorination chemical pumps will require an upgrade to meet the new operation requirements.

The chemical pump replacement began in June 2016 with the installation of five new peristaltic pumps. During the replacement, four existing chemical pumps remained online to ensure necessary treatment was uninterrupted. During startup of the new pumps, IEUA staff discovered that the pump control systems failed to sustain continued operation. Diagnostics indicated that the control systems were experiencing electrical interference caused by induced voltage on the control wiring from the power wiring from the pump to the electrical switchgear.

Through field troubleshooting, IEUA staff determined that replacing the control wiring with fiber optic cabling would resolve the interference issue and allow uninterrupted operation of the new pumps. The change order involves the materials and labor requires to install new fiber optic cabling, a remote control panel, and electrical connections, as well as the removal of existing control wiring. The change order price of $108,655 has been evaluated and found to be reasonable and fair.

The following table is the anticipated project cost:

Description	**Estimated Cost**
Design Services	**$556,591**
Design Contract (actual cost)	$357,621
IEUA Design Services (actual cost)	$198,970
Construction Services	**$159,252**
Engineering Services During Construction (actual cost)	$68,452
IEUA Construction Services (actual cost)	$90,800
Construction	**$1,165,492**
Current Construction Contract	$1,056,837
Change Order (this action)	$108,655
Total Project Cost:	**$1,881,335**
Total Project Budget:	**$3,397,200**
Remaining Budget:	**$1,515,865**

The following is the project schedule:

Project Milestone	Date
Change Order Approval	November 2017
Construction Completion	January 2018

Fiscal Impact:

If approved, the change order for the Flow Equalization and Effluent Monitoring, Project No. EN11031, for the not-to-exceed amount of $108,655, will be within the combined total project budget of $3,397,200 in the Regional Wastewater Capital (RC) Fund. Staff anticipates construction will be completed within Fiscal Year 2017/18.

Inland Empire Utilities Agency

Purchase Requisition No. _____

Contract No. 4600002249

Purchase Order No. 4500026634

CONSTRUCTION CONTRACT CHANGE ORDER

Project Title:	RP-5 Flow Equalization and Effluent Monitoring	**Project No.:**	EN11031
Contractor Name:	SCW Contracting Corp	**Change Order No.:**	0009
Subject:	Chemical Pump Signal Interference	**RFD No.:**	N/A
Location:	RP-5 Tertiary Chemical Facility	**RFI No.:**	N/A
Change Order type	Lump Sum	**Classification Code:**	200
Original Condition:			

The original contract documents directed the Contractor to install new power and signal cables in separate conduits from Power Center 3 to the Tertiary Chemical Facility for the new sodium hypochlorite and sodium bisulfite pumps.

Change Condition/Justification:
After installation of the new power and signal cables for the chemical pumps, the cables experienced induced voltage caused by the long run in the duct bank back to Power Center 3 and the number of cables in the cable tray under Power Center 3 which therefore made control of the pumps unreliable. The Contractor was directed to provide/install a Remote I/O control cabinet at the tertiary chemical facility and provide/install one (1) fiber optic cable from an existing control panel at the Tertiary Filters to the new Remote I/O cabinet. The Contractor was also directed to remove all unused cables from Power Center 3 to the Tertiary chemical pumps. The proposed changes will result in new scope of work and additional work for the Contractor.

This Change Order reflects the additional costs incurred by the Contractor to complete the aforementioned tasks. All work shall be performed in accordance with the original contract documents.

Time Change: 0.0 Calendar Days

Total Change Order Amount: $108,654.85

We the undersigned contractor, have given careful consideration to the change proposed and hereby agree, if this proposal is approved, that we will provide all labor, equipment, furnish all materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefore the prices shown above. The compensation offered herein represents full and final compensation for all direct and indirect costs arising from this change.

Contractors Acceptance: _____ Date: _____

IEUA Owner's Approval

Approval Recommended _____ Construction Project Coordinator Date: _____

Approval Recommended _____ Construction Project Manager Date: _____

Approval Recommended _____ Department Deputy Manager Date: _____

Owner Authorization _____ Manager of Engineering Date: _____

RFD Approved: -

Change Order Approved -

Days Turnaround: 0

CONSTRUCTION CONTRACT CHANGE ORDER

Project No.: EN11031 **Change Order No.:** 0009

Change Order Details:

Exhibit A: CONTRACTOR'S INVOICE.pdf
Exhibit B: COST ANALYSIS.pdf
Exhibit C: MANAGER'S APPROVAL.pdf

RFD Approved: - Change Order Approved - Days Turnaround: 0

EXHIBIT-A

Contractor's Invoice

9 Pages

Change Order Request

RP5 Flow Equalization

Date:	10/18/2017	Project No:	1656
Project:	RP5 Flow Equalization	Change Order Request No:	14.01
From:	SCW Contracting Corporation	Category No:	17000
To:	Inland Empire Utilities Agency	Category Desc:	Intrumenation & Control

Chemical Pump signal Interference

The multi-conductor cables for the chemical pump discrete controls are experiencing induced voltage due to the long run in the duct bank back to Power Center 3 and the abundant cables in the cable tray under Power Center 3.
Contractor is requested to provide the following:
1. Provide and install Remote I/O control cabinet per the attached drawings titled "RP5 Flow Equalization Control Chem Pump Cabinet Power Distribution".
2. Remove analog fiberglass junction box at Tertiary Chemical Facility and route conduits directly into the above-mentioned control cabinet.
3. Install (2) 2" conduits from new SS power junction box to new Remote I/O Control cabinet.
4. Install (1) Square D 2-20 amp single pole tandem breaker in the UPS panel at Power Center 3 to feed the new Remote I/O panel. Pull 3#10 power conductors to new Remote I/O panel from UPS power panel at Power Center 3.
5. Cut control cables (Discrete and analog) for all nine pumps at PB-33 and PB-33A. Pull cables back to PB-34 and PB-34A and route to new Remote I/O panel.
6. Remove all pump control cables (discrete and analog) from PB-33 and PB-33A back to Power Center 3.
7. Cut flowmeter Analog cables at PB-33A. Pull cables back to PB-34A to be routed to new Remote I/O panel.
8. Provide/install/terminate approximately 400' of new fiber optic cable in existing conduit from panel at tertiary filters to the new Remote I/O control cabinet (Contractor to verify length). Provide and install (1) new fiber optic patch plate in existing panel at tertiary filters to accommodate new fiber optic cable.
9. Update loop drawings.
10. Programming to be provided by IEUA

*Price does not include SCW supervision during Davis and Trimax's work. If this is required, additonal costs will need to be worked out and agreed upon prior to commencement of work.
**This change order request does not include additional contract days required. Upon execution of a change order, additional days will be requested.

TOTAL OF CHANGE ORDER REQUEST: $108,654.85

TOTAL TIME EXTENSION REQUESTED: TBD

Peter Kogler 10/18/2017

Extra Work Worksheet

1656_EN11031 RP-5

Flow Equalization Effluent Monitoring

RFD 14.1 Chem Pump Wiring Interference **Date: 10/18/2017**

SUBCONTRACTOR	Qty	# of Units		Price/Unit		Total
Davis & Trimax	1	1	$	101,953.00	$	101,953.00
	1	0	$	-	$	-
	1	1	$	-	$	-
				Subtotal:	$	101,953.00
10% Allowable Markup First $2,000.00		10%		Subcontractor OH&P:	$	200.00
5% Allowable Markup Remainder		5%		Subcontractor OH&P:	$	4,997.65
				Subcontractor Total:	**$**	**107,150.65**

MATERIAL	Qty	# of Units		Price/Unit		Total
Portable Toilet Rental (Sept - Dec)	1	4	$	150.00	$	600.00
Builders Risk Insurance Extension (July - Oct)	1	1	$	354.00	$	354.00
Builders Risk Insurance Extension (Oct - Dec)	1	1	$	354.00	$	354.00
	1	0	$	-	$	-
	1	0	$	-	$	-
				Subtotal:	$	1,308.00
		15%		Material OH&P:	$	196.20
				Material Total:	**$**	**1,504.20**

LABOR	Qty	Hours		Hourly Rate		Total
FOREMAN	1	0	$	90.00	$	-
OPERATOR	1	0	$	88.67	$	-
LABORER	1	0	$	66.55	$	-
PROJECT MANAGER	1	0	$	90.00	$	-
				Subtotal:	$	-
		15%		OH&P	$	-
				Labor Total:	**$**	**-**

EQUIPMENT	Qty	Hours		Hourly Rate		Total
PM Pickup	1	0	$	16.34	$	-
Foreman Crew Truck & Tools	1	0	$	25.30	$	-
10K Reach Fork Lift	1	0	$	50.74	$	-
185 CFM Air Compressor	1	0	$	27.71	$	-
	0	0	$	-	$	-
	0	0	$	-	$	-
	0	0	$	-	$	-
				Subtotal:	$	-
		5%		Equipment OH&P:	$	-
				Equipment Total:	**$**	**-**

EXTRA WORK TOTALS

Extra Work Subtotal:	$	108,654.85
EXTRA WORK TOTAL:	**$**	**108,654.85**

DAVIS ELECTRIC, INC.

ELECTRICAL CONTRACTING

CHANGE ORDER PROPOSAL

TO: PETER KOGLER	FROM: DAVIS ELECTRIC
FAX NUMBER: 760-728-2517	DATE: 10/17/17
COMPANY: SCW CONTRACTING	TOTAL NO. OF PAGES INCLUDING COVER: 5
PHONE NUMBER: 760-728-1308	PROJECT: RP-5
RE: DCR #9, RFD #14/RIO PANEL	YOUR REFERENCE NUMBER: RFD # 14

☐ URGENT X FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE COMPLETE

NOTES/COMMENTS:

Peter

Davis is providing a cost proposal for RFD #14 as outlined in the description provided by the Owner/Engineer. Please find attached, details of the estimate. Total cost for the work is $101,953.

At this time it is impossible to determine what adverse effect this change order will have on the ability of Davis Electric to meet the project schedule. Davis Electric reserves the right to request additional contract days later in the project due to the additional work described. This proposal is good for 30 days. As with all change orders, Davis Electric standard exclusions, clarifications and project specifics from our scope letter apply unless stated otherwise.

Regards,
Russ Cordell
Davis Electric, Inc
Phone: (909) 446-0054
FAX: (909) 446-0366
Email: Russ@davis-electric.com

ESTIMATE SUMMARY

JOB RP-5 RFD #14 DCR #9

EXTENDED BY _____ CHECKED BY _____

ESTIMATE No. _____
BID DEP. No. _____
BID DATE 10/17/17
ESTIMATOR _____
SHEET No. _____ of _____

SHEET No.	DESCRIPTION	MATERIAL	LABOR
1		4695	81
2		2413	342
3			48
	MISC. MATERIAL & LABOR	7108	471
	NON-PRODUCTIVE LABOR		
	TOTAL MATERIAL & LABOR		

NON-PRODUCTIVE LABOR	HOURS
SHOP DELIVERY & PICK UP @ $20	16
TOTAL	320

LABORER	HRS. @ $	PER HR.	
JOURNEYMAN	471 HRS. @ $ 81	PER HR.	38151
FOREMAN	HRS. @ $	PER HR.	
GEN. FOREMAN	20 HRS. @ $ 85	PER HR.	1700
SUPERINTENDENT	HRS. @ $	PER HR.	

JOB EXPENSE		
SALES TAX 8 %		569
TRIMAX		35912
TRUCK/TOOL @ $19		4475
MILEAGE		
PERMITS & LICENSES		
EQUIPMENT RENTAL		
SMALL TOOLS %		
DRAWINGS AND ENGINEERING		
TELEPHONE		
STORAGE		420
FREIGHT		
TOTAL		41696

TOTAL LABOR COST		39851
MATERIAL COST		7108
JOB EXPENSE		41696
TOTAL PRIME COST		88655
% OF MATERIAL COST	15 % OVERHEAD	13298
	SUBTOTAL	
% OF LABOR COST	% PROFIT	
PERFORMANCE BOND		
BID DEPOSITORY FEE		
SELLING PRICE		101953

ADDENDA INCLUDED

REMARKS:

(1)

COST ESTIMATE

LOCATION _____ JOB _____

DESCRIPTION	AMOUNT Quantity	Units	MATERIAL COST Units		Total	LABOR COST Units		Total	OTHER	
Item #1										
INSTALL RIO	1				20			16		
RIO 3x3 SQ TUBE	/		.		/			/		
SST	2				785			8		
RIO SUNSHADE SST	1				2700			16		
EX & BACKFILL	LOT				/			6		
5/8 x 6 SST ANCHORS	8		22	E	176	30	C	1 8		
Item #2										
DEMO FIBERGLASS BOX & CABLES								2 5		
RE-ROUTE EXISTING CONDUITS TO NEW RIO PANEL										
3/4 OCAL	5									
2" OCAL	2									
2" HUBS	2				400			16		
Item #3										
INSTALL NEW 2" CONDUIT TO RIO PANEL:										
2" OCAL CONDUIT	20'		852	C	171	24	C	4 8		
2" OCAL HUBS	2		78	E	156	2	E	4		
2" SST STRAPS	6		8	E	48	6	C	36		
1 5/8 SST STRUT - 4 CUTS	10'		183		183	.3	E	3		
3/8 x 5 SST ANCHORS	8		7	E	56			2 16		
Totals					4695			80 62		

Labor mhrs @		Material		Material, Etc. Total	
Suprv. mhrs @		Tax		Labor Total	
O.T. mhrs @		Equipment		Balance	
Travel Subsist.		Other		OH & P	
Labor Total		Material Total		Balance	

COST ESTIMATE

(2)

LOCATION _____ JOB _____

DESCRIPTION	AMOUNT Quanity	Units	MATERIAL COST Units		Total	LABOR COST Units		Total	OTHER
INSTALL BREAKERS 2-20	1		26	E	26	2	E	2	
NEW CIRCUIT TO RIO	/								
(3) #10 XHHW	2500		308	M	770	11	M	27 5	
CUT EXISTING CABLE									
AT PULL BOX - PULL BACK									
TO RIO;									
1" CONDUIT SPACE	9								
2" " "	2								
PULL LINE	1				68				
REMOVE PUMP CONTROL CABLES									
BACK TO PC #3									
9 CONDUITS - 800' RUNS	9							224	
DETERM WIRES	LOT							8	
CUT FLOW METER CABLE/PULL									
BACK TO NEW RIO	5							32	
FURNISH/INSTALL FO CABLE	420'		2.13	FT	895	/		16	
FAN OUT KIT	2		24	E	48	3	E	6	
FURNISH/INSTALL FO TERMS	24		21	E	504	/		16	
TEST FIBER CABLE	LOT				25			8	
FIBER CLOSET PANEL	1		77	E	77			2	
Totals					2413			341 5	

Labor mhrs @			Material		Material, Etc. Total
Suprv. mhrs @			Tax		Labor Total
O. T. mhrs @			Equipment		Balance
Travel Subsist.			Other		OH & P
Labor Total			Material Total		Balance

ITEM #4

ITEM #5 ← ITEM #6

ITEM 7

ITEM #8

(3)

COST ESTIMATE

LOCATION _____ JOB _____

Item #8

DESCRIPTION	AMOUNT Quantity	AMOUNT Units	MATERIAL COST Units	MATERIAL COST Total	LABOR COST Units	LABOR COST Total	OTHER
TRIMAX QUOTE;							
RIO PANEL							
6-7 WK LEAD TIME				35912			
MEGGERING TEST	LOT			—		32	
LOOPS	LOT			—		16	
Totals				35912		48	

Labor mhrs @			Material			Material, Etc. Total		
Suprv. mhrs @			Tax			Labor Total		
O. T. mhrs @			Equipment			Balance		
Travel Subsist.			Other			OH & P		
Labor Total			Material Total			Balance		

TRIMAX

Trimax Systems, Inc.
Change Order Request

Job Name:	Change Order Number:
IEUA RP5 Flow Equalization Project	16-0104-01
To: Davis Electric, Inc. 13556 Douglas St. Yucaipa, CA 92399 Attn: Attn: Denny Doyle Denny Doyle (denny@davis-electric.com)	Change Order Request: COR-02 Date: 10/5/2017

Descripton:

Ref - RFD No. 0014

Furnish one (1) new Remote I/O panel. Provide all material, design, submittals, fabrication/assembly and factory testing necessary to provide a complete control panel assembly. Update loop diagrams to reflect the new installation and signal routing.

Material

Item	Description		Qty	Unit Price	Extended Price
1	16 Ch. Isolated Digital AC Input	Allen Bradley 1756-IA16I	2	$434.97	$869.94
2	Isolated Fusible Interface Module	Allen Bradley 1492-IFM40F-FS120A-4	2	$303.29	$606.58
3	DI Interface Cable	Allen Bradley 1492-CABLE010Y	2	$221.07	$442.14
4	16 Ch. Digital AC Output	Allen Bradley 1756-OA16	1	$540.55	$540.55
5	16 Point Relay Interface Modules	Allen Bradley 1492-XIM20120-16R	1	$382.87	$382.87
6	DO Interface Cable	Allen Bradley 1492-CABLE010X	1	$115.93	$115.93
7	Analog Input 8 Ch.Isolated	Allen Bradley 1756-IF8I	2	$1,804.31	$3,608.62
8	Analog Interface Module	Allen Bradley 1492-AIFM8S-3	4	$93.27	$373.08
9	Analog Interface Cable	Allen Bradley 1492-ACABLE010YA	4	$158.13	$632.52
10	Analog Output 8 Ch. Isolated	Allen Bradley 1756-OF8I	2	$1,973.68	$3,947.35
11	Ethernet Comm Module	Allen Bradley 1756-EN2TR	2	$2,420.60	$4,841.20
12	10 Slot Chassis	Allen Bradley 1756-A10	1	$462.16	$462.16
13	Power Supply	Allen Bradley 1756-PA75	1	$828.60	$828.60
14	Power Supply	Allen Bradley 1606-XLE120E	2	$233.92	$467.85
15	Comm Module	Allen Bradley 1783-ETAP1F	2	$408.00	$816.00
16	Switch	Allen Bradley 1783-BMS06SL	1	$837.45	$837.45
17	Power Supply	Allen Bradley 1606-XLS480E	1	$732.27	$732.27
18	Breakers 1A	Allen Bradley 1489-M1C010	1	$48.70	$48.70
19	Breakers 3A	Allen Bradley 1489-M1C030	2	$48.70	$97.41
20	Breakers 5A	Allen Bradley 1489-M1C050	2	$48.70	$97.41
21	Breakers 10A	Allen Bradley 1489-M1C100	1	$48.70	$48.70
22	DIN Rail Mounted Duplex Receptacle	Allen Bradley 1492-REC15G	1	$38.10	$38.10
23	Terminals	Allen Bradley 1492-J3	25	$0.88	$22.03
24	End Caps	Allen Bradley 1492-EBJ3	10	$0.63	$6.32

TRIMAX

Trimax Systems, Inc.
Change Order Request

Job Name	Customer PO Number
IEUA RP5 Flow Equalization Project	16-0104-01
To: Davis Electric, Inc. 13556 Douglas St. Yucaipa, CA 92399 Attn: Attn: Danny Doyle Denny Doyle (denny@davis-electric.com)	Change Order Request: COR-02 Date: 10/5/2017

Material (cont'd)

Item	Description		Qty	Unit Price	Extended Price
25	End Anchors	Allen Bradley 1492-EAJ35	12	$1.70	$20.40
26	Ground Terminals	Allen Bradley 1492-JDG4C	10	$6.06	$60.57
27	Fuse Terminals	Allen Bradley 1492-WFB424	3	$13.66	$40.98
28	End Caps (Box of 50)	Allen Bradley 1492-EBLAFB6	1	$22.20	$22.20
29	NEMA 4X Cabinet	Hoffman CSD423010SS	1	$747.59	$747.59
30	Back Panel	Hoffman CP4230	1	$82.87	$82.87
31	Fiber Patch Panel	Corning ICH-02P	1	$329.00	$329.00
32	Fiber Patch Plate	Corning CCH-CP12-15T	2	$57.00	$114.00
33	Misc Material (wire, wire markers, name tags, etc.)	Lot	1	$300.00	$300.00
				Subtotal:	$22,581.38
				Markup: 15.00%	$3,387.21
				Sales w/o Tax:	$25,968.58
				Sales Tax: 7.75%	$2,012.57
				Total Material Cost:	**$27,981.15**

Non-Taxable Labor

Item	Description	Resource	Hrs	Rate	Extended Price
1	Prepare Panel Test Docs	Des Eng	4.00	110.00	$440.00
2	Update Loop Dwgs / Subm Prep	Des Eng	8.00	110.00	$880.00
3	Factory Test Remote I/O Panel	Tech	6.00	90.00	$540.00
	Total Non-Taxable Labor Cost:		**18.00**		**$1,860.00**

Taxable Labor

Item	Description	Resource	Hrs	Rate	Extended Price
1	Panel Design / Subm Prep	Des Eng	24.00	110.00	$2,640.00
2	Assemble Remote I/O Panel	Shop	32.00	75.00	$2,400.00
				Subtotal w/o Tax:	$5,040.00
				Sales Tax: 7.75%	$390.60
				Total Taxable Labor Cost:	**$5,430.60**

Other Direct Costs

Item	Description	RT Miles	Qty	Unit Price	Extended Price
1	Mileage	40	0	$0.62	$0.00
2	Freight		1	$340.00	$340.00
3	Delivery to job site		1	$300.00	$300.00
				Total Other Direct Costs:	**$640.00**

Complete price for the scope of work described herein: $35,911.75

EXHIBIT-B

Cost Analysis

4 Pages

Qty	Craft@Hours	Unit	Material	Labor	Equipment	Total

Project Name: RP5 Flow Equalization and Effluent Monitoring
Project Number: EN 11031.00 RP5 Flow equalization
RFD # 14 - Chemical Pump Signals
Date : 2017-10-19 Prepared by:GK Associates / Rod Hernandez for Josh Biesiada / Jesse Pompa

Description : Install new Fiber Optic Control system

AGENGY COST EVALUATION :				115,717.92		
CONTRACTORS PROPOSAL				108,654.85		
DIFFERENCE				(-7,063.07)		
Sub Contractor - Davis Electric						
Rio Cabinet Installation - Custom						
1.00	--@16.00	Ea	1.00	2,592.00	1.00	2,594.00
Rio Stanchions - Custom						
2.00	--@8.000	Ea	1,570.00	1,296.00	2.00	2,868.00
RIO Sunshade - Custom						
1.00	--@16.00	Ea	2,700.00	2,592.00	25.00	5,317.00
Excavation - Hand Digging Labor						
6.00	--@6.000	Ea	0.00	780.00	0.00	780.00
5/8 x 6 SST Anchor Bolts						
17.00	ul@8.500	Ea	374.00	688.50	45.05	1,107.55
Crew Labor - Labor - Demolition of existing hand hole						
3.00	--@3.000	Ea	0.00	243.00	0.00	243.00
3/4" conduit with couplings						
5.00	ll@3.750	LF	27.50	1,087.50	0.00	1,115.00
2" conduit with couplings						
2.00	ll@1.500	LF	17.00	435.00	0.00	452.00
2" adapter union - hubs						
2.00	ll@1.500	Ea	261.12	435.00	0.00	696.12
2" conduit with couplings						
20.00	ll@2.600	LF	170.00	754.00	0.00	924.00

Qty	Craft@Hours	Unit	Material	Labor	Equipment	Total
1-5/8" x 13/16", 16 gauge						
4.00	Ip@4.000	LF	732.00	1,620.00	0.04	2,352.04
2" SST Strut clamp						
6.00	Ip@3.000	Ea	48.00	1,215.00	0.18	1,263.18
2 pole, 240 volt, 15 to 60 amp						
2.00	Ik@2.000	Ea	293.76	324.00	0.20	617.96
#10 type THHN						
2.50	Ip@25.00	MLF	1,675.35	10,125.00	5.05	11,805.40
Crew Labor - Electricians - Demolition of existing wiring within conduits - Confined space						
9.00	--@144.0	Ea	0.00	11,664.00	450.00	12,114.00
Crew Labor - Electrician - Determinate existing control wiring						
8.00	--@8.000	Ea	0.00	648.00	0.00	648.00
Crew Labor - Electrician - Demolition - cut existing flow meter cables and remove back to RIO cabinet						
6.50	--@6.500	Ea	0.00	526.50	0.00	526.50
Fiber Optic Cable						
430.00	Ik@43.00	LF	1,075.00	6,966.00	0.00	8,041.00
Fan Out kits - splicing						
2.00	Ik@6.000	Ea	150.00	972.00	0.20	1,122.20
Fiber Terminating - splicing						
24.00	Ik@12.00	Ea	600.00	1,944.00	2.40	2,546.40
Testing - Meggering Cables and Fiber						
8.00	Ik@8.000	Ea	75.81	1,296.00	0.81	1,372.61
Patch Panel						
1.00	Ik@.5000	Ea	85.00	81.00	0.10	166.10
Crew Labor - Subcontractor - Trimax - See attached Trimax CO request.- custom products						
1.00	--@.0000	Ea	27,981.15	7,290.60	640.00	35,911.75
Crew Labor - Subcontractor OHP 15%						
1.00	--@.0000	Ea	0.00	14,187.53	0.00	14,187.53
**Subtotal: Davis Electric and Trimax						
	328.9		37,836.69	69,762.63	1,172.03	108,771.35

Qty	Craft@Hours	Unit	Material	Labor	Equipment	Total
GC Equipment						
Service or Mechanic Truck						
0.00	--@.0000	Ea	0.00	0.00	0.00	0.00
reach fork lift						
0.00	--@.0000	Ea	0.00	0.00	0.00	0.00
GC Confined Space Equipment						
0.00	--@.0000	Ea	0.00	0.00	0.00	0.00
Misc Materials per invoice Buidkers risk Insurance extension						
6.00	--@.0000	Ea	708.00	0.00	0.00	708.00
Equipment Rental - Portable Toilet - 4 months rental						
4.00	--@.0000	Ea	600.00	0.00	0.00	600.00
Crew Labor - GC OHP 15%						
0.00	--@.0000	Ea	0.00	0.00	0.00	0.00
**Subtotal: GC Equipment						
	0.0		1,308.00	0.00	0.00	1,308.00
Crew Labor - GC OHP 10% of 1st 2,000						
1.00	--@.0000	Ea	0.00	200.00	0.00	200.00
Crew Labor - GC OHP 5%						
1.00	--@.0000	Ea	0.00	5,438.57	0.00	5,438.57
Total Manhours, Material, Labor, and Equipment:						
	328.9		39,144.69	75,401.20	1,172.03	115,717.92
				Subtotal:		115,717.92

Qty	Craft@Hours	Unit	Material	Labor	Equipment	Total
				Estimate Total:		115,717.92

ACTION ITEM 1H

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources Committee *11/08/17*

Finance & Administration *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: Chino Basin Water Bank Planning Authority: Joint Powers Authority Agreement

Executive Summary:

The Chino Basin Water Bank's (CBWB) primary objective is to coordinate the development of groundwater storage within the Chino Basin. In August 2016, IEUA entered a cost-sharing letter agreement between IEUA, the Cucamonga Valley Water District, the City of Ontario, and Monte Vista Water District (Parties) to fund the initial steps in the formation of the CBWB. Since then, the CBWB Parties have been working together to develop a Planning Authority Joint Powers Authority (JPA), to engage in planning activities for potential coordinated storage and recovery programs within the Basin for local, regional and statewide benefits.

The intent of the JPA is to encourage the participation of Basin Stakeholders in the CBWB formed under this Agreement. Additional Parties may be added through amendments to the Agreement. The concept is for the CBWB to apply with the Chino Basin Watermaster for the right to create a comprehensive storage and recovery program under existing basin rules and with a dedicated quantity of basin storage. CBWB Parties would benefit directly through increased groundwater supplies, and the Chino Basin would generally experience improved groundwater levels and water quality.

Staff's Recommendation:

1. Approve the Chino Basin Water Bank Planning Authority Joint Powers Authority Agreement; and

2. Authorize the General Manager to execute the Agreement, subject to non-substantive changes.

Budget Impact: N *Budgeted (Y/N):* N *Amendment (Y/N):* N *Requested Amount:*

Account/Project Name:

N/A

Fiscal Impact (explain if not budgeted):

N/A

Full account coding (internal AP purposes only): - - - Project No.:
- - -

Prior Board Action:

On June 21, 2017, the Board of Directors approved a task order to master services contract for consulting services related to the Chino Basin Water Bank Program to and amended the cost sharing letter agreement with the Chino Basin Water Bank parties.

On August 17, 2016, the Board of Directors received and filed an informational item related to the CBWB cost sharing agreement.

Environmental Determination:

Not Applicable

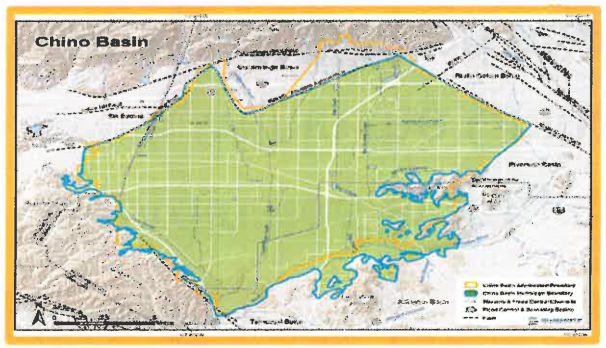
Business Goal:

The agreement is consistent with the Agency's Business Goal of increasing Water Reliability by meeting the region's need to develop reliable, drought-proof and diverse local water resources in order to reduce dependence on imported water supplies

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Chino Basin Water Bank Planning Authority Joint Powers Authority Agreement

Chino Basin Water Bank Planning Authority: Joint Powers Authority Agreement



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Sylvie Lee
November 2017

Chino Basin Water Bank (CBWB)

- Coordinated storage and recovery program within the Chino Basin
- Work within the Chino Basin Watermaster rules and regulations
- Obtain dedicated storage within the Basin
- CBWB storage would be available to outside parties at a "rate"
- Benefits:
  - increased groundwater supplies
  - improved groundwater levels
  - water quality

Chino Basin Water Bank

- Four party cost sharing agreement (August 2016)
  - IEUA, Monte Vista Water District, Cucamonga Valley Water District, Ontario
  - Water bank structure evaluation
  - Development of a Joint Powers Agreement (In Process)
  - Water banking program management (ongoing)
  - Economic benefits study (to be completed)

- CBWB Parties developed the Planning Authority Joint Powers Agreement
  - Establishes the Planning Authority
  - Provide local, regional and statewide benefits
    - Within the Santa Ana River watershed via new project and/or SARCCUP
    - All of Southern California via MWD or SBVMWD
    - N. California via recently submitted Proposition 1 grant application

Joint Exercise of Powers Agreement

- Engage in planning activities to evaluate potential implementation
- The Planning Authority will be governed by Board of Directors
- Each CBWB Party shall designate a Director to serve on the Board
- Amending the JPA (include adding a Party) requires:
  - Approval from the legislative bodies of the Planning Authority
- All other actions require majority (3) votes

- Schedule of CBWB Parties for JPA adoption: Nov – Dec 2017

Recommendation

- Approve the Chino Basin Water Bank Planning Authority Joint Powers Agreement; and
- Authorize the General Manager to execute the Agreement, subject to non-substantive changes

The Chino Basin Water Bank Planning Authority JPA is consistent with ***Agency's Business Goal of increasing Water Reliability*** by supporting the region with the development of reliable, resilient and sustainable water supplies from diverse sources.

INFORMATION ITEM 2A

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources Committee *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: Regional Water Use Efficiency Programs Annual Report - FY 2016/17

Executive Summary:

The Inland Empire Utilities Agency (IEUA) prepares a comprehensive regional water use efficiency (WUE) programs report that captures all activities that occurred during the prior fiscal year. This report tracks the progress that has been made toward goals and objectives outlined in IEUA's Regional WUE Business Plan. Member agencies receive a regional WUE summary perspective as well as service area specific data and activity that provides the foundation regulatory compliance with State WUE statutes. The report serves as a benchmark for assessing and evaluating overall program performances for planning existing and future programs.

There were approximately 24,170 water saving technologies/services deployed throughout the service area over the last fiscal year representing an estimated annual water savings of 427 acre-feet and a lifetime savings of 4,676 acre-feet.

Staff's Recommendation:

This is an informational item for the Board of Directors to receive and file.

Budget Impact: N *Budgeted (Y/N):* N *Amendment (Y/N):* N *Requested Amount:*

Account/Project Name:

N/A

Fiscal Impact (explain if not budgeted):

N/A

Full account coding (internal AP purposes only): - - - - - - Project No.:

Prior Board Action:

None

Environmental Determination:

Not Applicable

Business Goal:

The Programs are consistent with IEUA's Business Goal of increasing Water Reliability by promoting water use efficiency and education to enhance water supplies within the region; and meeting the region's need to develop reliable and diverse local water resources in order to reduce dependence on imported water supplies.

Attachments:

Attachment 1 - FY 2016/17 WUE Programs Preface
Attachment 2 - IEUA Regional Water Use Efficiency Programs Annual Report - FY 2016/17 - PowerPoint
Attachment 3 - IEUA Regional Water Use Efficiency Programs Annual Report - FY 2016/17 https://www.dropbox.com/s/7u4bker9e4b1rd8/Regional WUE Programs Annual Report-FY16-17 FINAL.pdf?dl=0

Preface
Regional Water Use Efficiency Programs
Annual Report
FY 2016-2017

Beginning in FY 2000/2001, and after the adoption of Inland Empire Utilities Agency's (IEUA) 2000 Urban Water Management Plan, IEUA in partnership with its member agencies established a regional goal and began planning and investing in local water conservation and water use efficiency (WUE) initiatives and actions. Since that time, direct financial investments grew from $85,000 to over $1,000,000, annually. Along with those investments, numerous accomplishments were achieved and millions of dollars contributed to the programs through the ability to leverage external funding opportunities whenever possible.

IEUA works closely with member retail agencies to design and implement WUE measures based on established goals and objectives. This has led to the region's success in exceeding water savings goals with lower than anticipated costs. The numerous accomplishments achieved over the past 17 years have been the result of the strong partnership between IEUA and the members who work collaboratively and proactively to implement strategies that create a foundation for future WUE efforts. Since 2010, State initiatives have mandated increased conservation, enhanced efficiency, technological improvements that increase water savings potential, and advancements in methods of communication that provide new opportunities to engage and educate the public.

In June 2016, IEUA completed an update of the 2010 Regional Water Use Efficiency Business Plan (Plan) by transforming the regional objective from deploying traditional WUE efforts to utilizing more sophisticated and effective strategies. The objective of the updated Plan is to deliver a prolonged, increased level of water efficiency by identifying inefficient water users through technology-based software, data gathering, analytics, and GIS mapping. in addition, the Plan also identifies another core component of increased water savings and sustained demand reduction through the adoption of conservation-based rate structures. The five-year Plan establishes a water savings goal of 16,095 acre-feet from newly deployed programs without the adoption of conservation-based rate structures and 33,554 acre-feet with two agencies adopting rate structures bu 2021.

Each year, IEUA prepares a comprehensive WUE report that captures all activities that occurred during the prior fiscal year. This report tracks the progress that has been made toward goals and objectives outlined in IEUA's Regional WUE Business Plan. Member agencies receive a regional WUE summary perspective as well as service area specific data and activity that provides the foundation for regulatory compliance with State WUE statutes. Moreover, the report serves as a benchmark for assessing and evaluating overall program performances for planning existing and future programs.

The Agency currently offers a suite of WUE programs that are designed to positively impact individual long-term behavior regarding efficient water use. Over the last fiscal year, there were approximately 24,170 water saving technologies/services deployed throughout the service area and includes some of the following:

- ✓ Residential and Commercial Turf Removal
- ✓ Landscape Installation and Retrofit Programs

- ✓ Freesprinklernozzles.com Voucher Program
- ✓ Landscape Evaluations and Consultations
- ✓ Residential Pressure Regulation Program
- ✓ Residential and Commercial Rebates
- ✓ Technology-Based Software Program
- ✓ Regional Member Agency Aerial Mapping Program
- ✓ Funding support for Member Agency Locally Implemented Programs
- ✓ Funding support for development of Sustainable Water Rate Structures

The water savings achieved through these regional WUE activities is approximately 427 acre-feet per year, with an estimated lifetime savings of 4,676 acre-feet. This new water savings is in addition to IEUA's cumulative lifetime water savings of 138,613 acre-feet for all water efficiency activities since 1992.

Over the last year, the cities of Chino and Chino Hills, and Cucamonga Valley Water District conducted rate studies funded through IEUA and the Santa Ana Watershed Project Authority's Proposition 84 – Drought Assistance Grant. An agency adopting a conservation-based rate structure may achieve a 15% sustained reduction in urban water use within the first year of adoption. It's estimated that 13,350 acre-feet may be saved per year if two agencies implemented a conservation-based rate structure. This is in addition to IEUA's regional core programming. If all three agencies elect to implement the new rate structure, collectively the region could see an estimated annual water savings of up to 40,050 acre-feet.

Policies and practices are shaped largely by core strategies and programs designed to meet regulatory requirements of the following initiatives:

- ➢ Surpassing SBX 7-7 - The Water Conservation Act of 2009 (reduction in per capita water use by 20% by 2020)
- ➢ Assembly Bill 1881 – The Model Water Efficient Landscape Ordinance
- ➢ Making Conservation a California Way of Life
- ➢ Future WUE legislation and regulations

Sustained reduction in water use, as mandated by state legislation, will be met through IEUA's member agency regional partnership and IEUA's continued commitment to implement innovative WUE programs that create market transformations. Many of these programs have been made possible through funding partnerships with local agencies, including the Metropolitan Water District of Southern California, the Department of Water Resources, the U.S. Bureau of Reclamation, and public/private partnerships.

Sincerely,

P. Joseph Grindstaff
General Manager
Inland Empire Utilities Agency

Regional Water Use Efficiency Programs Annual Report FY 2016/17

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Lisa Morgan-Perales
November 2017

FY 2016-2017
Regional WUE Priorities

- Surpassing SBX 7-7 (2009) – Reduce water use by 20% by 2020
- Assembly Bill 1881 – The Model Water Efficient Landscape Ordinance
- Making Water Conservation a California Way of Life
- Compliance with WUE legislation and regulations
- Regional WUE Business Plan (2015 – 2020)

FY 2016-2017
Water Use Efficiency Programs - Education

- IEUA Residential Landscape Training Workshops
  - 19 residential courses conducted throughout IEUA's service area
- National Theater for Children
  - 92 Theater Performances – 23,730 K-6 students, teachers and parents reached
- Shows that Teach
  - 36 Theater Performances – 10,616 K-6 students, teachers and parents reached
- Garden-In-Every School Program
  - 4 new Gardens installed – 4,929 students, teachers and parents reached (Chino Hills, Montclair, and Ontario)

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

FY 2016-2017
Water Use Efficiency Programs

Residential Landscape Retrofit	163 sites (239 controllers; 2,124 Nozzles)	19
Residential Controller Upgrade	153 Workshop Attendees 153 controllers Installed	6
Freesprinklernozzles.com Voucher	228 vouchers (7,038 nozzles – Res & CII)	29
Residential Pressure Regulation Pilot	161 sites, 99 reduced pressure	13
Regional Landscape Evaluation and Audit	42 residential / 7 CII	54
SoCalWater$mart.com	24,121 rebates - Res & CII	306
	Total	427

Res & CII: residential, Commercial, Industrial & Institutional

LIFETIME SAVINGS: 4,676 AF

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Water Use Efficiency-Transformational

- Technology Based Programming
  - Omni Earth
  - California Data Collaborative
- SAWPA Grant Funded Projects
  - Public Sector/HOA Turf Removal
  - Watershed Wide Aerial Mapping
  - Technology Based Software
  - Customer Engagement
  - Water Meter and NAICS CII Geocoding
  - SARCCUP Smartscape
  - Conservation Based Rate Studies
- Member Agency Support Programs
- Agricultural Pilot Program

CHINO

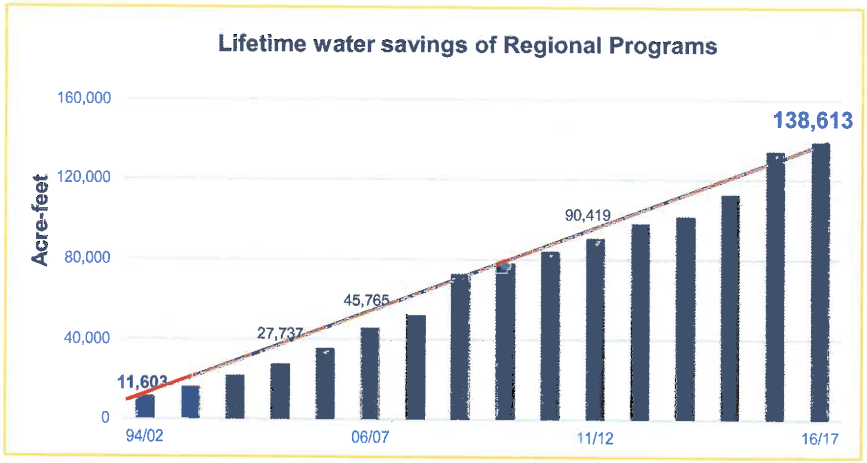
City of Chino Hills

Cucamonga Valley Water District
Service Beyond Expectation

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

FY 2016-2017
Annual WUE Programs Summary

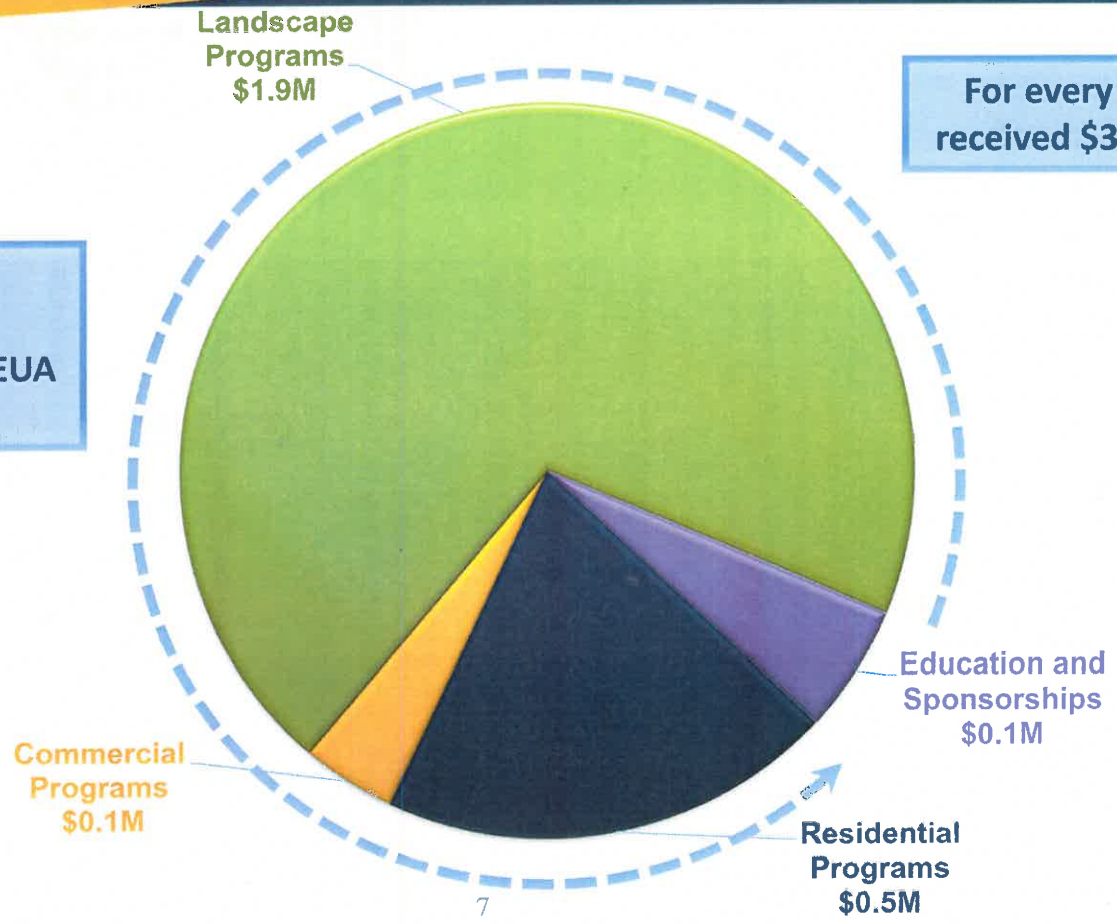
- 24,170 technologies & services
- 427 AF of annual water savings
- Lifetime water savings: 4,676 AF
- FY 2016-2017 Core Programs
  - Education
  - Programmatic
  - Transformational



~138,613 AF of water has been conserved since 1992 through IEUA's water use efficiency programs

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

FY 2016-2017
Water Use Efficiency Programs



For every $1 invested, IEUA received $3 in external funding

WUE Core Programs
$2.5M
Funding: 75% External - 25% IEUA
Program Cost per AF: $153

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

INFORMATION ITEM 2B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: November 15, 2017

To: The Honorable Board of Directors **From:** P. Joseph Grindstaff, General Manager

Committee: Engineering, Operations & Water Resources Committee *11/08/17*

Executive Contact: Chris Berch, Executive Manager of Engineering/AGM

Subject: FY 2016/17 Recycled Water Annual Report

Executive Summary:

The Recycled Water Annual Report is compiled each fiscal year to provide information on recycled water direct use, groundwater recharge and capital project development. It lists the status of projects to increase reliability and demands. The FY 2016/17 Recycled Water Annual Report accompanies the update and provides a detailed breakdown of the 33,411 acre-feet of recycled water delivered during the past fiscal year. The fiscal year was a record high for the recycled water recharge. Data are presented in the report by IEUA retail member agencies, by usage types and by customers. The report provides summaries of the program history, describes recent construction and gives an overview of the IEUA treatment plants. The report also includes appendices of water quality compliance data for IEUA water recycling plants and lists individual customer uses.

Staff's Recommendation:

This is an informational item for the Board of Directors to receive and file.

Budget Impact: N *Budgeted (Y/N):* N *Amendment (Y/N):* N *Requested Amount:*

Account/Project Name:

N/A

Fiscal Impact (explain if not budgeted):

N/A

Full account coding (internal AP purposes only): - - - - - - Project No.:

Prior Board Action:

None

Environmental Determination:

Not Applicable

Business Goal:

The activities summarized in the Annual Report are consistent with the IEUA business goal of Water Reliability, namely maximize the use of recycled water to enhance regional water reliability.

Attachments:

Attachment 1 - Recycled Water Annual Report FY 2016/17 - PowerPoint
Attachment 2 - IEUA FY 2016/17 Recycled Water Annual Report

Recycled Water Annual Report
FY 2016/17

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Sylvie Lee
November 2017

Recycled Water Program Overview

Project Name	Status	Completion Date	New Demand (AFY)
New FYE 17 Customer Connections	**Complete**	**06/2017**	**1,715**
RP-5 RW Pipeline Bottleneck	Design	10/2018	0*
Pressure Sustaining Valve Installation	Pre Design	04/2019	0*
Baseline Extension (Village of Heritage)	Pre Design	04/2019	105
Napa Lateral	Planning	09/2019	500
San Sevaine Basin Improvements	Design	02/2020	1,500**
RP-1 1158 Pump Station Improvements	Pre Design	02/2020	0*
		Total	**3,820**

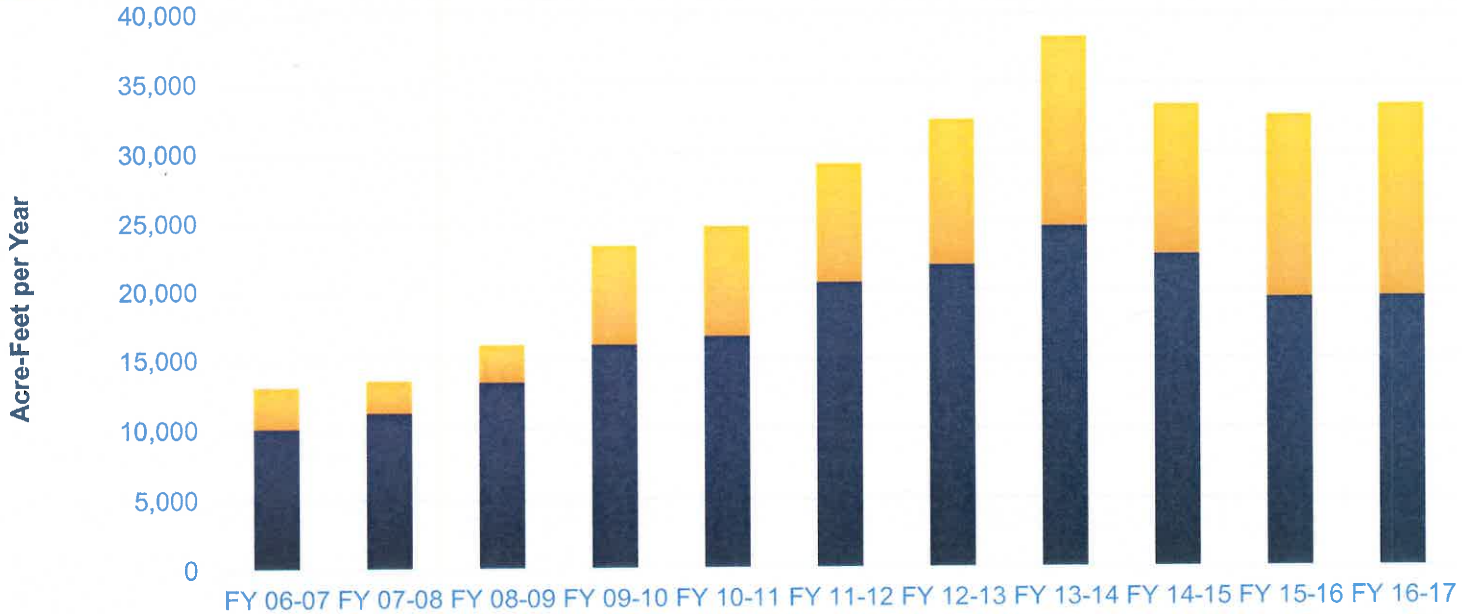
* Efficiency project to maximize operations and delivery of RW, potential to increase overall deliveries to groundwater recharge

** Potential for Recharge within San Sevaine Basin: 1,500 – 4,100 acre-feet per year

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Recycled Water Deliveries

Record high for RW Ground water recharge



	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17
Direct	10,048	11,153	13,361	16,057	16,656	20,556	21,840	24,659	22,850	19,397	19,477
GWR	2,981	2,340	2,684	7,208	8,028	8,634	10,479	13,593	10,840	13,222	13,934
Total	13,029	13,493	16,045	23,265	24,684	29,190	32,319	38,252	33,690	32,619	33,411

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RW Resolution 2016-6-17

- Resolution in effect July 1, 2017
- Each contracting agency has a Base Entitlement to recycled water (RW)
  - set by share of total wastewater EDU's
- For use in excess of base entitlement, requires either:
  - purchase of replacement water or
  - payment of surcharge rate
- In FY 2016-17, Chino exceeded Base Entitlement
  - Paid a surcharge in amount of $20,166
  - Curtailed groundwater recharge allocation of 10.8% (1,397 AF)

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

EDU: Equivalent Dwelling Unit, treatment capacity for one house

RW Groundwater Recharge Allocations

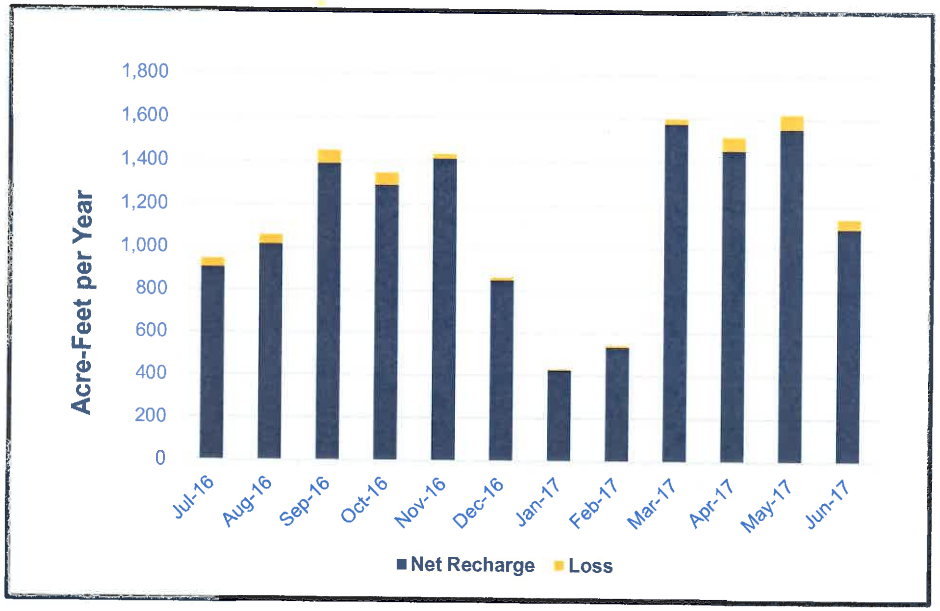
Agency	Pro Rata Share	Recharge Allocation AFY, FY 16/17
Chino	10.8%	0*
Chino Hills	9.1%	1,321
CVWD	25.4%	3,693
Fontana	19.0%	2,764
Montclair	4.4%	638
Ontario	21.6%	3,150
Upland	9.7%	1,418
Total (Excluding JCSD)		**12,984**
JCSD**		950
TOTAL		**13,934**

* Chino exceeded Base Entitlement per Resolution 2016-6-17

** JCSD maximum benefit: 950 AFY

Evaporative losses to supplemental water recharge

- Chino Basin Watermaster Rules & Regulations
- Losses are seasonal for wet water recharge:
  - 1.5% during November thru March
  - 4.2% during April thru October
- Applies beginning: October 1, 2017
  - Estimated impact to IEUA recycled water recharge
    - 2016-17 recharge 13,934 AFY = loss of 454 AF



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

2017

IEUA FY 2016-2017 Recycled Water Annual Report

Water Smart
Thinking in Terms of Tomorrow

Inland Empire Utilities Agency
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INTRODUCTION

The 2016/17 Recycled Water Annual Report for the Inland Empire Utilities Agency (IEUA) recycled water program provides annual delivery data by IEUA retail member agencies, by usage types, and by customers. The 2016/17 report is for IEUA's fiscal year, which runs from July 2016 to June 2017. The report summarizes the program history, describes recent construction, and gives an overview of the IEUA treatment plants. IEUA provides wastewater treatment for its seven member agencies: the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland and Cucamonga Valley Water District. Recycled water from the treatment process is generated and delivered to its retail water agencies for use in the IEUA service area.

IEUA owns and operates five wastewater recycling facilities that serve over 875,000 people. Figure 1 shows the IEUA service area, its member agencies, and the locations of IEUA's treatment plants. Of the five plants, four produce tertiary-treated, Title 22-quality recycled water. Of the treatment plants, RP-2 does not have any liquid treatment processes, and as such does not produce any recycled water. The general layout and capacities of the water recycling plants are discussed in the last section of the report. Appendices A and B contain the recycled water effluent monitoring data and recycled water compliance data, respectively, for the 2016 calendar year for the four recycled water facilities.

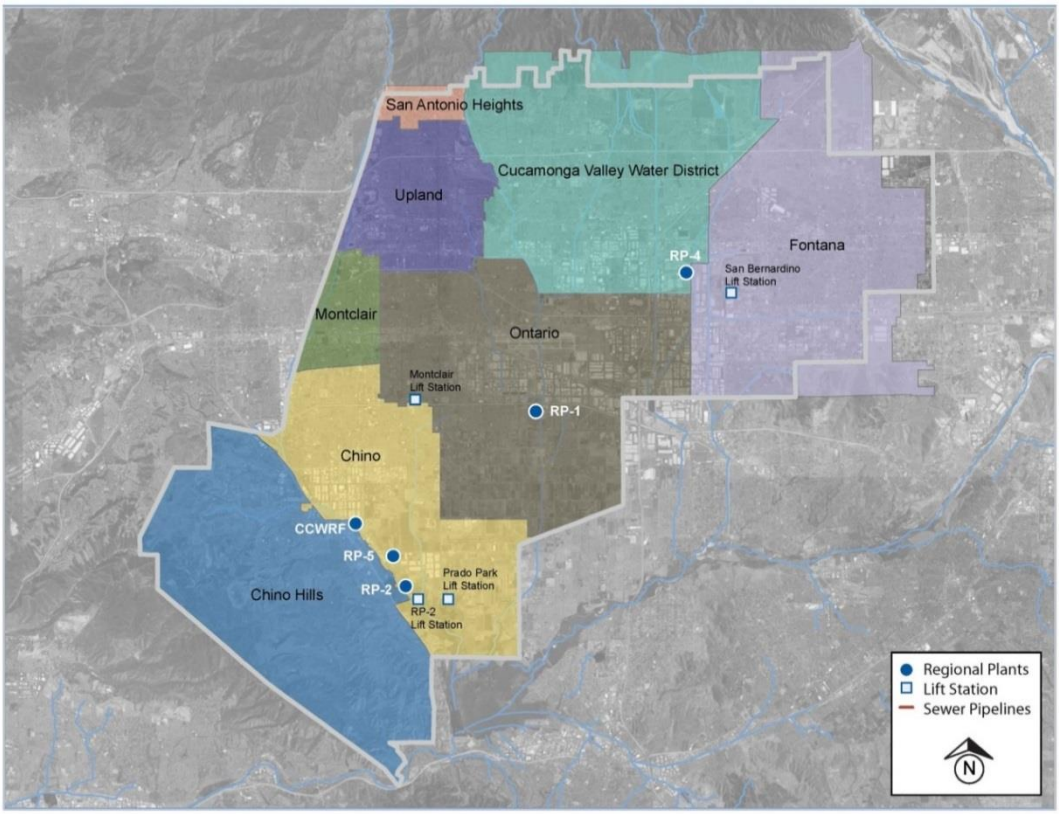

Figure 1 - IEUA Service Area

DEMANDS

During 2016/17, the average recycled water supply from IEUA's facilities was approximately 47.7 million gallons per day (MGD), or 53,467 acre-feet per year (AFY). Recycled water groundwater recharge usage was 13,934 AFY and recycled water direct usage was 19,477 AFY. Total recycled water demands during 2016/17 were 33,411 acre-feet (AF), an increase by 2.4% from the previous fiscal year. Recycled water recharge was up 5% and direct use was up 0.4%. The recycled water delivery volumes of direct use and groundwater recharge can vary seasonally and annually based on a variety of factors (e.g. the rainfall intensity, rainfall duration, and recharge basin maintenance activities). Figure 2 shows IEUA's historical direct use and groundwater recharge of recycled water for the past 10 years.

Recycled water demands for the combined direct use and recharge purposes were approximately 62 percent of the available supply. During the peak demand summer months (July through September), the total recycled water demand was approximately 90 percent of the available supply.

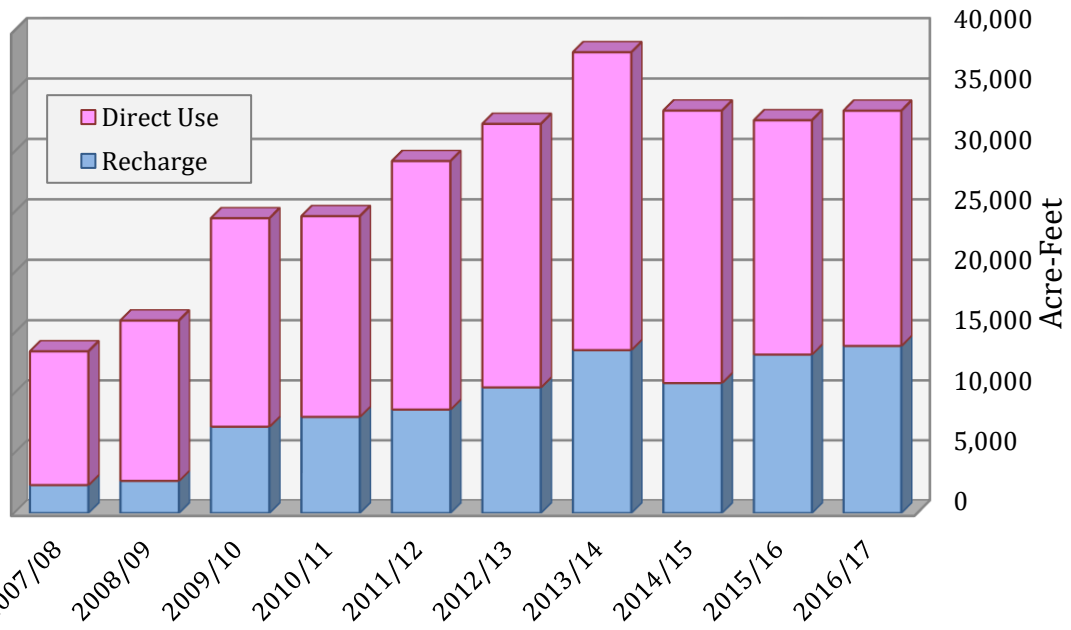

Figure 2 – Historical Recycled Water Direct Use and Groundwater Recharge

DEMANDS BY USE TYPE

Delivered recycled water was beneficially reused for a variety of applications including landscape irrigation, agricultural irrigation, industrial process water, groundwater recharge and construction. Table 1 and Figure 3 show the 2016/17 recycled water demand by use type.

Table 1 – Recycled Water Demand by Use Type for 2016/17

Type of Use	Demand (AF)	Percent of Demand
Recharge	13,934	42%
Agriculture	8,551	26%
Landscape	8,728	26%
Industrial	1,500	4%
Construction	698	2%
Total Demand	33,411	100%

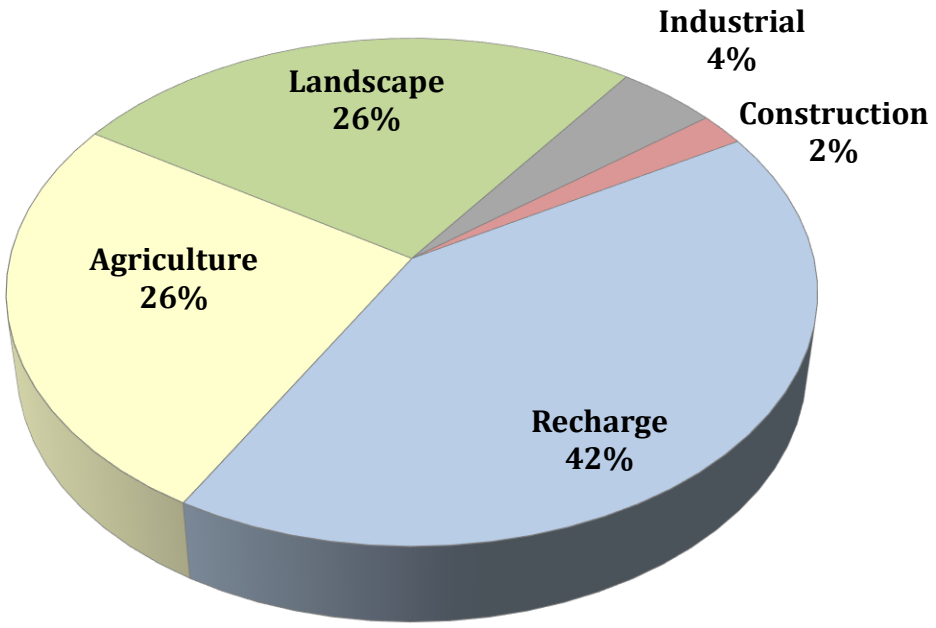

Figure 3 –Recycled Water Demand by Use Type for 2016/17

RETAIL DEMANDS

IEUA is the wholesale recycled water provider to its member agencies, which in turn are retail agencies that directly serve their customers. IEUA member agencies which served recycled water in 2016/17 include:

- City of Chino,
- City of Chino Hills,
- City of Ontario,
- Cucamonga Valley Water District (CVWD),
- Montclair (through MVWD),
- Fontana (through FWC), and
- City of Upland

Monte Vista Water District (MVWD) and Fontana Water Company (FWC) are the water retailers in the Cities of Montclair and Fontana, respectively, but are not IEUA member agencies. MVWD and FWC retail recycled water obtained from their overlying cities which are IEUA member agencies. San Bernardino County is currently a direct use customer of IEUA based on long standing historical contracts. Jurupa Community Services District (JCSD), located directly south of Fontana, is not an IEUA member agency yet will receive a recycled water groundwater recharge allocation through 2025 based on an allocation formula in a 2013 agreement between IEUA and JCSD.

Table 2 show the recycled water demand by agency. Each agency's total includes its direct use and its allocation from IEUA for recycled water groundwater recharge based on IEUA's Regional Sewage Service Contract.

Table 2 –Recycled Water Demand by Agency for 2016/17

Retail Agency	Direct Use (AF)	Recharge Allocation (AF)	Agency Total (AF)
Chino	6,447	0*	6,447
Chino Hills	1,837	1,321	3,159
CVWD	976	3,693	4,669
Fontana/FWC	52	2,764	2,816
Montclair/MVWD	305	638	943
Ontario	8,352	3,150	11,502
Upland	654	1,418	2,072
IEUA	588	0	588
San Bernardino County	265	0	265
JCSD	0	950	950
Subtotal	**19,477**	**13,934**	**33,411**

Chino exceeded Base Entitlement per Resolution 2016-6-17

CUSTOMERS DEMANDS

Appendix C lists the recycled water direct use customers of each retail agency and their demands for the fiscal year. Table 3 lists the top ten largest direct reuse customer sites for the fiscal year (excluding groundwater recharge sites). During 2016/17, one hundred and twenty-four (124) new connections were made to the recycled water system with a total new demand estimated at 1,715 AFY. Connected new demand is the anticipated annual usage based on land size and previous potable water usage history.

Table 3 –Top 10 Recycled Water Customers for 2016/17

Customer	Use (AF)	Type of Use	Retailer
GH Dairy	1,387	Agricultural	Ontario
Cleveland Farm	1,190	Agricultural	Ontario
Cleveland Farm	1,180	Agricultural	Chino
WESTSTEYN DAIRY	964	Agricultural	Chino
New Indy Ontario	901	Industrial	Upland
Whispering Lakes Golf Course	677	Landscape	Ontario
Murai Farm	660	Agricultural	Ontario
Cal Poly Pomona	656	Agricultural	Chino
Los Serranos Golf Course	429	Landscape	Chino Hills
Upland Hills Country Club	383	Landscape	Upland
Subtotal	**8,427**		

ECONOMIC AND ENVIRONMENTAL IMPACTS

The 33,411 AF of recycled water used during the fiscal year is the equivalent of the water supply for roughly 66,800 homes. The use of recycled water reduces the need to pump State Water Project water over the Tehachapi Mountains, an equivalent net energy demand reduction of 2,657 kilowatt-hours (kWh) per AF, and an overall reduction of approximately 79 percent in carbon dioxide emissions.

IEUA's wholesale recycled water rate to its member agencies for 2016/17 was $410/AF for direct usage and $470/AF for recharge. Table 4 lists the IEUA retail agencies' recycled water rates in 2016/17.

Table 4 –Retail Agency Water Rates for 2016/17

City of Chino			
Source	Usage Type	Usage (HCF)	Effective Oct. 1, 2016
Potable Water	Flat Rate	1	$2.64
Recycled Water	Non-Agricultural	1	$1.06
	Agricultural	1	$0.53

City of Chino Hills				
Source	Zone	Single Family Usage (HCF)	Multi-family Usage (HCF)	Effective July 1, 2016
Potable Water	Low	Tier 1 (0-12)	Tier 1 (0-7)	$2.51
		Tier 2 (13-30)	Tier 2 (8-20)	$2.86
		Tier 3 (>30)	Tier 3 (>21)	$4.00
	Intermediate	Tier 1 (0-12)	Tier 1 (0-7)	$2.72
		Tier 2 (13-30)	Tier 2 (8-20)	$3.07
		Tier 3 (>30)	Tier 3 (>21)	$4.21
	High	Tier 1 (0-12)	Tier 1 (0-7)	$3.03
		Tier 2 (13-30)	Tier 2 (8-20)	$3.40
		Tier 3 (>30)	Tier 3 (>21)	$4.51
Recycled Water	Low	Flat Rate		$2.10
	Intermediate			$2.24
	High			$2.47
	Temporary			$2.54

City of Ontario		
Source	Usage (HCF)	Effective March 4, 2016
Potable Water	0-15	$2.44
	>15	$2.84
Recycled Water	Flat Rate	$1.71

CVWD			
Source	Stage	Usage (HCF)	Effective July 1, 2016
Potable Water	Non-drought	Tier 1 (0-10)	$1.60
		Tier 2 (11-40)	$2.13
		Tier 3 (41-100)	$2.66
		Tier 4 (>100)	$3.03
Recycled Water		Flat Rate	$1.68

MVWD				
Source	Usage Type	Tier	Usage (HCF)	Effective January 1, 2017
Potable Water	Residential	Tier 1	Allocation	$1.95
		Tier 2	Allocation	$2.59
		Tier 3	Allocation	$4.95
		Tier 4	Allocation	$5.66
	Non-residential	Domestic Water	Flat Rate	$2.39
Recycled Water	Non-residential	Recycled Water	Flat Rate	$1.96

Fontana Water Company			
Source	Usage Type	Usage (HCF)	Effective July 1, 2017
Potable Water	Conservation Rates	Tier 1 (0-16)	$3.32
		Tier 2 (>16)	$3.82
	General Rate	1	$2.72
Recycled Water		Flat Rate	$2.62

City of Upland				
Source	Usage Type		Usage (HCF)	Effective January 1, 2017
Potable Water	Single Family Residential Rate		Tier 1 (0-20)	$1.52
			Tier 2 (21-50)	$1.80
			Tier 3 (>50)	$2.46
	Multi-Family Residential Rate		Flat Rate	$1.87
	Rates for Other Classes	Landscape:	Flat Rate	$2.14
		Commercial:		$1.78
		Schools:		$2.10
		Public Agencies:		$1.98
Recycled Water			Flat Rate	$1.60

HISTORY

Early water recycling efforts in the 1970s by IEUA involved irrigation at the Whispering Lakes Golf Course adjacent to RP-1 in Ontario and at the El Prado Park and Golf Course in Chino. In the 1980s, recycled water continued to be an integral part of IEUA planning with implementation of the CCWRF and RP-4 recycling plants. These two recycling plants were sited specifically at higher elevations to reduce recycling plants water pumping costs. A backbone recycled water distribution system was installed in Chino and Chino Hills from CCWRF in 1997 and was initially operated by IEUA under Ordinance No. 63. This system was later turned over to the City of Chino and the City of Chino Hills and forms the core of the recycled water distribution network operated by these two cities.

The first major regional pipeline was constructed in 1995 and served the dual purpose of a regional recycled water distribution pipeline and an outfall allowing RP-4 effluent to be discharged with RP-1 effluent into Cucamonga Creek. The RP-4 outfall was designed as a pressurized system so that water could be pumped up from RP-1 to RP-4 as well as flow down in the opposite direction from RP-4 to RP-1 and the creek outfall.

In 1999, IEUA began groundwater recharge with recycled water at Ely Basin. The initial Ely Basin project was followed by the Chino Basin Watermaster's (CBWM) development of the Optimum Basin Management Program (OBMP) and the region's efforts (including IEUA's) to implement the OBMP. In 2000, the OBMP identified recycled water use as a critical component in drought-proofing and maintaining the region's economic growth. With imported water rates increasing and long-term supply reliability declining, the region committed to aggressively and proactively address regional impacts. The OBMP set the path for the development of a regional recycled water distribution system and a Recycled Water Implementation Plan.

The use of recycled water presented several advantages to IEUA and its member agencies: it is one of the most significant unused local water supplies; it is reliable during drought and climate change conditions; and it requires significantly less energy than imported water to deliver to customers thus reduces greenhouse gas emissions. IEUA in partnership with its member agencies and CBWM invested approximately $625 million since 2000 to increase the availability of local water supplies through water recycling, conservation, recharge improvements, the MWD groundwater storage and recovery project, the Chino Desalter, and other water management programs.

In 2002, IEUA Board of Directors adopted Ordinance No. 75, the Mandatory Use Ordinance, to establish incentives and encourage recycled water use from the regional distributions system. Also in 2002, the CBWM, Chino Basin Water Conservation District (CBWCD), San Bernardino County Flood Control District (SBCFCD) and IEUA joined forces to greatly expand groundwater recharge capacity through the Chino Basin Facilities Improvement Program.

In 2005, IEUA was permitted by the Regional Water Quality Control Board to operate its recycled water groundwater recharge programs at five additional recharge basins (Banana, Hickory, Etiwanda Conservation Ponds, Declez, RP3, and Turner basins). In 2007, IEUA was permitted to operate its recycled water groundwater recharge program at seven more recharge sites (Brooks, 8th Street, Victoria, Lower Day, San Sevaine, Etiwanda Spreading Grounds (later reconfigured as the Etiwanda Debris Basin) and Ely Basins. The 2007 permit was amended in 2009 to modify how IEUA tracks diluent water and recycled water blending, which effectively increased IEUA's ability to recharge using recycled water.

In November 2007, IEUA and its member agencies unanimously adopted the Three Year Recycled Water Business Plan. IEUA and its member agencies committed to implementing the plan, which laid out a focused and cost-effective approach to rapidly increase the availability and use of recycled water within IEUA's service area.

Based on the series of regional decisions since 2000, over $350 million was invested into the implementation of a robust Recycled Water Program. The region has achieved program success by leveraging heavily on grant funding and loans. With unanimous regional support, annual recycled water use grew from approximately 5,000 AF in 2004/05 to 38,251 AF in FY 2013/14. Over the past three fiscal years, recycled water demand has fallen slightly and was 33,411 AF in 2016/17 and has been primarily driven by land use conversion from agriculture to urban.

RECYCLED WATER CAPITAL PROGRAM

IEUA currently produces nearly 48 MGD of recycled water and there are several projects under way to expand the use of recycled water within the service area. Table 5 lists the 2016/17 recycled water capital projects and their locations. The projects that were in design or construction during 2016/17 are summarized in the following paragraphs.

Table 5 - Capital Project Summary for 2016/17

Projects in Design/Construction	Engineering Budget	Total Grants	Total Loans	Total Costs to Date
Baseline RWPL Extension	$4,950,000	$1,435,500	$3,514,500	$19,748
Groundwater & Recycled Water SCADA Control Upgrades	$932,000	$932,000	$0	$621,260
East Avenue 1630 E RWP Relocation	$890,108	$0	$890,108	$519,871

RW Pressure Sustaining Valve Installation	$850,000	$0	$850,000	$32,697
SBCFCD Recycle Water Easement	$1,210,000	$0	$1,210,000	$571,280
San Sevaine Basin Improvements	$6,460,000	$3,625,000	$2,835,000	$790,148
RP-5 Bottleneck	$2,756,637	$0	$2,756,637	$378,151
Subtotal	$18,048,745	$5,992,500	$12,056,245	$2,933,155

PROJECTS COMPLETED

The East Avenue 1630 E RWP Relocation relocated about 200 LF of 1630 E. Recycled Water Pipeline on East Avenue in the City of Rancho Cucamonga. Additionally, the project relocated blow off and air release valves that are located on the East Avenue sidewalk and adjusted the elevation of the monitoring well. Under this project, we re-developed the Monitoring Well at Baseline Avenue and Northbound I-15 interchange.

PROJECTS IN CONSTRUCTION

The Groundwater and Recycled Water SCADA Control Upgrades project will upgrade five obsolete programmable logic controller (PLC) hardware and software at five recharge basins that each has an inflatable rubber dam system. The project will replace the older PLCs with newer and fully supported PLCs that will extend the reliability by 10 years and provide the initial development model when transitioning other sites to newer controllers.

PROJECTS IN DESIGN

The scope of the Baseline Recycled Water Extension project consists of the design, bid and award, and construction of approximately 6,800 lf of a 24" pipeline located along Baseline Avenue between American Way and Cherry Avenue. The design services of an engineering consultant will be acquired.

The RP-5 RW Pipeline Bottleneck evaluates the existing recycled water piping bottlenecks within the RP-5 facility and upsizes the 14" pipeline system downstream of the RW pump station to a 24"-30" pipeline; confirms future demands and pipe sizes. All buried RW valves will be replaced in addition to installing new valves in strategic locations. Surge analysis to RW piping system at RP-5 revealed presence of occasional surges which will cause damage to the pipping system therefore a surge control system will be installed to mitigate any surge issues. An outside consultant will be hired by the Agency to provide necessary consulting engineering services during design and construction.

The scope of work of the RW Pressure Sustaining Valve Installation project is to install 17 pressure sustaining valves at various locations on high volume users of recycled water to maintain system pressure in the regional recycled water system.

The San Sevaine Basin Improvements project recently completed preliminary design and solicited proposals for final design and construction services. The project will construct a pump station in basin 5 and a recycled water conveyance pipeline to recharge the upper basins 1 through 3. The project is anticipating up to 4,700 acre-feet per year of new groundwater recharge yield.

SBCFCD Recycled Water Easement project will fund the easement acquisitions for the regional RW pipelines located in San Bernardino Flood Control District right of way. For recycled water pipelines, ten (10) perpetual, non-exclusive easements will be acquired after the property appraisals are approved by San Bernardino County Real Estate Services. IEUA and the County mutually agreed upon a 30% valuation of the unit cost/square foot to be determined in the appraisal reports.

FUTURE REUSE PROJECTS

IEUA and its member agencies desire to increase the use of recycled water within IEUA's boundary. By implementing the Recycled Water Program Strategy, recycled water projects will increase the development of recycled water delivery, groundwater recharge, and the reliability of potable supplies for residents and customers. Future recycled water projects will allow IEUA and its member agencies to continue to provide a reliable alternate water supply to its customers to offset the demand for imported water for non-potable uses.

IEUA submitted an application for the State Water Resources Control Board Proposition 1 grant funding for water recycling projects. The projects identified in the application were: RP-1 1158 Recycled Water Pump Station Upgrades, RP-5 Recycled Water Pipeline Bottleneck, RP-1 Parallel Outfall Pipeline, Baseline Pipeline Extension, Napa Lateral, and Recycled Water Pressure Sustaining Valve Installation. IEUA received a response from the SWRCB early 2017 indicating that no grant funding will be awarded, but would be eligible for State Revolving Fund (SRF) low-interest loans.

TREATMENT PLANTS

IEUA owns and operates five regional water recycling facilities: RP-1, RP-2, RP-4, RP-5, and CCWRF. Of the treatment plants, RP-2 does not have any liquid treatment processes, and as such does not produce any recycled water. The combined treatment capacity of the remaining four plants is approximately 85 MGD.

Regional Water Recycling Plant No. 1

RP-1 is located in the city of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 MGD. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, and solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 23 MGD. The plant is divided into two separate treatment sections: liquids and solids.

The liquid treatment section consists of preliminary screening and grit removal, primary clarification, secondary treatment by aeration basins and clarification, tertiary treatment by filtration and disinfection, and dechlorination. Wastewater liquid is treated to California Department of Public Health Title 22 Code of Regulations standards for disinfected tertiary recycled water. The solids treatment section begins with thickening the solids removed from the primary and secondary clarification processes. The thickened solids are pumped to anaerobic digestion and then to the centrifuges for dewatering. Wastewater solids are digested to a minimum Class B biosolids standard, as defined by the United States Environmental Protection Agency Code of Federal Regulations. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility in the City of Rancho Cucamonga for further treatment to produce Class A compost. Figure 4 illustrates the RP-1 treatment processes.

Regional Water Recycling Plant No. 1

Plant Capacity:	44.0 MGD
2016/17 Influent Flow:	22.1 MGD
2016/17 RW Delivery:	15.0 MGD
2016/17 Creek Discharge:	10.8 MGD*

**RP-1 and RP-4 have a combined effluent outfall; therefore, creek discharge reported for RP-1 is for both plants combined.*

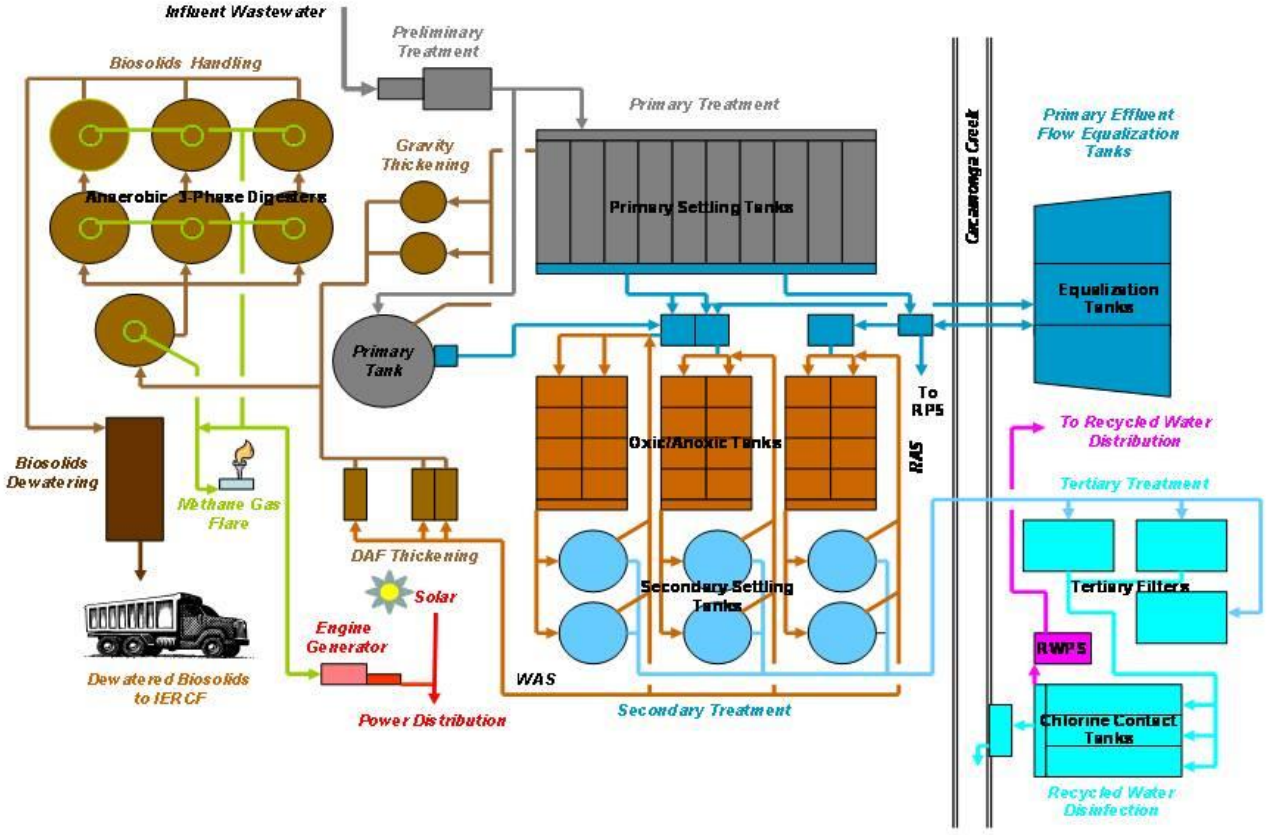

Figure 4 - RP-1 Treatment Process

Regional Water Recycling Plant No. 4

RP-4 is located in the city of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 14 MGD. The plant serves areas of Fontana, Rancho Cucamonga, and San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD.

The liquid treatment section consists of preliminary screening and grit removal, primary clarification, secondary treatment by aeration basins and clarification, and tertiary treatment by filtration and disinfection. Wastewater liquid is treated to California Department of Public Health Title 22 Code of Regulations standards for disinfected tertiary recycled water. The solids removed from RP-4 are conveyed by gravity through the regional sewer system to the influent of RP-1 for thickening, anaerobic digestion, and dewatering. Figure 5 illustrates the RP-4 treatment process. Tertiary water from RP-1 and RP-4 that is not utilized for direct sales or groundwater recharge is discharged to Cucamonga Creek at RP-1.

Regional Water Recycling Plant No. 4

Plant Capacity:	14.0 MGD
2016/17 Influent Flow:	9.7 MGD
2016/17 RW Delivery:	8.8 MGD
2016/17 Creek Discharge:	0.0 MGD*

**RP-1 and RP-4 have a combined effluent outfall; therefore, creek discharge reported for RP-1 is for both plants combined.*

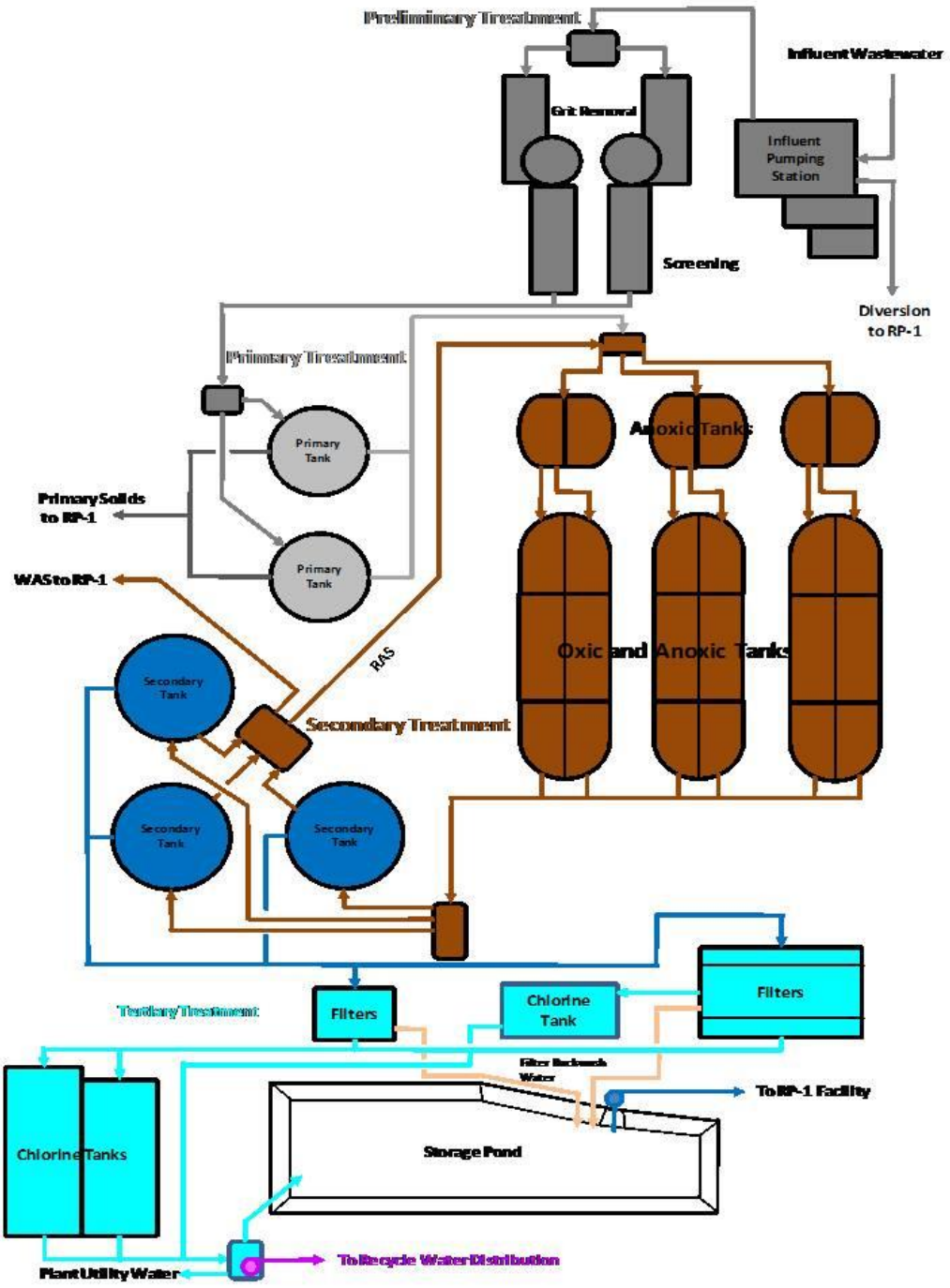

Figure 5 - RP-4 Treatment Process

Carbon Canyon Water Recycling Facility

CCWRF is located in the city of Chino and has been in operation since 1992. The design hydraulic domestic sewage (wastewater) treatment capacity was 11.4 million gallons per day until April 2014 when the facility's design capacity was re-rated based on an updated filter loading rate, which removed the tertiary filters as the bottleneck in the plant. The re-rating increased the plant capacity to 12.0 MGD. The updated capacity will be included in the 2015 NPDES permit renewal. The plant serves areas of Chino, Chino Hills, Montclair and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD.

The liquid treatment section consists of preliminary screening and grit removal, primary clarification, secondary treatment by aeration basins and clarification, tertiary treatment by filtration and disinfection, and dechlorination. Wastewater liquid is treated to California Department of Public Health Title 22 Code of Regulations standards for disinfected tertiary recycled water. The solids removed from CCWRF are pumped to RP-2 for thickening, anaerobic digestion, and dewatering. Figure 6 illustrates the CCWRF treatment process.

Carbon Canyon Water Recycling Facility

Plant Capacity:	12.0 MGD
2016/17 Influent Flow:	8.1 MGD
2016/17 RW Delivery:	4.2 MGD
2016/17 Creek Discharge:	3.4 MGD

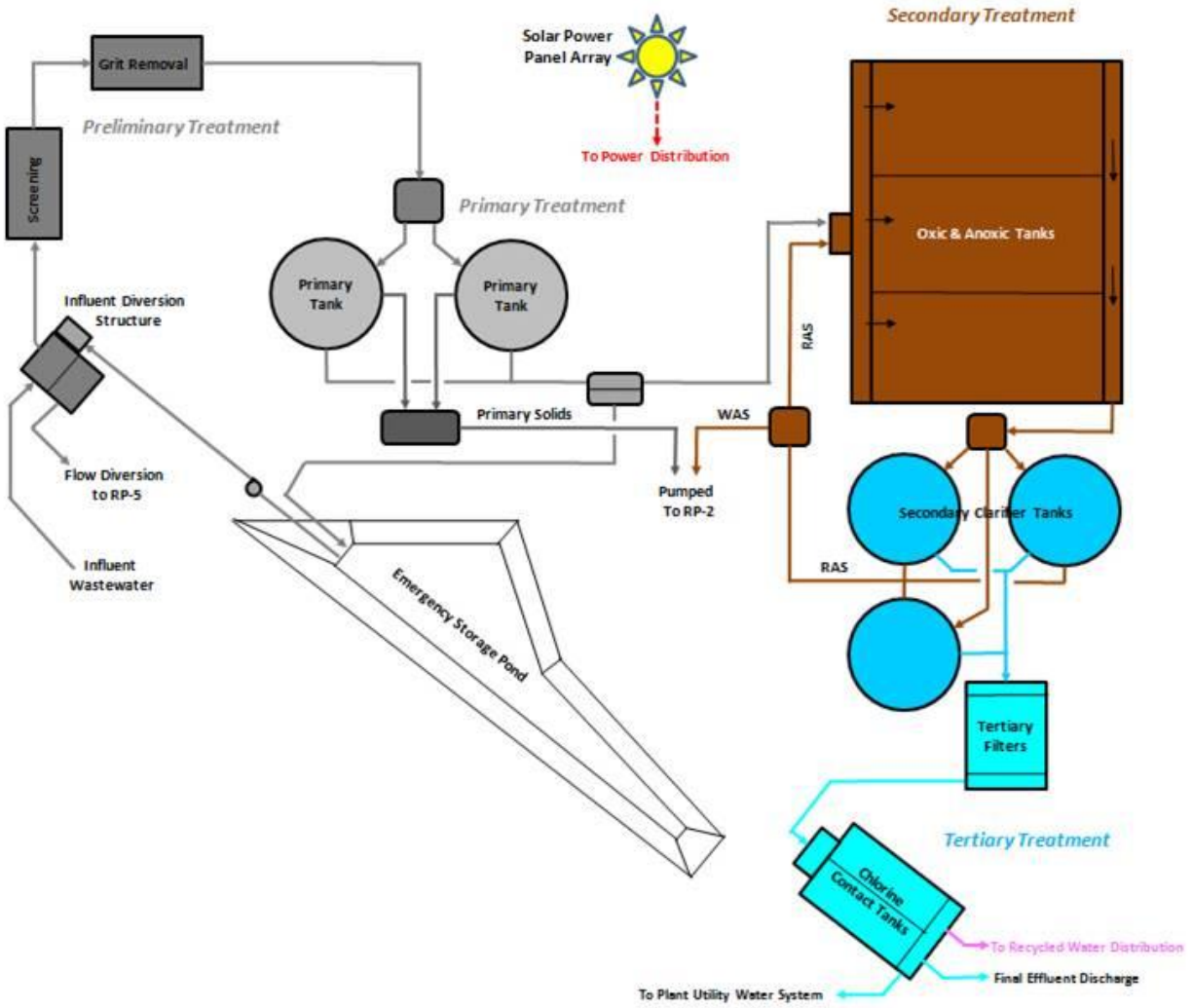

Figure 6 - CCWRF Treatment Process

Regional Water Recycling Plant No. 5

RP-5 is located in the city of Chino and has been in operation since 2004. The design hydraulic domestic sewage (wastewater) treatment capacity is 15 MGD, which includes 1.3 MGD of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 8 MGD.

The liquid treatment section consists of preliminary screening and grit removal, primary clarification, secondary treatment by aeration basins and clarification, tertiary treatment by filtration and disinfection, and dechlorination. Wastewater liquid is treated to California Department of Public Health Title 22 Code of Regulations standards for disinfected tertiary recycled water. The solids removed from RP-5 are pumped to RP-2 for thickening, anaerobic digestion, and dewatering. Figure 7 illustrates the RP-5 treatment process.

Regional Water Recycling Plant No. 5

Plant Capacity:	15.0 MGD
2016/17 Influent Flow:	7.8 MGD
2016/17 RW Delivery:	3.9 MGD
2016/17 Creek Discharge:	2.7 MGD

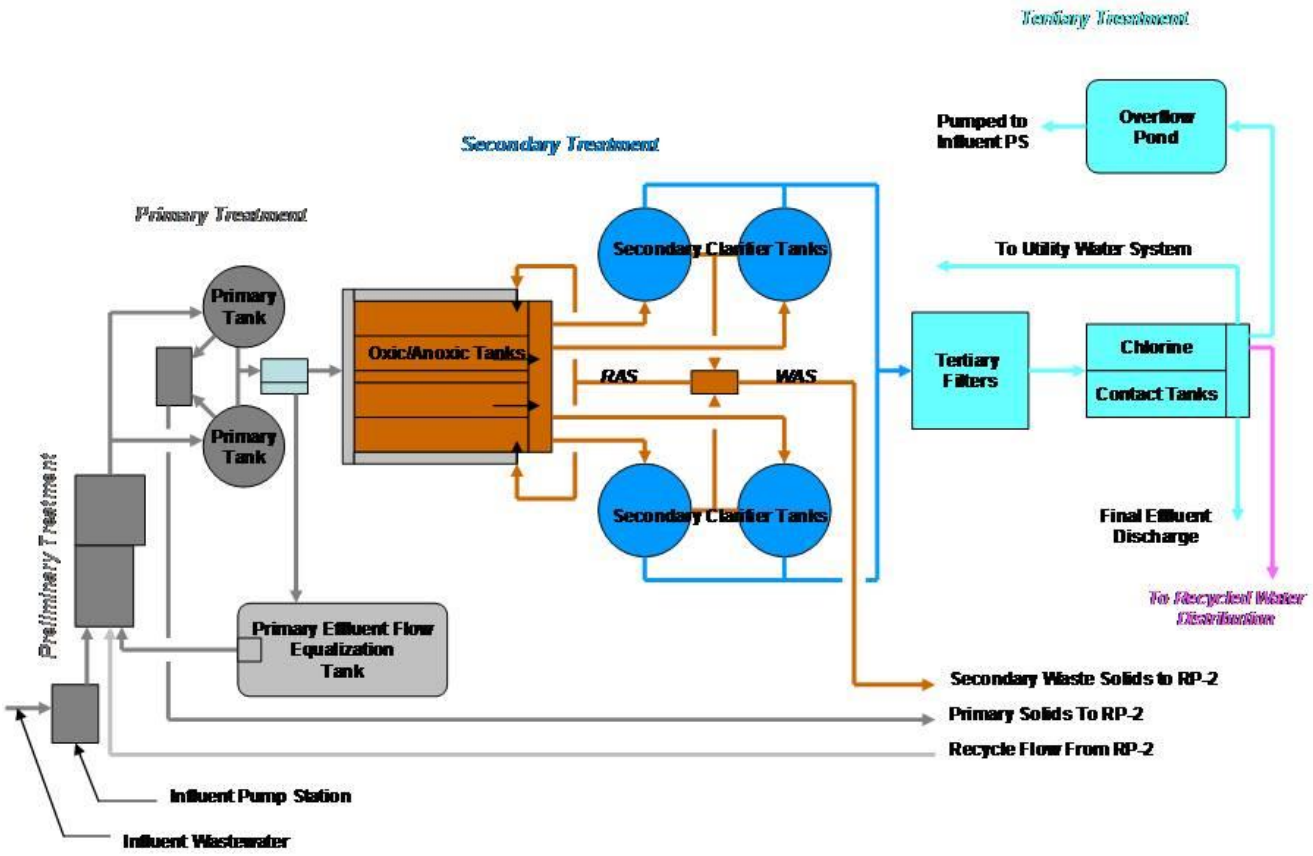

Figure 7 - RP-5 Treatment Process


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APPENDIX A

RECYCLED WATER

EFFLUENT MONITORING DATA

FOR CALENDAR YEAR 2016

RP-1 (M-001A* & M-001B) Effluent Monitoring Data

Table No. 3a

	Flow			EC			pH			BOD_5				TSS				TOC			TDS			TIN			TN			NH_3-N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L			%	mg/L			%	mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 -8.5			20			15	20			15													4.5		
Jan-16	1.6	0.0	3.8	800	729	836	7.1	6.6	7.5	<2	<2	<2	0.6	<2	<2	<2	0.8	5.5	4.8	6.0	512	500	524	8.9	4.9	10.6	8.8	5.7	10.5	<0.1	<0.1	<0.1
Feb-16	4.7	0.0	8.0	1,063	1,022	1,107	7.1	6.5	7.7	<2	<2	<2	0.5	<2	<2	<2	0.4	5.6	5.0	6.3	525	504	546	6.6	4.5	7.9	7.8	7.3	8.2	<0.1	<0.1	<0.1
Mar-16	3.4	3.0	7.0	1,103	1,057	1,154	7.1	6.9	7.3	<2	<2	<2	0.4	<2	<2	<2	0.4	5.4	5.1	5.6	528	520	536	6.0	3.6	7.6	6.7	5.4	8.3	<0.1	<0.1	<0.1
Apr-16	2.6	1.5	3.1	1,093	882	1,161	7.2	7.0	8.1	<2	<2	<2	0.4	<2	<2	<2	0.5	5.4	5.1	5.9	536	528	542	6.3	4.5	10.4	6.9	5.9	7.9	<0.1	<0.1	<0.1
May-16	1.4	0.5	2.0	997	880	1,118	7.2	7.0	7.9	<2	<2	<2	0.5	<2	<2	<2	0.4	5.5	5.0	6.3	546	528	570	6.0	3.1	8.2	7.5	6.9	9.0	<0.1	<0.1	<0.1
Jun-16	2.4	0.5	5.8	956	878	1,011	7.2	6.7	7.5	<2	<2	<2	0.4	<2	<2	<2	0.5	5.6	5.1	6.1	531	522	538	5.3	2.8	9.0	4.9	4.3	6.4	<0.1	<0.1	<0.1
Jul-16	1.6	0.9	3.2	1,026	916	1,095	7.4	7.0	7.7	<2	<2	3	0.6	<2	<2	<2	1.0	5.2	4.8	5.7	563	550	578	7.2	6.0	8.3	8.5	8.3	9.0	<0.1	<0.1	<0.1
Aug-16	1.4	0.9	3.0	908	707	1,078	7.3	6.8	7.5	<2	<2	<2	0.4	<2	<2	<2	0.5	5.3	4.9	5.8	543	524	550	7.4	4.9	12.8	8.0	7.4	8.9	<0.1	<0.1	<0.1
Sep-16	2.1	1.5	3.3	857	721	982	7.2	6.5	7.9	<2	<2	<2	0.5	<2	<2	<2	0.7	5.4	4.9	5.8	518	500	532	6.8	5.3	8.2	8.2	7.6	9.0	<0.1	<0.1	<0.1
Oct-16	1.4	0.0	3.7	903	618	972	7.2	7.1	7.3	<2	<2	<2	0.5	<2	<2	<2	1.0	5.3	4.7	5.8	525	514	532	6.7	5.3	10.3	7.4	6.0	8.2	<0.1	<0.1	<0.1
Nov-16	1.3	0.0	3.0	913	768	972	7.2	7.1	7.3	<2	<2	<2	0.4	<2	<2	<2	0.6	5.3	4.9	5.6	527	516	538	6.3	4.7	7.2	7.9	7.6	8.1	<0.1	<0.1	<0.1
Dec-16	2.8	1.9	4.6	895	685	972	7.1	6.9	8.1	<2	<2	<2	0.4	<2	<2	<2	0.5	5.4	4.8	6.0	513	484	542	6.2	4.4	7.7	7.8	5.8	8.7	<0.1	<0.1	<0.1
Avg	2.2	0.9	4.2	960	822	1,038	7.2	6.8	7.7	<2	<2	<2	0.5	<2	<2	<2	0.6	5.4	4.9	5.9	530	516	544	6.6	4.5	9.0	7.5	6.5	8.5	<0.1	<0.1	<0.1
Min	1.3	0.0	2.0	800	618	836	7.1	6.5	7.3	<2	<2	<2	0.4	<2	<2	<2	0.4	5.2	4.7	5.6	512	484	524	5.3	2.8	7.2	4.9	4.3	6.4	<0.1	<0.1	<0.1
Max	4.7	3.0	8.0	1,103	1,057	1,161	7.4	7.1	8.1	<2	<2	3	0.6	<2	<2	<2	1.0	5.6	5.1	6.3	563	550	578	8.9	6.0	12.8	8.8	8.3	10.5	<0.1	<0.1	<0.1

*M-001A is the compliance point for continuous monitoring parameters, TDS, and toxicity.

RP-1/RP-4 (M-002A) Effluent Monitoring Data

Table No. 3b

	Flow			EC			pH			BOD_5				TSS				TOC			TDS			TIN			TN			NH_3-N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L			%	mg/L			%	mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 -8.5			20			15	20			15													4.5		
Jan-16	17.3	5.4	35.7	793	732	828	7.0	6.7	7.2	<2	<2	<2	0.6	<2	<2	<2	0.6	5.3	4.7	5.6	496	484	508	7.9	3.4	11.2	5.7	5.7	5.7	<0.1	<0.1	<0.1
Feb-16	6.3	0.2	22.6	830	789	877	7.0	6.8	7.2	<2	<2	<2	0.5	<2	<2	<2	0.5	5.4	4.8	5.8	493	482	512	6.4	3.6	8.6	7.6	7.6	7.6	<0.1	<0.1	<0.1
Mar-16	15.8	2.1	35.2	849	781	920	7.1	6.7	7.3	<2	<2	<2	0.5	<2	<2	<2	0.5	5.1	4.8	5.4	521	498	540	5.7	3.8	7.1	6.6	6.6	6.6	<0.2	<0.1	0.4
Apr-16	7.4	0.5	25.3	864	811	961	7.1	6.7	7.2	<2	<2	<2	0.4	<2	<2	<2	0.5	5.1	4.8	5.5	510	502	520	5.5	4.0	9.6	7.3	7.3	7.3	<0.1	<0.1	0.1
May-16	6.2	0.1	26.5	855	814	904	7.1	6.8	7.3	<2	<2	<2	0.4	<2	<2	<2	0.5	5.2	4.9	5.9	515	500	546	5.4	3.5	9.2	10.0	10.0	10.0	<0.1	<0.1	<0.1
Jun-16	0.9	0.1	5.1	884	846	916	7.1	6.8	7.5	<2	<2	<2	0.5	<2	<2	<2	0.5	5.3	4.8	5.7	553	534	568	5.0	2.7	9.0	5.9	5.9	5.9	<0.1	<0.1	<0.1
Jul-16	1.1	0.2	2.9	870	844	905	7.1	6.7	7.4	<2	<2	<2	0.5	<2	<2	<2	0.7	5.0	4.7	5.4	542	538	548	6.6	5.5	8.4	7.7	7.7	7.7	<0.1	<0.1	<0.1
Aug-16	1.0	0.1	4.9	859	830	908	7.1	6.7	7.3	<2	<2	<2	0.5	<2	<2	<2	0.5	5.1	4.8	5.5	507	492	520	6.4	3.6	9.8	7.5	7.5	7.5	<0.1	<0.1	0.1
Sep-16	3.2	0.5	6.9	831	800	867	7.0	6.8	7.2	<2	<2	<2	0.5	<2	<2	<2	0.6	5.1	4.8	5.6	517	504	528	6.3	4.5	7.6	8.2	8.2	8.2	<0.1	<0.1	<0.1
Oct-16	10.1	2.1	23.2	812	787	848	7.1	6.9	7.2	<2	<2	<2	0.5	<2	<2	<2	0.7	5.0	4.6	5.5	506	488	532	5.7	2.8	10.0	7.7	7.7	7.7	<0.1	<0.1	<0.1
Nov-16	10.2	1.4	28.0	843	789	891	7.1	6.9	7.2	<2	<2	<2	0.4	<2	<2	<2	0.6	5.1	4.7	5.7	497	490	502	5.5	3.2	7.8	6.7	6.7	6.7	<0.1	<0.1	<0.1
Dec-16	21.4	8.0	39.3	867	789	921	7.0	6.8	7.2	<2	<2	<2	0.5	<2	<2	<2	0.5	5.2	4.8	5.8	493	466	514	5.5	3.3	7.9	6.3	6.3	6.3	<0.1	<0.1	<0.1
Avg	8.4	1.7	21.3	847	801	896	7.1	6.8	7.3	<2	<2	<2	0.5	<2	<2	<2	0.6	5.2	4.8	5.6	512	498	528	6.0	3.7	8.9	7.3	7.3	7.3	<0.1	<0.1	<0.1
Min	0.9	0.1	2.9	793	732	828	7.0	6.7	7.2	<2	<2	<2	0.4	<2	<2	<2	0.5	5.0	4.6	5.4	493	466	502	5.0	2.7	7.1	5.7	5.7	5.7	<0.1	<0.1	<0.1
Max	21.4	8.0	39.3	884	846	961	7.1	6.9	7.5	<2	<2	<2	0.6	<2	<2	<2	0.7	5.4	4.9	5.9	553	538	568	7.9	5.5	11.2	10.0	10.0	10.0	<0.2	<0.1	0.4

RP-5 (M-003) Effluent Monitoring Data

Table No. 3c

	Flow			EC			pH			BOD_5				TSS				TOC			TDS			TIN			TN			NH_3-N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L			%	mg/L			%	mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 -8.5			20			15	20			15													4.5		
Jan-16	8.6	3.8	12.2	1,053	889	1,137	6.9	6.8	7.1	<2	<2	<2	0.7	<2	<2	<2	0.9	4.8	4.5	5.0	530	512	546	7.2	5.2	8.2	8.2	8.2	8.2	<0.1	<0.1	<0.1
Feb-16	5.5	1.5	11.9	901	781	992	6.9	6.6	7.0	<2	<2	2	0.6	<2	<2	4	0.6	5.1	4.8	5.6	541	526	552	7.3	5.5	9.1	9.9	9.9	9.9	<0.1	<0.1	<0.1
Mar-16	3.0	1.9	4.4	1,004	859	1,143	7.0	6.7	7.1	<2	<2	<2	0.5	<2	<2	<2	0.7	4.9	4.5	5.3	541	526	554	6.9	5.4	9.5	8.1	8.1	8.1	<0.1	<0.1	0.1
Apr-16	2.8	1.4	4.3	1,030	856	1,175	6.9	6.8	7.1	<2	<2	<2	0.5	<2	<2	2	0.6	5.1	4.8	5.5	545	526	560	6.0	4.5	8.1	9.5	9.5	9.5	<0.1	<0.1	<0.1
May-16	1.8	1.3	2.2	981	662	1,126	6.9	6.6	7.1	<2	<2	2	0.5	<2	<2	<2	0.6	5.3	5.0	5.8	566	558	574	6.5	5.3	7.9	7.0	7.0	7.0	<0.1	<0.1	<0.1
Jun-16	0.4	0.0	1.8	977	867	1,104	7.2	6.8	7.4	<2	<2	<2	0.6	<2	<2	<2	0.8	5.1	4.7	5.4	568	568	568	6.1	5.1	8.7	8.5	8.5	8.5	<0.1	<0.1	<0.1
Jul-16	0.0	0.0	0.0	1,024	920	1,124	7.2	7.1	7.4	<2	<2	<2	0.7	<2	<2	2	1.2	5.2	4.8	5.6				6.3	5.6	6.8						
Aug-16	0.0	0.0	0.0	974	862	1,064	7.2	6.9	7.4	<2	<2	<2	0.6	<2	<2	<2	0.8	5.1	4.5	5.5				6.5	4.9	7.6						
Sep-16	0.0	0.0	0.0	974	897	1,126	7.2	7.0	7.4	<2	<2	<2	0.6	<2	<2	<2	1.0	4.9	4.5	5.4				6.2	5.2	7.1						
Oct-16	2.4	0.0	6.8	1,035	940	1,161	7.0	6.8	7.3	<2	<2	<2	0.5	<2	<2	3	0.8	4.8	4.4	5.4	529	526	534	5.8	3.6	7.1	7.1	7.1	7.1	<0.1	<0.1	<0.1
Nov-16	3.7	1.6	6.8	974	876	1,049	6.9	6.7	7.1	<2	<2	2	0.4	<2	<2	<2	0.6	4.8	3.6	5.4	532	522	542	6.1	4.5	7.8	6.9	6.9	6.9	<0.1	<0.1	<0.1
Dec-16	4.1	2.5	7.7	996	839	1,134	6.9	6.7	7.1	<2	<2	<2	0.3	<2	<2	3	0.5	5.3	4.9	5.7	508	486	536	6.6	4.7	8.8	6.4	6.4	6.4	<0.1	<0.1	<0.1
Avg	**2.7**	**1.2**	**4.9**	**994**	**854**	**1,111**	**7.0**	**6.8**	**7.2**	**<2**	**<2**	**<2**	**0.5**	**<2**	**<2**	**<2**	**0.8**	**5.0**	**4.6**	**5.5**	**540**	**528**	**552**	**6.5**	**5.0**	**8.1**	**8.0**	**8.0**	**8.0**	**<0.1**	**<0.1**	**<0.1**
Min	**0.0**	**0.0**	**0.0**	**901**	**662**	**992**	**6.9**	**6.6**	**7.0**	**<2**	**<2**	**<2**	**0.3**	**<2**	**<2**	**<2**	**0.5**	**4.8**	**3.6**	**5.0**	**508**	**486**	**534**	**5.8**	**3.6**	**6.8**	**6.4**	**6.4**	**6.4**	**<0.1**	**<0.1**	**<0.1**
Max	**8.6**	**3.8**	**12.2**	**1,053**	**940**	**1,175**	**7.2**	**7.1**	**7.4**	**<2**	**<2**	**2**	**0.7**	**<2**	**<2**	**4**	**1.2**	**5.3**	**5.0**	**5.8**	**568**	**568**	**574**	**7.3**	**5.6**	**9.5**	**9.9**	**9.9**	**9.9**	**<0.1**	**<0.1**	**0.1**

*Lab EC data used

CCWRF (M-004) Effluent Monitoring Data

Table No. 3d

	Flow			EC			pH			BOD_5				TSS				TOC			TDS			TIN			TN			NH_3-N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L			%	mg/L			%	mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 -8.5			20			15	20			15													4.5		
Jan-16	6.0	2.6	8.1	925	872	963	7.1	6.8	7.2	<2	<2	<2	0.6	<2	<2	3	0.7	5.5	5.0	6.4	551	524	582	5.2	3.7	6.1	7.0	7.0	7.0	<0.1	<0.1	<0.1
Feb-16	3.1	1.5	6.8	932	904	1,024	7.0	6.7	7.2	<2	<2	<2	0.6	<3	<2	9	1.1	6.4	5.4	7.2	546	536	556	5.2	3.5	6.9	5.9	5.9	5.9	<0.1	<0.1	<0.1
Mar-16	4.5	1.9	6.8	958	931	992	7.0	6.7	7.2	<2	<2	2	0.5	<2	<2	8	1.1	6.7	5.8	7.7	559	546	578	5.7	4.8	7.0	7.3	7.3	7.3	<0.1	<0.1	<0.1
Apr-16	4.2	1.9	7.6	989	959	1,021	7.0	6.8	7.2	<2	<2	<2	0.4	<2	<2	2	0.5	6.6	6.0	7.3	584	556	604	5.8	3.5	7.4	7.9	7.9	7.9	<0.1	<0.1	<0.1
May-16	2.7	1.0	6.8	981	871	1,046	7.0	6.7	7.3	<2	<2	<2	0.4	<2	<2	3	0.6	6.6	4.4	7.2	585	552	620	5.5	4.3	7.0	7.3	7.3	7.3	<0.1	<0.1	<0.1
Jun-16	1.6	0.8	3.8	1,058	1,022	1,099	7.0	6.7	8.3	<2	<2	2	0.5	<2	<2	4	0.8	7.1	6.4	8.2	613	608	616	5.2	4.0	6.9	5.9	5.9	5.9	<0.1	<0.1	<0.1
Jul-16	1.4	0.7	2.4	1,051	1,005	1,080	6.9	6.7	7.2	<2	<2	<2	0.4	<2	<2	5	0.6	6.3	5.7	6.7	618	612	636	4.8	3.9	6.7	5.8	5.8	5.8	<0.1	<0.1	<0.1
Aug-16	1.1	0.6	3.4	995	951	1,037	6.9	6.6	7.1	<2	<2	<2	0.5	<2	<2	3	0.5	6.6	6.2	7.1	565	542	590	5.2	3.8	7.3	6.7	6.7	6.7	<0.1	<0.1	<0.1
Sep-16	1.1	0.9	2.2	941	905	972	6.9	6.7	7.2	<2	<2	<2	0.5	<2	<2	2	0.5	5.8	5.4	6.3	522	518	526	6.1	5.6	7.0	8.3	8.3	8.3	<0.1	<0.1	<0.1
Oct-16	1.8	0.0	7.5	963	909	1,017	7.1	6.7	7.4	<2	<2	3	0.5	<2	<2	5	0.6	7.3	5.3	10.7	546	530	564	5.9	4.5	7.3	7.5	7.5	7.5	<0.1	<0.1	<0.1
Nov-16	4.3	0.0	7.9	983	925	1,055	7.0	6.7	7.4	<2	<2	<2	0.3	<2	<2	<2	0.5	5.2	4.5	5.8	555	548	562	4.9	4.0	6.7	6.0	6.0	6.0	<0.1	<0.1	<0.1
Dec-16	5.8	0.0	9.2	950	906	994	6.9	6.7	7.3	<2	<2	<2	0.4	<2	<2	2	0.7	5.2	4.8	5.6	525	508	544	6.2	4.6	9.6	7.3	7.3	7.3	<0.1	<0.1	<0.1
Avg	**3.1**	**1.0**	**6.0**	**977**	**930**	**1,025**	**7.0**	**6.7**	**7.3**	**<2**	**<2**	**<2**	**0.5**	**<2**	**<2**	**4**	**0.7**	**6.3**	**5.4**	**7.2**	**564**	**548**	**582**	**5.5**	**4.2**	**7.2**	**6.9**	**6.9**	**6.9**	**<0.1**	**<0.1**	**<0.1**
Min	**1.1**	**0.0**	**2.2**	**925**	**871**	**963**	**6.9**	**6.6**	**7.1**	**<2**	**<2**	**<2**	**0.3**	**<2**	**<2**	**<2**	**0.5**	**5.2**	**4.4**	**5.6**	**522**	**508**	**526**	**4.8**	**3.5**	**6.1**	**5.8**	**5.8**	**5.8**	**<0.1**	**<0.1**	**<0.1**
Max	**6.0**	**2.6**	**9.2**	**1,058**	**1,022**	**1,099**	**7.1**	**6.8**	**8.3**	**<2**	**<2**	**3**	**0.6**	**<3**	**<2**	**9**	**1.1**	**7.3**	**6.4**	**10.7**	**618**	**612**	**636**	**6.2**	**5.6**	**9.6**	**8.3**	**8.3**	**8.3**	**<0.1**	**<0.1**	**<0.1**

RP-1 (M-001A & M-001B) & RP-1/RP-4 (M-002A) Effluent Monitoring and Coliform Data — Table No. 5a

	001 Turbidity		002 Turbidity		001 Temp		002 Temp		001 Daily Coliform		001 7-day Median		002 Daily Coliform*		002 7-day Median		001 FLR	001 DT	001 CT	002 FLR	002 DT	002 CT
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Max	Min	Min	Max	Min	Min
Date	NTU		NTU		°C		°C		MPN / 100 mL								gpm/ft^2	min	mg-min/L	gpm/ft^3	min	mg-min/L
Jan-16	0.7	0.9	0.7	1.0	20.9	23.1	22.6	23.2	<2	4	<2	<2	<2	4	<2	<2	4	156	699	4	137	539
Feb-16	0.6	0.8	0.5	0.8	23.7	24.6	23.3	24.5	<2	2	<2	<2	<2	2	<2	<2	4	151	516	4	132	534
Mar-16	0.5	0.6	0.5	1.7	24.5	25.2	24.2	24.8	<2	2	<2	<2	<2	2	<2	<2	4	147	551	4	126	588
Apr-16	0.5	0.6	0.4	0.6	25.6	26.3	25.3	25.9	<2	4	<2	<2	<2	4	<2	<2	4	154	672	4	118	587
May-16	0.5	0.6	0.4	0.5	26.2	26.7	25.9	26.5	<2	2	<2	<2	<2	2	<2	<2	4	163	624	4	118	559
Jun-16	0.6	0.6	0.4	0.5	28.1	29.5	28.0	29.2	<2	4	<2	<2	<2	4	<2	<2	4	153	611	4	121	604
Jul-16	0.5	0.6	0.4	1.8	29.6	30.4	29.6	30.6	<2	2	<2	<2	<2	2	<2	<2	4	130	626	4	121	520
Aug-16	0.6	0.8	0.5	0.7	30.1	30.5	30.3	30.7	<2	2	<2	<2	<2	2	<2	<2	4	146	590	4	119	460
Sep-16	0.6	1.0	0.5	0.7	29.3	30.3	29.5	30.7	<2	2	<2	<2	<2	2	<2	<2	4	147	721	4	112	628
Oct-16	0.6	0.9	0.5	0.8	27.9	29.3	27.9	29.2	<2	<2	<2	<2	<2	<2	<2	<2	4	142	620	4	107	486
Nov-16	0.6	0.7	0.5	0.6	25.2	26.4	26.1	27.3	<2	4	<2	<2	<2	4	<2	<2	4	151	711	4	122	626
Dec-16	0.5	0.6	0.4	0.6	23.5	24.8	20.5	24.2	<2	10	<1	<2	<2	10	<1	<2	4	135	685	4	116	603
Avg	0.6	0.7	0.5	0.9	26.2	27.3	26.1	27.2	<2	3	<2	<2	<2	3	<2	<2	4	148	636	4	121	561
Min	0.5	0.6	0.4	0.5	20.9	23.1	20.5	23.2	<2	<2	<1	<2	<2	<2	<1	<2	4	130	516	4	107	460
Max	0.7	1.0	0.7	1.8	30.1	30.5	30.3	30.7	<2	10	<2	<2	<2	10	<2	<2	4	163	721	4	137	628

Requirements for disinfected tertiary-treated recycled water Title 22 Compliance: Min: 450 mg/L-min CT & 90 min DT

*Beginning August 2009, 002 effluent coliform compliance point at M-001B (splitter box).

RP-5 (M-003) & CCWRF (M-004) Effluent Monitoring and Coliform Data — Table No. 5b

	003 Turbidity		004 Turbidity		003 Temp		004 Temp		003 Daily Coliform		003 7-day Median		004 Daily Coliform		004 7-day Median		003 FLR	003 DT	003 CT	004 FLR	004 DT	004 CT
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Max	Min	Min	Max	Min	Min
Date	NTU		NTU		°C		°C		MPN / 100 mL								gpm/ft^2	min	mg-min/L	gpm/ft^3	min	mg-min/L
Jan-16	0.9	1.3	0.6	1.0	21.4	22.0	21.3	22.3	<2	2	<2	<2	<2	2	<2	<2	4	145	616	1	167	598
Feb-16	0.9	1.2	0.5	0.7	22.0	23.0	22.0	23.2	<2	<2	<2	<2	<2	2	<2	<2	4	152	555	2	140	533
Mar-16	0.8	1.2	0.7	0.9	22.7	23.7	23.8	24.7	<2	<2	<2	<2	<2	2	<2	<2	4	166	510	2	134	563
Apr-16	1.0	1.3	0.7	1.0	24.1	25.0	25.2	26.3	<2	<2	<2	<2	<2	2	<2	<2	4	169	518	2	117	498
May-16	1.1	1.5	0.7	1.0	24.9	25.7	24.8	26.1	<2	2	<2	<2	<2	2	<2	<2	4	188	507	2	148	550
Jun-16	0.9	1.2	0.7	0.9	27.0	27.0	27.0	29.3	<2	<2	<2	<2	<2	2	<2	<2	3	184	526	2	140	517
Jul-16	0.9	1.0	0.7	0.9			28.4	30.1	<2	<2	<2	<2	<2	2	<2	<2	3	196	696	2	145	647
Aug-16	1.1	1.4	0.8	1.1			24.6	28.6	<2	4	<2	<2	<2	2	<2	<2	3	191	659	2	136	506
Sep-16	0.9	1.1	0.7	0.8			26.5	27.6	<2	2	<2	<2	<2	<2	<2	<2	3	191	640	2	150	480
Oct-16	0.8	1.0	0.9	1.4	24.2	24.7	24.1	26.4	<2	2	<2	<2	<2	2	<2	<2	3	158	642	2	143	496
Nov-16	0.6	0.8	0.7	0.8	26.0	26.8	25.2	26.0	<2	2	<2	<2	<2	<2	<2	<2	3	112	526	2	135	505
Dec-16	0.7	0.9	0.7	0.8	22.9	24.6	22.0	24.6	<4	68	<1	<2	<1	2	<1	<2	3	158	498	2	145	523
Avg	0.9	1.2	0.7	0.9	23.9	24.7	24.6	26.3	<2	8	<2	<2	<2	2	<2	<2	3	168	563	2	142	535
Min	0.6	0.8	0.5	0.7	21.4	22.0	21.3	22.3	<2	<2	<1	<2	<1	<2	<1	<2	3	112	498	1	117	480
Max	1.1	1.5	0.9	1.4	27.0	27.0	28.4	30.1	<4	68	<2	<2	<2	2	<2	<2	4	196	696	2	167	647

Requirements for disinfected tertiary-treated recycled water Title 22 Compliance: Min: 450 mg/L-min CT & 90 min DT

RP-1 (M-001A) & RP-1/RP-4 (M-002A) Effluent and Receiving Water (R-002U & R-002D) Data

Table No. 6a

	M-001A Cl_2 Residual*		M-002A Cl2 Residual*		Upstream Cucamonga Creek (R-002U)										Downstream Cucamonga Creek (R-002D)							
					DO		Temp		pH		TDS	TIN	Total Hardness	TSS	DO		Temp		pH		Total Hardness	TSS
	Avg	Max	Avg	Max	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg
Date	mg/L				mg/L		°C		unit		mg/L	mg/L	mg/L	mg/L	mg/L		°C		unit		mg/L	mg/L
Jan-16	0.0	0.0	0.0	0.0	14.5	13.1	9.2	13.7	9.0	9.7	556	2.4	92	<4	9.3	8.2	20.0	21.5	7.8	8.3	158	<4
Feb-16	0.0	0.0	0.0	0.0	12.7	11.6	11.2	12.3	9.0	9.3	202	1.2			9.5	8.5	20.1	21.2	7.9	8.3		
Mar-16	0.0	0.0	0.0	0.0	13.8	11.5	11.7	14.7	8.8	10.0	254	<0.2			8.9	7.9	21.7	23.3	7.7	8.2		
Apr-16	0.0	0.0	0.0	0.0	12.3	11.5	14.7	17.2	9.1	9.3	434	0.5	195	7	9.1	8.4	21.5	23.1	7.8	8.7	156	1
May-16	0.0	0.0	0.0	0.0	12.2	10.0	18.6	23.2	9.0	10.1	348	0.1			10.9	9.1	21.5	23.2	8.0	9.0		
Jun-16	0.0	0.0	0.0	0.0	10.5	8.8	20.1	22.1	9.5	9.6	396	0.3			8.8	6.7	22.3	24.0	8.4	8.7		
Jul-16	0.0	0.0	0.0	0.0	10.0	9.3	20.9	24.7	9.0	9.5	458	0.3	188	6	8.6	7.9	23.6	26.0	7.8	9.0	164	2
Aug-16	0.0	0.0	0.0	0.0	10.3	10.0	20.5	21.5	9.5	9.7	568	0.2			9.8	9.1	23.1	24.6	8.6	8.9		
Sep-16	0.0	0.0	0.0	0.0	10.6	9.6	19.8	22.0	9.1	10.2	286	0.3			9.8	7.5	23.6	25.1	8.0	9.0		
Oct-16	0.0	0.0	0.0	0.0	10.5	9.8	17.6	20.0	8.7	10.1	332	1.8	155	5	8.8	8.1	23.9	26.6	8.1	8.8	163	3
Nov-16	0.0	0.0	0.0	0.0	10.8	9.7	11.7	13.5	9.4	9.8	320	2.0			8.2	7.3	21.9	23.4	8.2	8.4		
Dec-16	0.0	0.0	0.0	0.0	11.5	11.1	12.1	14.5	8.7	9.6	346	0.8			8.6	8.2	21.9	22.7	7.6	8.2		
Avg	**0.0**	**0.0**	**0.0**	**0.0**	**11.6**	**10.5**	**15.7**	**18.3**	**9.1**	**9.7**	**375**	**0.8**	**158**	**6**	**9.2**	**8.1**	**22.1**	**23.7**	**8.0**	**8.6**	**160**	**3**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**10.0**	**8.8**	**9.2**	**12.3**	**8.7**	**9.3**	**202**	**0.1**	**92**	**<4**	**8.2**	**6.7**	**20.0**	**21.2**	**7.6**	**8.2**	**156**	**1**
Max	**0.0**	**0.0**	**0.0**	**0.0**	**14.5**	**13.1**	**20.9**	**24.7**	**9.5**	**10.2**	**568**	**2.4**	**195**	**7**	**10.9**	**9.1**	**23.9**	**26.6**	**8.6**	**9.0**	**164**	**<4**

RP-5 (M-003) & CCWRF (M-004) Effluent and Receiving Water (R-003U, R-003D, & R-004U) Data

Table No. 6b

	M-003 Cl_2 Residual*		M-004 Cl2 Residual*		Upstream Chino Creek (R-003U)										Downstream Chino Creek (R-003D)								Upstream Chino Creek (R-004U)									
					DO		Temp		pH		TDS	TIN	Total Hardness	TSS	DO		Temp		pH		Total Hardness	TSS	DO		Temp		pH		TDS	TIN	Total Hardness	TSS
	Avg	Max	Avg	Max	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg
Date	mg/L				mg/L		°C		unit		mg/L	mg/L	mg/L	mg/L	mg/L		°C		unit		mg/L	mg/L	mg/L		°C		unit		mg/L	mg/L	mg/L	mg/L
Jan-16	0.0	0.0	0.0	0.0	10.5	7.9	19.8	20.3	6.9	7.3	322	2.6	205	<4	7.3	7.0	19.1	21.2	6.8	7.2	225	29	15.1	12.9	13.3	16.1	5.6	8.6	528	4.5	186	
Feb-16	0.0	0.0	0.0	0.0	16.1	9.5	16.4	24.0	7.3	8.9	594	8.9			7.2	6.8	19.5	21.6	6.6	7.2			12.5	10.2	21.7	22.9	7.2	13.7	408	2.6		
Mar-16	0.0	0.0	0.0	0.0	10.6	9.4	23.1	25.4	7.4	7.9	590	7.1			6.5	6.0	19.5	21.3	6.7	7.4			11.9	10.8	25.5	28.2	7.4	10.3	810	2.1		
Apr-16	0.0	0.0	0.0	0.0	10.1	8.5	24.2	25.5	6.8	7.7	616	5.6	184	2	6.8	6.6	21.5	22.6	6.8	7.5	309	6	12.5	10.8	23.6	28.6	7.1	9.7	720	1.6	373	6
May-16	0.0	0.0	0.0	0.0	11.6	8.8	23.4	27.7	7.3	8.0	588	6.1			7.0	6.2	22.5	24.4	7.0	7.2			12.2	9.7	21.2	30.6	8.2	8.8	864	0.2		
Jun-16	0.0	0.0	0.0	0.0	13.7	7.2	28.2	31.7	7.9	12.2	624	5.3			7.0	7.0	23.9	23.9	7.9	7.9			13.6	11.5	27.0	32.7	8.6	10.5	944	0.5		
Jul-16	0.0	0.0	0.0	0.0	10.5	7.6	26.6	31.5	8.3	9.3	444	2.3	141	7									11.2	8.7	26.0	32.0	8.9	9.4	342	0.2	125	11
Aug-16	0.0	0.0	0.0	0.0	9.5	8.4	22.8	27.0	8.2	9.3	410	1.6											9.7	8.2	22.5	27.2	8.4	9.2		0.1		
Sep-16	0.0	0.0	0.0	0.0	12.2	7.3	27.1	29.5	7.5	9.0	522	6.4											11.9	10.1	21.6	28.6	8.6	10.1	874	0.2		
Oct-16	0.0	0.0	0.0	0.0	9.9	6.5	24.0	26.4	7.6	8.8	552	6.0	131	45	6.7	6.6	24.2	24.7	6.9	7.2	202	5	12.0	9.5	19.9	25.9	7.7	10.3	930	0.5	477	15
Nov-16	0.0	0.0	0.0	0.0	11.0	9.5	24.3	26.3	7.1	8.8	586	3.3			7.0	7.0	22.7	24.8	7.1	7.4			12.4	12.2	22.7	26.9	8.4	9.7	848	0.2		
Dec-16	0.0	0.0	0.0	0.0	8.7	7.1	21.1	22.1	7.8	8.0	570	5.8			7.6	7.4	18.8	20.9	7.2	7.9			12.6	11.7	11.8	17.7	8.7	9.1	904	1.4		
Avg	**0.0**	**0.0**	**0.0**	**0.0**	**11.2**	**8.1**	**23.4**	**26.5**	**7.5**	**8.8**	**535**	**5.1**	**165**	**15**	**7.0**	**6.7**	**21.3**	**22.8**	**7.0**	**7.4**	**245**	**13**	**12.3**	**10.5**	**21.4**	**26.5**	**7.9**	**9.9**	**743**	**1.2**	**290**	**11**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**8.7**	**6.5**	**16.4**	**20.3**	**6.8**	**7.3**	**322**	**1.6**	**131**	**2**	**6.5**	**6.0**	**18.8**	**20.9**	**6.6**	**7.2**	**202**	**5**	**9.7**	**8.2**	**11.8**	**16.1**	**5.6**	**8.6**	**342**	**0.1**	**125**	**6**
Max	**0.0**	**0.0**	**0.0**	**0.0**	**16.1**	**9.5**	**28.2**	**31.7**	**8.3**	**12.2**	**624**	**8.9**	**205**	**45**	**7.6**	**7.4**	**24.2**	**24.8**	**7.9**	**7.9**	**309**	**29**	**15.1**	**12.9**	**27.0**	**32.7**	**8.9**	**13.7**	**944**	**4.5**	**477**	**15**

* A chlorine residual of 0.0 mg/L signifies a positive sodium bisulfite residual and a negative chlorine residual.

RP-1 (REC-001) & RP-4 (REC-002) Recycled Water Data — **Table No. 7a**

	REC-001											REC-002										
	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS
	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg
Date	mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L			mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L		
Jan-16	9.9	7.1	0.7	699	<2	4	<2	<2	<2	<2	482	4.5	7.1	0.3	867	<2	<2	<2	<2	<2	<2	457
Feb-16	16.1	7.1	0.6	516	<2	2	<2	<2	<2	<2	471	8.1	7.1	0.4	983	<2	2	<2	<2	<2	<2	466
Mar-16	10.2	7.1	0.5	551	<2	2	<2	<2	<2	<2	498	7.5	7.1	0.4	891	<2	<2	<2	<2	<2	<2	500
Apr-16	19.1	7.2	0.5	672	<2	4	<2	<2	<2	<2	493	7.5	7.1	0.4	984	<2	2	<2	<2	<2	<2	492
May-16	18.2	7.2	0.5	624	<2	2	<2	<2	<2	<2	495	9.2	7.1	0.4	967	<2	2	<2	<2	<2	<2	480
Jun-16	21.4	7.2	0.6	611	<2	4	<2	<2	<2	<2	514	9.7	7.2	0.4	938	<2	<2	<2	<2	<2	<2	458
Jul-16	20.6	7.4	0.5	626	<2	2	<2	<2	<2	<2	499	9.4	7.2	0.4	983	<2	2	<2	<2	<2	<2	462
Aug-16	22.6	7.3	0.6	590	<2	2	<2	<2	<2	<2	500	9.6	7.1	0.3	971	<2	<2	<2	<2	<2	<2	451
Sep-16	22.4	7.2	0.6	721	<2	2	<2	<2	<2	<2	497	7.7	7.1	0.3	919	<2	<2	<2	<2	<2	<2	434
Oct-16	15.7	7.2	0.6	620	<2	<2	<2	<2	<2	<2	488	9.0	7.1	0.4	984	<2	<2	<2	<2	<2	<2	435
Nov-16	13.9	7.2	0.6	711	<2	4	<2	<2	<2	<2	471	9.0	7.1	0.4	984	<2	2	<2	<2	<2	<2	435
Dec-16	3.6	7.1	0.5	685	<2	10	<1	<2	<2	<2	485	7.8	6.9	0.4	858	<1	<2	<1	<2	<2	<2	473
Avg	**16.1**	**7.2**	**0.6**	**628**	**<2**	**3**	**<2**	**<2**	**<2**	**<2**	**491**	**8.3**	**7.1**	**0.4**	**946**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**462**
Min	**3.6**	**7.1**	**0.5**	**516**	**<2**	**<2**	**<1**	**<2**	**<2**	**<2**	**471**	**4.5**	**6.9**	**0.3**	**858**	**<1**	**<2**	**<1**	**<2**	**<2**	**<2**	**434**
Max	**22.6**	**7.4**	**0.7**	**711**	**<2**	**10**	**<2**	**<2**	**<2**	**<2**	**514**	**9.7**	**7.2**	**0.4**	**984**	**<2**	**2**	**<2**	**<2**	**<2**	**<2**	**500**

RP-5 (REC-003) & CCWRF (REC-004) Recycled Water Data — **Table No. 7b**

	REC-003											REC-004										
	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS
	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg
Date	mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L			mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L		
Jan-16	0.2	6.9	0.9	616	<2	2	<2	<2	<2	<2	531	0.6	7.1	0.6	598	<2	2	<2	<2	<2	<2	548
Feb-16	0.4	6.9	0.9	555	<2	<2	<2	<2	<2	<2	513	1.8	7.0	0.5	533	<2	2	<2	<2	<2	<3	547
Mar-16	1.7	7.0	0.8	510	<2	<2	<2	<2	<2	<2	518	2.5	7.0	0.7	563	<2	2	<2	<2	<2	<2	577
Apr-16	3.0	6.9	1.0	518	<2	<2	<2	<2	<2	<2	527	2.9	7.0	0.7	498	<2	2	<2	<2	<2	<2	568
May-16	4.4	6.9	1.1	507	<2	2	<2	<2	<2	<2	544	3.9	7.0	0.7	550	<2	2	<2	<2	<2	<2	570
Jun-16	4.5	7.2	0.9	526	<2	<2	<2	<2	<2	<2	520	5.1	7.0	0.7	517	<2	2	<2	<2	<2	<2	609
Jul-16	5.8	7.2	0.9	696	<2	<2	<2	<2	<2	<2	543	5.9	6.9	0.7	647	<2	2	<2	<2	<2	<2	581
Aug-16	6.1	7.2	1.1	659	<2	4	<2	<2	<2	<2	520	6.1	6.9	0.8	506	<2	2	<2	<2	<2	<2	553
Sep-16	5.4	7.2	0.9	640	<2	2	<2	<2	<2	<2	502	5.8	6.9	0.7	480	<2	<2	<2	<2	<2	<2	510
Oct-16	4.0	7.0	0.8	642	<2	2	<2	<2	<2	<2	506	4.7	7.1	0.9	496	<2	2	<2	<2	<2	<2	519
Nov-16	2.8	6.9	0.6	526	<2	2	<2	<2	<2	<2	502	3.4	7.0	0.7	505	<2	<2	<2	<2	<2	<2	521
Dec-16	1.4	6.9	0.7	498	<4	68	<1	<2	<2	<2	482	2.2	6.9	0.7	523	<1	2	<1	<2	<2	<2	508
Avg	**3.3**	**7.0**	**0.9**	**568**	**<2**	**8**	**<2**	**<2**	**<2**	**<2**	**517**	**3.7**	**7.0**	**0.7**	**540**	**<2**	**2**	**<2**	**<2**	**<2**	**<2**	**551**
Min	**0.2**	**6.9**	**0.6**	**498**	**<2**	**<2**	**<1**	**<2**	**<2**	**<2**	**482**	**0.6**	**6.9**	**0.5**	**480**	**<1**	**<2**	**<1**	**<2**	**<2**	**<2**	**508**
Max	**6.1**	**7.2**	**1.1**	**696**	**<4**	**68**	**<2**	**<2**	**<2**	**<2**	**544**	**6.1**	**7.1**	**0.9**	**647**	**<2**	**2**	**<2**	**<2**	**<2**	**<3**	**609**

RP-1 (M-001B) Effluent Monthly Inorganic & Organic Data — **Table No. 8a**

	Total Hardness	HCO_3^{2-}	B	Ca	CO_3^{2-}	Cl	F	Mg	Na	SO_4	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																					
Jan-16	155	164	0.2	48	0	108	0.2	9	98	47	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	26	<1	13	0.0
Feb-16	148	147	0.2	45	0	114	0.3	9	99	57	<0.25	0.5	4	<0.5	<0.05	<2	<0.25	27			
Mar-16	153	152	0.2	48	0	105	0.3	8	90	56	<0.25	0.7	4	<0.5	<0.05	<2	<0.25	25			
Apr-16	150	155	0.2	46	0	107	0.3	9	95	61	<0.25	<0.5	3	<0.5	<0.05	<2	<0.25	27	5	22	
May-16	157	148	0.2	49	0	108	0.3	9	101	54	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	30			
Jun-16	166	162	0.2	50	0	119	0.3	10	99	56	<0.25	0.5	4	<0.5	<0.05	<2	<0.25	21			
Jul-16	150	160	0.2	45	0	105	0.3	9	96	52	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	31	3	25	
Aug-16	151	148	0.2	45	0	114	0.3	9	103	50	<0.25	<0.5	3	<0.5	<0.05	<2	<0.25	25			
Sep-16	145	145	0.2	44	0	112	0.3	8	94	40	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	24			
Oct-16	140	142	0.2	43	0	111	0.3	8	90	50	<0.25	0.6	4	<0.5	<0.05	<2	<0.25	29	4	23	
Nov-16	147	160	0.2	44	0	103	0.3	9	88	46	<0.25	0.6	4	<0.5	<0.05	<2	<0.25	27			
Dec-16	153	153	0.2	45	0	118	0.3	10	103	49	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	26			
Avg	**151**	**153**	**0.2**	**46**	**0**	**110**	**0.3**	**9**	**96**	**52**	**<0.25**	**<0.5**	**4**	**<0.5**	**<0.05**	**<2**	**<0.25**	**27**	**3**	**21**	**0.0**
Min	**140**	**142**	**0.2**	**43**	**0**	**103**	**0.2**	**8**	**88**	**40**	**<0.25**	**<0.5**	**3**	**<0.5**	**<0.05**	**<2**	**<0.25**	**21**	**<1**	**13**	**0.0**
Max	**166**	**164**	**0.2**	**50**	**0**	**119**	**0.3**	**10**	**103**	**61**	**<0.25**	**0.7**	**6**	**<0.5**	**<0.05**	**<2**	**<0.25**	**31**	**5**	**25**	**0.0**

RP-1/RP-4 (M-002A) Effluent Monthly Inorganic & Organic Data — **Table No. 8b**

	Total Hardness	HCO_3^{2-}	B	Ca	CO_3^{2-}	Cl	F	Mg	Na	SO_4	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits											1 mo avg; 2 max daily		14 mo avg; 20 max daily	8 mo avg; 15 max daily				120 mo avg; 150 max daily			
Jan-16	152	150	0.2	47	0	103	0.2	8	102	66	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	25	<1	12	0.0
Feb-16	149	140	0.2	45	0	115	0.3	9	106	78	<0.25	0.6	4	<0.5	<0.05	<2	<0.25	27			
Mar-16	157	152	0.2	49	0	108	0.3	8	97	69	<0.25	0.6	4	<0.5	<0.05	<2	<0.25	25			
Apr-16	153	147	0.2	46	0	109	0.3	9	104	82	<0.25	<0.5	3	<0.5	<0.05	<2	<0.25	28	4	15	
May-16	154	132	0.2	48	0	109	0.3	8	107	80	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	30			
Jun-16	168	150	0.2	51	0	120	0.3	10	112	88	<0.25	0.7	4	<0.5	<0.05	<2	<0.25	20			
Jul-16	148	149	0.2	45	0	106	0.3	9	105	85	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	30	3	19	
Aug-16	151	140	0.2	45	0	109	0.3	9	108	76	<0.25	0.5	3	<0.5	<0.05	<2	<0.25	25			
Sep-16	138	132	0.2	42	0	115	0.3	8	103	68	<0.25	0.6	5	<0.5	<0.05	<2	<0.25	24			
Oct-16	144	137	0.2	44	0	110	0.3	8	97	66	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	26	3	17	
Nov-16	138	155	0.2	41	0	105	0.3	9	91	68	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	26			
Dec-16	157	146	0.2	47	0	114	0.3	10	110	67	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	27			
Avg	**151**	**144**	**0.2**	**46**	**0**	**110**	**0.3**	**9**	**104**	**74**	**<0.25**	**<0.5**	**4**	**<0.5**	**<0.05**	**<2**	**<0.25**	**26**	**3**	**16**	**0.0**
Min	**138**	**132**	**0.2**	**41**	**0**	**103**	**0.2**	**8**	**91**	**66**	**<0.25**	**<0.5**	**3**	**<0.5**	**<0.05**	**<2**	**<0.25**	**20**	**<1**	**12**	**0.0**
Max	**168**	**155**	**0.2**	**51**	**0**	**120**	**0.3**	**10**	**112**	**88**	**<0.25**	**0.7**	**5**	**<0.5**	**<0.05**	**<2**	**<0.25**	**30**	**4**	**19**	**0.0**

*Free Cyanide is analyzed using ASTM-D7237 for analysis of aquatic free cyanide in accordance with R8-2016-0036

RP-5 (M-003) Effluent Monthly Inorganic Data — **Table No. 8c**

	Total Hardness	HCO_3^{2-}	B	Ca	CO_3^{2-}	Cl	F	Mg	Na	SO_4	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																			34 mo avg; 68 max daily		0.014 mo avg; 0.028 max
Jan-16	195	128	0.2	59	0	138	0.1	12	100	55	<0.25	0.5	8	<0.5	<0.05	<2	<0.25	54	8	25	0.0
Feb-16	184	115	0.2	55	0	144	0.2	11	98	63	<0.25	0.6	6	<0.5	<0.05	<2	<0.25	51	5	21	0.0
Mar-16	192	127	0.2	58	0	144	0.1	11	96	64	<0.25	0.6	10	<0.5	<0.05	<2	<0.25	53	4	19	0.0
Apr-16	179	119	0.2	52	0	147	0.2	12	102	69	<0.25	0.7	10	<0.5	<0.05	<2	<0.25	54	5	21	0.0
May-16	190	128	0.2	56	0	146	0.2	13	110	69	<0.25	0.8	8	<0.5	<0.05	<2	<0.25	57	2	18	0.0
Jun-16	188	116	0.3	54	0	140	0.2	13	110	87	<0.25	0.8	9	<0.5	<0.05	<2	<0.25	51	3	22	0.0
Jul-16																					
Aug-16																					
Sep-16																					
Oct-16	164	126	0.2	46	0	139	0.1	12	103	56	<0.25	0.7	12	<0.5	<0.05	<2	<0.25	55	7	23	0.0
Nov-16	169	132	0.2	48	0	145	0.1	12	100	53	<0.25	0.7	8	<0.5	<0.05	<2	<0.25	51	7	23	0.0
Dec-16	178	124	0.2	51	0	145	0.2	12	103	60	<0.25	0.7	7	<0.5	<0.05	<2	<0.25	60	3	17	0.0
Avg	**182**	**124**	**0.2**	**53**	**0**	**143**	**0.2**	**12**	**102**	**64**	**<0.25**	**0.7**	**9**	**<0.5**	**<0.05**	**<2**	**<0.25**	**54**	**5**	**21**	**0.0**
Min	**164**	**115**	**0.2**	**46**	**0**	**138**	**0.1**	**11**	**96**	**53**	**<0.25**	**0.5**	**6**	**<0.5**	**<0.05**	**<2**	**<0.25**	**51**	**2**	**17**	**0.0**
Max	**195**	**132**	**0.3**	**59**	**0**	**147**	**0.2**	**13**	**110**	**87**	**<0.25**	**0.8**	**12**	**<0.5**	**<0.05**	**<2**	**<0.25**	**60**	**8**	**25**	**0.0**

CCWRF (M-004) Effluent Monthly Inorganic Data — **Table No. 8d**

	Total Hardness	HCO_3^{2-}	B	Ca	CO_3^{2-}	Cl	F	Mg	Na	SO_4	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																			34 mo avg; 68 max daily	46 mo avg; 67 max daily	
Jan-16	178	123	0.2	54	0	142	0.2	10	109	82	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	60	9	28	0.0
Feb-16	175	131	0.2	53	0	143	0.2	10	110	80	<0.25	0.7	9	<0.5	<0.05	<2	<0.25	81	11	33	
Mar-16	172	127	0.2	53	0	147	0.3	10	110	79	<0.25	0.9	7	<0.5	<0.05	<2	<0.25	72	11	34	
Apr-16	179	118	0.2	52	0	156	0.2	12	118	89	<0.25	0.7	7	<0.5	<0.05	<2	<0.25	76	26	38	0.0
May-16	167	111	0.3	48	0	152	0.3	12	129	95	<0.25	0.7	9	<0.5	<0.05	<2	<0.25	92	7	32	
Jun-16	194	130	0.3	52	0	161	0.2	15	125	100	<0.25	0.6	10	<0.5	<0.05	<2	<0.25	67	13	44	
Jul-16	159	112	0.3	40	0	165	0.1	14	136	121	<0.25	0.5	9	<0.5	<0.05	<2	<0.25	69	14	38	0.0
Aug-16	155	102	0.3	42	0	144	0.2	12	128	110	<0.25	0.7	8	<0.5	<0.05	<2	<0.25	71	24	39	
Sep-16	133	93	0.2	36	0	134	0.1	10	116	87	<0.25	1.0	10	<0.5	<0.05	<2	<0.25	67	11	37	
Oct-16	129	93	0.2	35	0	142	0.1	10	116	92	<0.25	0.8	9	<0.5	<0.05	<2	<0.25	65	20	40	0.0
Nov-16	152	116	0.2	43	0	149	0.2	11	113	87	<0.25	0.7	7	<0.5	<0.05	<2	<0.25	63	24	43	
Dec-16	161	116	0.2	45	0	141	0.2	12	111	81	<0.25	0.9	9	<0.5	<0.05	<2	<0.25	71	9	29	
Avg	**163**	**114**	**0.2**	**46**	**0**	**148**	**0.2**	**12**	**118**	**92**	**<0.25**	**0.7**	**8**	**<0.5**	**<0.05**	**<2**	**<0.25**	**71**	**15**	**36**	**0.0**
Min	**129**	**93**	**0.2**	**35**	**0**	**134**	**0.1**	**10**	**109**	**79**	**<0.25**	**<0.5**	**6**	**<0.5**	**<0.05**	**<2**	**<0.25**	**60**	**7**	**28**	**0.0**
Max	**194**	**131**	**0.3**	**54**	**0**	**165**	**0.3**	**15**	**136**	**121**	**<0.25**	**1.0**	**10**	**<0.5**	**<0.05**	**<2**	**<0.25**	**92**	**26**	**44**	**0.0**

*Free Cyanide is analyzed using ASTM-D7237 for analysis of aquatic free cyanide in accordance with R8-2015-0036

RP-1 (M-001B) Effluent Quarterly Data — **Table No. 9a**

Date	Al, TR µg/L	Sb, TR µg/L	As, TR µg/L	Ba, TR µg/L	Co, TR µg/L	Ni, TR µg/L
Jan-16	32	0.7	<2	17	<1	3
Feb-16	32	0.7	<2	13	<1	3
Mar-16	44	0.7	<2	15	<1	4
Apr-16	47	<1	<2	19	<1	3
May-16	45	<1	<2	16	<1	2
Jun-16	45	<1	<2	20	<1	3
Jul-16	57	1	<2	19	<1	3
Aug-16	56	<1	<2	20	<1	3
Sep-16	48	<1	<2	23	<1	4
Oct-16	50	<1	<2	20	<1	4
Nov-16	63	<1	<2	18	<1	3
Dec-16	51	<1	<2	15	<1	2
Avg	**48**	**<1**	**<2**	**18**	**<1**	**3**
Min	**32**	**1**	**<2**	**13**	**<1**	**2**
Max	**63**	**1**	**<2**	**23**	**<1**	**4**

RP-1/RP-4 (M-002A) Effluent Quarterly Data — **Table No. 9b**

Al, TR µg/L	Sb, TR µg/L	As, TR µg/L	Ba, TR µg/L	Co, TR µg/L	Ni, TR µg/L
30	0.6	<2	15	<1	2
33	0.7	<2	14	<1	3
44	0.7	<2	15	<1	4
47	<1	<2	19	<1	3
44	<1	<2	17	<1	2
39	<1	<2	20	<1	3
57	1	<2	19	<1	3
53	<1	<2	19	<1	3
45	<1	<2	23	<1	3
50	<1	<2	20	<1	3
74	<1	<2	17	<1	3
55	<1	<2	16	<1	3
48	**<1**	**<2**	**18**	**<1**	**3**
30	**1**	**<2**	**14**	**<1**	**2**
74	**1**	**<2**	**23**	**<1**	**4**

RP-5 (M-003) Effluent Quarterly Data — **Table No. 9c**

Date	Al, TR µg/L	Sb, TR µg/L	As, TR µg/L	Ba, TR µg/L	Co, TR µg/L	Ni, TR µg/L
Jan-16	<25	<0.5	<2	38	<1	3
Feb-16	<25	<0.5	<2	28	<1	3
Mar-16	<25	<0.5	<2	29	<1	3
Apr-16	<25	<1	<2	38	<1	3
May-16	<25	<1	<2	30	<1	3
Jun-16	<25	<1	<2	37	<1	3
Jul-16						
Aug-16						
Sep-16						
Oct-16	<25	<1	<2	32	<1	3
Nov-16	<25	<1	<2	30	<1	3
Dec-16	<25	<1	<2	31	<1	3
Avg	**<25**	**<1**	**<2**	**33**	**<1**	**3**
Min	**<25**	**<1**	**<2**	**28**	**<1**	**3**
Max	**<25**	**<1**	**<2**	**38**	**<1**	**3**

CCWRF (M-004) Effluent Quarterly Data — **Table No. 9d**

Al, TR µg/L	Sb, TR µg/L	As, TR µg/L	Ba, TR µg/L	Co, TR µg/L	Ni, TR µg/L
92	0.6	<2	21	<1	2
46	0.6	<2	20	<1	3
64	0.6	<2	20	<1	3
66	<1	<2	20	<1	3
69	<1	<2	21	<1	3
<25	<1	<2	21	<1	3
78	<1	<2	16	<1	3
40	<1	<2	16	<1	3
83	<1	<2	15	<1	3
73	<1	<2	11	<1	3
73	<1	<2	14	<1	2
44	<1	<2	14	<1	3
63	**<1**	**<2**	**17**	**<1**	**3**
<25	**1**	**<2**	**11**	**<1**	**2**
92	**<1**	**<2**	**21**	**<1**	**3**

Table No. 10

	Discharged Eff Flow			TIN						Agency-wide TIN				
	RP1/RP4	RP5	CC	RP1/RP4		RP5		CC		Discharge		Limit		12-MRA
Mo-Yr										flow wt.	total	flow wt.	total	flow-wt.
		MGD		mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
Jan-16	18.9	8.6	6.0	7.9	1,250	7.2	520	5.2	260	7.3	2,030	8	5,338	5.7
Feb-16	11.0	5.5	3.1	6.4	590	7.3	330	5.2	140	6.5	1,060	8	5,338	5.6
Mar-16	19.2	3.0	4.5	5.7	920	6.9	170	5.7	210	5.9	1,300	8	5,338	5.6
Apr-16	10.0	2.8	4.2	5.7	480	6.0	140	5.8	200	5.8	820	8	5,338	5.6
May-16	7.7	1.8	2.7	5.6	360	6.5	100	5.5	120	5.7	580	8	5,338	5.6
Jun-16	3.4	0.4	1.6	5.2	150	6.1	20	5.2	70	5.3	240	8	5,338	5.7
Jul-16	2.7	0.0	1.4	6.9	150	6.3	0	4.8	60	6.2	210	8	5,338	5.7
Aug-16	2.5	0.0	1.1	7.1	140	6.5	0	5.2	50	6.5	190	8	5,338	5.9
Sep-16	5.3	0.0	1.1	6.5	290	6.2	0	6.1	60	6.4	350	8	5,338	6.0
Oct-16	11.5	2.4	1.8	5.8	560	5.8	120	5.9	90	5.8	770	8	5,338	6.1
Nov-16	11.5	3.7	4.3	5.5	530	6.1	190	4.9	170	5.5	890	8	5,338	6.0
Dec-16	24.2	4.1	5.8	5.6	1,130	6.6	230	6.2	300	5.8	1,660	8	5,338	6.0
Avg	**10.7**	**2.7**	**3.1**	**6.2**	**550**	**6.5**	**150**	**5.5**	**140**	**6.0**	**840**	**8**	**5,338**	**5.8**
Min	**2.5**	**0.0**	**1.1**	**5.2**	**140**	**5.8**	**0**	**4.8**	**50**	**5.3**	**190**	**8**	**5,338**	**5.6**
Max	**24.2**	**8.6**	**6.0**	**7.9**	**1,250**	**7.3**	**520**	**6.2**	**300**	**7.3**	**2,030**	**8**	**5,338**	**6.1**

Agency-wide TDS 12-Month Running Averages

Table No. 11

	Flows								Total Dissolved Solids (TDS)								Agency-wide TDS				
	001 [1]	RP-1 RW	002	RP-4 RW	RP-5	RP-5 RW	CC	CC RW	001	RP-1 RW [2]	002	RP-4 RW	RP-5	RP-5 RW [2]	CC	CC RW [2]	Discharge		Limit		12-MRA
Mo-Yr	MGD								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	flow wt. mg/L	total lbs/day	flow wt. mg/L	total lbs/day	flow wt. mg/L
Jan-16	1.6	9.9	17.3	4.5	8.6	0.2	6.0	0.6	512	482	496	457	530	531	551	548	504	244,720	550	366,960	515
Feb-16	4.7	16.1	6.3	8.1	5.5	0.4	3.1	1.8	525	471	493	466	541	513	546	547	495	196,240	550	366,960	510
Mar-16	3.4	10.2	15.8	7.5	3.0	1.7	4.5	2.5	528	498	521	500	541	518	559	577	521	220,230	550	366,960	509
Apr-16	2.6	19.1	7.4	7.5	2.8	3.0	4.2	2.9	536	493	510	492	545	527	584	568	514	218,370	550	366,960	508
May-16	1.4	18.1	6.2	9.2	1.8	4.4	2.7	3.9	546	495	515	480	566	544	585	570	514	199,390	550	366,960	507
Jun-16	2.4	21.4	0.9	9.7	0.4	4.5	1.6	5.1	531	514	553	458	568	520	613	609	519	181,160	550	366,960	508
Jul-16	1.6	20.6	1.1	9.4	0.0	5.8	1.4	5.9	563	499	542	462	NA	543	618	581	514	174,770	550	366,960	509
Aug-16	1.4	22.6	1.0	9.6	0.0	6.1	1.1	6.1	543	500	507	451	NA	520	565	553	502	178,230	550	366,960	509
Sep-16	2.1	22.4	3.2	7.7	0.0	5.4	1.1	5.8	518	497	517	434	NA	502	522	510	492	175,500	550	366,960	507
Oct-16	1.4	15.7	10.1	9.0	2.4	4.0	1.8	4.7	525	488	506	435	529	506	546	519	491	188,640	550	366,960	506
Nov-16	1.3	13.9	10.2	9.0	3.7	2.8	4.3	3.4	527	471	497	439	532	502	555	521	489	201,960	550	366,960	505
Dec-16	2.8	3.6	21.4	7.8	4.1	1.4	5.8	2.2	513	485	493	473	508	482	525	508	495	218,240	550	366,960	504
Avg	**2.2**	**16.1**	**8.4**	**8.3**	**2.7**	**3.3**	**3.1**	**3.7**	**530**	**491**	**512**	**462**	**540**	**517**	**564**	**551**	**504**	**199,790**	**550**	**366,960**	**508**
Min	**1.3**	**3.6**	**0.9**	**4.5**	**0.0**	**0.2**	**1.1**	**0.6**	**512**	**471**	**493**	**434**	**508**	**482**	**522**	**508**	**489**	**174,770**	**550**	**366,960**	**504**
Max	**4.7**	**22.6**	**21.4**	**9.7**	**8.6**	**6.1**	**6.0**	**6.1**	**563**	**514**	**553**	**500**	**568**	**544**	**618**	**609**	**521**	**244,720**	**550**	**366,960**	**515**

NOTES:
[1] Prior to April 2010, 001 effluent flow included recycled water flow.
[2] Flow and TDS added to flow-weight for RP-1, RP-5, and CCWRF recycled water (May 2010)
NA: Not Analyzed, due to no discharge

APPENDIX B

RECYCLED WATER

COMPLIANCE DATA

FOR CALENDAR YEAR 2016

INLAND EMPIRE UTILITIES AGENCY

Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2016 NPDES Annual Report

RP-1 (M-001B) Effluent Remaining Priority Pollutants

Table 18a

RP-1 (M-001B) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)	0.7	0.7	0.7	<1	<1	<1	1.1	<1	<1	<1	<1	<1	1
Arsenic (As)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**<2**
Beryllium (Be)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Cadmium (Cd)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	**<0.25**
Chromium (Cr)	<0.5	0.5	0.7	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	**0.7**
Copper (Cu)	3.9	3.9	3.5	3.2	3.5	3.8	3.9	3.1	5.5	4.3	4.4	3.8	**5.5**
Lead (Pb)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Mercury (Hg)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<0.05**
Nickel (Ni)	2.5	2.8	3.5	2.8	2.2	3.0	2.9	2.5	3.7	4.3	2.7	2.5	**4.3**
Selenium (Se)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	**<2**
Silver (Ag)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	**<0.25**
Thallium (Tl)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**
Zinc (Zn)	26	27	25	27	30	21	31	25	24	29	27	26	**31**
CN, Aquatic Free	<2			<2			<2			<2			**<2**

RP-1 (M-001B) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane	<1												**<1**
1,1,2,2-Tetrachloroethane	<0.5												**<0.5**
1,1,2-Trichloroethane	<1												**<1**
1,1-Dichloroethane	<0.5												**<0.5**
1,1-Dichloroethene	<1												**<1**
1,2-Dichlorobenzene	<1												**<1**
1,2-Dichloroethane	<0.5												**<0.5**
1,2-Dichloropropane	<0.5												**<0.5**
1,3-Dichlorobenzene	<1												**<1**
1,4-Dichlorobenzene	<1												**<1**
2-Chloroethyl vinyl ether	<1												**<1**
Benzene	<1												**<1**
Bromodichloromethane	13			22			25			23			**25**
Bromoform	<1			<1			<1			<1			**<1**
Bromomethane	<1												**<1**
Carbon tetrachloride	<0.5												**<0.5**
Chlorobenzene	<1												**<1**
Chloroethane	<1												**<1**
Chloroform	76			87			120			94			**120**
Chloromethane	<1												**<1**
cis-1,3-Dichloropropene	<0.5												**<0.5**
Dibromochloromethane	<1			5			3			4			**5**
Ethylbenzene	<1												**<1**
Methylene chloride	<1												**<1**
Tetrachloroethene	<1												**<1**
Toluene	<1												**<1**
trans-1,2-Dichloroethene	<0.5												**<0.5**
trans-1,3-Dichloropropene	<0.5												**<0.5**
Trichloroethene	<1												**<1**
Trichlorofluoromethane	<2												**<2**
Vinyl chloride	<0.5												**<0.5**
Acrolein	<2												**<2**
Acrylonitrile	<0.25												**<0.25**

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RP-1 (M-001B) Effluent Remaining Priority Pollutants

Table 18b

RP-1 (M-001B) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2,4,6-Trichlorophenol	<1												<1
2,4-Dichlorophenol	<2												<2
2,4-Dimethylphenol	<1												<1
2,4-Dinitrophenol	<3												<3
2,4-Dinitrotoluene	<1												<1
2,6-Dinitrotoluene	<2												<2
2-Chloronaphthalene	<1												<1
2-Chlorophenol	<1												<1
2-Methyl-4,6-dinitrophenol	<2												<2
2-Nitrophenol	<1												<1
3,3-Dichlorobenzidine	<5												<5
4-Bromophenyl phenyl ether	<1												<1
4-Chloro-3-methylphenol	<1												<1
4-Chlorophenyl phenyl ether	<1												<1
4-Nitrophenol	<3												<3
Acenaphthene	<1												<1
Acenaphthylene	<1												<1
Anthracene	<1												<1
Azobenzene	<1												<1
Benzidine	<5												<5
Benzo(a)anthracene	<5												<5
Benzo(a)pyrene	<1												<1
Benzo(b)fluoranthene	<1												<1
Benzo(g,h,i)perylene	<2												<2
Benzo(k)fluoranthene	<1												<1
Bis(2-chloroethoxy)methane	<2												<2
Bis(2-chloroethyl)ether	<1												<1
Bis(2-chloroisopropyl)ether	<1												<1
Bis(2-ethylhexyl)phthalate	<2			<1			<1			<1			<2
Butyl benzyl phthalate	<1												<1
Chrysene	<1												<1
Dibenzo(a,h)anthracene	<1												<1
Diethyl phthalate	<2												<2
Dimethyl phthalate	<1												<1
Di-n-butyl phthalate	<1												<1
Di-n-octyl phthalate	<1												<1
Fluoranthene	<1												<1
Fluorene	<1												<1
Hexachlorobenzene	<1												<1
Hexachlorobutadiene	<1												<1
Hexachlorocyclopentadiene	<5												<5
Hexachloroethane	<1												<1
Indeno(1,2,3-cd)pyrene	<2												<2
Isophorone	<1												<1
Naphthalene	<1												<1
Nitrobenzene	<1												<1
N-Nitrosodimethylamine	<1												<1
N-Nitroso-di-n-propylamine	<1												<1
N-Nitrosodiphenylamine	<1												<1
Pentachlorophenol	<2												<2
Phenanthrene	<1												<1
Phenol	<1												<1
Pyrene	<1												<1

INLAND EMPIRE UTILITIES AGENCY

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RP-1 (M-001B) Effluent Remaining Priority Pollutants

Table 18c

RP-1 (M-001B) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD	<0.006												<0.006
4,4-DDE	<0.006												<0.006
4,4-DDT	<0.008												<0.008
Aldrin	<0.004												<0.004
Alpha-BHC	<0.008												<0.008
Beta-BHC	<0.005												<0.005
Delta-BHC	<0.007												<0.007
Dieldrin	<0.006												<0.006
Endosulfan I	<0.01												<0.01
Endosulfan II	<0.007												<0.007
Endosulfan Sulfate	<0.009												<0.009
Endrin	<0.009												<0.009
Endrin aldehyde	<0.006												<0.006
Gamma-BHC	<0.01												<0.01
Heptachlor	<0.006												<0.006
Heptachlor epoxide	<0.007												<0.007
Chlordane	<0.1												<0.1
PCB-1016	<0.5												<0.5
PCB-1221	<0.5												<0.5
PCB-1232	<0.5												<0.5
PCB-1242	<0.5												<0.5
PCB-1248	<0.5												<0.5
PCB-1254	<0.5												<0.5
PCB-1260	<0.5												<0.5
Toxaphene	<0.5												<0.5
RP-1 (M-001B) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)													
PCDD/PCDF Congeners*	0.0												0.0

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants

RP-1/RP-4 (M-002A) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2,4,6-Trichlorophenol	<1												<1
2,4-Dichlorophenol	<2												<2
2,4-Dimethylphenol	<1												<1
2,4-Dinitrophenol	<3												<3
2,4-Dinitrotoluene	<1												<1
2,6-Dinitrotoluene	<2												<2
2-Chloronaphthalene	<1												<1
2-Chlorophenol	<1												<1
2-Methyl-4,6-dinitrophenol	<2												<2
2-Nitrophenol	<1												<1
3,3-Dichlorobenzidine	<5												<5
4-Bromophenyl phenyl ether	<1												<1
4-Chloro-3-methylphenol	<1												<1
4-Chlorophenyl phenyl ether	<1												<1
4-Nitrophenol	<3												<3
Acenaphthene	<1												<1
Acenaphthylene	<1												<1
Anthracene	<1												<1
Azobenzene	<1												<1
Benzidine	<5												<5
Benzo(a)anthracene	<5												<5
Benzo(a)pyrene	<1												<1
Benzo(b)fluoranthene	<1												<1
Benzo(g,h,i)perylene	<2												<2
Benzo(k)fluoranthene	<1												<1
Bis(2-chloroethoxy)methane	<2												<2
Bis(2-chloroethyl)ether	<1												<1
Bis(2-chloroisopropyl)ether	<1												<1
Bis(2-ethylhexyl)phthalate	<2			<1			<1			<1			<2
Butyl benzyl phthalate	<1												<1
Chrysene	<1												<1
Dibenzo(a,h)anthracene	<1												<1
Diethyl phthalate	<2												<2
Dimethyl phthalate	<1												<1
Di-n-butyl phthalate	<1												<1
Di-n-octyl phthalate	<1												<1
Fluoranthene	<1												<1
Fluorene	<1												<1
Hexachlorobenzene	<1												<1
Hexachlorobutadiene	<1												<1
Hexachlorocyclopentadiene	<5												<5
Hexachloroethane	<1												<1
Indeno(1,2,3-cd)pyrene	<2												<2
Isophorone	<1												<1
Naphthalene	<1												<1
Nitrobenzene	<1												<1
N-Nitrosodimethylamine	<1												<1
N-Nitroso-di-n-propylamine	<1												<1
N-Nitrosodiphenylamine	<1												<1
Pentachlorophenol	<2												<2
Phenanthrene	<1												<1
Phenol	<1												<1
Pyrene	<1												<1

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RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants

Table 19c

RP-1/RP-4 (M-002A) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD	<0.006												<0.006
4,4-DDE	<0.006												<0.006
4,4-DDT	<0.008												<0.008
Aldrin	<0.004												<0.004
Alpha-BHC	<0.008												<0.008
Beta-BHC	<0.005												<0.005
Delta-BHC	<0.007												<0.007
Dieldrin	<0.006												<0.006
Endosulfan I	<0.01												<0.01
Endosulfan II	<0.007												<0.007
Endosulfan Sulfate	<0.009												<0.009
Endrin	<0.009												<0.009
Endrin aldehyde	<0.006												<0.006
Gamma-BHC	<0.01												<0.01
Heptachlor	<0.006												<0.006
Heptachlor epoxide	<0.007												<0.007
Chlordane	<0.1												<0.1
PCB-1016	<0.5												<0.5
PCB-1221	<0.5												<0.5
PCB-1232	<0.5												<0.5
PCB-1242	<0.5												<0.5
PCB-1248	<0.5												<0.5
PCB-1254	<0.5												<0.5
PCB-1260	<0.5												<0.5
Toxaphene	<0.5												<0.5
RP-1/RP-4 (M-002A) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)													
PCDD/PCDF Congeners*	0.0												0.0

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

Table 20a

RP-5 (M-003) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)	<1	<1	<1	<1	<1	<1				<1	<1	<1	<1.0
Arsenic (As)	<2	<2	<2	<2	<2	<2				<2	<2	<2	<2
Beryllium (Be)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25				<0.25	<0.25	<0.25	<0.25
Chromium (Cr)	0.5	0.6	0.5	0.7	0.8	0.8				0.7	0.7	0.7	0.8
Copper (Cu)	8.0	6.4	9.7	10.2	8.1	9.0				11.8	7.7	7.2	11.8
Lead (Pb)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				<0.5	<0.5	<0.5	<0.5
Mercury (Hg)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				<0.05	<0.05	<0.05	<0.05
Nickel (Ni)	2.5	2.7	2.8	2.9	2.7	3.2				2.7	2.7	2.6	3.2
Selenium (Se)	<2	<2	<2	<2	<2	<2				<2	<2	<2	<2
Silver (Ag)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25				<0.25	<0.25	<0.25	<0.25
Thallium (Tl)	<1	<1	<1	<1	<1	<1				<1	<1	<1	<1
Zinc (Zn)	54	51	53	54	57	51				55	51	60	60
CN, Aquatic Free	<2			<2							<2		<2

RP-5 (M-003) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane	<1												<1
1,1,2,2-Tetrachloroethane	<0.5												<0.5
1,1,2-Trichloroethane	<1												<1
1,1-Dichloroethane	<0.5												<0.5
1,1-Dichloroethene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,2-Dichloroethane	<0.5												<0.5
1,2-Dichloropropane	<0.5												<0.5
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2-Chloroethyl vinyl ether	<1												<1
Benzene	<1												<1
Bromodichloromethane	25	21	19	21	18	22				23	23	17	25
Bromoform	<1	<1	<1	<1	<1	<1				<1	<1	<1	<1
Bromomethane	<1												<1
Carbon tetrachloride	<0.5												<0.5
Chlorobenzene	<1												<1
Chloroethane	<1												<1
Chloroform	59	56	61	59	84	77				59	52	51	84
Chloromethane	<1												<1
cis-1,3-Dichloropropene	<0.5												<0.5
Dibromochloromethane	8	5	4	5	2	3				7	7	3	8
Ethylbenzene	<1												<1
Methylene chloride	<1												<1
Tetrachloroethene	<1												<1
Toluene	<1												<1
trans-1,2-Dichloroethene	<0.5												<0.5
trans-1,3-Dichloropropene	<0.5												<0.5
Trichloroethene	<1												<1
Trichlorofluoromethane	<2												<2
Vinyl chloride	<0.5												<0.5
Acrolein	<2												<2
Acrylonitrile	<0.25												<0.25

Table 20b

RP-5 (M-003) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2,4,6-Trichlorophenol	<1												<1
2,4-Dichlorophenol	<2												<2
2,4-Dimethylphenol	<1												<1
2,4-Dinitrophenol	<3												<3
2,4-Dinitrotoluene	<1												<1
2,6-Dinitrotoluene	<2												<2
2-Chloronaphthalene	<1												<1
2-Chlorophenol	<1												<1
2-Methyl-4,6-dinitrophenol	<2												<2
2-Nitrophenol	<1												<1
3,3-Dichlorobenzidine	<5												<5
4-Bromophenyl phenyl ether	<1												<1
4-Chloro-3-methylphenol	<1												<1
4-Chlorophenyl phenyl ether	<1												<1
4-Nitrophenol	<3												<3
Acenaphthene	<1												<1
Acenaphthylene	<1												<1
Anthracene	<1												<1
Azobenzene	<1												<1
Benzidine	<5												<5
Benzo(a)anthracene	<5												<5
Benzo(a)pyrene	<1												<1
Benzo(b)fluoranthene	<1												<1
Benzo(g,h,i)perylene	<2												<2
Benzo(k)fluoranthene	<1												<1
Bis(2-chloroethoxy)methane	<2												<2
Bis(2-chloroethyl)ether	<1												<1
Bis(2-chloroisopropyl)ether	<1												<1
Bis(2-ethylhexyl)phthalate	<2			<1						<1			<2
Butyl benzyl phthalate	<1												<1
Chrysene	<1												<1
Dibenzo(a,h)anthracene	<1												<1
Diethyl phthalate	<2												<2
Dimethyl phthalate	<1												<1
Di-n-butyl phthalate	<1												<1
Di-n-octyl phthalate	<1												<1
Fluoranthene	<1												<1
Fluorene	<1												<1
Hexachlorobenzene	<1												<1
Hexachlorobutadiene	<1												<1
Hexachlorocyclopentadiene	<5												<5
Hexachloroethane	<1												<1
Indeno(1,2,3-cd)pyrene	<2												<2
Isophorone	<1												<1
Naphthalene	<1												<1
Nitrobenzene	<1												<1
N-Nitrosodimethylamine	<1												<1
N-Nitroso-di-n-propylamine	<1												<1
N-Nitrosodiphenylamine	<1												<1
Pentachlorophenol	<2												<2
Phenanthrene	<1												<1
Phenol	<1												<1
Pyrene	<1												<1

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RP-5 (M-003) Effluent Remaining Priority Pollutants

Table 20c

RP-5 (M-003) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD	<0.006												<0.006
4,4-DDE	<0.006												<0.006
4,4-DDT	<0.008												<0.008
Aldrin	<0.004												<0.004
Alpha-BHC	<0.008												<0.008
Beta-BHC	<0.005												<0.005
Delta-BHC	<0.007												<0.007
Dieldrin	<0.006												<0.006
Endosulfan I	<0.01												<0.01
Endosulfan II	<0.007												<0.007
Endosulfan Sulfate	<0.009												<0.009
Endrin	<0.009												<0.009
Endrin aldehyde	<0.006												<0.006
Gamma-BHC	<0.01												<0.01
Heptachlor	<0.006												<0.006
Heptachlor epoxide	<0.007												<0.007
Chlordane	<0.1												<0.1
PCB-1016	<0.5												<0.5
PCB-1221	<0.5												<0.5
PCB-1232	<0.5												<0.5
PCB-1242	<0.5												<0.5
PCB-1248	<0.5												<0.5
PCB-1254	<0.5												<0.5
PCB-1260	<0.5												<0.5
Toxaphene	<0.5												<0.5
RP-5 (M-003) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)													
PCDD/PCDF Congeners*	0.0	0.0	0.0	0.0	0.0	0.0	ND	ND	ND	0.0	0.0	0.0	0.0

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

ND: No Discharge

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CCWRF (M-004) Effluent Remaining Priority Pollutants

Table 21a

CCWRF (M-004) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)	0.6	0.6	0.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Arsenic (As)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Beryllium (Be)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chromium (Cr)	<0.5	0.7	0.9	0.7	0.7	0.6	0.5	0.7	1.0	0.8	0.7	0.9	1.0
Copper (Cu)	6.1	8.6	7.1	7.4	8.9	9.6	9.0	8.0	9.8	8.8	7.3	9.4	9.8
Lead (Pb)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury (Hg)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)	2.3	2.6	2.9	2.9	3.0	3.3	3.2	3.2	3.1	2.6	2.3	2.7	3.3
Selenium (Se)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver (Ag)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Thallium (Tl)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (Zn)	60	81	72	76	92	67	69	71	67	65	63	71	92
CN, Aquatic Free	<2			<2			<2				<2		<2

CCWRF (M-004) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane	<1												<1
1,1,2,2-Tetrachloroethane	<0.5												<0.5
1,1,2-Trichloroethane	<1												<1
1,1-Dichloroethane	<0.5												<0.5
1,1-Dichloroethene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,2-Dichloroethane	<0.5												<0.5
1,2-Dichloropropane	<0.5												<0.5
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2-Chloroethyl vinyl ether	<1												<1
Benzene	<1												<1
Bromodichloromethane	28	33	34	38	32	44	38	39	37	40	43	29	44
Bromoform	<1	<1	<1	3	<1	<1	1	3	<1	3	5	<1	5
Bromomethane	<1												<1
Carbon tetrachloride	<0.5												<0.5
Chlorobenzene	<1												<1
Chloroethane	<1												<1
Chloroform	62	61	63	43	93	74	63	45	75	56	54	60	93
Chloromethane	<1												<1
cis-1,3-Dichloropropene	<0.5												<0.5
Dibromochloromethane	9	11	11	26	7	13	14	24	11	20	24	9	26
Ethylbenzene	<1												<1
Methylene chloride	<1												<1
Tetrachloroethene	<1												<1
Toluene	1												1
trans-1,2-Dichloroethene	<0.5												<0.5
trans-1,3-Dichloropropene	<0.5												<0.5
Trichloroethene	<1												<1
Trichlorofluoromethane	<2												<2
Vinyl chloride	<0.5												<0.5
Acrolein	<2												<2
Acrylonitrile	<0.25												<0.25

Table 21b

CCWRF (M-004) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene	<1												<1
1,2-Dichlorobenzene	<1												<1
1,3-Dichlorobenzene	<1												<1
1,4-Dichlorobenzene	<1												<1
2,4,6-Trichlorophenol	<1												<1
2,4-Dichlorophenol	<2												<2
2,4-Dimethylphenol	<1												<1
2,4-Dinitrophenol	<3												<3
2,4-Dinitrotoluene	<1												<1
2,6-Dinitrotoluene	<2												<2
2-Chloronaphthalene	<1												<1
2-Chlorophenol	<1												<1
2-Methyl-4,6-dinitrophenol	<2												<2
2-Nitrophenol	<1												<1
3,3-Dichlorobenzidine	<5												<5
4-Bromophenyl phenyl ether	<1												<1
4-Chloro-3-methylphenol	<1												<1
4-Chlorophenyl phenyl ether	<1												<1
4-Nitrophenol	<3												<3
Acenaphthene	<1												<1
Acenaphthylene	<1												<1
Anthracene	<1												<1
Azobenzene	<1												<1
Benzidine	<5												<5
Benzo(a)anthracene	<5												<5
Benzo(a)pyrene	<1												<1
Benzo(b)fluoranthene	<1												<1
Benzo(g,h,i)perylene	<2												<2
Benzo(k)fluoranthene	<1												<1
Bis(2-chloroethoxy)methane	<2												<2
Bis(2-chloroethyl)ether	<1												<1
Bis(2-chloroisopropyl)ether	<1												<1
Bis(2-ethylhexyl)phthalate	<2			<1			<1			<1			<2
Butyl benzyl phthalate	<1												<1
Chrysene	<1												<1
Dibenzo(a,h)anthracene	<1												<1
Diethyl phthalate	<2												<2
Dimethyl phthalate	<1												<1
Di-n-butyl phthalate	<1												<1
Di-n-octyl phthalate	<1												<1
Fluoranthene	<1												<1
Fluorene	<1												<1
Hexachlorobenzene	<1												<1
Hexachlorobutadiene	<1												<1
Hexachlorocyclopentadiene	<5												<5
Hexachloroethane	<1												<1
Indeno(1,2,3-cd)pyrene	<2												<2
Isophorone	<1												<1
Naphthalene	<1												<1
Nitrobenzene	<1												<1
N-Nitrosodimethylamine	<1												<1
N-Nitroso-di-n-propylamine	<1												<1
N-Nitrosodiphenylamine	<1												<1
Pentachlorophenol	<2												<2
Phenanthrene	<1												<1
Phenol	<1												<1
Pyrene	<1												<1

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CCWRF (M-004) Effluent Remaining Priority Pollutants

Table 21c

CCWRF (M-004) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD	<0.006												<0.006
4,4-DDE	<0.006												<0.006
4,4-DDT	<0.008												<0.008
Aldrin	<0.004												<0.004
Alpha-BHC	<0.008												<0.008
Beta-BHC	<0.005												<0.005
Delta-BHC	<0.007												<0.007
Dieldrin	<0.006												<0.006
Endosulfan I	<0.01												<0.01
Endosulfan II	<0.007												<0.007
Endosulfan Sulfate	<0.009												<0.009
Endrin	<0.009												<0.009
Endrin aldehyde	<0.006												<0.006
Gamma-BHC	<0.01												<0.01
Heptachlor	<0.006												<0.006
Heptachlor epoxide	<0.007												<0.007
Chlordane	<0.1												<0.1
PCB-1016	<0.5												<0.5
PCB-1221	<0.5												<0.5
PCB-1232	<0.5												<0.5
PCB-1242	<0.5												<0.5
PCB-1248	<0.5												<0.5
PCB-1254	<0.5												<0.5
PCB-1260	<0.5												<0.5
Toxaphene	<0.5												<0.5
CCWRF (M-004) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)													
PCDD/PCDF Congeners*	0.0			0.0			0.0			0.0			0.0

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

APPENDIX C

RECYCLED WATER

USERS AND DEMANDS

FOR FISCAL YEAR 2016/17

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

City of Chino		
Customer Name	Usage Type	Value_AF
Cleveland Farm	Agriculture	1125.24
WESTSTEYN DAIRY	Agriculture	963.82
Cal Poly Pomona	Agriculture	655.55
CW Farms III	Agriculture	374.16
Cleveland Farm #1	Agriculture	349.98
La Bruncherie Farms	Agriculture	328.15
Nyenhius Dairy	Agriculture	235.65
SUPERIOR SOD AIRPORT #1	Agriculture	174
H PLACENICIA NURSERY	Agriculture	71.57
Superior Sod #4	Agriculture	36.72
Superior Sod	Agriculture	0
	Chino Agricultural Usage	4314.84
BOBERG ENGINEERING	Construction	86.22
Cleveland Farm	Construction	54.71
DRT GRADING INC	Construction	48.72
Lewin Operating Corp	Construction	31.26
LENNAR HOMES OF CA	Construction	29.29
Oltmans Construction	Construction	2.67
KENCO LOGISTICS	Construction	7.89
BRIDGE HOUSING CORPORATION	Construction	6.69
SARES REGIS GROUP	Construction	4.75
PARKCREST CONSTRUCTION INC	Construction	4.61
TELEPHONE AVE-SIEROTY BLDG	Construction	4.35
Fullmer Construction	Construction	2.41
COLLEGE PARK COMMUNITY ASSOC/HILLSDALE	Construction	2.27
Commerce Construction	Construction	1.92
K R G INC	Construction	1.8
AMPCO NORTH	Construction	1.16
MC KENNA GENERAL ENGINEERING	Construction	0.87
Chino Development Corporation	Construction	0.68
Standard Pacific	Construction	0.64
THREE D SERVICE CO INC	Construction	0.57
STANDARD PACIFIC OF OC	Construction	0.57
LEWIS OPERATING CORP	Construction	0.53
CANNON CONSTRUCTORS	Construction	0.29
MIKE PRLICH AND SONS, INC	Construction	0.2
SANCON ENGINEERING	Construction	0.15
HOUSTON & HARRIS PCS INC	Construction	0.11

ORANGE COUNTY WATER DISTRICT	Construction	0.07
MILLIE AND SEVERSON	Construction	0.04
WERECK AGE DEMOLITION INC	Construction	0.04
DR Horton	Construction	0.02
KB Homes	Construction	0.02
K HOVNANIAN HOMES	Construction	0.01
PARK WEST LANDSCAPE MAINTENANCE	Construction	0
	Chino Construction Usage	295.53
OLS ENERGY CHINO	Industrial	145.45
Repet Inc	Industrial	18.46
AMERICAN HONDA MOTOR CO INC	Industrial	2.51
	Chino Industrial Usage	166.42
City of Chino	Landscape	170.91
COLLEGE PARK COMMUNITY ASSOCIATION	Landscape	116.74
LENNAR HOMES OF CA	Landscape	112.44
PRESERVE MASTER MAINTENANCE CORP	Landscape	101.76
City of Chino Ayala Park	Landscape	96.66
Chino Development Corporation	Landscape	83.53
LEWIS OPERATING CORP	Landscape	70.84
GREAT LAKES ENVIRONMENTAL	Landscape	62
Lewis Operating Corp	Landscape	51.14
KB Homes	Landscape	45.97
MAJESTIC CHINO GATEWAY	Landscape	44.23
DEPT OF CORRECTIONS STATE OF CA	Landscape	39.57
UMA ENTERPRISES INC	Landscape	34.83
National Distribution Center	Landscape	28.97
SARES REGIS GROUP	Landscape	28.07
Tetherwinds Neighborhood	Landscape	22.98
AMERICAN HONDA MOTOR CO INC	Landscape	20.42
STANDARD PACIFIC OF OC	Landscape	17.81
NMS BUILDERS LLC	Landscape	17.45
VIRAMONTES EXPRESS	Landscape	17.33
PRESERVE MASTER MAINTENANCE	Landscape	16.56
Richardson, Don	Landscape	15.44
SYNNEX CORPORATION	Landscape	14.93
Standard Pacific	Landscape	14.64
Central Park Industrial PTNRS	Landscape	14.55
PORT LOGISTICS GROUP	Landscape	14.04
San Bdno County Fairgrounds	Landscape	12.98
Tramel Crow So Cal Inc	Landscape	11.53

AGAVE NEIGHNORHOOD ASSOCIATION	Landscape	10.54
American Power Conversion	Landscape	10.08
K-8 SCHOOL (PRESERVE)	Landscape	10.06
COLLEGE PARK COMMUNITY ASSOC/HILLSDALE	Landscape	9.8
PRESERVE MASTER COMMUNITY CORP	Landscape	9.69
SEACOUNTRY HOMES	Landscape	9.49
MC KESSON MEDICAL	Landscape	9.49
EURO-RO OPERATING INC	Landscape	9.21
WESTERN A WEST CA, LLC	Landscape	8.88
MOTIVATIONAL FULFILLMENT	Landscape	8.85
WATSON LAND COMPANY	Landscape	8.57
WAL-MART STORES INC #07-8103	Landscape	8.44
Yorba Industrial Center	Landscape	8.42
MONTE VISTA #3	Landscape	7.91
Evergreen at The Preserve	Landscape	7.62
CP BUISNESS PARK PARTNERS LP	Landscape	7.4
Majestic Management	Landscape	7.34
Chino Industrial Commons-Owners	Landscape	7.31
College Park Community Assoc 2	Landscape	7.19
CITRUS COMMONS	Landscape	7.11
RANCHO DEL CHINO LLC	Landscape	7.04
Warehouse Technology	Landscape	6.95
COLLEGE PARK COMMUNITIES	Landscape	6.94
WELLESLEY NEIGHBORHOOD	Landscape	6.85
NORCO INJECTION MOLDING	Landscape	6.62
OMNIA ITALIAN DESIGN	Landscape	6.59
Chaffey College	Landscape	6.43
5150 EDISON PARTNERS	Landscape	6.29
Sundance Spas	Landscape	5.79
Chino Hills Ford	Landscape	5.56
Woodbury Neighborhood Association	Landscape	5.23
W I I R E	Landscape	5.08
EDE GROUP INC	Landscape	4.84
GILBERT WEST	Landscape	4.7
Panattonis Construction	Landscape	4.45
THE CAMPUS OWNERS CORPORTATION	Landscape	4.27
BIRCHWOOD & GREENDRIER COMM ASSOC	Landscape	4.22
WESTERN NATION CONTRACTORS	Landscape	4.05
KPS GLOBAL LLC	Landscape	3.94
CENTREPOINTE DISTRIBUTION CENT	Landscape	3.58

Oltmans Construction	Landscape	3.2
CT Storage-Chino LLC	Landscape	3.17
Yoshimura R&D	Landscape	3.05
Central Business Owners Assoc	Landscape	2.81
HARPER CONSTRUCTION	Landscape	2.73
PACIFIC COAST MANUFACTURING	Landscape	2.65
Commerce Construction	Landscape	2.54
DR Horton	Landscape	2.47
Quetico Schaefer Properties	Landscape	2.45
Shamrock Marketing	Landscape	2.37
FUSION 5 CONDO ASSOCIATION	Landscape	2.36
College Park Community Assoc 1	Landscape	2.33
El Prado Rd Business Owners	Landscape	2.22
EVERBLOOM ENTERPRISE LLC	Landscape	2.21
Jasmine Willows HOA	Landscape	2.17
BERKSHIRE COMMUNITY ASSOCIATION	Landscape	2.1
Garrett Concrete	Landscape	2.02
Gro-Power Inc	Landscape	1.98
Yin, Zhihua	Landscape	1.97
Redwood Business Center	Landscape	1.93
Funding Resources	Landscape	1.78
Cal Trans	Landscape	1.77
Kinfine USA Inc	Landscape	1.69
Farrand Enterprises	Landscape	1.62
Collins Company	Landscape	1.49
Valbruna	Landscape	1.3
SCOTT ENGINEERING	Landscape	1.23
HYUNDAI -KIA AMERICA	Landscape	1.14
Preserve Master Community	Landscape	1.13
ORIENTAL WHOLESALE	Landscape	1.02
CALATLANTIC HOMES	Landscape	0.99
Evergreen at The Preserve (222671-2)	Landscape	0.98
DBRS Medical System	Landscape	0.79
NEW RAY TOYS INC	Landscape	0.77
Redbuilt LLC	Landscape	0.69
COLONIAL ELECTRIC INC	Landscape	0.54
Chandler Real Properties	Landscape	0.42
Inland Empire Utilities Agency	Landscape	0.22
PERFORMANCE TEAM FREIGHT SYSTEMS	Landscape	0.22
VIKING DISTRIBUTING LLC	Landscape	0.22

Southern California Edison	Landscape	0.18
WOODSIDE O5S, LP	Landscape	0.02
MONTE VISTA SPECTRUM #2	Landscape	0.01
	Chino Landscape Usage	1650.09
	Chino Total Usage	6426.88

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

City of Chino Hills		
Customer Name	Usage Type	Value_AF
Sukut Construction LLC	Construction	55.84
Standard Pacific	Construction	40.06
Jeremy Harris Construction Inc.	Construction	10.26
Fullmer Construction	Construction	3.96
LCD Santa Barbara IN CH LLC	Construction	3.67
Avalonbay Communities, Inc	Construction	2.34
City of Chino Hills	Construction	1.68
KB Homes Coastal Division	Construction	0.77
	Chino Hills Construction Usage	118.58
City of Chino Hills	Landscape	253.01
Vellano Sk Inc	Landscape	170.96
Vellano Homeowner	Landscape	112.18
Pinehurst Hills Comm Assoc	Landscape	78.72
Ridgegate HOA	Landscape	76.31
Sycamore Heights Comm Assoc	Landscape	52.15
Big League Dreams	Landscape	50.88
Standard Pacific	Landscape	47.73
EGM Management	Landscape	27.55
BRE Properties	Landscape	24.55
Chino Valley Community Church	Landscape	24.18
Artisan & CH Maint Assoc	Landscape	19.4
Pine Corp Center (4279489)	Landscape	19.39
BAPS Development	Landscape	17.42
Chino Hills Mall	Landscape	17.42
Higgins Ranch Community	Landscape	15.57
Chino Hills Community Center	Landscape	13.28
Loving Savior	Landscape	12.8
Chino Hills Business Park	Landscape	10.54
Fairfield Ranch HOA	Landscape	7.82
Fairfield Ranch BS Ctr Condo Assoc	Landscape	7.69
Fairfield Chino Hills LP	Landscape	7.58
FHF The Heights LLC	Landscape	6.96
Los Serranos Ranch Comm. Assoc.	Landscape	6.65
Felfam,Ltd	Landscape	4.42
Chino Retail	Landscape	4.12
Ridgegate Neighborhood Assoc	Landscape	3.4
DZ Properties, Inc.	Landscape	2.58
Fairfield Ranch	Landscape	2.39

Natures Image Inc	Landscape	2.34
CVUFD	Landscape	2.04
Hyoung Corp	Landscape	2
Chino Hills Storage	Landscape	1.84
7-Eleven	Landscape	1.65
Century Commercial	Landscape	1.53
Cal Trans	Landscape	1.38
Turner Chino Hills LLC	Landscape	1.22
Lexington	Landscape	0.86
Vista San Juan/ C.C Medical Center	Landscape	0.76
Avalonbay Communities, Inc.	Landscape	0.62
COMTOP	Landscape	0.36
	Chino Hills Landscape Usage	1114.25
	Chino Hills Total Usage	1232.83

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Cucamonga Valley Water District (CVWD)		
Customer Name	Usage Type	Value_AF
Lennar Homes (CVWD)	Construction	28.93
City of Rancho Cucamonga	Construction	1.89
San Bernardino county flood control	Construction	0.85
James Mcminn	Construction	0.82
	CVWD Construction Usage	32.49
City of Rancho Cucamonga	Landscape	180.47
CalTrans	Landscape	95.45
Oak Creek Ranch Golf Club Inc.	Landscape	62.96
Alta Loma High School	Landscape	54.93
Etiwnada School District	Landscape	53.88
Srathmore Maintenance Corp	Landscape	42.78
Home Depot	Landscape	38.12
Day creek aps	Landscape	35.96
Goodman Rancho SPE, LLC	Landscape	34.01
PSIP WR Etiwanda LLC	Landscape	27.72
O & S Holdings	Landscape	25.72
Bradshaw International, Inc	Landscape	25.71
The Hawthornes	Landscape	19.26
Cal Development LLC	Landscape	18.99
Victoria Gardens (Shea Homes)	Landscape	17.44
Hilemen Development Co.	Landscape	15.73
Frito Lay Inc.	Landscape	14.76
Exchange Professional Center	Landscape	14.35
Owens and Minor Distributing inc	Landscape	13.39
CPT 6th & Cleveland LLC	Landscape	13.02
Canbot Industrial Trust	Landscape	11.43
Stadium Plaza South	Landscape	10.59
Prologis	Landscape	10.46
CIP Real Estate	Landscape	9.54
City of Fontana	Landscape	9.5
Earth Basics	Landscape	9.33
Market Place Properties	Landscape	8.27
O&S (Foothill Crossings)	Landscape	7.33
Stadium Plaza North	Landscape	7.22
Life Way Church	Landscape	7
Southern California Edison	Landscape	6.78
pac r cucamonga lp	Landscape	5.33
TREF RANCHO LLC	Landscape	5.23

Richard Dick & Associates	Landscape	3.68
Mission Business Center LLC	Landscape	3.26
DEDEAUX PROPERTIES LLC	Landscape	3.25
Haven Rock	Landscape	2.99
Miliken Corporate Center	Landscape	2.46
CSF INC	Landscape	2.34
Rackafeller group	Landscape	2.01
Stanley Steamers	Landscape	1.2
Miliken Hospitality LLC	Landscape	1.18
Comfort - Pedic Mattress USA	Landscape	1.09
Avis Transmission Technology	Landscape	1.07
Facility Builders & Erectors	Landscape	0.97
Vega Industries	Landscape	0.96
Toyota Motor Sales	Landscape	0.94
ASAP power sports	Landscape	0.91
Wells Fargo Bank	Landscape	0.73
CKE Restaurant Holdings Inc.	Landscape	0.5
Murfco INC.	Landscape	0.47
Bass Pro Shop	Landscape	0.42
Cal National Bank	Landscape	0.35
Starbuck's Coffee	Landscape	0.32
Harrys Pacific Grill	Landscape	0.21
	CVWD Landscape Usage	943.97
	CVWD Total Usage	976.46

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Inland Empire Utilities Agency (IEUA)		
Customer Name	Usage Type	Value_AF
Genon Energy Plant	Industrial	324.12
IERCF	Industrial	12.53
ESCI	Industrial	1.31
	IEUA Industrial Usage	337.96
IEUA Headquarters	Landscape	118.55
Chino Creek Park Evaporation	Landscape	114.12
Chino Cree Wetlands and Educational Park	Landscape	17.76
	IEUA Landscape Usage	250.43
	IEUA Total Usage	588.39

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Monte Vista Water District (MVWD)		
Customer Name	Usage Type	Value_AF
Montclair Hi School	Landscape	69.33
Saratoga Park	Landscape	42.75
Montclair Town Center	Landscape	29.25
Sunset Park	Landscape	24.03
Buena Vista Elem School	Landscape	23.68
Monte Vista Elementary School	Landscape	19.57
Kingsley Elem School	Landscape	17.09
Montclair Medical Center	Landscape	14.65
Kingsley Park	Landscape	13.69
Alma Hoffman Park	Landscape	10.97
Sunrise Park	Landscape	9.82
Wilderness Basin Park	Landscape	8.15
Lehigh Elementary School	Landscape	7.92
Library/City Hall	Landscape	7.46
City Hall	Landscape	4.1
Our Lady of Lourdes Church	Landscape	1.63
Demonstration Garden	Landscape	1.07
Golden Girls Park	Landscape	0
	MVWD Landscape Usage	305.16
	MVWD Total Usage	305.16

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Ontario		
Customer Name	Usage Type	Value_AF
GH Dairy	Agriculture	1386.98
Cleveland Farm	Agriculture	1189.55
Murai Farm	Agriculture	659.8
Legend Dairies (Petersma)	Agriculture	216.26
LaBrucherie Farm	Agriculture	189.34
Li Yuan Farms	Agriculture	173.17
Yoog II Farm Inc.	Agriculture	112.51
Breezy Boots, Inc.	Agriculture	100.67
Trevelde Farm	Agriculture	75.39
Barth Farms	Agriculture	71.57
Rojo Farms	Agriculture	29.76
FRUIT GROWERS SUPPLY	Agriculture	23.84
Akzo Nobel Coatings (Haven B)	Agriculture	1.52
Bootsma Farm	Agriculture	0.02
	Ontario Agriculture Usage	4230.38
New Indy Ontario	Industrial	900.92
Cintas	Industrial	95.18
EnCorr Sheets	Industrial	1.76
	Ontario Industrial Usage	997.86
James McMinn Inc	Construction	70.38
Foremost Communities Inc	Construction	47
SL Ontario Development Co	Construction	22.32
Brookfield Ontario Builders	Construction	17.91
STICE COMPANY INC	Construction	17.59
Heartland Grading	Construction	14.11
Salsbury Engineering	Construction	7.24
Palmer Ontario Properties	Construction	5.76
The Realty Associates Fund X LP	Construction	5.06
Weka Inc	Construction	4.8
MCC Pipeline	Construction	3.88
Majestic Mgt CCC IV (Bldg. 6)	Construction	3.68
All American Asphalt	Construction	3.35
Tri Pointe Homes	Construction	2.76
STICE COMPANY INC	Construction	2.07
Ryland Homes	Construction	1.45
Oltmans Construction	Construction	1.3
Lennar Homes	Construction	1.29
City of Ontario Street Sweepers	Construction	1.24

Advanced Asphalt	Construction	1.1
Utah Pacific Construction Co.	Construction	1.05
American Integrated Services	Construction	0.55
Ontario Construction Usage		235.89
Whispering Lakes Golf Course	Landscape	676.54
Bellevue Cemetery	Landscape	147.6
CCC_N	Landscape	106.32
Brookfield Land Const	Landscape	75.78
Westwind Park	Landscape	59.17
Toyota	Landscape	57.43
Guaasti Park	Landscape	56.34
Munoz Park	Landscape	53.71
CalTrans	Landscape	53.42
City of Ontario (Soccer Complex)	Landscape	52.33
Vineyard STEM School	Landscape	51.02
City of Ontario	Landscape	50.72
CCC-S	Landscape	47.62
Majestic Reality	Landscape	46.31
SMG CBB Arena	Landscape	42.37
Chaffey High School	Landscape	39.36
Ontario Montclair School Dist.	Landscape	38.11
Ontario Center Owners Assoc.	Landscape	37.62
Cal Trans Do8 Ont	Landscape	36.56
Prologis California	Landscape	36.45
The Ontario Center Owners Assoc.	Landscape	36.05
Ontario Center (Founders Garden)	Landscape	34.74
Galvin Park	Landscape	30.88
Centrelake Assn	Landscape	29.73
Parks Dept. (Galvin Park West)	Landscape	29.73
Brookfield Ontario Builders	Landscape	26.33
California Commerce Center	Landscape	25.88
Parkside Ontario Community Assoc	Landscape	25.05
Doubletree	Landscape	24.61
SL Ontario Development Co	Landscape	23.95
Chaffey High School (Valley View)	Landscape	23.63
NMC Builders LLC	Landscape	23.09
Del Norte Elementary School	Landscape	23
Ont/Mont School Dist - Elem School	Landscape	22.67
Pancal Portfolio, LLC	Landscape	22.42
Corona Elementary School (OMSD)	Landscape	21.95

Mathis Brothers Furniture	Landscape	21.71
Camden Development Inc	Landscape	21.13
Lennar Homes	Landscape	20.46
Parks Dept. (Veterans Park)	Landscape	20.21
Pier 1 Imports	Landscape	19.95
Vina Danks Junior High	Landscape	19.81
SW Ontario Owner	Landscape	19.52
Kaiser	Landscape	17.62
Ont Convention Center	Landscape	16.47
Cheveron Land	Landscape	16.39
Vineyard Industrial II, LLC	Landscape	16.2
Ontario Motor Speedway Park	Landscape	15.72
Kohls	Landscape	15.64
Airport Corp. Center @ Centrelake	Landscape	15.33
Park Place Master Community Assoc	Landscape	15.16
Vineyard Park	Landscape	14.91
QVC Inc.	Landscape	14.61
Shelby Office Park (PDEV04-006)	Landscape	14.59
Ontario Health Education	Landscape	14.51
AEG Ontario Arena	Landscape	14.32
Archibald Freewat Center Owners Assoc.	Landscape	13.52
Empire Towers	Landscape	12.99
Dorthy Gibson Continuation School	Landscape	12.92
Grove Memorial Park	Landscape	11.09
SJC II/Fourth and Haven	Landscape	10.79
ERP Operating LP (Vintage)	Landscape	10.02
Concours Plaza	Landscape	8.94
Calif Com Cntr Owners (North)	Landscape	8.69
Walmart	Landscape	8.65
Dunpont Business Center	Landscape	7.94
4th Street Retail LLC	Landscape	7.78
Ferrari Corporate Center LLC	Landscape	7.68
Ontario Lodging Associates LLC	Landscape	7.42
Mercedes Benz of Ontario	Landscape	7.27
HMC Architects	Landscape	7.23
Stratham Communities	Landscape	6.93
Parks Dept. (Galanis Park)	Landscape	6.64
City of Ontario (Holt/Gausti West)	Landscape	6.56
MGR Property Management	Landscape	6.36
Ingram Micro	Landscape	6.24

RYLAND HOMES OF CA	Landscape	6.18
LBA Realty (4 meters)	Landscape	6.13
Ontario Commerce Park	Landscape	6.03
OM Guasti	Landscape	5.92
Flags Importer	Landscape	5.62
Vineyard Industrial I, LLC	Landscape	5.53
3536 Concours LLC	Landscape	4.84
Niagara Water	Landscape	4.8
Haven Ave LLC	Landscape	4.72
T S Express	Landscape	4.57
Woodside 055LP	Landscape	4.49
City of Ontario (4th/Miliken Parkway)	Landscape	4.33
KB Homes	Landscape	4.2
Passport Food Group	Landscape	4.08
Concours Retail	Landscape	3.86
Oak Hill Court HOA	Landscape	3.77
Parkes Dept. (Haven Parkway)	Landscape	3.69
Custom Goods LLC	Landscape	3.63
Majestic Management	Landscape	3.55
G & K Services	Landscape	3.4
Tri Pointe Homes	Landscape	3.31
Feed the Children	Landscape	3.14
Inland Empire Utilities Agency	Landscape	3.09
Ont Industrial Partn	Landscape	3.07
Mabela LP	Landscape	2.74
Metro Air Service	Landscape	2.74
Golden State Container	Landscape	2.72
Piemonte Business Park (04930593)	Landscape	2.66
CK Restaurants	Landscape	2.64
Poseidon Ontario Airport Plaza	Landscape	2.58
Piemonte 5-story	Landscape	2.58
Target	Landscape	2.51
Wella Mfg	Landscape	2.38
Ontario Airport Center	Landscape	2.3
Piemonte Business Park (04725037)	Landscape	2.24
Nexen Tire America Inc	Landscape	2.23
Ontario Convention Center (North)	Landscape	2.19
Envirokinetics	Landscape	2.11
Ontario Airport Business Park	Landscape	1.94
Foremost Communities Inc	Landscape	1.89

Arvato Digital Services LLC	Landscape	1.83
Roshan LLC (La Galleria at the Mills)	Landscape	1.79
Castle Industries	Landscape	1.79
Caliber Collision	Landscape	1.79
Diesel Emissions	Landscape	1.74
City of Ontario (Holt/Gausti East)	Landscape	1.73
Warmington Residential Comm. (04748546)	Landscape	1.72
Vineyard Park Maintenance Corp.	Landscape	1.57
Hino Motor Manufacturing	Landscape	1.56
JK Towngate Property	Landscape	1.56
Just Do It 4 Less.Com LLC	Landscape	1.31
Flex Solutions	Landscape	1.29
Acco America	Landscape	1.24
Wheel Group Holding LLC	Landscape	1.23
BP West Coast Products, LLC #5965	Landscape	1.07
Audi Ontario	Landscape	1.06
Raymer Properties LP	Landscape	0.98
JMS Wineville M. Craitenberger	Landscape	0.87
M. Craitenberger	Landscape	0.76
Piemonte Business Park (04920427)	Landscape	0.76
Metropolitan Warehouse and Delivery	Landscape	0.74
So Cal Mechanical	Landscape	0.73
Fire Station	Landscape	0.7
Parks Dept. (Holt Median W/O Vineyard)	Landscape	0.56
Dupont Airport Partners LLC	Landscape	0.55
Bedford Properties	Landscape	0.5
Dial Chemical	Landscape	0.45
Dura Coat Powder Coating	Landscape	0.42
Pancal Airport C248 LLC C/O CBRE	Landscape	0.4
Sierra Insulation	Landscape	0.4
24 Hour Fitness	Landscape	0.37
Beach Center LLC	Landscape	0.34
Pacific Lewis Properties	Landscape	0.32
Top Gun Paint & Body	Landscape	0.32
Panattoni Development (03453746) 2250 S Archibald	Landscape	0.3
Stein & Roitblat Living Trusts	Landscape	0.24
Wells Com International Group	Landscape	0.24
CBWCD Ely Basin #3	Landscape	0.2
Ontario Collision Center	Landscape	0.09
Kellogg Supply Inc.	Landscape	0.07

Ontario Landscape Usage	2888.4
Ontario Total Usage	8352.53

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Recharge Basins		
Customer Name	Usage Type	Value_AF
RP3 Basin	Recharge	5770
7th/8th St. Basin	Recharge	2281
Victoria Basin	Recharge	1621
Ely Basin	Recharge	1491
Turner Basin	Recharge	1236
Declez Basin	Recharge	514
Banana Basin	Recharge	500
Brooks Basin	Recharge	385
Hickory Basin	Recharge	136
San Sevaine Basin 5	Recharge	0
	Total Recharge	13934

San Bernardino County		
Customer Name	Usage Type	Value_AF
El Prado Park	Landscape	147.86
El Prado Golf Course	Landscape	116.98
	San Bernardino County Landscape Usage	264.84
	San Bernardino County Total Usage	264.84

APPENDIX C
RECYCLED WATER USES AND DEMANDS
FY 2016/17

Upland		
Customer Name	Usage Type	Value_AF
Garrsion Foothill Nursery	Agriculture	3.11
Tolle Nursery	Agriculture	2.78
	Upland Agriculture Usage	5.89
Upland Hills Country Club	Landscape	383.09
City of Upland / Memorial Park	Landscape	81.15
City of Upland / Memorial Park	Landscape	47.99
City of Upland / Sierra Vista Park	Landscape	25.72
Sierra Vista Elementary	Landscape	22.92
Upland Elementary	Landscape	20.99
Upland JR H.S.	Landscape	15.34
Mountain View Estates	Landscape	14.77
San Antonio Hospital	Landscape	9.74
Boquet Estates	Landscape	6.69
Upland Meadows Estates	Landscape	5.66
SCE	Landscape	4.42
Foothill Knolls Elementary	Landscape	4.27
Drydock Depot	Landscape	2.75
Upland Unified School District	Landscape	2.26
	Upland Landscape Usage	647.76
	Upland Total Usage	653.65

Engineering, Operations, and Water Resources Committee

INFORMATION ITEM 2C

SARCCUP Update

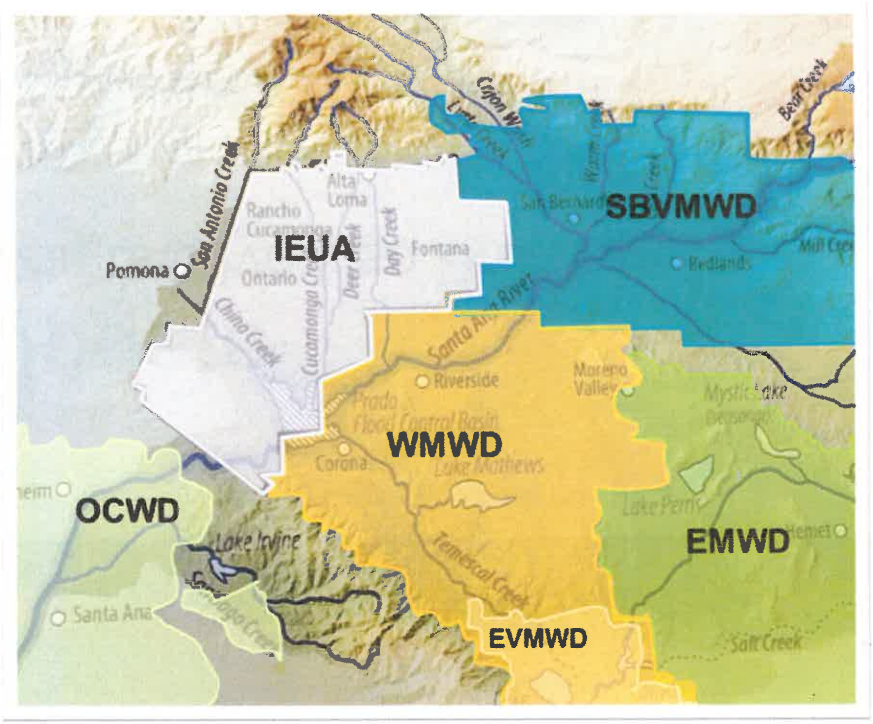
Santa Ana River Conservation & Conjunctive Use Program

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Sylvie Lee
November 2017

Santa Ana River Conservation and Conjunctive Use Program (SARCCUP)

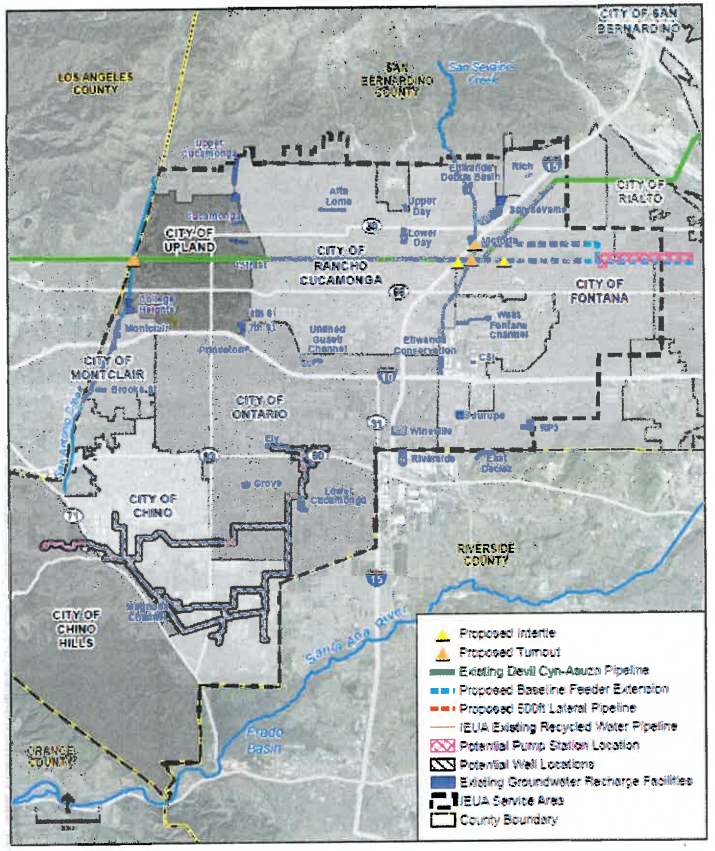
- Five SAWPA Agencies Project to increase supply reliability
- $100M ($55M Grant, $9M Local Cost Share)
- 180,000 AF Groundwater Storage
- Habitat Improvement
- Regional Water Use Efficiency with 7,200 AF Annual Water Savings



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Santa Ana River Conservation and Conjunctive Use Program (SARCCUP): Chino Basin

- Chino Basin would function as storage reservoir
- Water quality improvements
- Potential to offset land subsidence
- Alternative imported water supply
- Assumes consensus on development of Chino Basin Water Bank



SARCCUP Opportunities & Challenges

- Build facilities with 55% external funding
- Limitations to take water in-lieu
- Storage management within Chino Basin
- MWD vs. Non-MWD system access to wet year water
- Value of water supply vs cost of water supply (estimated supply cost @ MWD Tier 1 rate or higher)


Arrundo Donax
Giant Reed

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Next Steps

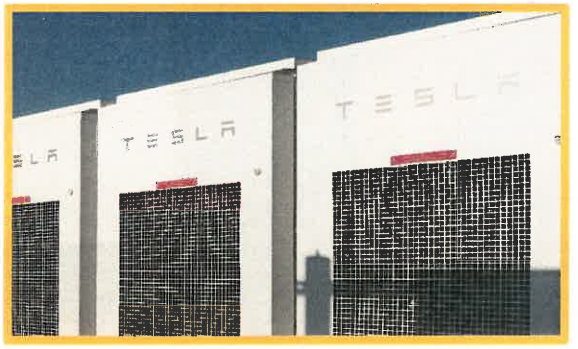
- GM Meeting: November 7, 2017
- SAWPA PA23 Meeting: December 5, 2017

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Engineering, Operations, and Water Resources Committee

INFORMATION ITEM 2D

Engineering and Construction Management Project Updates



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Jerry Burke
November 2017

EN18006 – RP-1 Flare Improvements

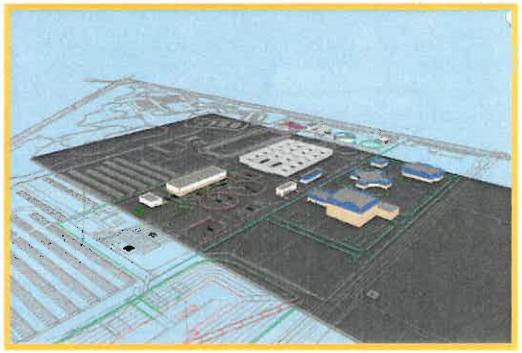
- Design Engineer: Lee & Ro/Arcadis
- Current Contract (Design): $378 K
- Total Project Budget: $5.3 M
- Project Completion: September 2019
- Percentage Complete: 10%
- Scope of Work:
  - Replacement of existing flare with new high efficiency flares
  - Assess gas piping condition and provide pre-design for relocation/upgrades
  - Provide pre-design for future piping inspection/access
- Current Activities:
  - Update/Revise pre-design report per site visit investigations and observations
  - Low pressure gas holders evaluation for operation flexibility and compliance
  - Continued coordination with flare manufacturers and receive updated proposals
- Focus Points:
  - Coordinate flare system site/location with RP-1 Expansion Project
  - Coordinate with SCAQMD the new flare compliance requirements

RP-1 Candlestick Flare

Riverside Flares (Site Visit)

EN19006 - RP-5 Biosolids Facility

- Design Engineer: Parsons
- Current Contract (Design): $9.3 M
- Total Project Budget: $165 M
- Project Completion: January 2023
- Percentage Complete: 10%
- Scope of Work:
  - Relocation of RP-2 to RP-5 and provide solids treatment capacity for southern facilities through 2035
  - Rotary drum thickening building, phased digestion, centrifuge dewatering, digester gas treatment, and RP-5 solids handling facility food waste improvements
- Current Activities:
  - 30% design submittal
  - Request for Proposals for the pre-selection of rotary drum thickeners and centrifuges
- Focus Points:
  - RP-5 electrical improvements
  - Geotechnical constraints on design



RP-5 Expansion 3D Working Model

RP-1 Centrifuge

EN14043 - RP-5 RW Pipeline Bottleneck

- Design Engineer: Stantec Consulting
- Current Contract (Design): $238 K
- Total Project Budget: $2.8 M
- Project Completion: January 2019
- Percentage Complete: 10%
- Scope of Work:
  - Upgrade of piping system downstream of pump station
  - Installation of surge control system
  - Buried valve replacements
  - Installation of new wet well access hatch
- Current Activities:
  - Complete the final design documents
  - Update construction cost estimate
  - Contractor pre-qualification and selection
- Focus Points:
  - Complete contractor pre-qualification per grant and SRF Loan requirements
  - Advertise bid documents to pre-qualified contactors in November 2017

Pump Station Area

Bottleneck Upgrade Area

REEP Engine Upgrades

- Design Engineer: Inland BioEnergy (RP-5 SHF Lessee)
- Current Contract (Design): Funded by Inland BioEnergy
- Total Project Budget: Funded by Inland BioEnergy
- Project Completion: 1st Engine - Jan 2018, 2nd Engine - Jul 2018
- Percentage Complete: 30%
- Scope of Work:
  - Permit and install Selective Catalytic Reduction (SCR) emissions control systems for REEP Engines
  - Permit, certify, and install Continuous Emissions Monitoring System (CEMS)
- Current Activities:
  - Complete final design and conduct structural review
  - Acquire final AQMD permits to construct
- Focus Points:
  - Purchase and install SCR and CEMS systems to meet new AQMD emissions limits in accordance with the lease amendment

REEP Engine #1