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

WEDNESDAY, OCTOBER 14, 2020
9:45 A.M.

INLAND EMPIRE UTILITIES AGENCY*
VIEW THE MEETING LIVE ONLINE AT IEUA.ORG
TELEPHONE ACCESS: (415) 856-9169 / Conf Code: 785 915 772#

PURSUANT TO THE PROVISIONS OF EXECUTIVE ORDER N-25-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 12, 2020, AND EXECUTIVE ORDER N-29-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 17, 2020 AND IN AN EFFORT TO PROTECT PUBLIC HEALTH AND PREVENT THE SPREAD OF COVID-19, THERE WILL NO PUBLIC LOCATION FOR ATTENDING IN PERSON.

The public may participate and provide public comment during the meeting by dialing into the number provided above. Alternatively, you may email your public comments to the Board Secretary/Office Manager Denise Garzaro at dgarzaro@ieua.org no later than 24 hours prior to the scheduled meeting time. Your comments will then be read into the record during the 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 email the Board Secretary/Office Manager no later than 24 hours prior to the scheduled meeting time or address the Board during the public comments section of the meeting. Comments will be limited to three 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. CONSENT ITEMS

A. MINUTES

The Committee will be asked to approve the September 9, 2020 Engineering, Operations, and Water Resources Committee meeting minutes.

B. RATIFICATION OF THE RP-1 HOT WATER LOOP REPLACEMENT CONSTRUCTION CONTRACT AWARD

Staff recommends that the Committee/Board:

1. Ratify the construction Contract for the RP-1 Hot Water Loop and Valves Replacement, Project No. EN20065, to Ferreira Construction Company, in the amount of $996,000;

2. Approve a total project budget transfer from the Solids Hot Water Loop Valve Replacement, Project No. EN21040, to the RP-1 Hot Water Loop and Replacement, Project No. EN20065, in the amount of $560,000; and

3. Authorize the General Manager to execute the contract and budget transfer, subject to non-substantive changes.

C. SOLE SOURCE PURCHASE FOR CONTINUED FOXBORO DCS SUPPORT

Staff recommends that the Committee/Board:

1. Approve the sole source purchase for continued services with Schneider Electric for a two-year technical support contract for a not-to-exceed amount of $135,395; and

2. Authorize the General Manager to finalize and execute the contract.

2. ACTION ITEMS

A. NSNT SEWER SIPHON REPLACEMENT CONSULTANT CONTRACT AWARD

Staff recommends that the Committee/Board:

1. Award a single source consultant contract for the NSNT Sewer Siphon Replacement, Project No. EN20064, to Michael Baker International, for a not-to-exceed amount of $241,130; and

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

B. SANTA ANA RIVER CONSERVATION & CONJUNCTIVE USE PROGRAM (SARCCUP) – MWD AGREEMENT

Staff recommends that the Committee/Board:

1. Approve the Santa Ana River Conservation & Conjunctive Use Program – MWD Agreement; and

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

3. INFORMATION ITEMS

A. RP-5 EXPANSION PROJECT UPDATE (POWERPOINT)

B. PLANNING & ENVIRONMENTAL RESOURCES ANNUAL REPORTS (WATER USE, RECYCLED WATER, AND ENERGY) (WRITTEN)

C. 1ST QUARTER PLANNING & ENVIRONMENTAL RESOURCES UPDATES (POWERPOINT)

D. OPERATIONS DIVISION QUARTERLY UPDATE (POWERPOINT)

RECEIVE AND FILE INFORMATION ITEM

E. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES (POWERPOINT)

4. GENERAL MANAGER'S COMMENTS

5. COMMITTEE MEMBER COMMENTS

6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

7. 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/Office Manager (909-993-1736), 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

Proofed by: ___ ___

DECLARATION OF POSTING

I, Denise Garzaro, Board Secretary/Office Manager 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, October 8, 2020.

Denise Garzaro, CMC

CONSENT
ITEM
1A

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

WEDNESDAY, SEPTEMBER 9, 2020
9:45 A.M.

COMMITTEE MEMBERS PRESENT via Teleconference
Michael Camacho, Chair
Kati Parker

COMMITTEE MEMBERS ABSENT
None

STAFF PRESENT
Christiana Daisy, Executive Manager of Engineering/AGM
Joseph Cundiff, Network Administrator
Laura Mantilla, Interim Board Secretary/Office Manager
Wilson To, Technology Specialist II

STAFF PRESENT via Teleconference
Shivaji Deshmukh, General Manager
Kathy Besser, Executive Manager of External Affairs & Policy Development/AGM
Randy Lee, Executive Manager of Operations/AGM
Jose Biesiada, Project Manager II
Jerry Burke, Manager of Engineering
Pietro Cambiaso, Deputy Manager of Planning & Environmental Resources
Andrea Carruthers, Manager of External Affairs
Javier Chagoyen-Lazaro, Manager of Finance & Accounting
Robert Delgado, Manager of Operations & Maintenance
Don Hamlett, Acting Deputy Manager of Integrated Systems Services
Jennifer Hy-Luk, Acting Executive Assistant
Joel Ignacio, Senior Engineer
Sylvie Lee, Manager of Planning & Environmental Resources
Jason Marseilles, Deputy Manager of Engineering & Construction Management
Scott Oakden, Manager of Operations and Maintenance
Craig Proctor, Deputy Manager of Planning & Environmental Resources
Teresa Velarde, Manager of Internal Audit
Brian Wilson, Senior Engineer

OTHERS PRESENT
None

Committee Chair Michael Camacho called the meeting to order at 9:45 a.m. He stated that the meeting is being conducted virtually by video and audio conferencing. He added that there will be no public location available to attend the meeting; however, the public may participate and provide

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comments during the meeting by calling into the number provided on the agenda. He further added that the public may also view the meeting live through the Agency's website and gave instructions for emailing comments to be read into the record during the meeting. He then gave the public the opportunity to comment and provided instructions for unmuting the conference line.

There were no public comments received or additions to the agenda.

CONSENT ITEMS
The Committee:

- Approved the Engineering, Operations, and Water Resources Committee meeting minutes of August 12, 2020.

- Recommended that the Board:

    1. Award a contract amendment to Conserv Construction, Inc. for the Landscape Tune-up Program, for an additional amount of $400,000 with two one-year extension options of $200,000 each, increasing the contract from $200,000 to a not-to-exceed amount of $1,000,000 (80% increase); and

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

    as a Consent Calendar Item on the September 16, 2020 Board meeting agenda.

- Recommended that the Board:

    1. Award an RP-5 Operations & Maintenance Resource Study services consultant contract for the RP-5 Expansion, Project Nos. EN19001.99 and EN19006.99, to CDM Smith for the not-to-exceed amount of $270,000; and

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

    as a Consent Calendar Item on the September 16, 2020 Board meeting agenda.

- Recommended that the Board authorize the General Manager to execute the collectible work agreement with SoCalGas, subject to non-substantive changes, in the amount of $129,484.15;

    as a Consent Calendar Item on the September 16, 2020 Board meeting agenda.

ACTION ITEM
The Committee:

- Recommended that the Board:

    1. Award a service contract for the Condition Assessment and Optimization of the Collection System, Project Nos. EN19024 & EN19028, to CDM Smith for a not-to-exceed amount of $2,910,909;

    2. Approve total project budget amendment in the RO Fund, Project No. EN19024 from $1,250,000 to $2,800,000, an increase of $1,550,000; and

DRAFT

3. Authorize the General Manager to execute the contract, subject to non-substantive changes;

as a Consent Calendar Item on the September 16, 2020 Board meeting agenda.

- Recommended that the Board authorize a budget amendment of $1.5 million to the TCE Plume Cleanup Project which is expected to be funded by grant funds;

  as a Consent Calendar Item on the September 16, 2020 Board meeting agenda.

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

- RP-5 Project Update: August 2020
- Planning & Environmental Resources Update
- Engineering and Construction Management Project Updates

GENERAL MANAGER'S COMMENTS
General Manager Shivaji Deshmukh noted that currently San Bernardino, Riverside and Los Angeles counties are in the Purple Tier of California's four tier benchmark system and stated that he extended the next assessment to October 31, 2020. General Manager Deshmukh reiterated that this does not mean that the Agency will go back to work on that date but provides the Agency a new date to conduct the assessment on employee telework status based on current data surrounding the COVID-19 pandemic.

General Manager Deshmukh stated he is looking forward to the presentation of the Employer Support of the Guard and Reserve Award from the U.S. Department of Defense and Guard and Reserve, recognizing IEUA for going above and beyond at the next Board meeting. The Agency received the awards in March, but the presentation was delayed as staff was hoping to present the awards in person. General Manager Deshmukh stated that Maintenance Planner Mike Frazier facilitated the award previously. Mr. Frazier will be presenting the awards to staff and General Manager Deshmukh stated that the Board meeting will be safe and only minimal personnel will be present in compliance to reduce the spread of COVID-19.

COMMITTEE MEMBER COMMENTS
There were no Committee member comments.

COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS
There were no Committee member requests for future agenda items.

With no further business, Committee Chair Camacho adjourned the meeting at 10:15 a.m.

Respectfully submitted,

Laura Mantilla
Interim Board Secretary/Office Manager

*****A Municipal Water District

APPROVED: OCTOBER 14, 2020

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CONSENT
ITEM
1B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 21, 2020

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources *10/14/20*

Executive Contact: Christiana Daisy, Executive Manager of Engineering/AGM

Subject: Ratification of the RP-1 Hot Water Loop Replacement Construction Contract Award

Executive Summary:

The Regional Recycling Plant No. 1 (RP-1) underground hot water loop has experienced multiple failures resulting in interruptions to critical operations at RP-1. Due to compliance and safety concerns, multiple "level one" emergency projects have been issued since December 2019. These multiple failures of this critical infrastructure launched a project to replace the existing hot water loop with new robust materials that will resist heat and corrosion. Furthermore, staff is taking advantage of this opportunity to improve the system by replacing a group of isolation and drains valves to improve operations.

On September 9, 2020, Inland Empire Utilities Agency (IEUA) received construction bids from three pre-qualified contractors. Ferreira Construction Company (FCC) was the lowest responsive, responsible bidder with a bid price of $996,000. After bids were received and evaluated, another leak in the hot water loop was discovered on September 15, 2020. To maintain permit compliance, staff executed a contract and directed Ferreira to install the bypass system to the hot water loop with the understanding that this action would require ratification by the Board of Directors. Staff requests approval to ratify awarding a construction contract in the amount of $996,000 and requests a total budget augmentation in the amount of $560,000 to the RP-1 Hot Water Loop Replacement Project No. EN20065.

Staff's Recommendation:

1. Ratify the construction contract for the RP-1 Hot Water Loop and Valves Replacement, Project No. EN20065, to Ferreira Construction Company, in the amount of $996,000;
2. Approve a total project budget transfer from the Solids Hot Water Loop Valve Replacement, Project No. EN21040, to the RP-1 Hot Water Loop and Replacement, Project No. EN20065, in the amount of $560,000; and
3. Authorize the General Manager to execute the contract and budget transfer subject to non-substantive changes.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* Y *Amount for Requested Approval:* $ 560,000

Account/Project Name:

EN20065/RP-1 Hot Water Loop Replacement
EN21040/Solids Hot Water Loop Valve Replacement

Fiscal Impact (explain if not budgeted):

If approved, the total project budget for the RP-1 Hotwater Loop Replacement, Project No. EN20065, will increase from $800,000 to $1,360,000 in the Wastewater Capital (RO) Fund.

Full account coding (internal AP purposes only): 1000 - 127151 - 10800 - 590000 Project No.: EN20065/EN21040
1000 - 127151 - 10800 - 590000

Prior Board Action:

None.

Environmental Determination:

Statutory Exemption

CEQA exempts a variety of projects from compliance with the statute. This project qualifies for the Common Sense Exemption as defined in Section 15061(b)(3) of the State CEQA Guidelines.

Business Goal:

The RP-1 Hot Water Loop Replacements Project is consistent with IEUA's Business Goal of Work Environment and Wastewater Management, specifically the staff safety and asset management where IEUA will promote and ensure a safe and healthy work environment, exceeding industry best practices and will ensure the regional sewer system and treatment facilities are well maintained, upgraded to meet evolving requirements, sustain-ably managed, and can accommodate changes in regional water use.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Consultant Contract

RP-1 Hot Water Loop and Valves Replacement
Construction Contract Award
Project No. EN20065/EN21040

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Adham Almasri, PE
October 2020

Project Background

- 3 emergency repairs within past 9 months
- 3rd discovered 6 days after these bids opened
- Contractor began work to maintain permit compliance
- This action requires ratification by the Board

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Project Scope

- Installation of a bypass system
- Replace the existing loop with new robust material, resistant to heat and corrosion
- Replace and add isolation/drain valves
- Kennedy Jenks provided engineering support

Existing Dual Pipelines


Proposed New Pipeline

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Contractor Selection

Three bids were received on September 9, 2020, from prequalified contractors:

Bidder's Name	Final Bid Amount
Ferreira Construction	$996,000
WM Lyles Co.	$1,383,000
W. A. Rasic	$1,819,945
Engineer's Estimate	**$1,025,000**

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Project Budget and Schedule

Description	Estimated Cost
Design Services	***$49,626***
Design Consultant Contract	$25,000
IEUA Design Services (actuals)	$24,626
Construction Services	***$125,000***
Engineering Services During Construction	$25,000
IEUA Construction Services (~10%)	$100,000
Construction	***$1,096,000***
Construction Contract (this action)	$996,000
Contingency (~10%)	$100,000
Total Project Cost:	**$1,270,626**
Total Project Budget (current):	**$800,000**
Augmented Project Budget (this action)**:**	**$560,000**
Total Revised Budget	**1,360,000**

Project Milestone	Date
Construction	
Construction Contract Award	October 2020
Construction Completion	April 2021

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Recommendation

- Ratify the construction contract for the RP-1 Hot Water Loop and Valves Replacement, Project No. EN20065, to Ferreira Construction Company, in the amount of $996,000;
- Approve a total project budget transfer from the Solids Hot Water Loop Valve Replacement, Project No. EN21040, to the RP-1 Hot Water Loop and Replacement, Project No. EN20065, in the amount of $560,000; and
- Authorize the General Manager to execute the contract and budget transfer subject to non-substantive changes.

The RP-1 Hot Water Loop and Valves Replacement Project is consistent with ***IEUA's business goal of Wastewater Management***, specifically the Asset Management objective that IEUA will ensure the treatment facilities are well maintained, upgraded to meet evolving requirements, sustainability managed, and can accommodate changes in regional water use.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-1 Hot Water Loop Replacement

1.0 CONTRACT

THIS CONTRACT, made and entered into this 21st day of October, 2020, by and between Ferreira Construction Company, 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 "IEUA".

WITNESSETH:

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

A. CONTRACTOR agrees to perform and complete in a workmanlike manner, all Work required under these Bid Documents FOR **Invitation for Bids, IFB-JV-20-014, Project No. EN20065, RP-1 Hot Water Loop Replacement**, in accordance with the Bid Documents, 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 Bid Documents to be furnished by IEUA, and to do everything required by this Contract and the said Bid Documents.

B. 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 Bid Documents; 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 IEUA, 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 Bid Documents are expressly stipulated to be borne by IEUA; and for completing the Work in accordance with the requirements of said Bid Documents, IEUA will pay and said CONTRACTOR shall receive, in full compensation therefore, the price(s) set forth in this Contract.

C. That IEUA 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 Section 4 – Forms, Bid Price Schedule & Bid Forms, and accepted by IEUA, and set forth in this below.

Total Bid Price: $966,660 Dollars and 0 Cents.

D. IEUA 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 Bid Documents; 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.

E. The Notice Inviting Bids, Instructions to Bidders, Bid Forms, Information Required of Bidder, Performance Bond, Payment Bond, Contractor's License Declaration, Specifications, Drawings, all General Conditions, Special Conditions, and all Project Requirements, and all Addenda issued by IEUA 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.

F. 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 IEUA **two hundred and ten (210)** calendar days after the Notice to Proceed. All Work shall be completed before final payment is made.

G. Time is of the essence on this Contract.

H. CONTRACTOR agrees that in case the Work is not completed before or upon the expiration of the Contract Time, damage will be sustained by IEUA, and that it is and will be impracticable to determine the actual damage which IEUA will sustain in the event and by reason of such delay, and it is therefore agreed that the CONTRACTOR shall pay to IEUA the amounts as set forth in Section 2 – General Information, S., Liquidated Damages for each day of delay, which shall be the period between the expiration of the Contract Time and the date of final acceptance by IEUA, 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 IEUA, and the CONTRACTOR agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, the CONTRACTOR agrees that IEUA 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.

I. In addition to the liquidated damages, which may be imposed if the CONTRACTOR fails to complete the Work within the time agreed upon, IEUA 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.

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

K. That the CONTRACTOR shall have furnished, prior to execution of the Contract, two bonds approved by IEUA, 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.

L. The CONTRACTOR hereby agrees to protect, defend, indemnify and hold IEUA 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 IEUA 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.

M. The CONTRACTOR, by signing the contract does swear under penalty of perjury that no more than one final unappeasable finding of contempt of court by a Federal court has been issued against the CONTRACTOR within the immediately preceding two year period because of the CONTRACTOR's failure to comply with an order of a Federal court which orders the CONTRACTOR to comply with an order of the National Labor Relations Board (Public Contract Code 10296).

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

By _____
General Manager
Shivaji Deshmukh

* *A Municipal Water District*

CONTRACTOR

By _____
Vice President
Title

Brandon Pensick
Vice President

CONSENT
ITEM
1C

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: September 16, 2020

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources *10/14/20*

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

Subject: Sole Source Purchase for Continued Foxboro DCS Support

Executive Summary:

The Agency operates five wastewater treatment plants using a computerized system called Distributed Control System (DCS). The DCS at each plant provides automation of plant treatment processes, notification of alarm conditions, remote control for on-call operators, and recording of process data, including data used to report to the regulatory agencies. The original system was installed in 1989. Due to the age of the DCS, the Agency started a project to replace the legacy system made by Schneider Electric named Foxboro with a new system. Currently, the DCS at Carbon Canyon Water Recycling Facility, Regional Water Recycling Plant No. (RP) 5, and RP-4 have been replaced, while RP-1 and RP-2 will continue to use Foxboro until 2024. Foxboro's technical staff has supported the Agency for over three decades and they understand the unique architecture and complexities of the Agency's DCS. The sole source request is based on their staff's specific knowledge of the Agency's system and the need to continue the technical support contract with the manufacturer until these systems are decommissioned. The request is for a two-year sole source technical support contract at $135,395. Two and three year contract durations were evaluated. The two year contract will allow for further evaluation of future decommissioning dates and plan for the last support contract to end in 2024 or later.

Staff's Recommendation:

It is recommended that the Board of Directors:

1. Approve the sole source purchase for continued services with Schneider Electric for a two-year technical support contract for a not-to-exceed amount of $135,395; and

2. Authorize the General Manager to execute the contract.

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

Account/Project Name:

Fiscal Impact (explain if not budgeted):

If approved, sufficient funds are available in the Fiscal Year 2020/21 under Regional Operations and Maintenance (RO) fund under Professional Fees & Services. For Fiscal Year 2021/22, Operations Division will include funds in its budget requests to cover the contract requirements.

Full account coding (internal AP purposes only): 10800 - 146151 - 503000 - 521410 Project No.: N/A

Prior Board Action:

On July 20, 2016, the Board approved a four-year DCS Support Services Contract awarded to Schneider Electric, Contract No.4600002120.

Environmental Determination:

Not Applicable

Business Goal:

The purchase for continued Foxboro DCS support is consistent with IEUA's Business Goal of Business Practices, specifically, Efficiency and Effectiveness objective that IEUA will apply best industry practices in all processes in maintain or improve the quality and value of the services we provide to our member agencies and the public.

Attachments:

Attachment 1 - Power Point
Attachment 2 - Schneider Electric Contract No. 4600002120
Attachment 3 - Schneider Electric Proposal No. QLK-2006-4982192

Sole Source Purchase for Continued Foxboro DCS Support

Don Hamlett
Acting Deputy Manager of Integrated Systems Services
October 2020

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Recommendation

- Approve the sole source purchase for continued services with Schneider Electric for a two-year technical support contract for a not-to-exceed amount of $135,395; and

- Authorize the General Manager to execute the contract.

The purchase for continued Foxboro DCS support is consistent with IEUA's ***Business Goal of Business Practices***, specifically, Efficiency and Effectiveness objective that IEUA will apply best industry practices in all processes in maintain or improve the quality and value of the services we provide to our member agencies and the public.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Proposal to:

Inland Empire Utilities Agency

Chino, California, USA

Customer FIRST Support and Services Proposal:
Standard Level

System:
Foxboro IA

ISSUED BY	**:** Schneider Electric Systems USA, Inc.
ISSUED DATE	**:** September 30,2020
SE REF.	**:** OP-200213-9340004
PROPOSAL NO.	**:** QLK-2006-4982192
REV. NO.	**:** 1a
VALIDITY PERIOD	: 30 days

SCHNEIDER ELECTRIC CONTACTS:

Product Sales Executive (PSE)
Name: Gerald Mullaney
Title: Product Sales Executive (PSE)
Tel: +1 3035221892
Mobile: +1 3035221892
Email: gerry.mullaney@se.com

Name: Andy Saunders
Title: Product Sales Account Representative
Mobile: +1 7195054557
Email: andy.saunders@rustco.com

Please Submit Purchase Orders and Tax-Exempt Certificate to:

Schneider Electric Systems USA, Inc.
Attn: Order Management
10900 Equity Drive
Houston, Texas 77041
Fax: 949-639-1508 Attn: Order Management
E-mail: processautomation.us@schneider-electric.com

Please ensure your Purchase Order includes the following information:

- *Authorized signature and date.*
- *Ship to Address*
- *Invoice Address*

The Schneider Electric Proposal Number QLK-2006-4982192, Rev1a terms and conditions will govern and supersede – any terms provided by Purchaser.

Please Remit Payment to:

Schneider Electric Systems USA, Inc.
Wires: Bank of America, NY NY 10001
ABA 026009593 SWIFT BOFAUS3N Acct 4426314169
Checks: 14526 Collection Center Drive, Chicago IL 60693

Please ensure your payment includes the following information:

- *Authorized signature and date.*
- *Ship to Address*
- *Invoice Number*

Proprietary Disclaimer:

This proposal contains technical and business information that is confidential and proprietary to Schneider Electric. It is provided to the customer solely for internal review and evaluation. The information contained herein may not be shown or disclosed in any form to third parties without the express consent of Schneider Electric.

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1. EXECUTIVE SUMMARY

The Customer FIRST Support and Services Program offers a broad portfolio of resources designed to help ensure high levels of asset availability, utilization and reliability from Schneider Electric's EcoStruxure™ Foxboro DCS and EcoStruxure™ Triconex Safety Systems. It will help you manage your systems throughout their productive lifecycles, and protect your property and intellectual investments, maximize asset performance while helping you reduce total cost of ownership.

Customer FIRST membership facilitates fast, efficient response to requests for material, labor and technical expertise with flexible options designed to provide you with a wealth of resources through the largest partner ecosystem in the industry. From training and planning, to project implementation, operation and lifecycle support, Schneider Electric and its network of partners are uniquely qualified to help you effectively utilize our applications, systems, services and solutions.

Schneider Electric's globally-situated support and service teams are uniquely qualified to deliver the high-quality support and services that you require. Our support experts can provide fast and reliable support assistance, recommend risk mitigation strategies such as remote connectivity, automated back documentation, backup and restore services, and assist with maintenance tasks to help protect your Schneider Electric systems from the potential of catastrophic loss.

The Customer FIRST Program offers an array of options such as cost-control incentives, access to technical information specific to your operation, inventory management support and training opportunities for your personnel.

As technology inevitably continues to evolve, we can assist you with planning and implementation of system upgrades to ensure that you are getting the most from the latest technology with minimum disruption to your business operations.

Schneider Electric has earned a global reputation for support excellence with continuously improving levels of service and performance.

2. PROPOSAL SCOPE

The Customer FIRST Support and Services Program offers a broad scope of support features encompassing technical support, onsite corrective support, product lifecycle assessment, and more. Discounts on value-add services are offered, and the opportunity to establish funded reserves to help cover any billable labor, material, and training requirements that you anticipate encountering during the coverage timeframe of your Agreement.

Offered in the form of an annual or multi-year agreement that can be renewed for continued coverage, your Customer FIRST Support and Services Agreement serves as the foundation of a lasting service relationship that is predicated upon your success with using our technology.

2.1 CUSTOMER FIRST PROGRAM – INTRODUCTION

The Customer FIRST Support and Services Program will help you accomplish your short- and long-range objectives at the lowest possible cost. Program enrollment gives you the support services and resources you need to help increase asset availability, utilization and performance.

2.2 CUSTOMER FIRST PROGRAM – STANDARD LEVEL

Keep your EcoStruxure™ Foxboro DCS working reliably and efficiently with the Customer FIRST Standard program level. Maximize your investment in Schneider Electric products with access to our technical support engineers during normal business hours, en route response commitment for hands-on corrective support, and the latest software versions and maintenance releases. If applicable to covered equipment, scheduled preventive maintenance visits will be arranged. Flexible payment options are available for purchase of labor-based services, training, and material-based services including the Advantage Discount Program for hardware upgrades.

3. CUSTOMER FIRST FEATURES SUMMARY

3.1 CUSTOMER FIRST PROGRAM – FOXBORO FEATURES SUMMARY

Customer FIRST Support and Services program features are summarized below.

April 2020

Customer FIRST for Foxboro

Included Services	Standard
Core Support and Services	
Technical Support Access	**NBH**
Global Customer Support Website Access	**Y**
Preventive Maintenance Site Visits (per year)	**1**
En route Response Commitment for Billable Onsite Corrective Assistance*	**NBD**
Software Maintenance Releases, Service Packs, Patches and Updates	**Y**
Lifecycle Assessment and Upgrade Planning Roadmap	**Y**
Support Usage and Summary Report	**Y**
Module Reserve Program	**Y**
Software Version Upgrades and Revisions**	**Y**
Services and Material Discounts	
Advantage Discount Program	**50%**
Site Support Services	**10%**
MRP Parts	**43%**
Consulting Services	**10%**
Spares	**10%**

Optional Advanced / Managed Services

EcoStruxure System Advisor**	**Y**

NBH = Normal Business Hours
NBD = Next Business Day* where available
* where available
** exclude labor and hardware, additional conditions apply.

4. AGREEMENT CONTENT

4.1 CUSTOMER FIRST PROGRAM – FEATURE DESCRIPTIONS

Customer FIRST Support and Services program features are described below.

4.1.1 Standard Level – Included Services

4.1.1.1 Core Support and Services

Technical Support Access
Schneider Electric provides expert technical assistance and application support during normal business hours via regional support centers and locally-based service engineers. Each request is processed through a defined multi-level response model that assures skilled and timely attention appropriate to the urgency and complexity of the reported situation. Reported situations are assessed by support analysts according to the impact on the customer's production, safety or environment.

Standard level: Normal business hours

Note: Emergency support rendered outside of normal business hours is billable; provision of a purchase order or credit card number is required within one business day of initiating your request.

Global Customer Support Website Access
Schneider Electric makes available its extensive knowledgebase of technical user documentation, issue solutions, and software via the Customer Support website. The registration profile allows the website user to refine their access to only the product content of interest.

Schneider Electric web tools provide online support case management. Customer personnel may submit service requests A tracking number will be issued to the submitter, who may review case status and upload additional information as appropriate.

In addition, website-registrants will receive pro-actively issued communications of two types:

- Advisories that describe identified technical product problems and provide a solution
- Notifications pertaining to lifecycle management topics such as hardware and software release notifications, and service program changes

(FX) Preventive Maintenance site visits per year
The Customer FIRST Support and Services Agreement provides you with a number of Preventive Maintenance (PM) visits each year based on your selected program level. The general scope of

work includes physical inspection of equipment, review of software maintenance releases and fixes, technical advisories, product alert notices (Triconex) and status of open cases. The service engineer will perform analysis of system conditions (counters, loading, etc.) to help ensure the system is operating within defined specifications. They will perform corrective actions that are within the scope of the PM visit, and schedule follow-up maintenance for additional issues if necessary. Schneider Electric will help you determine the appropriate length of the PM visit per site.

Once per year, or more frequently if EcoStruxure™ DCS Advisor Services V4.0 (or higher) is enabled, Schneider Electric will collect system configuration data via use of a tool known as FERRET. This data will be used for the following purposes:

- It will be analyzed as a proactive aid in helping to identify any potential need for corrective or preventive activity.
- It will be used to develop your annual Lifecycle Assessment Report and Upgrade Planning Roadmap.
- It is available for System Asset Viewer application use.
- The data files will be stored in the Global Support Center's (GCS) Installed Base Repository.

These Customer FIRST features are described in this proposal.

Notes:

1) *The delivery schedule and timing of PM visits will be determined in consultation with the customer.*
2) *Customer should review the full scope of work with the Service Engineer prior to their arrival at site.*
3) *The Preventive Maintenance Site Visit includes (if installed) DCS Advisor Server maintenance support.*
4) *The Preventive Maintenance Site Visit does not include:*
   a) *Installation of version licenses, revision releases and maintenance releases, or any startup activities.*
   b) *Activities associated with the optional DCS Advisor Services: Remote Backup Service, Netsight Console, DCS Advisor Server with Data Diode, Patch Deployment to DCS Advisor Server.*

   These activities, and others that fall outside of PM scope of work, require the scheduling of a separate site visit for which the labor terms of this agreement will apply.

(FX) Standard level: One (1) Preventive Maintenance site visit per year

En Route Response Commitment for Billable Onsite Corrective Assistance

Schneider Electric solutions are reliably supported by our technical support engineers/consultants in collaboration with you via voice and electronic communication methods. If remote connection directly to your EcoStruxure Foxboro DCS is applicable, with proper approvals, this approach may be engaged to help facilitate matters.

If we are unable to resolve your support case via remote methods, Schneider will provide hands-on corrective assistance. These activities may include system troubleshooting, defective hardware replacement, and software restoration[3] or correction due to data corruption or necessity.

While this type of support is typically time sensitive in nature, actual en route response time commitment will be determined by the Customer FIRST support level, situation urgency and availability of regional resources. Arrival time at site is dependent on transportation contingencies beyond Schneider Electric's control.

Notes:

1) *Activities that are not covered by Onsite Corrective Assistance include application work, block configuration, display creation, historian creation, software installation, manual installation activity associated with "Patch Deployment to EcoStruxure™ DCS Advisor Server", preventative maintenance work, startup support and upgrade labor.*
2) *Labor and materials, travel and living expenses are billable unless otherwise defined in the Agreement terms. Billable labor hours include travel time, time spent obtaining plant access, time spent onsite and offsite performing evaluations and preparing documentation necessary for the assigned tasks.*
3) *Software restoration may be accomplished using install discs or via download. If the customer's data is corrupt, there may be no recourse, in some cases, to restore corrupted user data.*

This Customer FIRST Support and Services Agreement includes:

Standard level: Next Business Day (NBD) En Route Response Commitment for Corrective Assistance

Software Maintenance Releases, Service Packs, Patches and Updates

With the Customer FIRST Support and Service program, Schneider Electric provides maintenance releases and fixes for covered software related to your application that is released during the contract period.

Maintenance releases provide corrections to software defects within a software revision level. Media will be made available upon release, in electronic or physical format as appropriate, during the program's coverage timeframe. Schneider Electric makes no guarantee that maintenance releases will become available during the agreement period.

Installation labor for version licenses, revision releases, maintenance releases, service packs, patches and updates, and startup activities is not included in this program feature. These activities require the scheduling of a separate site visit for which the labor terms of this Agreement apply.

Lifecycle Assessment and Upgrade Planning Roadmap

Schneider Electric understands that you have a need and a responsibility to maintain system equipment and software applications as critical parts of your business. The Lifecycle Assessment and Upgrade Planning Roadmap report provides a top-level view of the current lifecycle status of the products in use at your site and outlines key business objectives related to their maintenance and supportability.

Schneider Electric will collect system configuration data either remotely or during a site visit. The data files are stored in the Global Customer Support (GCS) Installed Base Repository and will be used to develop the Lifecycle Assessment and Upgrade Planning report. The report will be reviewed with you during the annual Customer FIRST Program renewal process.

The components of your system and applications will be assessed, as appropriate, for potential upgrade to preferred (current) phase products. This collaborative activity between customer staff and Schneider Electric focuses on identifying a logical progression for the potential upgrade of your equipment, software and files, and potentially, third party products.

The Lifecycle Assessment and Upgrade Roadmap will help facilitate effective short- and long-term upgrade planning decisions. It will be updated annually and may be used as the foundation for the optional Modernization and Migration Planning service.

Support Usage and Summary Report
The Support Usage and Summary Report highlights all technical support case activity, labor-based site visits and material exchange activity logged by Schneider Electric's service management system.

Module Reserve Program (MRP)
Schneider Electric provides fast, cost-effective access to its materials inventory when rapid replacement of malfunctioning equipment is necessary. If you encounter an issue with a component, you may arrange for exchange of the malfunctioning unit with another unit. Schneider Electric will provide an authorization number and shipping instructions. The replacement material generally ships within one business day following receipt of the malfunctioning equipment at Schneider Electric's designated address.

Product provided under the Module Reserve Program is billable. Pricing for the replacement unit is contingent on Schneider Electric's subsequent determination that the returned unit meets Module Reserve Program Policy qualifications.

Note: The price of equipment provided from Module Reserve Program inventory may be applied to the Flexible Material Fund or MRP-Material Cost-Inclusive feature, if appropriate under the terms of your Customer FIRST Agreement.

Software Version Upgrades and Revisions
Schneider Electric has established clear and predictable product support timelines to enable customers to plan product upgrades in advance of reaching obsolescence. This proactive approach provides a comprehensive view of product lifecycle phases, phase transition timing, and available support during each phase.

Schneider Electric provides Software Version Upgrade and Revision releases with the Customer FIRST Support and Services program.

Software Version entitlement is offered for the same product, excluding platform change. This benefit provides you with the ability to upgrade and keep covered Foxboro and Triconex software continuously current at the Preferred (i.e., most current) lifecycle phase.

The Version release is the most significant software upgrade. It generally contains major new features and enhancements. The Revision release generally contains both software correction and minor enhancements.

License(s) and upgrade media will be made available upon release, in electronic or physical format as appropriate, during the program coverage timeframe. Schneider Electric makes no guarantee that version and revision releases will become available during the agreement period.

Installation labor for version licenses, revision releases, maintenance releases, service packs, patches and updates, and startup activities is not included in this program feature. These activities require the scheduling of a separate site visit for which the labor terms of this Agreement apply.

Version Upgrade Eligibility:

- Installed Software must be at the current version (Preferred lifecycle phase) to be eligible for version entitlements. Software that was in the Preferred lifecycle phase when the client's first Customer FIRST agreement was executed is eligible for version entitlement. When these criteria have been met, entitlement to software versions of Foxboro or Triconex software begins and will continue for as long as an active Customer FIRST agreement (with Software Version and Revision entitlement) is maintained with no lapse in support coverage.
- The Components and Software List provided in this proposal will identify Schneider Electric software eligible for version upgrade.

Revision Upgrade Eligibility:

- For customers enrolled in the Customer FIRST Program, eligibility for revision entitlement will continue for as long as an active Customer FIRST agreement (Standard, Premium or Elite levels) is maintained with no lapse in support coverage.

Notes:

1) *Installation labor for version licenses, revision releases, maintenance releases, service packs, patches and updates, and startup activities is not included in this program feature.*

These activities require the scheduling of a separate site visit for which the labor terms of this Agreement apply.

2) *Upgrades to third-party operating system (OS) software, application software, and anti-virus software may be required to support new Schneider Electric system and application version and revision releases. These are not part of the Software Version Upgrades and Revisions element of the Customer FIRST program.*
3) *New hardware may be required to support new Foxboro or Triconex systems and application version and revision releases. An incentive program may be offered as appropriate to support such requirements. (Refer to Modernization Program.)*
4) *System shutdown may be required to support hardware and software version and revision releases.*
5) *A platform change occurs when the underlying software framework and environment has been changed to a dissimilar offering permitting new application software to operate and run. (e.g., FoxView to Control HMI or Aim* Historian to the Wonderware Historian)*

4.1.1.2 Services and Material Discounts

Advantage Discount Program
Schneider Electric's careful attention to backward compatibility and serviceability enables our customers to preserve intellectual property and save significant downtime as they modernize. The Advantage Discount Program enables EcoStruxure Foxboro DCS and EcoStruxure Triconex Safety System customers to cost-effectively modernize aging equipment with innovative and productivity enhancing technologies.

Schneider Electric offers a significant incentive for modernizing system hardware and software to Preferred (current) lifecycle products, in exchange for the return of older equipment to Schneider Electric. The Advantage Discount Program is a global discount policy offering a 25% discount from global list price to loyal existing customers. Customer FIRST Support and Services Agreement customers receive an additional 25% discount, bringing the total Advantage Discount Program discount to 50% off the global list price of eligible parts.

The Advantage Discount Program applies to the upgrading of equipment in the lifecycle categories of Available, Mature, Lifetime, and Obsolete with products in the Preferred product lifecycle. Discounts applies to Preferred lifecycle product purchases only.

In general, Advantage Discount Program applies to product manufactured by Schneider Electric factories. Third party buyout equipment is generally not eligible for the Advantage Discount Program.

The returned equipment must be the functional equivalent of the equipment being modernized. Products returned must be in refurbishable condition. Contaminated, damaged, non-repairable or obviously broken material will not be accepted in trade. Additionally, equipment must be return to a Schneider Electric-designated location within 3 months of shipment of the new equipment.

Standard level: Advantage Discount Program offers 50% off the global list price.

Site Support Services
A discount on the current Schneider Electric labor rate at time of service is provided on labor hours dedicated to Site Support Services.

Site Support Services utilize the talents of Schneider Electric Service Engineers to supplement your site resources with simple day to day activities or to help solve more complex engineering issues. Schneider Electric will help you define the scope of work to meet your specific requirements.

Standard level: 10% discount on labor rate for Site Support Services

Module Reserve Program (MRP) Parts
The price of unit supplied to the customer will qualify for a discount contingent on material returned to Schneider Electric meeting Module Reserve Program qualifications.

Note: Not applicable to consumable products

MRP Parts: 43% discount on list price. Landed costs (duties, fees, etc.) may apply.

Consulting Services
Consulting Services allow you to leverage skilled Schneider Electric resources that can help optimize the performance of your existing assets, conduct routine performance assessments and assist with new product deployment. The Customer FIRST Program provides you with access to discounts on Consulting Services when purchased in conjunction with your support and services agreement.

Whether you are planning a new project and need help architecting a solution, or want recommendations to optimize the performance of your existing application for a single-site project or a global, enterprise-wide engagement, we will help you make arrangements with the appropriate resources within the Schneider Electric organization. Consulting Services combine best-in-class software technologies with in-depth process, plant and IT expertise.

Standard level: 10% discount on list price

Spares
The Customer FIRST Support and Services Agreement enables you to better manage and control the cost of equipment by providing a discount on the purchase of new material that will be stored as spare inventory at your site.

Standard level: 10% discount on list price

4.1.2 Optional Advanced/Managed Services

Schneider Electric offers the following optional advanced/managed services with the Customer FIRST Support and Services program for your consideration.

EcoStruxture™ System Advisor
The Customer FIRST Program supports the utilization and performance of your EcoStruxure System Advisor application, providing essential software maintenance, technical support and services. The Customer FIRST Program provides access to:

- Continuous software maintenance and innovation through software version upgrades
- Technical support experts adept at resolving issues quickly, capitalizing on years of experience

EcoStruxure™ System Advisor for Process Control
EcoStruxure™ System Advisor for Process Control is a comprehensive documentation and system management tool designed for the Foxboro Distributed Control System, with the following capabilities:

- Proactively manage changes made to the DCS system with complete Change Tracking monitoring, User alerts to changes that have been made and a complete MOC (Management Of Change) workflow process to document these changes.
- Maintain the integrity of the entire system.
- Monitor dynamic data such as Alarms, Sequence Of Events (SOEs) and Operator Actions so they can be analyzed and incorporated into plant root cause analysis procedures to improve the process performance and safety.
- Quick and accurate access to configuration documentation to resolve problems.
- Manage the Alarm System properly to maintain compliance with standards like EEMUA, ASM and ISA- 18.2.
- Manage system resources such as I/O and Historian availability.
- Monitor system health proactively to help ensure that the system is performing properly. This includes monitoring the MESH network for network related issues.

Note: EcoStruxure System Advisor does not include hardware and installation. Installation requires the scheduling of a separate site visit for which the labor terms of this agreement will apply.

5. COMPONENTS AND SOFTWARE COVERED

5.1 SYSTEM – COMPONENTS COVERED

The following system components and software are covered under the terms and conditions of this Customer FIRST Support and Services Agreement and the Lifecycle Support Policy. Components and software not listed are not covered by this Agreement.

Item	Qty	Product	Short Description	Current Lifecycle phase	Obsolete Date	Previous Contract Entitlement to SW Version Upgrade (Yes/No)
RP1						
10.00	4	P0972AJ	FBI10E Fieldbus Isolator For 10 MB Ethernet	LifeTime		
20.00	4	P0972VA	Address Translation Station;Mesh/Nodebus Connect	Preferred		
30.00	8	P0917YZ	FCP270 Control Processor	Mature		
40.00	6	P0961FR	Control Processor 60 (CP60) Module	LifeTime	2/1/2021	
50.00	3	J0200NX	CP60 2500 Value Point NonFT SW Lic	LifeTime		No
60.00	18	P0926GX	FBM233, 10/100 Mbps Ethernet, Redundant	Available		
70.00	5	CM400YH	FBM07 Contact/dc Input	LifeTime		
80.00	1	CM400YK	FBM09 Contact/dc Input/Output	LifeTime		
90.00	6	CM400YN	FBM12 Contact/dc Input Expander	LifeTime		
100.00	5	CM400YP	FBM13 120 Vac Input Expander	LifeTime		
110.00	1	CM400YQ	FBM14 Contact/dc Input/Output Expander	LifeTime		
120.00	12	CM400YR	FBM15 120 Vac I/O Expander	LifeTime		
130.00	13	DM400YJ	FBM08 120 Vac Input	LifeTime		
140.00	25	DM400YL	FBM10 120 Vac Input/Output	LifeTime		
150.00	26	P0400DA	FBM01 0-20 mA Input	LifeTime		
160.00	35	P0400YE	FBM04 0-20 mA Input/Output	LifeTime		
170.00	3	P0400YH	FBM07 CONTACT/DC INPUT	LifeTime		
180.00	4	P0400YL	FBM10 120 Vac I/O	LifeTime		
190.00	11	P0914SQ	FBM201 Channel Isolated 8 Input 0-20 mA	Preferred		
200.00	35	P0914TD	FBM207 Channel Isolated 16 DIN Voltage Monitor	Preferred		
210.00	7	P0914XS	FBM237 Channel Isolated 8 Output 0-20 mA	Preferred		
220.00	4	P0916CP	FCM10EF 2KM Fieldbus Communication Module	LifeTime		

230.00	10	P0916TA	FBM242 Channel Isolated External Source DO	Preferred		
240.00	3	P0917HB	FBM221 4 Port, H1 FOUNDATION Fieldbus Module	LifeTime		
250.00	4	P0926DJ	DCM10E DIN Fieldbus Converter	LifeTime		
260.00	2	P0926DP	DCM10EF DIN FO Fieldbus Converter (Fiber Optic)	LifeTime		
270.00	4	P0972AJ	FBI10E Fieldbus Isolator For 10 MB Ethernet	LifeTime		
280.00	1	Q0302BT	Custom Allen-Bradley CSP FDSI Driver	Preferred		Yes
290.00	1	P0903CV	Annunciator Keyboard	LifeTime		
300.00	1	P0904AK	50 Series GCIO Interface w/o TS (EC96)	LifeTime		
310.00	1	S10D23270010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
320.00	1	S10B00260010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
330.00	1	S10D14250010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
340.00	1	S10D00250010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
350.00	1	S10B00250010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
360.00	1	S61C10002000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
370.00	1	S61C11932000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
380.00	1	S61C11511000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
390.00	1	S61C21211000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
400.00	1	S61C11931000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
410.00	1	S61C11512000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
420.00	1	S61C21212000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
RP2						
440.00	2	P0917YZ	FCP270 Control Processor	Mature		
450.00	2	P0926GX	FBM233, 10/100 Mbps Ethernet, Redundant	Available		
460.00	5	CM400YP	FBM13 120 Vac Input Expander	LifeTime		
470.00	8	CM400YR	FBM15 120 Vac I/O Expander	LifeTime		
480.00	11	DM400YJ	FBM08 120 Vac Input	LifeTime		
490.00	7	DM400YL	FBM10 120 Vac Input/Output	LifeTime		
500.00	10	P0400DA	FBM01 0-20 mA Input	LifeTime		
510.00	11	P0400YE	FBM04 0-20 mA Input/Output	LifeTime		
520.00	11	P0400YJ	FBM08 120 Vac Input	LifeTime		
530.00	2	P0914SQ	FBM201 Channel Isolated 8 Input 0-20 mA	Preferred		
540.00	1	P0914SY	FBM204 4 Channel 0-20 In + 4 Channel 0-20 Out	Preferred		
550.00	3	P0914TG	FBM241 Ch Isolated Vmon DI + External Source DO	Preferred		
560.00	1	P0916TA	FBM242 Channel Isolated External Source DO	Preferred		

570.00	1	Q0302BT	Custom Allen-Bradley CSP FDSI Driver	Preferred		Yes
580.00	1	S10B00250010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
590.00	1	S10D24260010	Software Suite License for Foxboro DCS +I/A Series	Available		Yes
600.00	1	S61C31821000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
610.00	1	S61C31822000	I/A Series Function Block SW Lic (Certificate)	Available		Yes
620.00	1	Q0301AS	AIM*Historian SW Lic (2000 Points)	Available		No
630.00	1	Q0301VG	AIM*Inform SW Lic - Qty 1	Available		No
640.00	1	Q0301YB	AIM*OLE DB Provider License - 1 User	Mature		Yes

The following equipment is in the Obsolete Phase and cannot be supported by the Module Reserve Program.

Item	Qty	Product	Short Description	Current Lifecycle phase	Obsolete Date
10.00	2	P0924FL	P91 Style G Workstation Server	Obsolete	8/1/2015
20.00	1	P0924TW	P92 Style M, Rev A, B, C, D Workstation	Obsolete	10/1/2016
30.00	2	P0924XY	P91 Style J Workstation Server	Obsolete	2/1/2016
40.00	8	P0973BJ	Fiber E'net Switch w/24 MT-RJ Ports & Uplink Ports	Obsolete	4/1/2016
50.00	2	P0973HA	24 SFP Port Uplink Switch	Obsolete	9/1/2016
60.00	1	P0923MA	P91 Workstation Server; Styles B,C & D	Obsolete	6/1/2014
70.00	1	P0924TW	P92 Style M, Rev A, B, C, D Workstation	Obsolete	10/1/2016
80.00	2	P0973BJ	Fiber E'net Switch w/24 MT-RJ Ports & Uplink Ports	Obsolete	4/1/2016

6. CONTACT INFORMATION

6.1 CUSTOMER CONTACT INFORMATION

Customer shall provide the following information to Schneider Electric.

6.1.1 Customer Addresses

Customer shall provide the following addresses to Schneider Electric.

Site Name:	Inland Empire Utilities Agency
Billing Address	6905 Kimball Avenue Chino, California 91708-9136 USA
Shipping Address	6905 Kimball Avenue Chino, California 91708-9136 USA
End User Address	6905 Kimball Avenue Chino, California 91708-9136 USA
Sold to Address	6905 Kimball Avenue Chino, California 91708-9136 USA

6.1.2 Purchasing & Accounts Payable Contacts

Customer shall provide contact information for purchasing and accounts payable to Schneider Electric.

NO.	CONTACT NAME	RESPONSIBILITY	CONTACT INFORMATION
1	Cameron B. Langner	Manager of Contracts and Procurement	Tel: 909-993-1600 Fax: 909-993-1987
2			Tel: Mobile: Fax: Email:

6.1.3 Site Identification

This Customer FIRST Support and Services Agreement covers the identified system(s) located at the following site(s).

1.	Site Name and Location	Inland Empire Utilities Agency- Chino, California
2.	System	Foxboro IA system

6.1.4 Site Operations Contacts

Customer shall provide personnel names and contact information for the individuals that Schneider Electric may contact for support purposes.

Indicate whether the named individual(s) may be contacted by Schneider Electric for remote services (EcoStruxure™ DCS Advisor) purposes.

NO	CONTACT NAME	RESPONSIBILITY	CONTACT INFORMATION	PROCESS UNIT ID, LOCATION
1	Don Hamlett	Process Automation & Control Supervisor	Tel: 909-993-1846 Mobile: 951-675-9879 Fax: 909-993-1982 Email: dhamlett@ieua.org	

6.2 SCHNEIDER ELECTRIC CONTACT INFORMATION

Schneider Electric shall provide contact information to the customer.

6.2.1 Schneider Electric Support Centers

The following authorized support centers are available to provide support to your site for the products covered by this Agreement:

Worldwide contact points:

Global Customer Support (GCS) website: https://pasupport.schneider-electric.com
Training website: http://industrialtraining.schneider-electric.com/processautomation/iom

Email:
General and non-technical inquiries: systems.support@schneider-electric.com
Technical support requests: pa.support@schneider-electric.com

GCS Center	America's GCS	Asia Pacific GCS	EMEA GCS
Location	Foxboro MA USA	Shanghai	Baarn NL
Phone	+1-866-746-6477	+86 21 37180086	+31-3554-84125
Internationally	+1-508-549-2424		
Fax	+1-508-549-4999	+86 21 37180196	+31-3554-84230
Email – general and non-technical inquiries	systems.support@schneider-electric.com	GCSSupport.APAC@schneider-electric.com	EMEAGCS.support@schneider-electric.com
Email – technical support requests	pa.support@schneider-electric.com	pa.support@schneider-electric.com	pa.support@schneider-electric.com

6.2.2 Individual Schneider Electric Contacts

The following individuals have assisted in preparing this Customer FIRST Support and Service Agreement.

NO.	CONTACT NAME	RESPONSIBILITY	CONTACT INFORMATION
1	Gerald Mullaney	Product Sales Executive (PSE)	Tel: +1 3035221892 Mobile: +1 3035221892 Email: gerry.mullaney@se.com
2	Andy Saunders	Product Sales Account Representative	Mobile: +1 7195054557 Email: andy.saunders@rustco.com

6.2.3 Material Return Instructions and Contact Information

It is essential to confirm the correct address, instructions, and authorization for material return claims and Modernization claims prior to shipping a package to Schneider Electric.

For all material returns and exchanges, contact Schneider Electric via the contact points listed above or one of the Schneider Electric offices listed below to request a Return Material Authorization (RMA) number and the correct shipping address to which to return the material.

Note: Check the Office Locator (http://www.buyautomation.com/OfficeLocator/) for current contact information, as the information listed below will change over time.

CUSTOMER SITE LOCATION	SCHNEIDER ELECTRIC ADDRESS	CONTACT INFORMATION
Canada and USA: *NOTE: Always contact the telephone numbers provided here to request Return Material Authorization Number (RMA#) and shipping instructions prior to shipping unit.*	Schneider Electric Systems Canada Inc. 4 Lake Road, D.D.O, Quebec H9B-3H9 Canada Schneider Electric Systems USA, Inc. Dept. 910 Field Service Receiving 15 Pond Street Foxboro, MA 02035 USA Schneider Electric Systems, USA, Inc. 26561 Rancho Parkway South Lake Forest, CA 92630 USA	Canada, USA toll free: Telephone: +1 866 746 6477 Worldwide support: Telephone: +1 508 549 2424 Fax: +1 508 549 4999 Email: systems.support@schneider-electric.com

7. SELECTION AND PRICING SUMMARY

7.1 PROPOSAL ACCEPTANCE

This Proposal is valid for 30 calendar days from the date of this Proposal.

Note: Notwithstanding any provision of this proposal or the Purchase Order, Schneider Electric reserves its right to increase the price after the validity date to cover the cost caused by any delays or an extreme price inflation arising for reasons outside the reasonable control of Schneider Electric or its Suppliers and such change shall be documented through a Change Order or a revision to the Purchase Order.

7.2 SELECTION SUMMARY

The Customer FIRST Program's Support and Services Agreement provides a comprehensive portfolio of support and service features that addresses your short term and long-term maintenance and lifecycle challenges. Refer to the Agreement Content section of this Agreement for a summary matrix and description of program level features.

The following information covers pricing for the proposed Customer FIRST Support and Services program.

Included Services
The "Included Services" are covered by the selected Customer FIRST Program level's price before Optional Features are added. Refer to the Agreement Content section of this Agreement for a summary matrix and description of program features.

Optional Services
The Customer FIRST Program offers the listed Support and Services features on an optional basis.

Optional Advanced/Managed Services
The Customer FIRST Program allows the opportunity to include Optional Advanced/Managed Services to help you meet your specific support requirements.

SELECTION SUMMARY	Year 1	Year 2
INCLUDED SERVICES *(Price before Optional Services)*	$61,886.00	$63,743.00
☒ EcoStruxure System Advisor	$4,883.00	$4,883.00
TOTAL:	**$66,769.00**	**$68,626.00**

7.3 BILLING SCHEDULE

This Customer FIRST Support and Services Agreement is:

☒ A renewal of a prior Agreement

The billing cycle is:

☒ Quarterly

7.4 PAYMENT SCHEDULE

PAYMENT SCHEDULE	ANNUAL PAYMENT TOTAL	PERIOD PAYMENT	PERIOD LENGTH	START DATE	END DATE	
Year 1	$66,769.00	$16,692.25	Quarterly	August 14,2020	August 13,2021	
Year 2	$68,626.00	$17,156.50	Quarterly	August 14,2021	August 13,2022	
Total	**$135,395.00**					

Payment is due 30 days from date of invoice.

8. AGREEMENT ACCEPTANCE

Execution of this Agreement represents acceptance into the Customer FIRST program and its terms and conditions.

PURCHASER	
Client (Company) Name	
Address	
City/State/Zip	
Country	
Authorized Purchaser Representative *(signature)*	
Authorized Purchaser Representative *(print name)*	
Title	
Date	

SCHNEIDER ELECTRIC	
Schneider Electric Local Entity Name	
Acceptance By *(signature)*	
Acceptance By *(print name)*	
Title	
Date	

9. POLICIES AND GUIDELINES FOR SPECIFIC CUSTOMER FIRST FEATURES

9.1 SUPPORT HOURS AND RATES

Customer FIRST Support and Services shall be performed during the normal workday as defined by local practice or labor law, or as defined in this Agreement. Support, services, and travel hours in excess of the normal workday may be billable, subject to the specified Customer FIRST Program level, labor terms and provisions of this Agreement.

NO.	TITLE	DESCRIPTION
1	NORMAL WORKDAY HOURS	Normal workday hours: 8:00AM to 5:00 PM ☒ Schneider Electric-designated holidays will be observed.
2	TRAVEL HOURS	Travel hours shall accrue from the point of origin and cover time traveling to and returning from the job site. The point of origin shall be: ☒ Home base of the Schneider Electric engineer performing the work The following detail will apply as determined appropriate by Schneider Electric and Customer. Travel hours will be billed for: ☒ Actual time incurred
3	SERVICE RATES	☒ Service Rates are defined in local Service Rate Schedule

9.2 LIFECYCLE SUPPORT POLICY

Schneider Electric has established clear and predictable product support timelines to enable customers to plan product upgrades in advance of reaching obsolescence. This proactive approach provides a comprehensive view of product lifecycle phases, phase transition timing, and available support during each phase.

Information about the products currently supported in each lifecycle phase is posted on the respective Schneider Electric brand support websites, and we provide periodic notification of all product transitions from one lifecycle phase to the next.

The Lifecycle Support Policy provides consistent and predictable guidelines for product support, compatibility, availability and repair. The policy establishes clear and predictable product support timelines to assist customers with managing end of life issues related to their installed Electric system equipment. This proactive approach provides a comprehensive view of product lifecycle phases, phase transition timing, and available support during each phase. This information enables customers to plan product upgrades years in advance. Schneider Electric system products move through five phases during their lifecycles:

- Preferred Products (PREF): These products are the most recent sales-released products available in their functional area.
- Available Products (AVAL): Products are available for sale primarily for expansion projects. They are no longer the Preferred Product offering.
- Mature Phase (MATR): Products withdrawn from sale. Comprehensive support services are provided.
- LifeTime Phase (LIFE): Schneider Electric continues to support and maintain standard Schneider Electric products based on an annual review of support capability.
- Obsolete (OBSL): Schneider Electric will determine if a product is unrepairable due to age or obsolescence and will provide advance notice via email to client personnel that have registered on the Global Customer Support website. Once the product has entered the Obsolete Phase, Schneider Electric can no longer provide a quality repair nor provide a module exchange. Products that are identified as Obsolete shall be excluded from coverage under this Service Agreement. If that product fails, Schneider Electric will suggest purchase of an alternate replacement.

Note: Schneider Electric may adjust Product List Value (PLV) throughout product lifecycle.

9.3 MODULE RESERVE PROGRAM (MRP) POLICY

If you encounter an issue with your Foxboro or Triconex system, Schneider Electric will help you return it to normal operation. When replacement of a malfunctioning component is determined to be the best solution, a unit may be shipped from Schneider Electric inventory in exchange for your malfunctioning unit. You must be covered by a Customer FIRST Support and Services Agreement to receive this benefit.

Product provided under the Module Reserve Program is billable and may be applied to Module Reserve Program (MRP) - Material Cost-Inclusive feature or the Flexible Material Fund if appropriate.

Major system components are carefully selected for refurbishment and inclusion in Schneider Electric inventory. These components undergo a comprehensive refurbishment process including error detection and correction. Firmware is updated when appropriate and the hardware is put through Schneider Electric's manufacturing product testing sequence. A 90-day warranty is provided on refurbished equipment.

1) CUSTOMER FIRST COVERAGE CONDITIONS

The Module Reserve Program (MRP) is available to Foxboro and Triconex non-Nuclear industry system customers that have Customer FIRST program Standard level coverage.

The requested replacement unit will be shipped by Schneider Electric AFTER Schneider Electric has received your malfunctioning unit.

2) PRODUCT LIFECYCLE AND AVAILABILITY

Components are categorized in the Available, Preferred, Mature, LifeTime, and Obsolete Phases defined in the Lifecycle Policy in the “Components and Software Covered” section of the Customer FIRST Support and Service Agreement. Product lifecycle status may affect availability, as described below.

- Products in Preferred, Available and Mature Phases are generally available for shipment within one business day, in accordance with Customer FIRST program level.

- Products in LifeTime Phase will be supplied on a reasonable effort basis, with shipment subject to availability, in accordance with Customer FIRST program level.

- Products in Obsolete Phase are not supported under this program. In situations in which it is determined that an Obsolete Phase product has failed, Schneider Electric may suggest that client purchase a new functionally equivalent Preferred Phase product if available.

3) ORDERING INSTRUCTIONS and PRICING

a) Equipment is provided at the price prevailing at the time of shipment, if the exchange transaction meets the conditions detailed below.

b) Equipment can be requested by the customer’s authorized personnel by contacting the Global Customer Support center in the United States of America (telephone +(00)1 508-549-2424) or Schneider Electric representative in the customer’s geographical area. Refer to the Schneider Electric Contact \ Material Return section of the Customer FIRST Support and Service Agreement.

c) Shipping and handling costs may apply. This detail varies by country in accordance with local custom and regulations. Your Schneider Electric representative will advise you on this detail.

d) The requested replacement material will be shipped generally within one business day after Schneider Electric receives the unit that is being replaced, subject to availability. Refer to “Product Lifecycle and Availability” section above.

e) Delivery of critical equipment within 24 hours may be arranged if availability and transportation logistics allow it; a premium charge will apply.

f) A purchase order or credit card number will be requested at time of order placement if product is billable.

4) INSTRUCTIONS FOR PRODUCT RETURN TO SCHNEIDER ELECTRIC-DESIGNATED LOCATION

a) A Return Material Authorization (RMA) number will be provided at the time of order placement for use in returning the malfunctioning unit to an address designated by Schneider Electric. The RMA number must be clearly identified on the box in which the malfunctioning unit is being shipped.

b) Schneider Electric is not responsible for loss, or delay in processing, of returned material when packaging lacks clear identification (i.e., Return Material Authorization number, your company name, individual contact name and address) or is received at any Schneider Electric address other than the specific address provided with a Return Material Authorization number.

c) The malfunctioning equipment must be received at the Schneider Electric-designated location before the refurbished replacement unit will be shipped to the customer.

5) EVALUATION OF RETURNED PRODUCT

a) Schneider Electric will evaluate returned material to determine whether it is in acceptable condition for repair/refurbishment and subsequent inclusion in Schneider Electric inventory.

b) Schneider Electric reserves the right to disqualify returned units that do not qualify as visually presentable to our next client (i.e., scratched, written upon), or which have been damaged by misuse, incorrect installation, power surges, exposed to contaminants, force majeure, or subjected to non-Schneider Electric unauthorized repair. Such damage may prevent the modules from being repaired reliably and these modules must be removed from the pool of replacement modules.

6) NON-COMPLIANCE

a) Non-compliance with this policy will result in the issuance of an invoice for the full list price of product provided. Purchaser agrees to provide Schneider Electric with a funded purchase order for this purpose.

7) WARRANTY

a) The Module Reserve Program does not cover warranty replacement. For warranty replacement, the client can arrange for a return to the factory for repair or replacement in accordance with Schneider Electric warranty terms.

8) CONSUMABLE PRODUCTS

a) The Module Reserve Program supports consumable products at full value with the benefit of expedited shipment.

10. COMMERCIAL SECTION

10.1 PROJECT TERMS AND CONDITIONS

Proposal Validity:	This proposal is valid for 30 calendar days from the date of - proposal. Notwithstanding any provision of this proposal or the Purchase Order, Schneider Electric reserves its right to increase the price after the validity date to cover the cost caused by any delays or an extreme price inflation arising for reasons outside the reasonable control of Schneider Electric or its Suppliers and such change shall be documented through a Change Order or a revision to the Purchase Order.
Firm Prices:	Prices are in USD and are firm for all Customer FIRST Program support and services.
Taxes/Duties:	Sales taxes, duties and other fees are not included in this proposal.
Payment/Schedule	Payment schedule is defined in this proposal.
Services:	Customer FIRST Program support and services shall be performed as defined in the proposal and by local practice or labor law.
Covid 19 Disclaimer:	The Customer acknowledges that the products or part thereof are produced in, or otherwise sourced from, or will be installed in areas already affected by, or that may be affected in the future by, the prevailing COVID-19 epidemics/pandemic and that the situation may trigger stoppage, hindrance or delays in Schneider Electric Systems' (or its subcontractors) capacity to produce, deliver, install or service the products, irrespective of whether such stoppage, hindrance or delays are due to measures imposed by authorities or deliberately implemented by Schneider Electric Systems (or its subcontractors) as preventive or curative measures to avoid harmful contamination exposure of Schneider Electric Systems' (or its subcontractors') employees. The Customer therefore recognizes that such circumstances shall be considered as a cause for **excusable delay** not exposing Schneider Electric Systems to contractual sanctions including without limitation delay penalties, liquidated or other damages or termination for default.
Others:	Unless stated as included elsewhere in the Proposal, all travel and living expenses are extra and will be invoiced at cost + 10%. Unless stated as included elsewhere in the Proposal, all engineering estimates do not include travel time which will be charged at an agreed to rate. This quotation assumes standard work 8-hour days, Monday through Friday, Schneider Electric holidays excluded.
``	Customer FIRST Program Terms and Conditions apply to this proposal. Modifications and additional Schneider Electric terms and conditions may be defined in this proposal.

10.2 STANDARD TERMS AND CONDITIONS FOR CUSTOMER FIRST AGREEMENT (CFA)

Schneider Electric Systems USA, Inc.

General Terms and Conditions of Sale of CFA

Article 1 - AGREEMENT TERM.

These General Terms and Conditions of Sale ("Terms of Sale") shall apply to any purchase or procurement of Goods, Software and/or Services by the legal entity procuring such Goods, Software and/or Services ("Buyer") from Schneider Electric Systems USA, Inc. or Schneider Electric Systems Canada, Inc., as applicable ("Seller"). To the extent that there is a conflict between these Terms of Sale and a valid signed master agreement between the Buyer and Seller, the specific conflicting terms of the master agreement shall prevail. To the extent that there is a conflict between these Terms of Sale and another set of Seller terms and conditions issued to the Buyer as part of the proposal or quotation process, the specific conflicting terms of the proposal or quotation document shall prevail. To the extent that Buyer attaches any other terms and conditions to a Purchase Order or other instrument used to buy Seller's Goods, Software or Services, such attached Buyer terms and conditions shall be null, and void and these Terms of Sale shall be the terms and conditions of sale. Any other variation from these Terms of Sale shall require the signed consent of an authorized Seller representative.

Article 2 - DEFINITIONS

2.1 **"Affiliates"** means any legal entity which has an ownership interest in or is under a common ownership interest with a Party and which is defined in attachments to this Agreement or subsequent Purchase Orders. Notwithstanding the definition of Affiliates, Seller Affiliates shall not include Aveva Group PLC. and all its subsidiaries.

2.2 **"Agreement"** means these terms and conditions, Seller's Proposal with all the attachments, and the Purchase Order with all Change Orders "if any". In case of any discrepancies between the documents, the order of precedence will be as following:

1. Seller Proposal with all the attachments,
2. These Terms of Sale with all the attachments, and
3. The Buyer Purchase Order.

2.3 **"Buyer"** shall mean the company and any of its Affiliates which has executed a Purchase Order under this Agreement.

2.4 **"CFA"** shall mean Customer First Agreement which is the support services program Buyer provides to Seller. CFA scope of work, support exclusions and other special terms related to CFA are as described in the Seller's Proposal.

2.5 **"Days"** shall be calculated as calendar days unless otherwise specified under this Agreement.

2.6 **"Expenses"** shall mean all out-of-pocket expenses reasonably incurred by Seller in the provision of the Goods, Software and Services, including but not limited to, airfare, hotel, transportation, meals, supplies, data preparation, and other direct expenses incurred by Seller's personnel or subcontractors in performing Seller's obligations under a Purchase Order, as these expenses may be further detailed in a Purchase Order and the net tax costs of any non-deductible travel expenses for assignment of employees over one (1) year in locations not within a reasonable commuting radius of the employee's principal place of employment.

2.7 **"Goods"** shall mean all products, equipment, materials, spare parts, hardware, supplies, and accessories to be supplied under a Purchase Order.

2.8 **"Intellectual Property Rights"** shall mean any patent, trademark, service marks, copyrights, trade secrets, ideas, concepts, know-how, techniques or other proprietary right.

2.9 **"Party and Parties"** shall mean Seller, Buyer hereunder and any third party to which the Parties may have assigned their rights under the Agreement. In its singular form, Party means any one of Seller, Buyer or the third party to whom one of them has assigned its rights under the Agreement.

2.10 **"Price"** shall mean the total value of a Purchase Order after all applicable discounts have been applied. Expenses are not included in the Price unless agreed upon in the Purchase Order.

2.11 **"Purchase Order"** shall mean any purchase order, either paper or electronic, with related attachments and changes thereto, agreed upon by the Parties pursuant to this Agreement, which shall describe the specific Goods, Software or Services to be supplied by Seller to the Buyer and the detailed Specifications for such. Purchase Orders agreed upon from time to time between Seller and Buyer and/or their respective Affiliates shall constitute separate contracts that incorporate this Agreement.

2.12 **"Seller"** shall mean Schneider Electric Systems USA, Inc.

2.13 **"Services"** shall mean the provision of testing, assessment, per-diem or specific time-limited engineering services, installation, start-up, configuration and any development of application programs, customization, implementation, training and any other services agreed upon between the Parties in Purchase Orders hereunder.

2.14 **"Software"** shall mean computer software programs, in object code form including firmware and custom software, and instructions manuals, specifications and related documentation in written or electronic form, their related instructions manuals and documentation, for which Seller grants Buyer a license under the contract. The conditions of the Software license shall be set forth in the Seller end-user license agreement applicable to the particular Software at the time of delivery or, in the absence of such end-user license agreement, the software license terms contained herein.

2.15 **"Specifications"** shall mean the Seller's standard specifications applicable to the Goods and/or Software at the time of execution of the Agreement or a Purchase Order hereunder or the specific requirements mutually agreed upon between the Parties in Purchase Orders hereunder in relation to the Goods, Software and, with respect to Services, the agreed upon statement(s) of work containing a description of the Services to be rendered.

2.16 **"Warranty Period"** shall mean the applicable time period during which Goods, Software and Services are respectively guaranteed by Seller under the conditions set forth herein and in accordance with the Warranties Article.

Article 3 - CHANGES

3.1 Either Party may request changes that affect the scope, duration, delivery schedule or price of a Purchase Order, including changes in the Specifications and Goods, Software or Services to be delivered or licensed. If either Party requests any such change, the Parties shall negotiate in good faith a reasonable and equitable adjustment to the Purchase Order. Neither Party shall be bound by any change requested by the other until an amendment to the Purchase Order in the form of a change order has been accepted in writing by both Parties. Pricing of changes shall be based on the then current Seller's prices.

3.2 Any alteration, deletion or addition to the Work ordered in the Purchase Order or a change in any provision of the Purchase Order shall be effective only if made in a change order is executed by Buyer and Contractor. A change order, however, shall not modify any provisions of the Agreement unless the parties agree in writing to do so.

Article 4 - PRICE

4.1 Unless otherwise stated in an applicable quotation or proposal, all prices are subject to change without notice. In the event of a net price change and unless otherwise agreed to in writing, prices for orders scheduled for immediate release shall be those in effect at time of order entry. Prices for orders placed for future shipment without an agreed price and ship date will be billed at the pricing in effect as of the shipment date. All clerical errors are subject to correction.

4.2 **Services Assumptions:** Seller's work estimates are based on work performed during normal work hours (8 hours) between the hours of 06:00 and 18:00 local time, Monday to Friday, holidays excepted. Unless specified

in writing the following are chargeable in addition to base rates: overtime or premium hours, travel costs, specialized tools and test goods, utility shutdowns, any delays or site issues not caused by Seller, additional trips for postponement or delay. No on-site orientation, safety training, work required for site specific requirements is included in a quotation unless expressly specified by Seller. Current rates are in Seller's then current Seller Field Services Demand Labor Rates document. Field specialists bill a 4-hour minimum charge for travel where Services are performed in less than 4 hours, and an 8-hour minimum charge for Services otherwise.

Article 5 - TAXES:

5.1 Unless otherwise set out in Seller's proposal or quotation, the price excludes all present or future sales taxes, revenue or excise taxes, value-added taxes, import and export duties and any other taxes, surcharges or duties now existing or hereafter imposed by Government authorities upon equipment and/or services quoted by the Seller. Buyer shall be responsible for all such taxes, duties and charges resulting from this agreement. The Seller is required to impose taxes on orders and shall invoice the Buyer for such taxes and/or fees according to state and local statute, unless the Buyer furnishes the Seller at the time of order with a properly completed exemption certificate(s) acceptable to the authorities imposing the tax or fees.

5.2 Any duty, tariff, levy, tax or charge (including without limitation, sales, use, excise, goods and services, harmonized, value-added and withholding taxes), customs levy or inspecting, licensing or testing fee, or other tax, fee or charge of any nature whatsoever, imposed by any governmental authority or measured by any transaction between Seller and Buyer, shall be paid by the Buyer in addition to the prices quoted or invoiced, and such charges will appear as a separate line item on the invoice. Buyer agrees that current unit prices will be equitably adjusted in the event Seller is required to pay any incremental amounts for any duty, tariff, levy, or charge on any input components of the Goods.

Article 6 - INVOICING

6.1 Invoices shall be sent to the address specified in the Purchase Order.

6.2 Should Buyer dispute any invoice, Buyer shall notify Seller of the nature of the dispute in writing within fifteen (15) days of the invoice date. Buyer shall have the right to withhold payment of the portion of the payment in question until the dispute is resolved ("Disputed Invoice"). If Buyer does not notify Seller of any dispute within fifteen (15) calendar days of the invoice date, then the invoice is deemed to have been accepted and invoice payment is required to be made on the payment due date per contract terms. Notwithstanding any dispute regarding the invoice, Buyer shall pay the undisputed portion of the disputed invoice.

6.3 Seller shall invoice Buyer in accordance with the invoicing milestones agreed in the relevant Proposal. All Time and Materials Orders shall be billed at 100% of Labor hours expended and Goods supplied shall be billed at then current rates of the Seller on a monthly basis. All Expenses incurred shall be billed on a monthly basis with a minimum administrative fee equal to 5% of the amount of expenses.

Article 7 - PAYMENT TERMS

7.1 Subject to Seller's approval of Buyer's current credit rating and unless otherwise agreed upon in the relevant Purchase Order, payments of all Goods, Software, Services are due in advance, and Expenses are due Net thirty (30) calendar days from the invoice date. Buyer acknowledges that it has the right to request Seller reassess Buyer's creditworthiness from time to time, which Seller has the right to make a revision in its sole determination Upon request, Buyer shall provide financial data evidencing the Buyer's worth in order for Seller to determine the creditworthiness of Buyer. Such information shall include, but not be limited to, annual reports, balance sheets, and bank records.

7.2 Payments advices from Buyer shall include the following information: invoice number, amount of payment, and purchase order number.

7.3 If Buyer is delinquent in its payment obligations, without prejudice to any other remedies available to it by law or in equity, Seller may demand immediate payment and at Seller's option (i) suspend all further deliveries or performance to be made under the Agreement or any further performance under any other contract with Buyer or Buyer's Affiliates, in which event Buyer shall not be released in any respect from its obligations to Seller under the Agreement or the other contract; (ii) recover all costs of collection including but not limited to reasonable attorneys' fees; (iii) repossess the Goods and Software for which payment has not been made; (iv) retain any equipment supplied by Buyer to Seller in relation to Seller's provision of Services; (v) charge

interest at 1.5% per month on the past due amount, not to exceed the interest percentage allowed by law; and (vi) reassess the credit worthiness of Buyer and change any current payment terms. Any discount from Seller's rates, if any, shall cease to apply to the delinquent invoice, Buyer shall be invoiced for such differences in cost, and shall immediately pay the resulting invoice.

7.4 Buyer shall not set off or recoup invoiced amounts or any portion thereof against sums that are due or may become due from Seller and/or its Affiliates.

Article 8 - RECEIVING, INSPECTION AND ACCEPTANCE

8.1 If Buyer fails to notify Seller of any material non-conformities with the Specifications within a reasonable period following delivery, not to exceed thirty (30) calendar days, or is using those Goods, Software or Services in a production environment or for the regular conduct of its business, the Goods, Software or Services shall be deemed accepted, without prejudice to the warranty provisions hereunder.

8.2 Buyer shall have the right to reject Goods, Software and Services not materially in accordance with the Specifications in the Purchase Order. Seller shall have a reasonable opportunity to correct non-conformities, replace non-conforming Goods and/or Software or correct or re-perform the Services at its option, in accordance with Warranty Article. Should Seller fail to use reasonable efforts to correct non-conformities, replace the non-conforming Goods and/or Software or re-perform or correct non-conforming Services within a reasonable period of time, based on the complexity of the non-conformities, Buyer may terminate the Purchase Order or portion thereof. Seller's maximum liability under this Article shall be to refund the fees and expenses paid by Buyer for the portion of the Goods, Software or Services that is non-conforming.

8.3 Unless other acceptance criteria are agreed upon in the Specifications, Seller's standard testing procedures, including factory acceptance test and site acceptance test where applicable, shall apply to Goods, Software and Services provided. If Buyer's representative is unable to attend any of these tests having received reasonable notice thereof, Buyer shall be deemed to have waived its entitlement to attend such tests. To the extent that any Goods, Software or Services have been, or can be deemed approved by Buyer pursuant to the terms of this Agreement or the applicable Purchase Order at any stage of Seller's performance, Seller shall be entitled to rely on such approval for purposes of all subsequent stages of its performance hereunder.

Article 9 - WARRANTIES

9.1 **Warranty Period:** shall mean the applicable time period during which Goods, Software and Services are respectively guaranteed by Seller under the conditions set forth herein as follows:

a) **Customer First Support Program ("CFA"):** are warranted for a period of Ninety (90) days from the date of Service. Seller warrants that any parts, for Goods which are supplied while performing Services under the Agreement, will be free from material defects for a period of 90 days following delivery of such parts. Additionally, Seller warrants that any Software upgrades, patches, service packs, quick fix, quick custom, or corrective fixes which are supplied while performing Services under the Agreement, will be free from material defects for a period of 90 days following delivery of such Software upgrades, patches, service packs, quick fix, quick custom or corrective fixes. For any breach of these warranties, a Buyer's exclusive remedy, and Seller' entire liability, shall be the reperformance of the Services or repair or replacement of such parts, Software upgrades, patches, service packs, quick fix, or quick custom.

b) **Consumable Products:** Products normally consumed in operation or which have an inherently short normal use period, including but not limited to consumables such as flashtubes, lamps, batteries, storage capacitors, are guaranteed for a period of ninety (90) days from date of delivery by Seller, except for disposable PH/ORP sensors, replacement PH, ORP and reference electrodes and dissolved oxygen membranes which are guaranteed for a period of one (1) year from the date of shipment or until they are installed, whichever occurs first.

9.2 **Exclusive Warranty Remedies:** In the event of any warranty covered defects or deficiencies in Goods in subsections above, or Services in subs. (b) above, the sole and exclusive obligation of Seller shall be to re-perform the Services, or repair or replace the defective Goods or part of the Goods, at Seller's sole discretion. Such warranty coverage is contingent on Buyer providing prompt notification to Seller once such defect or deficiency is reasonably apparent to Buyer.

9.3 **Exclusions & Limitations:** This warranty shall not apply (a) to Goods not manufactured by Seller, (b) Services not provided directly by Seller, (c) to Goods or Services that has been repaired or altered by anyone

other than Seller so as, in Seller's judgment, affects the same adversely, (d) Seller's conformance with Buyer's design of the Goods or Software; or (e) to Goods or Services that appear to be subjected to negligence, accident, or damage by circumstances beyond Seller's control, or improper any non-Seller operation, maintenance or storage, or to other than normal use or service. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, temporary power, or any other expenses that may be incurred in connection with repair or replacement.

9.4 **Non-Seller Goods or Services:** With respect to Goods not manufactured by Seller, or Services provided by non-Seller providers, the warranty obligations of Seller shall in all respects conform and be limited to the warranty extended to Seller by such non-Seller supplier.

9.5 SELLER MAKES NO WARRANTY THAT THE BUYER'S USE OF SELLER'S GOODS, SOFTWARE, OR SERVICES WILL BE UNINTERRUPTED, SECURE AND/OR ERROR-FREE. SELLER DOES NOT REPRESENT OR GUARANTEE THAT ANY GOODS AND/OR SOFTWARE WILL BE FREE FROM VULNERABILITIES, ATTACK, VIRUSES, INTERFERENCE, HACKING, OR OTHER SECURITY INTRUSIONS, AND SELLER DISCLAIMS ANY LIABILITY IN RELATION THERETO.

9.6 EXCEPT AS SET FORTH HEREIN OR IN THE WARRANTIES PROVISIONS CONTAINED IN SEPARATE SOFTWARE END USE LICENSE AGREEMENTS, THESE WARRANTIES, CONDITIONS, AND EXCLUSIONS ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, CONDITIONS, REPRESENTATIONS AND GUARANTEES (EXCEPT WARRANTIES OF TITLE), EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED, TO IMPLIED WARRANTIES OF MERCHANTABILITY, MERCHANTABLE QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS MAY BE PROVIDED IN WRITING BY SELLER, SELLER SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES WHATSOEVER THAN AS STATED ABOVE WITH REGARD TO GOODS, SOFTWARE AND SERVICES SOLD BY SELLER TO BUYER.

9.7 ALL WARRANTIES PROVIDED HEREIN ARE PERSONAL TO, AND INTENDED SOLELY FOR THE BENEFIT OF, BUYER AND DO NOT EXTEND TO ANY THIRD PARTY, EXCEPT IN CASE OF TRANSFER OF THE SOFTWARE IN ACCORDANCE WITH APPLICABLE SOFTWARE LICENSE OR THE ASSIGNMENT ARTICLE.

Article 10 - INTELLECTUAL PROPERTY OWNERSHIP

10.1 Seller retains ownership of all right, title and interest (including copyright and patent rights) in and to its Intellectual Property Rights relating to Goods and Services and work product relating to these. Nothing in these Terms of Sale constitutes a transfer or conveyance of any right, title or interest in such Intellectual Property, including without limitation any Software, including firmware, contained in those, except the limited right for use as it provided and stated herein.

10.2 Seller may utilize proprietary works of authorship, pre-existing or otherwise, including without limitation software, computer programs, methodologies, templates, flowcharts, architecture designs, tools, specifications, drawings, sketches, models, samples, records and documentation, as well as Intellectual Property Rights and any derivatives thereof, which have been originated, developed or purchased by Seller, an Affiliate of Seller, or by third parties under contract to Seller or to an Affiliate of Seller (all of the foregoing, collectively, "Seller's Information"). Seller and any third party owner shall retain at all times their respective ownership of Seller's Information.

10.3 Seller or the applicable third-party owner shall retain at all times the ownership of its Software, and Third Party Products, regardless of the media upon which the original or copy may be recorded or fixed. Without prejudice to the license(s) expressly granted hereunder and under a Purchase Order, no right, title or interest in or to the Software, Seller's Information, any copies thereof and any Intellectual Property Rights residing in the Goods, Software or result of Services is transferred to Buyer. Buyer acknowledges that the prices for Services and Software charged by Seller under these Terms of Sale are predicated in part on Seller's retention of ownership over such Software and any results of the Services, none of which shall be considered "work for hire."

10.4 Buyer shall retain at all times the ownership of its Intellectual Property Rights, regardless of the media upon which the original or copy may be recorded or fixed.

Article 11 - SELLER SOFTWARE LICENSE

1. Any software or computer information, in whatever form that is provided with Goods manufactured by Seller

or as part of Services, is licensed to Buyer as previously sold under or pursuant to standard licenses of Seller or its supplier of such software or computer information which licenses are hereby incorporated by reference and are available upon request. Seller does not warrant that such software or computer information will operate error-free or without interruption and warrants only that during the warranty period applicable to the Goods that the software will perform its essential functions. If such software or computer information fails to conform to such warranty, Seller will, at its option, provide an update to correct the non- conformance or replace the software or computer information with the latest available version containing a correction. Seller shall have no other obligation to provide updates or revisions.

Article 12 - CONFIDENTIALITY

12.1 **"Confidential Information"** shall mean any and all information in any form that each Party provides to each other in the course of the Agreement and that either (i) has been marked as confidential; or (ii) is of such nature that a reasonable person would treat as confidential under like circumstances. Unless otherwise provided in the Specifications, Confidential Information does not include work products resulting from the Services performed hereunder and information which (i) is already known to the other Party at the time of disclosure; (ii) is independently developed without the benefit of the other's Confidential Information; (iii) is received from a third party that is not under any confidentiality obligation towards the owner of the information; or (iv) has entered the public domain through no fault of the recipient.

12.2 Each Party retains ownership of its Confidential Information.

12.3 Each party agrees to (i) protect the other's Confidential Information in the same manner as it protects the confidentiality of its own proprietary and confidential materials but in no event with less than reasonable care; (ii) use the other's Confidential Information only in relation to the Purchase Order.

12.4 Upon termination of this Agreement or a relevant Purchase Order or upon written request submitted by the disclosing Party, whichever comes first, the receiving Party shall return or destroy, at the disclosing Party's choice, all of the disclosing Party's Confidential Information.

12.5 Neither Party shall, except with respect to their employees, contractors or agents with a need to know for purposes of this Agreement, disclose to any person any Confidential Information of the other Party without the other Party's prior written consent, except where Confidential Information may be disclosed by law.

12.6 Unless otherwise agreed in Purchase Orders, these confidentiality obligations shall terminate five (5) years after the expiration of the relevant Purchase Order or termination of this Agreement, whichever comes first.

Article 13 - SUSPENSION

13.1 Seller's performance of work under this Agreement or a Purchase Order may be suspended by the Buyer in whole or in part whenever the Buyer may elect, with minimum prior written notice ("Notice of Suspension") of at least thirty (30) business days.

13.2 Upon Notice of Suspension, Seller shall (i) discontinue work on the date and to the extent specified in the notice; and (ii) makes every reasonable effort to stop orders for materials and equipment and reassign personnel.

13.3 Upon Notice of Suspension, Buyer shall Pay all fees earned and expenses incurred in connection with the performance of this Agreement or the Purchase Order until the effective date of such suspension ("Fees and Expenses") including all reasonable costs directly related to Buyer's suspension pursuant to this provision, including costs associated with personnel reassignment, travel, restocking charges, storage costs and other administrative requirements ("Suspension Costs").

13.4 In addition to the above, in the event of a suspension, Buyer acknowledges the following:

a) All Milestones and/or delivery dates that have been agreed to, will be postponed, and such Milestones and/or delivery dates will be mutually agreed to upon the lifting of the Suspension.

b) If the Suspension continues for more than thirty (30) days that the Seller's personnel assigned to the Agreement or Purchase Order may not be available and any cost required to attain the knowledge required to continue the performance of the Agreement or Purchase Order upon lifting the Suspension will be for the account of the Buyer.

c) When the performance is re-commenced, Buyer shall pay costs associated with extending performance, such

as, but not limited to, increased costs for Services, Goods, or Software, or the extension of warranties.

d) The suspended Agreement and/or Purchase Order shall be recommenced upon the date mutually agreed to between the Parties.

13.5 If the Buyer breaches any of its contractual obligations, including but not limited to its payment obligations, Seller shall have the right to suspend the performance of the Purchase Order.

13.6 In the event that the suspension continues for greater than ninety (90) days, Seller, at its sole option, may terminate the Purchase, and the suspension shall be treated as a Termination for Convenience.

Article 14 - TERMINATION FOR CONVENIENCE

Unless otherwise agreed in the Seller's Proposal:

14.1 14. 1Seller's performance of work under this Agreement or a Purchase Order may be terminated by the Buyer in accordance with this article in whole or in part whenever the Buyer may elect, with minimum prior written notice ("Notice of Termination") of at least ninety (90) business days. Any such termination shall take place by delivery to the Seller of a Notice of Termination specifying the extent to which performance of work under the Agreement or Purchase Order is terminated, and the date upon which termination becomes effective. Upon receipt of any such notice, Seller shall, unless the notice requires otherwise:

a) discontinue work on the date and to the extent specified in the notice; and

b) makes every reasonable effort to either obtain cancellation of all orders to subcontractors.

14.2 Customer may terminate the Agreement without cause by giving Seller ninety (90) days written notice of such termination prior to the specified termination date. Upon termination of the Agreement, Customer shall pay Seller (i) all fees and expenses (including but not limited to CFA fees) earned or incurred in connection with the performance of the Services under the Agreement until the effective date of such termination ("Fees and Expenses"); (ii) any and all reasonable costs directly related to Customer's termination pursuant to this provision, including costs associated with personnel reassignment, travel and other administrative requirements, which termination costs equal 25% of the remaining balance of the total Agreement value and (iii) a Termination Fee equal to 2.5 % of the Agreement value.

Article 15 - TERMINATION FOR DEFAULT

15.1 Either Party may terminate this Agreement or any outstanding Purchase Order for default if the other has materially breached any of its obligations under the relevant Purchase Order and has not cured the breach within thirty (30) days of written receipt of a notice from the other Party.

15.2 Termination of a Purchase Order by either Party whether for default or for convenience shall not affect continuing performance by the Parties of their respective obligations under a different Purchase Order, unless otherwise agreed upon by the Parties.

Article 16 - COMPLIANCE

16.1 Neither Party shall comply with any foreign boycott laws or requirements, which are in violation of any federal or state law, rule, or regulation.

16.2 Either Party shall execute and deliver to the other any documents as may be required to effect or evidence compliance.

16.3 The Parties may correspond and convey documentation via the Internet unless Buyer expressly requests otherwise. Neither Party has control over the performance, reliability, availability or security of the Internet. Seller shall not be liable for any loss, damage, expense, harm or inconvenience resulting from the loss, delay, interception, corruption or alteration of any communication over the Internet due to any reason beyond Seller's reasonable control.

Article 17 - FORCE MAJEURE

17.1 Seller will be excused from and not be liable for any non-performance of a Purchase Order if such delay or non- performance is due to any cause beyond the reasonable control of Seller, or which Seller could not reasonably foresee or reasonably provide against, and which prevents Seller from carrying out the terms of the Purchase Order. This includes but is not limited to the following: war, revolution, insurrection or hostilities

(whether declared or not), riot, economic upheaval, civil commotion or uprising, flood, earthquake, tempest, hurricane, lightning or other natural disaster; fire or explosion, epidemic or pandemic, strike, lockout or other industrial disturbance whether at Seller or one of its suppliers; sabotage, accident, embargo, car shortage, wrecks or delays in transportation, non-delivery of materials or order or action of government authority.

17.2 The Buyer acknowledges that the products or part thereof are produced in, or otherwise sourced from, or will be installed in areas already affected by, or that may be affected in the future by, the prevailing COVID-19 epidemics or pandemic and that the situation may trigger stoppage, hindrance or delays in Seller (or its subcontractors) capacity to produce, deliver, install or service the products, irrespective of whether such stoppage, hindrance or delays are due to measures imposed by authorities or deliberately implemented by the Seller (or its subcontractors) as preventive or curative measures to avoid harmful contamination exposure of Seller's (or its subcontractors') employees. The Buyer therefore recognizes that such circumstances shall be considered as a cause for excusable delay not exposing the Seller to contractual sanctions including without limitation delay penalties, liquidated or other damages or termination for default.

17.3 Any delay resulting from such cause shall extend the date of delivery accordingly. Seller reserves the right to cancel a Purchase Order, if in its opinion such circumstances threaten or cause extended delay in the performance thereof.

Article 18 - INDEPENDENT CONTRACTOR

18.1 Seller is performing the Services as an independent contractor and not as an employee of Buyer and none of Seller's personnel shall be entitled to receive any compensation, benefits or other incidents of employment from Buyer. Seller shall be responsible for all taxes and other expenses arising from the employment or independent contractor relationship between Seller and its personnel and the provision of services hereunder by such personnel to Buyer.

18.2 At all times and notwithstanding anything to the contrary herein or in a Purchase Order, Seller retains full control over the methods, details, persons employed or otherwise used to perform the Services and any other means of performance of its obligations under a Purchase Order and vary the composition of the team assigned to the performance of the Services or make different arrangements to achieve completion of its obligations.

18.3 Nothing in this Agreement shall be deemed to constitute a partnership, joint venture, or fiduciary relationship between Buyer and Seller, nor shall anything in this Agreement be deemed to create an agency relationship between Buyer and Seller. Neither Buyer nor Seller shall be or become liable or bound by any representation, act or omission whatsoever of the other.

Article 19 - BUYER'S OBLIGATIONS

19.1 Unless otherwise specifically agreed in the Specifications, Seller's personnel shall not perform Services on equipment in operation on Buyer's work site.

19.2 If Seller is to perform Services on Buyer's work site, Buyer shall be responsible for obtaining all applicable permits, visas or other governmental approvals required. Buyer shall be responsible for ensuring the safety of work conditions at its site and the safety of Seller's personnel.

19.3 Seller ensures that its employees, subcontractors and agents adhere to and comply with Buyer's health, safety, security and environmental ("HSSE") policies while at the work site, to the extent these policies have been made available to Seller.

19.4 Buyer agrees to cooperate with Seller in the performance of the project described in the Specifications, including, without limitation, providing Seller with, timely access to data, information and personnel of Buyer, and while on Buyer's Site, reasonable facilities and a safe working environment.

19.5 Buyer acknowledges and agrees that Seller's performance is dependent upon the timely and effective satisfaction of Buyer's responsibilities hereunder and timely decisions and approvals of Buyer where required. In addition, Buyer acknowledges and agrees that Seller may, in performing its obligations pursuant to this Agreement, be dependent upon or use data, material, and other information furnished by Buyer without any independent investigation or verification thereof, and that Seller shall be entitled to rely upon the accuracy and completeness of such information in performing its obligations. In the event that Seller incurs cost or is delayed due to Buyer's failure to comply with its obligations hereunder, Buyer shall issue a change order to extend the schedule and/or to provide the additional funding for any of Seller's costs incurred.

Article 20 - INSURANCE

20.1 Seller maintains sufficient insurance and shall provide upon request to Buyer, certificates of such insurance policies. Seller agrees to provide a thirty (30) days advance notice of any material change or cancellation of any insurance policies.

Article 21 - INDEMNIFICATION

21.1 Seller shall indemnify, defend and hold Buyer harmless against third party claims (including without limitation, the Parties' employees) for personal injury, death or loss or damage to property caused by and to the extent of Seller's negligence in the performance of its obligations hereunder, provided (i) Seller is entitled to exclusively control the defense against the claim; (ii) Seller is immediately notified of such claim and (iii) Buyer provides reasonable assistance in the defense of the claim and does not enter into any settlement or make any concession without the Seller's prior written approval.

21.2 This Article states the Parties' entire liability and sole remedy with respect to infringement or claims thereof.

Article 22 - LIMITATION OF LIABILITY

22.1 NOTWITHSTANDING ANY PROVISION OF THESE CONDITIONS OF SALE OR ANY OTHER CONTRACT DOCUMENT TO THE CONTRARY, IN NO EVENT SHALL EITHER PARTY, ITS OFFICERS, DIRECTORS, AFFILIATES OR EMPLOYEES BE LIABLE FOR: LOSS OF BUSINESS, PROFITS, REVENUES OR ANTICIPATED SAVINGS; LOSS OR DEPLETION OF GOODWILL; LOSS OF ORDERS, PRODUCTION OR USE; LOSS OR CORRUPTION (OR RECONSTRUCTION) OF DATA OR INFORMATION OR RECONSTRUCTION OF DATA OR INFORMATION; ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR PURE ECONOMIC LOSS, COSTS, DAMAGES, CHARGES OR EXPENSES; OR ANY INCIDENTAL OR PUNITIVE DAMAGES.

22.2 NOTWITHSTANDING ANY OTHER PROVISION OF THESE CONDITIONS OF SALE OR ANY OTHER CONTRACT DOCUMENT TO THE CONTRARY, AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE MAXIMUM AGGREGATE LIABILITY OF SELLER FOR DIRECT DAMAGES HEREUNDER SHALL NOT EXCEED THE AMOUNTS ACTUALLY PAID BY THE BUYER TO SELLER FOR THE WORK GIVING RISE TO A CLAIM.

22.3 TO THE EXTENT PERMITTED BY LAW, THE PROVISIONS OF THIS ARTICLE SHALL APPLY REGARDLESS OF THE FORM OF ACTION, DAMAGE, CLAIM, LIABILITY, COST, EXPENSE, OR LOSS, WHETHER IN CONTRACT, STATUTE, TORT OR OTHERWISE.

Article 23 - ASSIGNMENT

23.1 This Agreement shall extend to and be binding upon the parties hereto, their successors, and assigns, provided, however, that neither Party shall assign or transfer this Agreement or any Purchase Order hereunder without the other party's express prior written consent, which shall not be unreasonably withheld. Notwithstanding the foregoing, Seller shall have the right to assign this Agreement or any Purchase Order hereunder to any of its parent, affiliates without prior written consent of Buyer and Buyer shall have the right to transfer the licensed Software in accordance with the applicable License.

23.2 Seller shall have the right at any time without prior consent of Buyer to subcontract all or part of its obligations under a Purchase Order. Such subcontract shall not relieve Seller from its obligations under this Agreement and relevant Purchase Order.

Article 24 - LAWS AND DISPUTE RESOLUTION

All matters arising out of or relating to the execution, construction, interpretation or breach thereof, are to be governed by the laws of Massachusetts, excluding such jurisdiction's rules regarding conflicts of laws and the provisions of the United Nations Convention on Contracts for the International Sale of Goods. Seller agrees to bring any action claims or legal proceedings in any way pertaining to this Purchase Order, or the execution, construction, interpretation or breach thereof in the courts of the jurisdiction specified above and in no other court or tribunal whatsoever.

Article 25 - SOLE AGREEMENT

25.1 This Agreement, including any Purchase Order entered into pursuant hereto, constitutes the entire agreement of the parties hereto with respect to its subject matter and supersedes all prior and contemporaneous

representations, proposals, discussions, and communications, whether oral or in writing with respect to this subject matter. This Agreement may be modified only by means of a duly executed written amendment signed by the authorized representatives of both Parties. Neither the terms of any invoice or other instrument documenting a payment or transaction that is issued by Buyer in connection this Agreement, nor any other act, document, pre-printed form or statement, usage, custom, or course of dealing shall modify the terms of this Agreement. In the event of any conflict between the terms of this Agreement and any Purchase Order, the provisions of this Agreement shall govern unless expressly agreed upon by the Parties under the Purchase Order and modifications made by the Purchase Order to this Agreement are required to comply with local applicable laws.

Article 26 - MISCELLANEOUS

26.1 **Waiver.** Failure by either Party to insist upon strict performance of any of the terms and conditions hereof or failure or delay exercising any rights or remedies provided herein or by law or to properly notify the other in the event of breach shall not be construed as a waiver of any provision of this Agreement or Purchase Order. No waiver by a party of a right or default under this Order shall be effective unless in writing.

26.2 **Severability.** If any provision or portion of this Agreement shall be adjudged invalid or unenforceable by a court of competent jurisdiction or by operation of any applicable law, that provision or portion of this Agreement shall be deemed omitted and the remaining provisions and portions shall remain in full force and effect.

26.3 **Amendments.** Any amendment to the terms of this Agreement shall only be effective if made in writing and signed by Buyer and Seller. Once an Agreement amendment is made, it shall be deemed incorporated as of its effective date for all future Purchase Orders, unless expressly stated to the contrary in the Agreement amendment. Such amendment shall also apply to ongoing Purchase Orders except no such amendment shall impact the pricing, pay, title, delivery, or freight terms of ongoing Purchase Orders unless expressly stated to the contrary in the Agreement amendment.

26.4 **Notice.** All notices hereunder shall be deemed given if delivered in writing personally, by courier, sent via US mail, electronic transmission, telephone facsimile, telex, or telegram to Buyer or to Seller at the address(es) set forth in the Purchase Order(s). Electronic transmission must be acknowledged by a process requiring human action. Any notice given by US mail shall be deemed given at the time such notice is deposited with the US mail service.

26.5 **Survivorship.** The provisions of this Agreement that by their nature survive final acceptance under a Purchase Order, expiration, cancellation or termination of any Purchase Order or Agreement and shall remain in full force and effect after such acceptance and payment for the period specified herein, or if not specified then for the maximum time allowed by law. These Articles are (Definitions, Price, Taxes, Warranties, Intellectual Property Ownership, Seller Software License “if any”, Confidentiality, Compliance, Force Majeure, Indemnification, Limitation of Liability and Laws and Dispute Resolution)

26.6 **Headings.** The headings in this Agreement are for ease of reference only and shall not be used to construe or interpret the provisions of the Agreement.

ACTION ITEM 2A

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 21, 2020

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources *10/14/20*

Executive Contact: Christiana Daisy, Executive Manager of Engineering/AGM

Subject: NSNT Sewer Siphon Replacement Consultant Contract Award

Executive Summary:

The City of Ontario notified Inland Empire Utilities Agency (IEUA) about an odor complaint. Collection and Source Control Groups worked on short-term solutions while Engineering investigated a long-term solution. The existing siphon located in the North System North Trunk Sewer (NSNT) has reduced flow caused by closure of the energy production plant as well as poor slope both of which contribute to the build-up of solids, which causes odors.

Michael Baker International (MBI) was hired to provide a high level analysis to resolve the issue. Their review included an analysis to determine the feasibility of eliminating the siphon by adding a new gravity sewer in a new alignment along either Hellman Avenue or Archibald Avenue. The most viable solution is constructing a new sewer in Hellman Avenue, with a drop manhole to cross the Metropolitan Water District (MWD) aqueduct line.

Staff recommends awarding a single-source contract for final design services to MBI for a new alignment, since addressing the issue is time-sensitive.

Staff's Recommendation:

1. Award a single source consultant contract for the NSNT Sewer Siphon Replacement, Project No. EN20064, to Michael Baker International, for a not-to-exceed amount of $241,130; and

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

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

Account/Project Name:

EN20064/NSNT Sewer Siphon Replacement

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 127100 - 10500 - 175000 Project No.: EN20064

Prior Board Action:

None.

Environmental Determination:

Statutory Exemption

CEQA exempts a variety of projects from compliance with the statute. This project qualifies for the Common Sense Exemption as defined in Section 15061(b)(3) of the State CEQA Guidelines.

Business Goal:

The NSNT Sewer Siphon Replacement Project is consistent with IEUA's Business Goal of Environmental Stewardship, specifically safeguarding public health and the environment. Staff will control odors at all Agency facilities for the purpose of improving the environment and being a good neighbor to the local community.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Consultant Contract

NSNT Sewer Siphon Replacement

Consultant Contract Award

Project No. EN20064

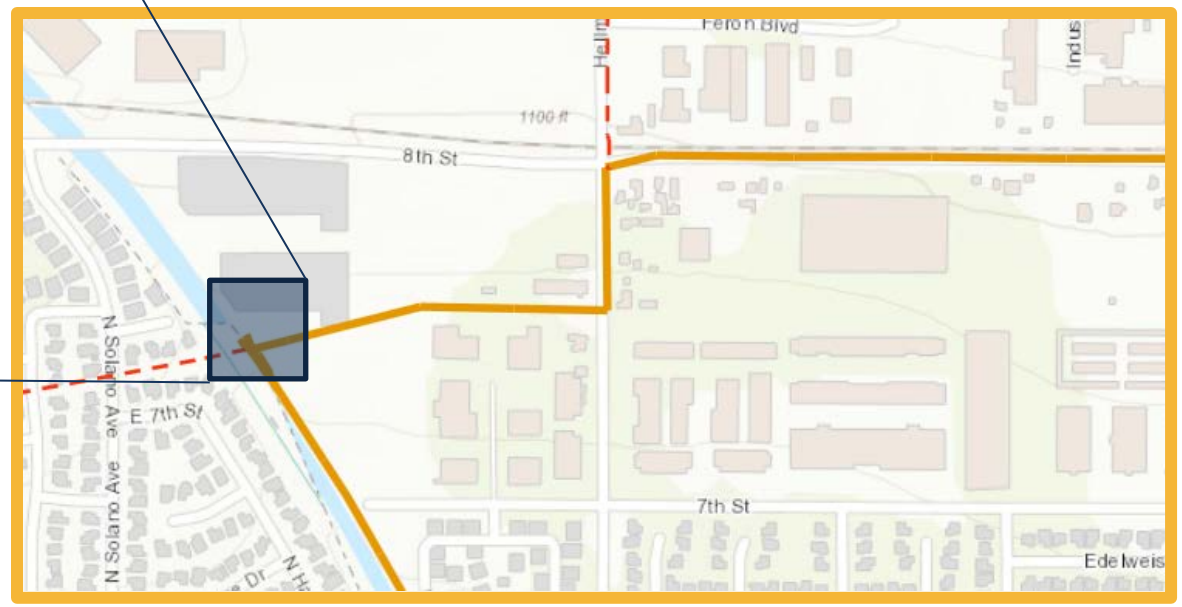
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Adham Almasri, PE

October 2020

Project Background

- Siphon located along the Cucamonga Creek Channel
- Uphill slope - low velocity - odor complaints
- Michael Baker International (MBI) provided two analyses



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

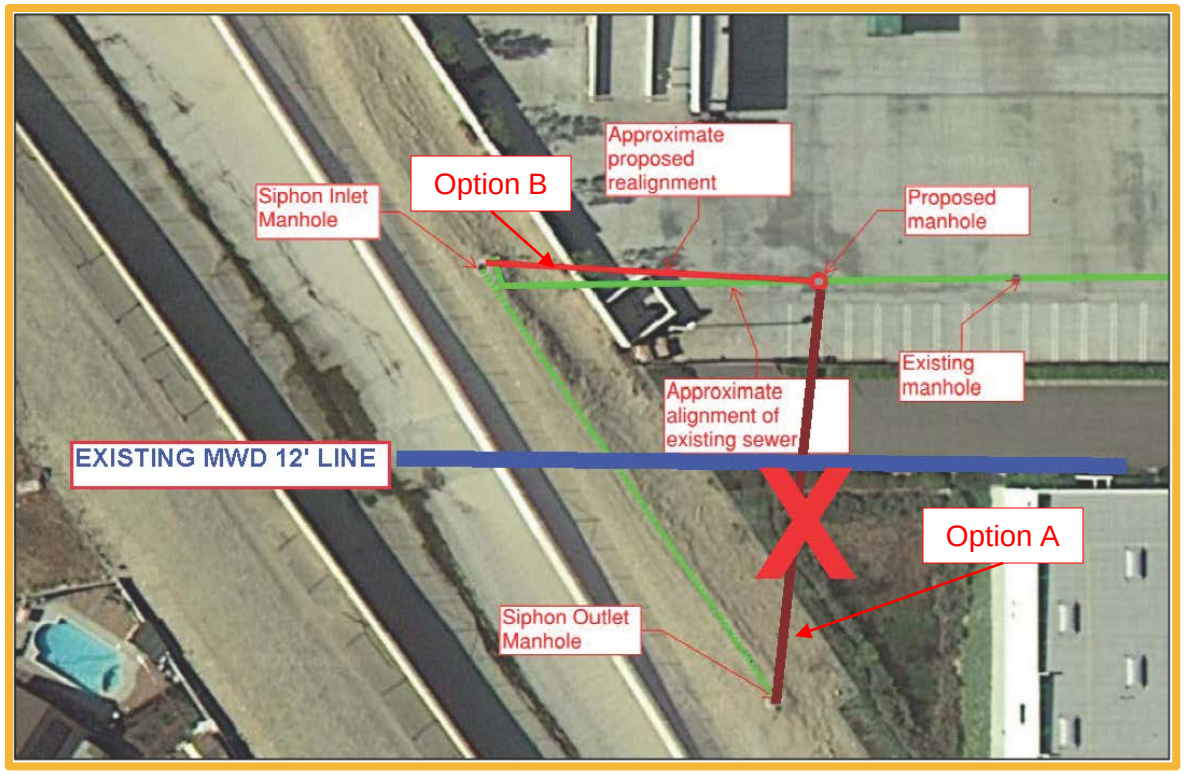
Project Scope

ALTERNATIVE 1: MODIFY THE SIPHON

1. OPTION A- Realign to connect the south
   - Not feasible 12’ Diameter existing MWD

2. OPTION B- Realign the incoming line and install a new manhole.
   - Not certain will work due to poor slope

- Modifications to the existing siphon are not expected to provide any significant improvements.



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Project Scope

ALTERNATIVE 2 – CONSTRUCT NEW SEWER

- Alignment A - Hellman Avenue
- Alignment B - Archibald Avenue

Alignment	Construction Cost
A.1- Hellman w/ Drop Manhole	$1,985,000
A.2- Hellman w/ Siphon	$1,530,000
B.1- Archibald w/ Drop Manhole	$2,280,000
B.2- Archibald w/ Siphon	$1,770,000

*A-1 is recommended option.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Project Budget and Schedule

Description	Estimated Cost
Design Services	***$331,130***
Design Consultant Contract	$241,130
IEUA Design Services	$90,000
Construction Services	***$280,000***
Engineering Services During Construction	$140,000
IEUA Construction Services (~5%)	$140,000
Construction	***$2,382,000***
Construction Contract (estimate)	$1,985,000
Contingency (~20%)	$397,000
Total Project Cost:	**$2,993,130**
Total Project Budget	**$500,000***

*Total Project Budget will be amended during the FY 2021/22 Ten-Year Forecast budgeting cycle.

Project Milestone	Date
Evaluation	
Consultant Contract Award	October 2020
Design Completion	October 2021
Construction Contract Award	January 2022
Construction Completion	January 2023

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Recommendation

- Award a single source consultant contract for the NSNT Sewer Siphon Replacement, Project No. EN20064, to Michael Baker International, for a not-to-exceed amount of $241,130; and

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

The NSNT Sewer Siphon Replacement Project is consistent with IEUA's ***Business Goal of Environmental Stewardship***, specifically safeguarding public health and the environment. Staff will control odors at all Agency facilities for the purpose of improving the environment and being a good neighbor to the local community.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

CONTRACT NUMBER: 4600002961
FOR

NORTH SOUTH NORTH TRUNK (NTST) SEWER SIPHON REPLACEMENT

PROJECT NO. EN20064

THIS CONTRACT (the "Contract"), is made and entered into this _____ day of _____, _____, 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 interchangeably referred to as “IEUA” and “Agency”) and Michael Baker International, Inc., with offices located in Ontario, California (hereinafter referred to as "Consultant"), for professional design services in support of the NTST Sewer Siphon Replacement, Project No. EN20064.

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.

Project Manager:	Adham Almasri, P.E., Senior Engineer
Address:	6075 Kimball Avenue
	Chino, California 91708
Telephone:	(909) 993-1462
Facsimile:	(909) 993-1982
Email:	aalmasri@ieua.org

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

Consultant:	Dan Smith, P.E., QCM
Address:	3536 Concours, Suite 100
	Ontario, California 91764
Telephone:	(909) 974-4004
Facsimile:	(626) 683-8938
Email:	dan.smith@mbakerintl.com

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

   A. Amendments to Contract Number 4600002961
   B. Contract Number 4600002961 General Terms and Conditions.
   C. Consultant's Proposal dated, September 9, 2020.

4. SCOPE OF WORK AND SERVICES: Consultant's services and responsibilities shall be in accordance with Consultant's Proposal, as outlined in **Exhibit A** which is referenced herein, attached hereto, and made a part hereof (hereinafter "Work").

   Familiarity with Scope of Work: By execution of this Agreement, Consultant warrants that:

   (1) It has thoroughly investigated and considered the scope of the Work under this Agreement to be performed, based on all available information; and

   (2) It carefully considered how the Work should be performed; and

   (3) It fully understands the difficulties and restrictions attending the performance of the Work under this Agreement; and

   (4) It has the professional and technical competency to perform the Work and the production capacity to complete the Work in a timely manner with respect to the Scope of Work.

5. TERM: The term of this Contract shall extend from the date of the Notice to Proceed and terminate on December 31, 2021, unless agreed to by both parties, reduced to writing, and amended to this Contract.

6. COMPENSATION: Agency shall pay Consultant's once-monthly, properly executed invoice, approved by the Project Manager, within thirty (30) days following receipt of the invoice by Agency. Invoices shall include the name of assigned personnel, fully burdened hourly billing rate, dates worked, a brief description of work, as well as the Contract Number 4600002961 for payment. Payment shall be withheld for any service which does not materially meet Agency requirements or have proven unacceptable until such service is revised, the invoice resubmitted and accepted by the Project Manager. Consultant's original invoice shall be submitted electronically to apgroup@ieua.org . Should Consultant engage in any public works activity covered under California prevailing wage laws (California Labor Code §1720 et seq.) in excess of $1,000.00 in billing value, Consultant shall provide with all public works invoicing certified payroll verifying that Consultant has paid prevailing wage in accordance with the Department of Industrial Relations requirements as stipulated in SB-854 [http://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html].

   In compensation for the Work represented by this Contract, Agency shall pay Consultant NOT-TO-EXCEED a maximum total of **$241,130.00** for all services provided in accordance with **Exhibit A,** referenced herein, attached hereto, and made a part hereof.

Agency may, at any time, make changes to the Scope of Work, including additions, reductions, and changes to any or all of the Work, as directed in writing by the Agency. Such changes shall be made by an Amendment to the Contract. Any changes shall be made by a written Amendment to the Contract. Consultant's invoice must be submitted by Consultant and accepted by the Agency's Project Manager, and shall include a breakdown by items completed, all associated labor provided, labor hours supplied and associated hourly rates, dates worked, the current monthly amount due, and the cumulative amount invoiced to-date against this Contract, using the Agency's standard Excel-based invoicing template **Exhibit B**. Invoice shall not be submitted in advance and shall not be dated earlier than the actual date of submittal. A copy of subject Excel invoicing template shall be furnished by the Agency's Project Manager.

7. CONTROL OF THE WORK: The Consultant shall perform the Work in compliance with the Work Schedule. If performance of the Work falls behind schedule, due to fault of Consultant, the Consultant 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 Consultant is unable to accelerate the Work, Consultant shall promptly notify the Project Manager of the delay, the causes of the delay, and submit a proposed revised Work Schedule.

8. FITNESS FOR DUTY:

A. Fitness: Consultant 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.

4. Compliance: Consultant shall advise all Consultant 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. Consultant shall impose these requirements on its Subcontractors. Agency may cancel the Contract if Consultant violates these Fitness for Duty Requirements.

B. California Department of Industrial Relations: **For all public works performed in excess of $1,000.00, SB854 is applicable**:

Effective January 1, 2015: The call for bids and contract documents must include the following information:

1. 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)].

2. 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.

3. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. As such, a PWC-100 shall be generated under the direction of the IEUA Project Manager or their designee.

9. INSURANCE: During the term of this Contract, the Consultant shall maintain at Consultant'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 claim limit.

2. Automobile Liability: ISO Form Number CA 00 01 covering any auto (Code 1), or if Consultant 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.

4. Professional Liability (Errors and Omissions): Insurance appropriates to the Consultant's profession, with limit no less than $1,000,000 per occurrence or claim, $2,000,000 aggregate.

B. Deductibles and Self-Insured Retention: Any deductibles or self-insured retention must be declared to and approved by the Agency.

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. 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 Consultant including materials, parts or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Consultant's insurance (at least as broad as ISO Form CG 20 10 11 85 or both CG 20 10, CG 20 26, CG 20 33, or CG 20 38; and CG 20 37 forms if later revisions used).

b. Primary Coverage: The Consultant'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 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 hereby grants to Agency a waiver of any right to subrogation which any insurer of said Consultant may acquire against the Agency by virtue of the payment of any loss under such insurance. Consultant 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, canceled by either party, except after thirty (30) days prior written notice by mail, has been given to the Agency.

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

E. Verification of Coverage: Consultant shall furnish 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 Consultant'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: Consultant shall submit all required certificates and endorsements to the following:

Inland Empire Utilities Agency, a Municipal Water District
Attn: Angela Witte
P.O. Box 9020
Chino Hills, California 91709

10. LEGAL RELATIONS AND RESPONSIBILITIES

A. Professional Responsibility: The Consultant shall be responsible, to the level of competency presently maintained by other practicing professionals performing the same or similar type of work under similar circumstances ("Standard of Care").

B. Status of Consultant: The Consultant is retained as an independent Consultant 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 Consultant shall keep itself fully informed of all applicable 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 Consultant 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 Consultant 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 Project Manager. For this project subcontractor list law shall apply.

E. 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.

Consultant understands and acknowledges that executing this Agreement may inhibit the Consultant from engaging in future contracts, jobs, or agreements with the Agency that is, or can be considered, related to the Scope of Work due to a potential conflict of interest.

F. Equal Opportunity and Unlawful Discrimination: During the performance of this Contract, the Consultant 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 IEUA 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 shall be thoroughly investigated by the Agency.

G. Non-Conforming Work and Warranty: Consultant represents and warrants that the Work and Documentation shall be performed within the Standard of Care. Consultant 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 Consultant by Agency, or any other person or entity. Consultant shall within three (3) calendar days, correct any error or shortcoming that renders the Work or Documentation dysfunctional or unusable and shall correct other errors within thirty (30) calendar days after Consultant's receipt of notice of the error. Upon request of Agency, Consultant 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 Consultant'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, Consultant shall notify the Project Manager, in writing, detailing the dispute and reason for the Consultant's position.

Any dispute that cannot be resolved between the Project Manager and Consultant shall be resolved in accordance with the provisions of this Contract. Neither party shall have any claim or right against the other, whether in contract, warranty, tort (including negligence), strict liability or otherwise, for any special, indirect, incidental, or consequential damages of any kind or nature whatsoever, such as but not limited to loss of revenue, loss of profits on revenue, loss of customers or contracts, loss of use of equipment or loss of data, work interruption, increased cost of work or cost of any financing, howsoever caused, even if same were reasonably foreseeable.

H. Disputes:

1. All disputes arising out of or in relation to this Contract shall be determined in accordance with this section. The Consultant 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 Consultant shall comply, pursuant to the Agency Project Manager instructions. If the Consultant 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 Consultant 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 Consultant'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 Consultant 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 Consultant to be appointed as Arbitrator. The Agency shall determine if any of the names submitted by Consultant are acceptable and, if so, such person shall be designated as Arbitrator.

b. In the event that none of the names submitted by Consultant are acceptable to Agency, or if for any reason the Arbitrator selected in Step (a) is unable to serve, the Agency shall submit to Consultant a list of five names of persons acceptable to Agency for appointment as Arbitrator. The Consultant 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 Consultant in mediation or arbitration commenced by a subcontractor 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 Consultant.

11. INDEMNIFICATION: Consultant shall indemnify the Agency, its directors, employees and assigns, and shall 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 Consultant, its directors, employees, agents and assigns, in the performance of work under this Contract, to the extent caused by Consultant's negligence or willful misconduct. Notwithstanding the foregoing, to the extent that this Contract includes design professional services under Civil Code Section 2782.8, as may be amended from time to time, such duties of Consultant to defend and to indemnify Agency shall only be to the full extent permitted by Civil Code Section 2782.8.

12. 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 Consultant and/or the Consultant's subcontractor(s) pertaining to this Contract. Any modifications or reuse of such materials for purposes other than those intended by the Contract shall be at the Agency's sole risk and without liability to Consultant. Said materials and documents are confidential and shall be available to the Agency from the moment of their preparation, and the Consultant shall deliver same to the Agency whenever requested to do so by the Project Manager and/or Agency. The Consultant agrees that same shall not be made available to any individual or organization, private or public, without the prior written consent of the Agency.

13. TITLE AND RISK OF LOSS:

A. Documentation: Title to the Documentation shall pass to Agency when prepared; however, a copy may be retained by Consultant for its records and internal use. Consultant 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, field or research equipment, and laboratory models, procured or fabricated under the Contract shall pass to Agency when procured or fabricated, and such title shall be free and clear of any and all encumbrances. Consultant shall have risk of loss of any Material or Agency-owned equipment of which it has custody.

C. Disposition: Consultant shall dispose of items to which Agency has title as directed in writing by the Agreement Administrator and/or Agency.

14. 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 Consultant in the performance of the Work, shall be governed by the following provisions:

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

2. If Proprietary Rights conceived, developed, or reduced to practice by Consultant 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, Consultant 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, Consultant 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 Consultant of any compensation specifically for the assignments and assurances required hereby, other than the payment of expenses as may be actually incurred by Consultant in complying with this Contract.

15. INFRINGEMENT: Consultant 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.
Consultant 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.
Consultant 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.
However, Consultant will not indemnify Agency if the suit or claim results from: (1) Agency's alteration of a deliverable such that Agency's alteration of any deliverable created the infringement upon any presently existing U.S. letters, patent or copyright or (2) the use of a deliverable in combination with other material not provided by Consultant when it is such use in combination which infringes upon an existing U.S. letters patent or copyright.

16. 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
Inland Empire Utilities Agency, a Municipal Water District
P.O. Box 9020
Chino Hills, California 91709

Consultant: Dan Smith, P.E., QCM
Program Manager
Michael Baker International
3536 Concours, Suite 100
Ontario, California 9176

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.

17. 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 Consultant, and their respective successors and assigns. Notwithstanding the foregoing, no assignment of the duties or benefits of the Consultant under this Contract may be assigned, transferred or otherwise disposed of without the prior written consent of the Agency, such consent to not be unreasonably withheld; 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.

18. 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 Consultant of any requests for disclosure of any documents pertaining to this work.

In the event of litigation concerning disclosure of information Consultant considers exempt from disclosure, (e.g., "Confidential," "Proprietary" or "Trade Secret,") 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 Consultant has marked "Confidential," "Proprietary" or "Trade Secret," Consultant 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.

19. CERTIFICATION UNDER LABOR CODE SECTION 1861 BY CONSULTANT: I, the undersigned Consultant, am aware of the provisions of Section 3700 et seq. of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the Code, and I, the undersigned Consultant, agree to and will comply with such provisions before commencing the performance of the work of this Agreement.

20. RIGHT TO AUDIT: The Agency reserves the right to review and/or audit all Consultant'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 termination of the Contract. The Consultant shall make all records and related documentation available within three (3) working days after said records are requested by the Agency.

21. INTEGRATION: The Contract Documents represent the entire Contract of the Agency and the Consultant 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 Consultant.

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

23. 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 Consultant. In the event of such termination, the Agency shall pay Consultant for all authorized and Consultant-invoiced services up to the date of such termination.

24. 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.

25. 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 Consultant.

26. AGENCY-PROVIDED INFORMATION AND SERVICES: The Agency shall furnish Consultant available studies, reports and other data pertinent to Consultant's services; obtain or authorize Consultant to obtain or provide additional reports and data as required; furnish to Consultant services of others required for the performance of Consultant's services hereunder, all subject to Agency's prior approval, and Consultant shall be entitled to use and rely upon all such information and services provided by the Agency or others in performing Consultant's services under this Agreement.

27. THIRD PARTIES: The services to be performed by Consultant are intended solely for the benefit of the Agency. No person or entity not a signatory to this Agreement shall be entitled to rely on Consultant's performance of its services hereunder, and no right to assert a claim against Consultant by assignment of indemnify rights or otherwise shall accrue to a third party as a result of this Agreement of the performance of Consultant's services hereunder.

IN WITNESS WHEREOF, 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)		MICHAEL BAKER INTERNATIONAL:	
_____	_____	_____	09-28-2020 _____
Shivaji Deshmukh General Manager	(Date)	Daniel G. Smith Water Resources Department Manager	(Date)

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Exhibit A

Michael Baker
INTERNATIONAL

September 9, 2020

Proposal
Electronic Submittal

Mr. Adham Almasri, P.E.
Senior Engineer
Inland Empire Utilities Agency (IEUA)
6075 Kimball Avenue
Coachella, CA 92236

Subject: Proposal for NSNT Sewer Siphon Relocation, IEUA Project #EN20064

Dear Mr. Almasri:

As a follow-up to the workshop for the NRW Pipeline Siphon Replacement – Gravity Alignment Feasibility Technical Memorandum (TM) and subsequent internal agency staff meetings, IEUA has decided to move forward with Option 1-A of that TM which is a deep gravity sewer alignment in Hellman Avenue with a drop manhole structure to go under the 12-foot diameter MWD aqueduct line. IEUA is requesting a proposal for professional engineering services for the design and preparation of construction documents (plans, specifications, and cost estimates) for this gravity sewer alternative to replace the existing NRW pipeline alignment, west of Hellman Avenue to the Cucamonga Creek channel and southerly along the channel, including the existing sewer siphon at the channel.

Introduction

The NRW Pipeline Siphon Replacement – Gravity Alignment Feasibility Technical Memorandum (TM) outlined several alternatives for a gravity sewer replacement of the existing NRW Pipeline that runs from 8th Street southerly down Hellman Avenue, then turns westerly to the Cucamonga Creek Channel, through a double-barrel siphon, and then southerly along the easterly side of the channel back to Hellman Avenue. See Figure 1 on the next page for a graphic representation of the proposed NRW realignment and the abandonment of the existing NRW Pipeline.

The proposed alignment will consist of approximately:

- 3,325 feet of 12-inch sewer with depths varying from 16 feet deep to 28 feet deep.
- 10 new manholes
- 60 feet of Jack and Bore 12-inch sewer in a 24-inch steel casing
- Bypass pumping and connections to existing facilities

The decommissioning of the existing NRW pipeline will consist of abandoning approximately:

- 4,760 feet of 21-inch RCP and 18-inch VCP sewer pipe
- 12 manholes
- Double barrel sewer siphon (12-inch and 15-inch)

Approach

The project will commence with a kick-off meeting with Michael Baker's Project Manager (Momo Savovic, PE), Project Engineer (Miles Costanza, PE), Program Manager (Dan Smith), and IEUA's CVWD's engineering and operations personnel. MBI will then proceed with the site reconnaissance, records

research, field survey and mapping, and geotechnical investigations to assimilate the existing site information. An Alignment Technical Memorandum (TM) will be prepared for District review that includes preliminary alignment alternative plan view drawings that utilize the base plan of existing conditions created for this project and the proposed alignment for the replacement pipeline, the proposed design parameters will be listed, right-of-way concerns discussed, trench sections provided along with an Opinion of Probable Construction Cost (OPCC). The TM will be reviewed by District staff and discussed in a preliminary design workshop with MBI to vet the proposed alignments and any construction phasing and tie-in concerns that Operations may have.

Figure 1: Pipeline Alignments

The final approved TM will constitute the 30-percent design review level and will identify the horizontal alignments and connection configurations. The 50-percent plans will be developed utilizing the recommendations of the approved TM, and the 100-percent plans will be developed using the comments and discussion from the 50-percent plan review workshop. Final plans will incorporate IEUA's comments from the 100-percent plan review workshop and any additional comments from the City of Rancho Cucamonga required for their approval.

Schedule

Our schedule of Preliminary Project Milestones assumes that an NTP will be issued by October 22, 2020. We have allowed for a three-week District review period each for the review of the Alignment TM and the 50-percent plans; the 100-percent are allotted four weeks for IEUA review.

The overall design for the project can be completed in approximately 10 months as shown in our schedule of milestones. The project will require close coordination with District staff and receiving review comments from various departments at the same time. To facilitate this schedule, we plan to have review workshop at the time of the submittal review comment are available so that the design concepts and any plan changes can be directly communicated to staff. The District's project manager can then compile the comments from the meeting with staff and any additional comments that may have developed after the workshop. It would be expected that comments would be received within three working days of the workshop.

Geotechnical/Utilities

The geotechnical investigation work for this project assumes that boring will be performed approximately every 1,000 feet along the alignment. We are assuming a total of five borings with one boring near the location of the proposed jack and bore section.

Pothole exploration for up to 40 pothole locations is included. Michael Baker has recently encountered an increasing number of agencies requiring a grind and overlay asphalt repair and not willing to accept cold patch repairs of potholes. The pothole fee includes the grind and overlay repair. During the course of the project, if Rancho Cucamonga is willing to accept cold patch repairs, the cost savings will be passed along to IEUA. Michael Baker has elected to provide the more expensive repair costs up front in the proposal, to avoid requests for additional funds due to pavement patching requirements. During the development of this proposal, Michael Baker reached out to the City but was not able to obtain a definitive answer on what the patching requirements will be for this project.

Project Understanding

Our project understanding and scope of work is based upon our discussions and your email of August 28, 2020 (a copy attached), and our previous work on the NRW Pipeline Siphon Replacement – Gravity Alignment Feasibility Technical Memorandum.

Attached please find our Scope of Services (Exhibit A), Compensation and Payment (Exhibit B), and Preliminary Project Milestones (Exhibit C). If the attached are acceptable, please forward to Michael Baker a professional services agreement (PSA) from IEUA. We are prepared to begin the work immediately following your written authorization to proceed and execution of the PSA.

Our scope of work details our proposed submittals and completion levels. The estimated engineering services fee for this task order is $241,130. This fee includes standard grind and overlay for pavement repair of the utility verification potholes; for the 40 potholes included as part of this project that amount is just over $31,000. If the City of Rancho Cucamonga will accept the typical temporary compacted pothole patches normally provided for potholing, then this amount will be reduced.

We appreciate the opportunity to provide this proposal and look forward to working with you. Please feel free to contact our Project Manager Momo Savovic at (760) 855-3224 or myself at (951) 506-2087, if you have any questions.

Sincerely,

Momo Savovic, P.E.
Project Manager

Dan Smith, P.E., QCM
Program Manager

EXHIBIT A

NSNT Sewer Siphon Relocation Project, IEUA Project #EN20064

Scope of Services

TASK 1. PROJECT ADMINISTRATION

1.1 Project Management

Provide project management during the preliminary and final design phases of the project. Project Management will include project coordination, schedule and billing management.

1.2 Meetings

The Project "Kick-Off" Meeting will be held within a week of Notice to Proceed. This meeting should include representatives from, but not be limited to, IEUA (Engineering and Operations) Michael Baker (PM and PE), and subconsultants if needed. The primary objective is to establish project protocol, finalize the project schedule, and identify key technical and regulatory issues. There will be a half-hour coordination call every two weeks through the project design duration, it is assumed the design will take 10 months to complete assuming no unusual agency delays, therefore we are projecting 18 coordination conference calls. There will be a comment review meeting for the Alignment Technical Memorandum and two Agency plan review meetings following the District review of the plans and specifications at the 50-percent and 100-percent completion levels. It is assumed that the coordination meetings will be virtual meetings and the plan review meetings with be face-to-face meetings at IEUA's offices. Michael Baker will provide agenda and meeting minutes for each meeting. It is assumed that compiled Agency comments to be available from IEUA within 3 days of the plan review meetings.

Quality Control/Quality Assurance: The deliverables will be reviewed by a senior project manager for content, clarity, and accuracy prior to submittal to the District.

1.3 Metropolitan Water District Coordination

Michael Baker will submit 50% and 100% Drawings to Metropolitan Water District (MWD) for review and comment. Coordination is limited to 16 hours of time for coordination with MWD and is included in this task at the rates shown in the fee schedule.

TASK 2. FIELD RECONNAISSANCE, DATA COLLECTION, UTILITY RESEARCH, AND CATEGORICAL EXEMPTION DOCMUMENTATION

2.1 Field Reconnaissance

Perform a reconnaissance survey to become familiar with the project sites, develop a photographic inventory of the locations and existing improvements, and identify issues to be considered in the alignment selection.

2.2 Research and Review of Record Information

The team will obtain and review available reports, right-of-way maps, drawings, and standard specifications from IEUA, and other local agencies and review utility maps and easement information regarding abandoned, existing, and proposed utilities corresponding to the project sites. Utility maps will be reviewed to corroborate the utility information to be shown on the base mapping CADD files IEUA will pay any and all charges by the utility agencies and entities associated with utility maps and easement information procurement regarding abandoned, existing, and proposed utilities corresponding to the project sites. Utility maps will be reviewed to corroborate the utility information to be shown on the base mapping CADD files. Records research will include road right-of-way and public easements along the existing alignment with the City of Rancho Cucamonga.

2.3 Utility Mark-Outs and Subsurface Utility Locating

Michael Baker team member, Kana Subsurface Engineering, will contact Underground Service Alert to mark-out any utilities within the project area limits as defined by the team. Utilities identified to be located will be exposed using vacuum extraction potholing methods. This will include excavation, identifying the utility size and material type, depth measurement to top of utility, backfilling using native materials, temporary asphalt patching of the vacuum extraction hole, and basic traffic control per the MUTCD manual. An allowance for forty (40) potholes is included in the base fee amount. Any potholes locations exceeding forty (40) potholes can be covered under the additional services listed below. Any City requirements for traffic control outside of typical MUTCD requirements will also be an additional service. IEUA will pay the costs for the encroachment permit for potholing. Pavement patches have assumed a standard grind and overlay repair, any additional requirements beyond industry standards is not included.

2.4 Permit Processing for Local Agencies

Process encroachment permits as may be required by local agencies for District installed portions of the work. It is anticipated that permit coordination will be required for the City of Rancho Cucamonga. Effort is limited to the eight hours as shown on the fee breakdown. Permit fees shall be paid by IEUA.

TASK 3. SURVEY/MAPPING FIELD RECONNAISSANCE, DATA COLLECTION, AND UTILITY RESEARCH

3.1 Aerial Topographic Mapping

Michael Baker will prepare an Aerial Topographic Map of the project site, at a scale of 1"=40', with one-foot contour intervals. This topography will tie into local benchmarks and control as specified to the district. The work shall include:

- Preparation of a flight plan and layout of ground control targets;
- Field surveying services to set ground control panels and survey their precise positions on the appropriate coordinate system basis;
- Aerial photogrammetric services;
- Compilation of planimetric and topographic features from controlled stereo pair photographs to digital medium;

- Perform field survey check profile observations and office analysis of said observations to check ground truth of the compiled map within accepted standards.

3.2 Record Data Base Map

In order to include and plot the record position of the project boundary in approximate orientation with a specific coordinate system, compiled aerial topographic base data or other overlay features, Consultant shall perform the following tasks:

- Consultant shall perform research of the available public records via on-line services to obtain maps and other items that affect the boundary location of the property;
- Consultant shall prepare a preliminary record data map to be used by the field survey crew to search for a sampling of boundary monuments;
- Consultant shall perform a field survey of said monuments in order to establish orientation of the record survey data in relation to the coordinate system used in the topographic mapping;
- Consultant shall plot the record boundary lines on the aerial base map, with the understanding of the Client that said record boundary is NOT the result of a comprehensive boundary survey and analysis, and that it's orientation may disagree substantially from the position determined by a full boundary survey and analysis;
- The budget for this scope of work is based upon an assumption that adequate and accessible boundary monumentation exists in the immediate project vicinity to control this record data survey.

Any cost associated with the preparation and processing of a Record of Survey Map, if one becomes necessary as a legal requirement, shall be covered by IEUA.

3.3 Supplemental Topographic Survey

In addition to the Aerial Topographic Survey included in Task 3.1 above, Michael Baker shall perform a supplemental field topographic survey to show more detailed information as needed by the engineering team for design.

The location of the following ground surface and/or visible underground items are the primary target of this survey:

- Water meters;
- Electrical and other above ground dry utility items;
- Sewer cleanouts (if any);
- Culverts and visible storm drain system items;
- Tree locations

The following items are specifically not required and not included in this survey:

- Street cross sections

3.4 Pothole Location Survey

After exposure of the object by the Pothole Contractor, said Contractor will set durable reference tie points at the ground or paved surface and prepare notes and sketches to describe the reference points and their relationship to the exposed object. Contractor will further document other characteristics of the object and backfill the pothole.

After all potholes have been excavated, documented and backfilled as described above, the Contractor will notify the Consultant's survey crew and schedule a move-in by the crew to locate the reference tie points.

Consultant shall then provide a field survey to determine the horizontal and vertical location of the tie points, document the location on a set of survey notes and provide the information to the design engineer.

The fee amount shown for this task in this agreement assumes that the services described herein will cover 40 potholes in no more than 2 survey crew move-ins.

Standby time for the survey crew is not a part of this agreement and will be covered as "extra work" on a time and materials basis pursuant to the Michael Baker rate schedule.

Coordination and compensation for the work performed by the pothole excavation Contractor are not covered by this task unless otherwise stated in this agreement.

TASK 4. GEOTECHNICAL INVESTIGATION

4.1 Field Investigation

Michael Baker team member, Petra Geosciences, will perform a geotechnical investigation and evaluation of the project area. The purpose of this evaluation is to determine the nature of subsurface soil conditions, evaluate their in-place characteristics, and provide geotechnical recommendations for the design and construction of the sewer line. The project includes open-cut pipeline installation, and jack-and-bore beneath the 12-foot diameter Metropolitan Water District water line. For purposes of this proposal, it is anticipated that the depth of pipeline will be on the order of 30 below ground surface.

The following services will be performed as part of the geotechnical investigation:

- Collect and review readily available literature and maps pertaining to soil and geologic conditions within and adjacent to the site.
- Review plans and project specifications made available to us at the time of our investigation.

- Drill 5 borings (one at the jacking pit or receiving pit and 4 along the alignment), on the order of 35 to 45 feet below the existing surface or refusal. All borings will be drilled utilizing a standard, truck-mounted, hollow stem auger drilling rig having the appropriate depth and sampling capabilities. Borings will be backfilled with excavated soils. Fieldwork is anticipated to require 2 days of effort.

- Provide traffic control plans and implement during the field work.
- Log and field-classify soil materials encountered in each boring in accordance with the visual-manual procedures outlined in the Unified Soil Classification System and the American Society for Testing and Materials (ASTM) Procedure D 2488-90. If encountered, the depth to seepage zones and/or static groundwater will also be documented. All field activities will be performed by or under the direct observation of a State of California Certified Engineering Geologist.
- Collect representative bulk and undisturbed soil samples for laboratory analysis. Undisturbed samples will be retrieved at 1- to 5-foot depth intervals utilizing a 2.4-inch inside diameter, modified-California split-spoon sampler. In addition, where granular soils are encountered within the saturated zone, these materials will be selectively sampled using the Standard Penetration Test (SPT) method in accordance with ASTM Procedure D 1586-92. To ensure uniformity of driving energy, all samples will be driven with successive 30-inch blows delivered by a 140-pound hammer assembly.
- Perform appropriate laboratory analysis on soil samples which may include the following: in-situ and maximum dry density; in-situ and optimum moisture content; corrosivity tests (pH, Sulfate, Chloride and Resistivity) and direct shear tests on undisturbed specimens.
- Perform geologic and engineering analysis on data collected.
- Prepare a geotechnical report presenting the results of our evaluation and recommendations for the proposed project.

Our evaluation will not include a study of the effects of the proposed development on the environment and excludes any assessment or treatment of hazardous wastes, which may exist on or beneath the site.

4.2 Geotechnical Report

A project specific geotechnical report will be provided. In general, the geotechnical report is expected to include the following information:

- A description of site conditions and geotechnical factors that may influence site development.
- A summary of project requirements and design criteria as known to us at the time of our field exploration and report preparation.
- A summary of subsurface conditions as encountered during our field exploration.
- A geotechnical map depicting the locations of our exploratory assessment points.
- Logs of our exploratory borings.
- A description of laboratory test procedures and test results.
- Regional faulting and site seismicity, including secondary seismic effects.
- Presence of groundwater and its potential adverse impact on the site development.
- A preliminary discussion regarding temporary excavation stability and sidewall stabilization requirements (as necessary).

The geotechnical fee was prepared prior to obtaining any site-specific subsurface information or project specifications. If additional time is required to complete some of the services outlined previously (i.e., additional data acquisition, laboratory testing or field exploration time, etc.), additional costs may be incurred to complete the study. If unusual or unexpected

environmental, soil or geologic conditions are encountered in our field investigation that requires increasing the amount of investigation, depth of exploration and/or the number of exploration sites, it may be necessary to modify the scope and cost of the study. If such is the case, Michael Baker will inform IEUA immediately to discuss what impact these conditions may have on the study and an amendment to this proposal will be prepared that provides a revised scope of services and associated costs.

TASK 5. ALGNMENT TECHNICAL MEMORANDUM

5.1 Preliminary Design Plan for Overall Alignment

Utilizing the existing conditions base plan from the field survey, aerial mapping, records research, and the information obtained from the utility research, prepare a conceptual plan for the proposed alignment of the replacement NRW pipeline. Conceptual plans will show two alternative alignments for discussion with District staff. It is anticipated that an overall exhibit showing the entire alignment will be prepared in addition to preliminary single line tie-in details.

5.2 Alignment Technical Memorandum (TM)

Prepare a preliminary design technical memorandum that summarizes the existing conditions and the proposed design parameters for the water main replacements. The design recommendations in the memorandum will include alignment analysis, potential utility conflicts and resolutions, pipeline configuration and appurtenance locations, record right-of-way information, trench design calculations, and any special construction considerations. Pipe materials per approved material list.

After the workshop with IEUA staff to review the Alignment TM, IEUA's comments will be addressed and incorporated into a final TM. This TM will be the basis of developing the design through the final submittal of plans and specifications. The design recommendations in the memorandum will include alignment analysis, potential utility conflicts and resolutions, any right-of-way considerations and preliminary Opinion of Probable Construction Costs.

TASK 6. FINAL DESIGN

6.1 50-Percent Submittal

Upon acceptance of the final TM, proceed from to 50-percent complete plans; bid forms, and technical specification listing will be a part of this submittal. At 50-percent the details sheets will not be complete but will demonstrate the intent of the concepts approved from the TM. The 50-percent plans will incorporate all survey data and utilities research accomplished to date.

The Sheet layout and formatting will be in accordance with IEUA's Design Manual. The 50-percent plan submittal shall include:

1. Title Sheet
2. General Notes, Water Notes, Symbols, Legends, and Abbreviations
3. Index Map
4. Plan and Profile – Hellman Avenue Station 0+00 to Station 9+00

5. Plan and Profile – Hellman Avenue Station 9+00 to Station 18+00
6. Plan and Profile – Hellman Avenue Station 18+00 to Station 27+00
7. Plan and Profile – Hellman Station 27+00 to Station 34+00
8. Jack and Bore Details
9. Demolition Plan for Existing NRW Sewer Pipeline and Sewer Siphon
10. Trench Paving Repair Details (1 sheet)
11. Detail Sheets (2 sheets)
12. Traffic Control Plans (up to 7 sheets)

Deliverables will include two half-sized sets of plans, two hard copies of the proposal forms, technical specification listing and Opinion of Probable Construction Cost (OPCC). A PDF of the plans, specification listing and OPCC will also be submitted. Pothole data will also be a part of this submittal.

6.2 100-Percent Submittal

Address and incorporate District comments from the 50-percent submittal and prepare 100-percent complete plans. Proposal forms, technical specifications, and Opinion of Probable Construction Cost will be a part of this submittal.

Deliverables will include one full sized plan set, two half sized sets of plans, two hard copies of the proposal forms, technical specifications and OPCC. A PDF of the plans, specifications and OPCC will also be submitted.

6.3 Final Submittal

Address and incorporate District comments from the 100-percent submittal into the Final plans. Final Proposal forms, technical specifications, and Opinion of Probable Construction Cost will be a part of this submittal.

Final deliverables will include two full-sized plan sets, two half-sized sets of plans, final hard copies of the proposal forms, technical specifications and OPCC. A PDF of the signed and sealed plans, specifications and OPCC will be submitted along with the CADD files for the plans and the Word files for the proposal forms, technical specifications and OPCC.

6.4 Traffic Control Plans

Engineered traffic control plans will be developed in for the selected alignment and be submitted to the City of Rancho Cucamonga at the 100% for review and comment. The City's comments will be addressed, and the final traffic control plans will be included in the Final Submittal Drawings. The traffic control plans are anticipated to include 7 sheets and include the major intersections of 8th Street and Hellman, 7th Street and Hellman, and 6th Street and Hellman.

The following assumptions have been made for Task 6.4:

1. The traffic handling plans are being prepared assuming that the stage construction will be done in a rolling stage construction.
2. The traffic handling plans are being prepared assuming that all utilities will be identified by the contractor.
3. The traffic handling plans will be prepared assuming that the traffic handling at all cross streets will be done during night-time construction.
4. It is assumed that Traffic Signal Modification Plans will not be required and that the contractor will be responsible for any disruption to any existing traffic signal being affected by the project.
5. It is assumed that striping plans will not be required and that the contractor will be responsible to replace any striping detail in kind.
6. It is assumed that Quantities and Cost Estimate will not be required for the traffic control plans.

TASK 7. BID SUPPORT SERVICES

7.1 Attend Pre-Bid Meeting

Michael Baker's Project Manager will participate in a Pre-Bid Meeting at District offices.

7.2 Respond to Contractor's Questions

Michael Baker will provide responses to Contractor's questions which are vetted through the District Project Manager that will be submitted by email to IEUA.

7.3 Prepare Addendum

Michael Baker will prepare one addendum during the bid period based on questions received during the bid period.

7.4 Bid Review Assistance

Michael Baker will assist IEUA with the review of bids as specifically directed by the District Project Manager.

ASSUMPTIONS

In preparing this scope of work, Michael Baker based our scope on the assumptions listed below. These are in addition to assumptions that are included in specific tasks in the scope.

1. Michael Baker has not included any effort for preparation of easement documents.
2. No environmental services are included.
3. No electrical or controls design is incorporated into this proposal.
4. The District will pay for all encroachment permit expenses for pre-design and construction activities.

5. The District will provide access to the existing NRW manholes locations if located outside of public road right-of-way.
6. Michael Baker assumes that Metropolitan Water District (MWD) will allow a jack and bore installation below the aqueduct line based on the information in the geotechnical report and without additional investigation or engineering evaluation on their behalf. Any additional engineering requests by MWD are not included and will require additional fee.
7. Michael Baker has not included any costs or efforts to obtain permits from the railroad for any pothole activities in or near 8th Street for this proposal.

ADDITIONAL SERVICES

Services which are not specifically identified herein as services to be performed by Michael Baker are considered "Additional Services" for purposes of this Agreement. Client may request that Michael Baker perform services which are Additional Services. Upon such request Michael Baker will perform the requested services upon full execution of an amendment to this Agreement setting forth the scope, schedule and fee for such Additional Service.

In the event Michael Baker performs Additional Services at the Client's written request before receipt of such executed amendment, Client acknowledges its obligation to pay for such services at Michael Baker's hourly rates as shown in the Fee Summary, within 30 days of receipt of invoice for services performed.

FEE

In accordance with the associated fee summary shown on Exhibit B, Michael Baker proposes to perform the above scope of work on a Time & Materials (T&M) basis with a not-to-exceed (NTE) amount. Michael Baker acknowledges that the NTE amount cannot be exceeded for the scope of work unless changes are approved in advance by a written change order issued and signed by the CVWD and Michael Baker.

Progress billings will be forwarded to the Client monthly. These billings will include the fees earned for the billing period plus all reimbursable project expenses advanced by the Consultant. Reimbursable expenses (printing, courier, postage, etc.) will be billed at cost plus 10% to cover administrative costs. Mileage will be billed at current IRS mileage rate.

PAYMENT

Client shall pay the Consultant for services performed within 30 days of receipt of invoice from Consultant. Work shall commence upon receipt of an executed Purchase Order. Michael Baker invoices will follow CVWD standard invoice format.

EXHIBIT B

NSNT Sewer Siphon Relocation Project, IEUA Project #EN20064: Compensation and Payment

		Water				Survey			Total Estimated Hours	Labor Cost	Direct/Repro Subcontract Costs	Total Estimated Fee
		Program Manager	Project Manager	Senior Engineer	Project Designer	Survey Tech	Licensed Surveyor	1-Person Crew				
		$ 240.00	$ 235.00	$ 185.00	$ 130.00	$ 150.00	$ 190.00	$ 175.00				
TASK 1: PROJECT ADMINISTRATION												
1.1	Project Management and Coordination Calls (18 calls)		13						13	$ 3,055.00	$ -	$ 3,055.00
1.2	Review Meetings (3 meetings)		6	12					18	$ 3,630.00	$ 500.00	$ 4,130.00
1.3	QC Review	8							8	$ 1,920.00	$ -	$ 1,920.00
1.4	MWD Coordination		8	8					16	$ 3,360.00	$ -	$ 3,360.00
	TOTAL AMOUNT (TASK 1):	**8**	**27**	**20**	**0**	**0**	**0**	**0**	**55**	**$ 11,965.00**	**$ 500.00**	**$ 12,465.00**
TASK 2: FIELD RECONNAISSANCE, DATA COLLECTION, UTILITY RESEARCH, AND CATEGORICAL EXEMPTION DOCMUMENTATION												
2.1	Field Reconnaissance			8	8				16	$ 2,520.00	$ 250.00	$ 2,770.00
2.2	Research and Review of Record Information			2	8				10	$ 1,410.00	$ 50.00	$ 1,460.00
2.3	Utility Mark-Outs and Subsurface Utility Locating				8				8	$ 1,040.00	$ 105,400.00	$ 106,440.00
2.4	Permit Processing for Local Agencies		4	4					8	$ 1,680.00	$ -	$ 1,680.00
	TOTAL AMOUNT (TASK 2):	**0**	**4**	**14**	**24**	**0**	**0**	**0**	**42**	**$ 6,650.00**	**$ 105,700.00**	**$ 112,350.00**
TASK 3: SURVEY/MAPPING FIELD RECONNAISSANCE, DATA COLLECTION, AND UTILITY RESEARCH												
3.1	Aerial Topographic Mapping						8	16	24	$ 4,320.00	$ 5,300.00	$ 9,620.00
3.2	Record Data Base Map				2	16	8		26	$ 4,180.00	$ -	$ 4,180.00
3.3	Supplemental Topographic Surveys				2		8	16	26	$ 4,580.00	$ 200.00	$ 4,780.00
3.4	Pothole Survey				8		4	16	28	$ 4,600.00	$ 200.00	$ 4,800.00
	TOTAL AMOUNT (TASK 3):	**0**	**0**	**0**	**12**	**16**	**28**	**48**	**104**	**$ 17,680.00**	**$ 5,700.00**	**$ 23,380.00**
TASK 4: GEOTECHNICAL INVESTIGATION												
4.1	Field Investigation			1					1	$ 185.00	$ 15,000.00	$ 15,185.00
4.2	Geotechnical Report			2					2	$ 370.00	$ 8,000.00	$ 8,370.00
	TOTAL AMOUNT (TASK 4):	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**$ 555.00**	**$ 23,000.00**	**$ 23,555.00**
TASK 5: ALIGNMENT TECHNICAL MEMORANDUM												
5.1	Preliminary Design Plan for Overall Alignment		2	4	40				46	$ 6,410.00	$ 20.00	$ 6,430.00
5.2	Alignment Technical Memorandum		2	24	4				30	$ 5,430.00	$ 20.00	$ 5,450.00
	TOTAL AMOUNT (TASK 5):	**0**	**4**	**28**	**44**	**0**	**0**	**0**	**76**	**$ 11,840.00**	**$ 40.00**	**$ 11,880.00**
TASK 6: FINAL DESIGN												
6.1	50-Percent Submittal		4	24	80				108	$ 15,780.00	$ 200.00	$ 15,980.00
6.2	100-Percent Submittal		4	20	80				104	$ 15,040.00	$ 200.00	$ 15,240.00
6.3	Final Submittal		2	8	20				30	$ 4,550.00	$ 200.00	$ 4,750.00
6.4	Traffic Control Plans		4	8	100				112	$ 15,420.00	$ 200.00	$ 15,620.00
	TOTAL AMOUNT (TASK 6):	**0**	**14**	**60**	**280**	**0**	**0**	**0**	**354**	**$ 50,790.00**	**$ 800.00**	**$ 51,590.00**
TASK 7: BID SUPPORT SERVICES												
7.1	Attend Pre-Bid Meeting		4						4	$ 940.00	$ 100.00	$ 1,040.00
7.2	Respond to Contractor's Questions			8					8	$ 1,480.00	$ -	$ 1,480.00
7.3	Prepare Addendum		2		8				10	$ 1,510.00	$ -	$ 1,510.00
7.4	Bid Review Assistance		8						8	$ 1,880.00	$ -	$ 1,880.00
	TOTAL AMOUNT (TASK 7):	**0**	**14**	**8**	**8**	**0**	**0**	**0**	**30**	**$ 5,810.00**	**$ 100.00**	**$ 5,910.00**
										BASE SERVICES TOTAL FEE		**$ 241,130.00**

EXHIBIT C

NSNT Sewer Siphon Relocation Project, IEUA Project #EN20064

Project Milestones

October 22, 2020	Board Approval/Notice to Proceed
October 23, 2020	Data Collection, Records Research, and Utility Research Begins
October 26, 2020	Kick-off Meeting and Field Reconnaissance
October 28, 2020	Survey Mapping Begins
November 11, 2020	Geotechnical Field Work Begins
December 16, 2020	Base Plan Complete (Records and Utility research, Aerial Mapping, etc.)
January 5, 2020	**Submit** Alignment Technical Memorandum (TM) and Preliminary Plan View Alignment Drawings
January 26, 2021	Preliminary Design Workshop for Alignment TM Review and Discussion
February 3, 2020	**Submit Final Alignment TM**
February 24, 2021	**Submit 50%** Plans, Specifications Listing and OPCC
March 17, 2021	Design Workshop and Discussion for 50% Plan Comments
May 20, 2021	**Submit 100%** Plans, Specs, and OPCC
June 17, 2021	Design Workshop and Discussion for 90% Plans, Specs, and OPCC
July 28, 2021	**Submit Final Plans, Specs, and OPCC**

NSNT Sewer Siphon Relocation Project, IEUA Project #EN20064

Proposal Attachment

From: Adham Almasri <aalmasri@ieua.org>
Sent: Friday, August 28, 2020 2:39 PM
To: Smith, Dan <Dan.Smith@mbakerintl.com>
Cc: Christian Gomez <cgomez@ieua.org>; Jason Marseilles <jmarseilles@ieua.org>; Jerry Burke <jburke@ieua.org>
Subject: Re: EXTERNAL: NSNT Sewer Siphon Relocation, IEUA Porject # EN20064

Dan:
Thanks for confirmation on the schedule. IEUA will handle the entire environmental permitting/CEQA and this is why it is not included in MBI's scope.
Have a great weekend.

From: Smith, Dan <Dan.Smith@mbakerintl.com>
Sent: Friday, August 28, 2020 1:01 PM
To: Adham Almasri <aalmasri@ieua.org>
Cc: Christian Gomez <cgomez@ieua.org>; Jason Marseilles <jmarseilles@ieua.org>; Jerry Burke <jburke@ieua.org>
Subject: RE: EXTERNAL: NSNT Sewer Siphon Relocation, IEUA Porject # EN20064

Adham,

I forgot to address the schedule, yes we will be able to complete that design within the year time frame you mentioned. We are projecting 8-9 moths depending upon review time for the City of Rancho Cucamonga and the time required to obtain encroachment permits for potholing.

I am assuming from the scope of work you presented below that IEUA is going to perform the environmental work; or is that something you want our environmental department to assist with? If IEUA will handle that, we will assume typical support of furnishing base plans or exhibits that show the project for your environmental staff to utilize in their efforts.

Dan
Dan Smith, P.E. | Sr. Principal Engineer
9755 Clairemont Mesa Blvd Suite 100 | San Diego, CA 92124-1333 | [O] 858-810-1408 | [M] 858.663.5334
dan.smith@mbakerintl.com | www.mbakerintl.com

From: Smith, Dan
Sent: Thursday, August 27, 2020 1:10 PM
To: Adham Almasri <aalmasri@ieua.org>
Cc: Christian Gomez <cgomez@ieua.org>; Jason Marseilles <jmarseilles@ieua.org>; Jerry Burke <jburke@ieua.org>
Subject: RE: EXTERNAL: NSNT Sewer Siphon Relocation, IEUA Porject # EN20064

Adham,

Thank you for your request for proposal for the Hellman Realignment of the NRW Pipeline that will employ Alignment A, Option 1 from the NRW Pipeline Siphon Replacement – Gravity Alignment Feasibility Technical Memorandum. We will provide you a proposal for this request on or before September 9, 2020.

Thank you,
Dan

Dan Smith, P.E. | Sr. Principal Engineer
9755 Clairemont Mesa Blvd Suite 100 | San Diego, CA 92124-1333 | [O] 858-810-1408 | [M] 858.663.5334
dan.smith@mbakerintl.com | www.mbakerintl.com

From: Adham Almasri <aalmasri@ieua.org>
Sent: Thursday, August 27, 2020 10:12 AM
To: Smith, Dan <Dan.Smith@mbakerintl.com>
Cc: Christian Gomez <cgomez@ieua.org>; Jason Marseilles <jmarseilles@ieua.org>; Jerry Burke <jburke@ieua.org>
Subject: EXTERNAL: NSNT Sewer Siphon Relocation, IEUA Porject # EN20064

Dear Dan:

IEUA staff presented to the General Manager and Executive Management the options available to either modify the NSNT siphon south of 8th Street or relocate the siphon and associated sewer. IEUA Management agreed with staff recommendation to relocate the siphon as outlined in Option 1-A. The sewer line will be relocated to Hellman Avenue and a drop manhole will be utilized to go under the MWD aqueduct. The relocation option was chosen over the on-site modifications since the modifications will not provide significant improvements to guarantee overcoming the current issues with the solids built up and odor generation.

Because it is imperative to timely address the high LEL and related odor complaints, IEUA is inclined to single source the design services contract to Michael Baker International taking into consideration the firm's familiarity of the issues, the deep understanding of the project background, alignment length and ways to avoids the aqueduct. Executing the design services contract for the design and bid phase of the relocation is contingent upon negotiating a fair contract value. Therefore, you are requested to submit a fee proposal to prepare the design and provide IEUA with support during the bid phase of the project. The scope of work shall include:

1) Preparation of a design survey and base map.

2) Potholing and identification of existing utilities in the vicinity of the proposed sewer trench. Please assume 40 potholes.

3) Potholing sub. shall obtain a permit from the City of Ontario. IEUA will pay the permit fees.

4) Michael Baker International shall furnish either a Technical Memo. or preliminary design report (PDR) that outlines the alignment, utilities, depth and updated construction cost estimate. IEUA will share said PRD/TM with the City of Ontario to ensure the alignment is feasible and does not conflict with their future underground infrastructures.

5) Prepare a 50% design submittal to include plans and specifications. Allow the Agency to review (2 to 3) weeks and then incorporate the comments into the 100% design submittal.

6) Prepare a 100% design submittal design submittal to include plans and specifications. Allow the Agency to review (2 to 3) weeks and then incorporate the comments into the final/bid documents. A final estimate of the construction cost shall be provided with the bid documents.

7) Prepare traffic control plans.

It is important to note that the design submittals including traffic control drawings will be shared with the City of Ontario for review and their comments/questions will need to be addressed which may generate an added level of efforts. Please account for this in the fee proposal.

8) Provide the Agency with support during the bid phase (answering questions from bidders and attending a pre bid job walk).

9) There will be a need to have a half-hour call every two weeks to monitor project activities and plan for upcoming milestones.

It is expected to have the design completed within a year from the contractor execution. Please confirm if this time frame can be met. It will be much appreciated if your proposal is received on or before September 9, 2020. Please contact me if you have any questions.

Thanks

Adham Almasri , P.E., PMP
Senior Engineer

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

"Water Smart - Thinking in Terms of Tomorrow"
6075 Kimball Ave / Chino, California 91708
Tel: 909-993-1462 / Fax: EMail: aalmasri@ieua.org Website: www.ieua.org
Connect with us

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Exhibit B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

INLAND EMPIRE UTILITIES AGENCY
CONSULTING SERVICES INVOICE

Company:	Pay Estimate No.:	Contract Date	Invoice Date:
Address:	Contract No.:	IEUA Project Manager:	This Period: From:
			To:
Proj Name:			Invoice No /Consult Ref

ORIGINAL CONTRACT:

PO No.	SAP Line Item No.	WBS Element No.	Item Description	Original Contract Value	Total This Period From: To:		Total to Date From: To:		Progress to Date	Remaining Contract Value
				Amount ($)	% Complete	Amount ($)	% Complete	Amount ($)	% Complete	Amount ($)
					#DIV/0!		#DIV/0!		#DIV/0!	$0.00
					#DIV/0!		#DIV/0!		#DIV/0!	$0.00
					#DIV/0!		#DIV/0!		#DIV/0!	$0.00
					#DIV/0!		#DIV/0!		#DIV/0!	$0.00
			Subtotal Original Contract:	$0.00		$0.00		$0.00		$0.00

CONTRACT AMENDMENTS:

PO No.	SAP Line Item No.	WBS Element No.	Amendment Description	Amended Contract Value	Total This Period From: To:		Total to Date From: To:		Progress to Date	Remaining Contract Value
				Amount ($)	% Complete	Amount ($)	% Complete	Amount ($)	% Complete	Amount ($)
					#DIV/0!		#DIV/0!		#DIV/0!	0%
					#DIV/0!		#DIV/0!		#DIV/0!	0%
					#DIV/0!		#DIV/0!		#DIV/0!	0%
			Subtotal Contract Amendments	$0.00		$0.00		$0.00		$0.00
			Total Contract with Amendment	$0.00		$0.00		$0.00		$0.00

PAYMENT SUMMARY FOR THIS PERIOD:

	From: To:	
Amount Earned Original Contract	$0.00	
Amount Earned Amendments	$0.00	
Back Charges	$0.00	
Amount Due This Period		**$0.00**

PRIOR PAYMENT SUMMARY:

	From: To:	
ount Earned Original Contract	$0.00	
Amount Earned Amendments	$0.00	
Back Charges	$0.00	
Prior Payments		**$0.00**

TOTAL PAYMENT SUMMARY:

	Total Contract
Total Original Contract	#########
Total Contract Amendments	$0.00
Total Payments to Date	$0.00
Back Charges	$0.00
Payment this period	$0.00
Balance of Contract	##########

CONTRACT SCHEDULE SUMMARY:

Contract Start Date:
Contract Duration:
Contract Completion Date:
Authorized Time Extension:
Revised Completion Date:

PROJECT COMPLETION SUMMARY:

Contract Time Expired:
Contract Work Complete:

Consultant Approval:

Title:_____ Signature:_____ Date:_____

Inland Empire Utilities Agency Approvals:

Project Engineer: _____ Date:_____ Exec Mgr / CFO: _____ Date: _____

Dept. Manager: _____ Date:_____ General Manager: _____ Date: _____

ACTION ITEM 2B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 21, 2020

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources *10/14/20*

Executive Contact: Christiana Daisy, Executive Manager of Engineering/AGM

Subject: Santa Ana River Conservation & Conjunctive Use Program (SARCCUP) - MWD Agreement

Executive Summary:

Santa Ana River Conservation & Conjunctive Use Program (SARCCUP) is a watershed-wide collaboration between the five Santa Ana Watershed Project Authority (SAWPA) member agencies for the development of water supply reliability, water use efficiency and habitat enhancements projects. SARCCUP member agencies may utilize existing and new facilities to convey additional surface water supplies to groundwater banking facilities by recharging the underlying groundwater basins throughout the watershed. IEUA's current participation is in the conservation portion, with provisions to participate in future conjunctive use opportunities.

The SARCCUP member agencies and the Metropolitan Water District of Southern California (MWD) have collectively developed an Agreement to support the SARCCUP watershed-wide groundwater banking program. The Agreement will allow SARCCUP parties to store available water during wet years in local groundwater basins and recover stored water during dry years to reduce the impacts from multi-year droughts. The Agreement includes the water supply and operations for the groundwater banking and conjunctive use facilities and defines the supplies, pricing and use. IEUA's inclusion in the Agreement will allow for future conjunctive use participation.

Staff's Recommendation:

1. Approve the Santa Ana River Conservation & Conjunctive Use Program - MWD Agreement; and,

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

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:* $ 0

Account/Project Name:

WR16024, SARCCUP

Fiscal Impact (explain if not budgeted):

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

Prior Board Action:

In June 2016, IEUA's Board of Directors (BOD) approved a Memorandum of Understanding with SAWPA member agencies, approved PA23, appointed IEUA's General Manager as IEUA's representative, and awarded Tom Dodson & Associates for CEQA services. In February 2019, the BOD adopted the Final SARCCUP Environmental Impact Report and authorized the Filing of Notice of Determination. In September 2019, the BOD adopted and executed the Sub Grantee Agreement between SAWPA and IEUA.

Environmental Determination:

Project Environmental Impact Report

The Final Environmental Impact Report was adopted by the IEUA Board of Directors on February 20, 2019. The Notice of Determination was filed with the Counties affected by the projects.

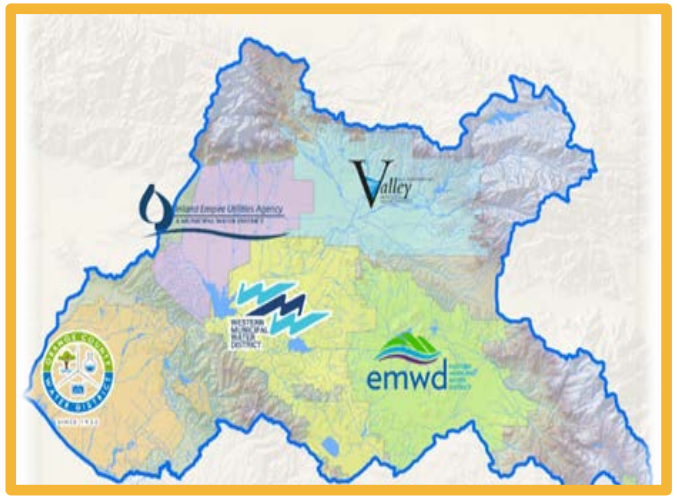
Business Goal:

Approval of the Agreement is consistent with IEUA's Business Goal of Water Reliability by promoting groundwater programs to assist the region in enhancing water supply management.

Attachments:

Attachment 1 - SARCCUP-MWD Agreement Presentation
Attachment 2 - SARCCUP-MWD Operational Term Sheet
Attachment 3 - SARCCUP-MWD Agreement

Santa Ana River Conservation & Conjunctive Use Program (SARCCUP) - MWD Agreement

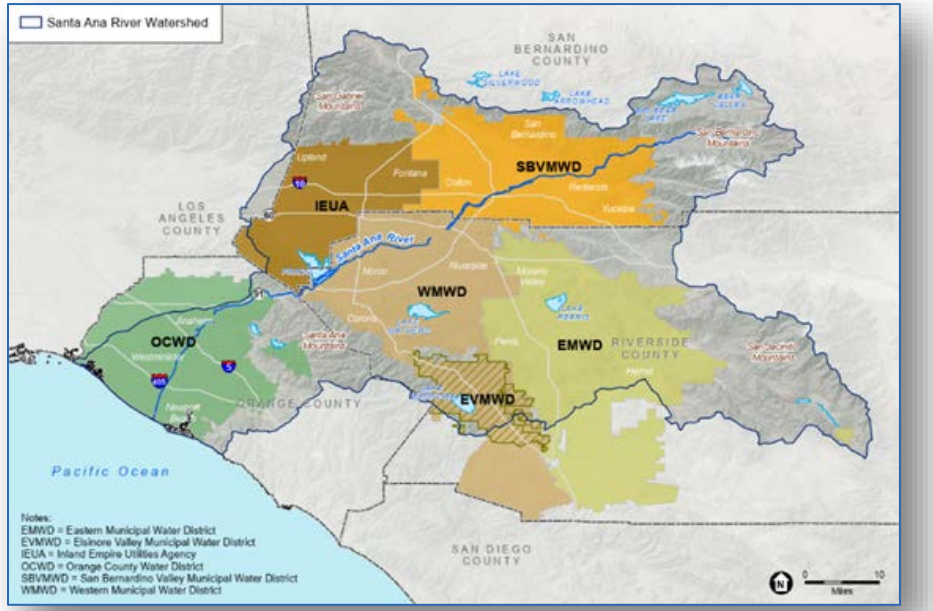


Joshua Aguilar, P.E.
Senior Engineer
October 2020

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

SARCCUP Background

- Multi-agency watershed-wide effort ($150 M)
  - Water conservation measures
  - Habitat enhancement/restoration
  - Watershed-scale water banking
- $55 M funding through Proposition 84
- IEUA was lead agency for environmental certification
- IEUA currently participates in conservation only



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

SARCCUP-Metropolitan Water District

- Metropolitan (MWD) – Valley District Agreement
  - Surplus Valley District water Purchase Agreement
  - Mutual-aid Agreement
- SARCCUP – MWD Agreement
  - Metropolitan receives access to 50% program water and makes available the remaining 50% for SARCCUP
  - Allows purchase and use of surplus Valley District Water in Metropolitan service area
  - Full service rate based on water tier, at time of delivery
  - Term: 2035
  - Agreement allows for future IEUA conjunctive use participation

SARCCUP-Metropolitan Member Agencies: [Signatories to Metropolitan Agreement]

- Eastern MWD
- IEUA
- MWDOC
- Western MWD

SARCCUP Banking Agencies:

- Eastern MWD
- Orange County WD
- Valley District
- Western MWD

Recommendation

1. Approve the Santa Ana River Conservation & Conjunctive Use Program - MWD Agreement; and,

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

*Approval of the Agreement is consistent with IEUA's Business Goal of **Water Reliability** by promoting groundwater programs to assist the region in enhancing water supply management*.

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Final
Operational Term Sheet for
MWD and SARCCUP-MWD Member Agencies' Agreement

Background

- The Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) is a multi-agency, watershed wide groundwater storage and recovery project involving multiple basins in the Santa Ana Watershed. The goal is to store available and potentially lower-cost water during wet years in local groundwater basins throughout the watershed and extract the stored water during dry years to reduce the impacts from multi-year droughts.

- Eastern Municipal Water District (EMWD), Inland Empire Utilities Agency (IEUA), Municipal Water District of Orange County (MWDOC) acting on behalf of Orange County Water District (OCWD), and Western Municipal Water District (WMWD) are all member agencies of Metropolitan Water District of Southern California (MWD), herein referred to as "SARCCUP-MWD member agencies".

- SARCCUP participants include the SARCCUP-MWD member agencies, OCWD and San Bernardino Valley Municipal Water District (Valley), herein referred to as the "SARCCUP participants".

- Valley is a State Water Project (SWP) Contractor. Valley owns SWP capacity and recharges SWP water into the San Bernardino Basin Area (SBBA) groundwater basin for the benefit of its member agencies.

- MWD is the regional imported water wholesaler that delivers water to 26-member agencies in Southern California and is also a SWP Contractor.

- It is the intent of the SARCCUP-MWD member agencies to purchase from MWD an equivalent amount of surplus Valley SWP water (Valley Water) purchased by MWD for storage in their groundwater basins.

- The Valley Water will be purchased by MWD pursuant to the MWD and Valley agreement.

Supplies

- As specified in the MWD and Valley agreement, MWD will be given the right to purchase surplus Valley Water. In that agreement, the SARCCUP-MWD member agencies may purchase from MWD up to 50% of an equivalent amount of Valley Water purchased by MWD (Base Amount) for storage in SARCCUP banking facilities. This equivalent amount of Valley Water purchased (Base Amount) could qualify as Extraordinary Supply provided that it meets the provisions of Appendix G of MWD's Water Supply Allocation Plan (Appendix G).

- Should MWD choose not to take delivery of Valley Water in a given year for its own member agencies, the SARCCUP-MWD member agencies may request MWD to purchase all available surplus Valley Water (the Base Amount plus the remaining Valley Water (Residual Amount)) at MWD's discretion for delivery to the SBBA recharge facilities on behalf of the SARCCUP-MWD member agencies. The Base Amount could qualify as Extraordinary Supply and the Residual Amount would qualify as Local Supply.

- MWD's discretion will not be unreasonably applied to purchase the Valley Water for the SARCCUP-MWD member agencies.

- SARCCUP-MWD member agencies shall have the right to pump the Residual Amount at any time.

- MWD can call on any Residual Amount remaining in the SARCCUP banking facilities, requiring the SARCCUP-MWD member agencies to pump the water in-lieu of purchasing MWD supplies. This call provision may reduce the SARCCUP-MWD member agencies' demands on MWD in a future year.

- If the water delivered under the program and designated as Extraordinary Supply is pumped from storage during a non-allocation year, such water shall be considered a Local Supply, as described in Appendix G.

Pricing

- Individual SARCCUP-MWD member agencies will be financially responsible to pay the MWD full-service volumetric rate at the time of delivery. MWD's full-service volumetric rate includes the Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

- The Readiness-to-Serve (RTS) Charge applies in all examples of SARCCUP-purchased water.

- The Capacity Charge does not apply in any examples of SARCCUP-purchased water because the deliveries are at MWD's discretion.

- The SARCCUP-purchased water would not count against the SARCCUP-MWD member agency's Tier 1 Limit (Examples I-V) but would count towards their Tier 1 Commitment in all examples. If the agency was in Tier 2 at the time of the delivery, the agency pays the Tier 2 Supply Rate. The table presents the rates and charges that apply at the time of "Put"/purchase. The applicable charges for each defined example are shown below.

Example	Scenario	Full-Service Volumetric Rate[1]	RTS Charge[2]	Capacity Charge[3]	Applies to Purchase Order Commitment[4]	Applies to Purchase Order (Tier 1/ Tier 2) Limit[4]
I	SARCCUP Banks (Direct MWD Delivery/Pump and Use Locally)	Yes	Yes	No	Yes	No
II	SARCCUP Banks (Indirect MWD Delivery/Direct Local Delivery)	Yes	Yes	No	Yes	No
III	SARCCUP Banks (Indirect MWD Delivery/In-Lieu MWD Delivery)	Yes	Yes	No	Yes	No
IV	SBBA (Storage in SARCCUP Valley Bank (50% MWD/50% SARCCUP))	Yes	Yes	No	Yes	No
V	SBBA (Storage in SARCCUP Valley Bank (0% MWD/100% SARCCUP))	Yes	Yes	No	Yes	No

Notes

[1] The MWD full-service volumetric rate (previously defined) for the SARCCUP-purchased water applies in all examples and at the time the water is delivered to the SARCCUP-MWD member agency.

[2] The Readiness-to-Serve charge applies in all examples of SARCCUP-purchased water.

[3] The Capacity Charge does not apply in any examples of SARCCUP-purchased water.

[4] The SARCCUP-purchased water would not count against the SARCCUP-MWD member agency's Tier 1 Limit (Examples I-V) but would count towards their Tier 1 Commitment in all examples. If the agency is in Tier 2 at the time of the delivery, the agency pays the Tier 2 Supply Rate.

Put Scenarios (Storage)

- Any Valley Water purchased by MWD and sold to the SARCCUP-MWD member agencies falls into three put scenarios. One or more of these scenarios may be used separately or in combination, and may involve more than one SARCCUP-MWD member agency:
  - **Put Scenario A (Direct MWD Delivery) –** Water purchased by a SARCCUP-MWD member agency for direct delivery to its SARCCUP storage facilities.
  - **Put Scenario B (Indirect MWD Delivery) –** Water purchased for one SARCCUP-MWD member agency for delivery to another SARCCUP-MWD member agency's storage facilities.
  - **Put Scenario C (Delivery to Valley) –** Delivery of a SARCCUP-MWD member agency's water to Valley's SARCCUP recharge facilities (MWD "virtual meter") for storage in the SBBA bank (outside the MWD service area).
- All deliveries are through MWD facilities or an agreed upon MWD virtual meter.

Take Scenarios (Recovery)

- Stored water recovered from a SARCCUP groundwater bank falls into two take scenarios. One or more of these scenarios may be used separately or in combination, and may involve more than one SARCCUP-MWD member agency:

- **Take Scenario 1 (Direct Local Delivery) –** Pumping and direct conveyance of stored water between SARCCUP-MWD member agencies using local interagency conveyance facilities.
- **Take Scenario 2 (In-lieu MWD Delivery) –** Pumping and local use of water by a SARCCUP-MWD member agency (pumping agency) that was stored on behalf of another SARCCUP-MWD member agency (benefitting agency), with an equivalent reduction in the pumping agency's MWD deliveries and an equivalent increase in the benefitting agency's MWD deliveries.

- No banked water is conveyed through the MWD system. Recovery of stored water is either in-lieu or direct deliveries using local conveyance facilities between SARCCUP-MWD member agencies.

Accounting

- The accounting and financial reconciliation for costs of recovering supplies will be between the SARCCUP-MWD member agencies, under a separate agreement.

- A SARCCUP Operations & Finance (O&F) Committee will be established consisting of the SARCCUP participants. The O&F Committee will analyze transactions proposed by the SARCCUP participants resulting in storage location and transfer recommendations that minimize costs in delivering water supplies.

- For purposes of accounting, the SARCCUP-MWD member agencies will provide regular updates to MWD for certification of Extraordinary Supply (in accordance with Appendix G).

Agreement Among The Metropolitan Water District of Southern California, Eastern Municipal Water District, Inland Empire Utilities Agency, Municipal Water District of Orange County, and Western Municipal Water District Regarding the Santa Ana River Conservation and Conjunctive Use Program

This Agreement Among The Metropolitan Water District of Southern California (Metropolitan), Eastern Municipal Water District (Eastern MWD), Inland Empire Utilities Agency (IEUA), Municipal Water District of Orange County (MWDOC), and Western Municipal Water District (Western MWD) Regarding the Santa Ana River Conservation and Conjunctive Use Program (Agreement) is hereby entered into as of _____, 2020. Metropolitan, Eastern MWD, IEUA, MWDOC, and Western MWD are collectively referred to as "Parties" and individually as a "Party."

RECITALS

A. Metropolitan is a metropolitan water district organized under the Metropolitan Water District Act, codified at section 109-1, et seq. of West's Appendix to the California Water Code, and is engaged in developing, storing, and distributing water in the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura. Metropolitan has a long-term contract with the California Department of Water Resources (DWR) which sets forth the terms and conditions of Metropolitan's participation in the State Water Project (SWP).

B. Eastern MWD is a California municipal water district formed and existing under the California Municipal Water District Act of 1911, Sections 71000 et seq. of the California Water Code, for the purpose of providing water services and certain other services. Eastern MWD's powers and purposes include the acquisition within or without the district's boundaries in the State of California of all necessary property or rights in property necessary or proper for

the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and the power to contract with one or more public agencies in carrying out any of its powers. Eastern MWD is a member agency of Metropolitan.

C. IEUA is a California municipal water district formed and existing under the California Municipal Water District Act of 1911, Sections 71000 et seq. of the California Water Code, for the purpose of supplying supplemental water to the Chino Basin and certain other services. IEUA's powers and purposes include the acquisition within or without the agency's boundaries in the State of California of all necessary property or rights in property necessary or proper for the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and the power to contract with one or more public agencies in carrying out any of its powers. IEUA is a member agency of Metropolitan.

D. MWDOC is a municipal water district formed and existing under the California Municipal Water District Act of 1911, Sections 71000 et seq. of the California Water Code, for purposes that include providing its 28 member agencies in Orange County, including Orange County Water District, with reliable, high quality supplies from Metropolitan and other sources to meet present and future needs, at an equitable and economic cost, and to promote water use efficiency for all of Orange County. MWDOC is a member agency of Metropolitan. One of MWDOC's member agencies, Orange County Water District (OCWD), undertakes the responsibilities associated with actively managing the OCWD groundwater basin. OCWD was formed by an act of the California State Legislature in 1933 for the purpose of protecting and managing the Orange County groundwater basin.

E. Western MWD is a California municipal water district formed and existing under the California Municipal Water District Act of 1911, Sections 71000 et seq. of the California

Water Code, for the purpose of providing water services and certain other services. Western MWD's powers and purposes include the acquisition within or without the district's boundaries in the State of California of all necessary property or rights in property necessary or proper for the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and the power to contract with one or more public agencies in carrying out any of its powers. Western MWD is a member agency of Metropolitan.

F. In 2014, Eastern MWD, IEUA, OCWD, Western MWD, and the San Bernardino Valley Municipal Water District (Valley District) entered into a Memorandum of Understanding (2014 MOU). Valley District is engaged in developing, transporting, storing, treating, and wholesale delivery of water in portions of the counties of San Bernardino and Riverside. Like Metropolitan, Valley District has a long-term contract with DWR which set forth the terms and conditions of its participation in the SWP. Valley District recharges SWP water into the San Bernardino Basin Area (SBBA) for the benefit of its member agencies. The purpose of the 2014 MOU is to collaborate in the exploration, analysis and implementation of a large-scale, regional water supply reliability project, known as the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP). The SARCCUP is a multi-agency, watershed-wide groundwater storage and recovery project involving multiple basins in the Santa Ana Watershed. The goal is to store available water during wet years in local groundwater basins throughout the watershed and extract the stored water during dry years to reduce the impacts from multi-year droughts. Eastern MWD, IEUA, MWDOC, and Western MWD are collectively referred to as the "SARCCUP Member Agencies" and individually as a "SARCCUP Member Agency."

G. The SARCCUP includes four water banking sites. Three of the sites are located within Metropolitan's service area. More specifically, they are located in the service areas of

Eastern MWD, Western MWD, and MWDOC. The facilities within MWDOC's service area are located within, owned, and operated, by OCWD. The fourth site is the SBBA, which is located outside of Metropolitan's service area and within Valley District's service area. The owners of the four water banking sites are responsible for all operating decisions for those water banking facilities including the quantity of water that they store and extract within the water banks under the SARCCUP.

H. Valley District and Metropolitan entered into a Coordinated Operating and Surplus Water Agreement, dated _____, whereby Valley District may offer to sell to Metropolitan, and Metropolitan may purchase from Valley District, surplus water.

I. Under this Agreement, Metropolitan will sell to the SARCCUP Member Agencies an amount of water equivalent to the amount of water Metropolitan purchases from Valley District without such water counting against a SARCCUP Member Agency's annual Tier 1 limit or incurring Metropolitan's capacity charge. Some of the water Metropolitan sells to the SARCCUP Member Agencies under this Agreement may be temporarily stored in the SBBA. An amount of water equivalent to up to half of the water that Metropolitan purchases from Valley District may qualify as Extraordinary Supply under Metropolitan's Water Supply Allocation Plan. Metropolitan may also make a call on water stored by the SARCCUP Member Agencies in Valley District's SBBA pursuant to this Agreement that has not qualified as Extraordinary Supply.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and the representations, warranties, covenants and agreements contained in this Agreement and for other good and

valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, the Parties hereby agree to the following terms and conditions of this Agreement.

1. Consultation between Metropolitan and the SARCCUP Member Agencies

A. By June 15th of each calendar year subsequent to the execution of this agreement, Metropolitan will inform the SARCCUP Member Agencies of the amount of water, if any, that Metropolitan will purchase from Valley District and, of that amount, how much water, if any, Metropolitan is willing to deliver to the SARCCUP Member Agencies at Valley District's connection to the SWP and/or Metropolitan's service connections to the SARCCUP Member Agencies. Metropolitan has discretion whether to purchase any or all of the water Valley District offers to Metropolitan within a calendar year. No SARCCUP Member Agency may purchase water from Valley District.

B. Metropolitan will allocate equally to those SARCCUP Member Agencies requesting water an equivalent amount of water of at least 50% of the amount that Metropolitan purchases from Valley District during a calendar year, provided that those SARCCUP member agencies requesting water may modify the allocation by unanimous written agreement among themselves. Each SARCCUP Member Agency will inform Metropolitan of the amount, if any of the allocated water, that the SARCCUP Member Agency will purchase and accept for delivery at Valley District's connection to the SWP and/or Metropolitan's service connections to the SARCCUP Member Agencies. The SARCCUP Member Agencies will notify Metropolitan by August 15th of each year of these amounts.

2. Delivery to SARCCUP Member Agencies at Valley District's Connection to the SWP

Metropolitan will deliver to the SARCCUP Member Agencies at Valley District's connection to the SWP during a calendar year the amount that the SARCCUP Member Agencies previously notified Metropolitan they would accept under Section 1(B). Such deliveries will be scheduled and delivered at times and rates acceptable to Metropolitan, Valley District, and the relevant SARCCUP Member Agencies. Water that Metropolitan delivers to Valley District's connection to the SWP may be stored temporarily within Valley District's service area but must be used in Metropolitan's service area during the term of this Agreement. Water purchased from Metropolitan and delivered into Valley District's service area that does not qualify as Extraordinary Supply shall be considered local supply under Metropolitan's Water Supply Allocation Plan.

3. Billing and Payment

Metropolitan will bill each SARCCUP Member Agency individually and each SARCCUP Member Agency will pay Metropolitan's rate for full service untreated water or full service treated water in effect at the time of the sale of water to the SARCCUP Member Agency. Water purchased by a SARCCUP Member Agency will be counted as water delivered for purposes of meeting that SARCCUP Member Agency's purchase order commitment. Upon Metropolitan's approval of a SARCCUP Member Agency certification of each monthly delivery, the following exceptions will apply: (a) such purchases will not count against a SARCCUP Member Agency's annual Tier 1 limit; and (b) Metropolitan's capacity charge will not apply to such purchases. The sale of water under this Agreement will be included in the calculation of the Ten-Year Rolling Sales Average for purposes of Metropolitan's Readiness-to-Serve Charge at

the time water is sold to the SARCCUP Member Agencies. Metropolitan's invoices will separately identify the quantities of water subject to this Agreement.

4. Extraordinary Supply Benefit

An amount equivalent to up to half of the amount of water Metropolitan purchases from Valley District during a calendar year, if stored by the SARCCUP Member Agencies during the same calendar year in either a SARCCUP Member Agency's groundwater basin or in Valley District's SBBA, in accordance with Appendix G of Metropolitan's Water Supply Allocation Plan (or as any successor to such plan), will qualify as Extraordinary Supply. The amount of Extraordinary Supply available to each SARCCUP Member Agency under this Agreement may not exceed the allocation provided under Section 1(B). However, in the event that the SARCCUP Member Agencies' combined purchases exceed 50% of the amount that Metropolitan purchases from Valley District, the amount of Extraordinary Supply available to each SARCCUP Member Agency that purchases water will be equal, provided that those SARCCUP Member Agencies purchasing water may, by unanimous written agreement among themselves, re-allocate the total amount of Extraordinary Supply available to each SARCCUP Member Agency that purchases water.

5. Extraordinary Supply Benefit Regarding OCWD

Metropolitan will assign any Extraordinary Supply benefit that would accrue to MWDOC as result of actions taken by OCWD, in accordance with a separate agreement among Metropolitan, MWDOC, OCWD, and the Cities of Anaheim, Fullerton, and Santa Ana.

6. Pumping of Stored Water and Reduction in Purchases from Metropolitan

Upon written notice provided by Metropolitan, a SARCCUP Member Agency will pump a requested amount of water it has in storage in Valley District's SBBA at the time Metropolitan

makes the request, less the amount of water that has qualified as Extraordinary Supply at the time Metropolitan makes the request. The SARCCUP Member Agency will also reduce its purchases of water from Metropolitan by an equivalent amount. The SARCCUP Member Agency may pump stored water prior to the time Metropolitan makes a request.

7. Record Keeping

SARCCUP Member Agencies and Metropolitan will keep records of water purchased, delivered, and stored pursuant to this Agreement. The records of each Party relevant to this Agreement will be open to inspection by the other Parties upon reasonable notice. The Parties will cooperate to develop coordinated administrative procedures for the tracking required under this Agreement.

8. Metropolitan's Administrative Code

Unless otherwise specifically provided for in this Agreement, Metropolitan's Administrative Code will continue to apply to the relationship between Metropolitan and the SARCCUP Member Agencies.

9. Termination

This Agreement will terminate on December 31, 2035 unless the State Water Contract between Metropolitan and the State of California is extended past 2035, in which case, this Agreement will have the same termination date. After 2035, this Agreement may be terminated upon five-years' notice provided in writing by Metropolitan to all other Parties.

10. Late Arising Claims

If a claim arising under or with respect to one or more terms of this Agreement has not been resolved when such term terminates, or if such a claim is brought after this Agreement has terminated, but within the period of time for bringing such a claim under California law (Late

Arising Claim), the provisions of this Agreement shall continue in full force and effect for such additional period of time as is necessary to resolve such claims and to satisfy the rights and obligations of the Parties hereto with respect thereto.

11. Indemnity Clause

Liability and indemnification shall be determined pursuant to section 4502 of Metropolitan's Administrative Code. Metropolitan provides no warranty or guarantee regarding the quality or content of its untreated water or the suitability of its use for storage in groundwater basins. SARCCUP Member Agencies acknowledge that they accept untreated water "as is."

12. Informal Mediation

In the event of a dispute between the Parties regarding this Agreement, the Parties may attempt to resolve the dispute by using the services of a mutually acceptable mediator. If the Parties decide to use a mediator, they will equally share the mediator's fees and expenses.

13. Successors and Assigns

This Agreement shall bind and inure to the benefit of the successors and assigns of the Parties; provided, however, no Party shall assign any of its rights or obligations under this Agreement without the prior written consent of the other Parties. Nothing in this Agreement is intended to confer any right or remedy under this Agreement on any person other than the Parties to this Agreement and their respective successors and permitted assigns, or to relieve or discharge any obligation or liability of any person to any Party to this Agreement, or to give any person any right of subrogation or action over or against any Party to this Agreement.

14. Waiver/Cure of Defaults

The failure of any Party to enforce against another Party a provision of this Agreement shall not constitute a waiver of that Party's right to enforce such a provision at a later time. No

Party shall be deemed to be in default of any provision of this Agreement unless the other Party has given written notice specifically stating the alleged default and the Party in default fails to cure the default within sixty (60) days of receipt of such written notice.

15. Construction of Agreement

The language in all parts of this Agreement shall be in all cases construed simply according to its fair meaning and not strictly for or against any of the Parties, and Section 1654 of the Civil Code has no application to interpretation of this Agreement. The recitals and all exhibits and schedules to this Agreement are part of this Agreement and are incorporated herein by this reference.

16. Entire Agreement

This Agreement constitutes the final, complete and exclusive statement of the terms of the agreement among the Parties pertaining to the matters provided herein during the term and supersedes all prior and contemporaneous understandings or agreements of the Parties related thereto. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

17. Severability

In the event that a court of competent jurisdiction determines that a provision included in this Agreement is legally invalid or unenforceable and such decision becomes final, the Parties to this Agreement shall use their best efforts to (i) within thirty (30) days of the date of such final decision, identify by mutual agreement the provisions of this Agreement which must be revised, and (ii) within three (3) months thereafter promptly agree on the appropriate revision(s). The time periods specified above may be extended by mutual agreement of the Parties. Pending the completion of the actions designated above, to the extent it is reasonably practical and can be

done without violating any applicable provisions of law, the provisions of this Agreement, which were not found to be legally invalid or unenforceable in the final decision, shall continue in effect. If the Parties cannot agree on appropriate revisions, this Agreement shall be terminated, and the Parties will return any water owed to each other.

18. Force Majeure

All obligations of the Parties other than monetary or payment obligations shall be suspended for so long as and to the extent the performance thereof is prevented, directly or indirectly, by earthquakes, fires, tornadoes, facility failures, floods, strikes, other casualties, acts of God, orders of court or governmental agencies having competent jurisdiction, or other events or causes beyond the control of the Parties. In no event shall any liability accrue against a Party, to its officers, agents or employees, for any damage arising out of or connected with a suspension of performance pursuant to this section. All time limits to perform and the term of the Agreement shall be extended by a period of time equivalent to the length of suspension.

19. Notices

All notices, requests, and demands hereunder (Notices) shall be in writing, including electronic communications, and shall be deemed to have been duly given when delivered (or, if mailed, postage prepaid, on the third business day after mailing, if that date is earlier than actual delivery). Notices shall be sent to a Party at the address of that Party set forth below or, if such Party has furnished notice of a change of that address as herein provided, to the address of that Party most recently so furnished.

Metropolitan Water District of Southern California
Attention: General Manager
P.O. Box 54153
Los Angeles, CA 90054-0153

Eastern Municipal Water District
Attention: General Manager
P.O. Box 8300
Perris, CA 92572-8300

Inland Empire Utilities Agency
Attention: General Manager
6075 Kimball Ave.
Chino, CA 91708

Municipal Water District of Orange County
Attention: General Manager
P.O. Box 20895
Fountain Valley, CA 92708

Western Municipal Water District
Attention General Manager
14205 Meridian Pkwy
Riverside, CA 92518

20. Further Assurances

Each Party hereto, upon the request of the other, agrees to perform such further acts and to execute and deliver such other documents as are reasonably necessary to carry out the provisions of this instrument.

21. Governing Law

The validity, construction, and enforceability of this Agreement shall be governed in all respects by the laws of the State of California.

22. Counterparts

This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

In WITNESS WHEREOF, the Parties have caused this Agreement to be executed by the following duly authorized representatives.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By:_____ _____
Jeffrey Kightlinger Dated
General Manager

APPROVED AS TO FORM:

By:_____
Marcia L. Scully
General Counsel

EASTERN MUNICIPAL WATER DISTRICT

By: _____ _____
Paul D. Jones II Dated
General Manager

APPROVED AS TO FORM:

Olivarez, Madruga, Lemiuex & O'Neill

By: _____
Steven O'Neill

INLAND EMPIRE UTILITIES AGENCY

By: _____ _____
Shivaji Deshmukh Dated
General Manager

APPROVED AS TO FORM:

JC Law Firm

By: _____
Jean Cihigoyenetche

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

By: _____ _____
Robert Hunter Dated
General Manager

APPROVED AS TO FORM:

Best, Best & Krieger

By: _____
Joseph Byrne

WESTERN MUNICIPAL WATER DISTRICT

By: _____ _____
Craig Miller Dated
General Manager

APPROVED AS TO FORM:

Best Best & Krieger LLP

By: _____
Jeffry F. Ferre

Engineering, Operations, and Water Resources Committee

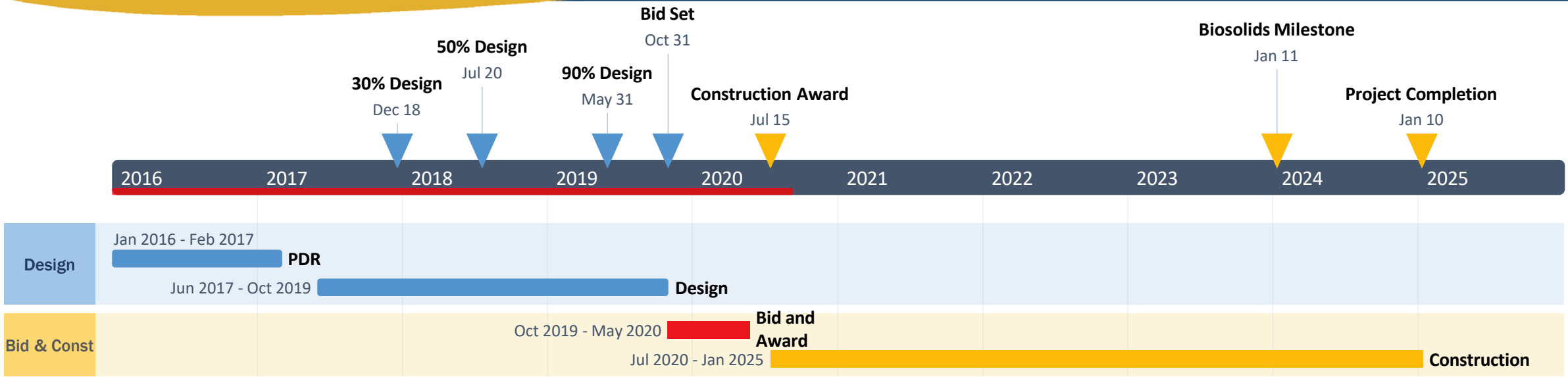
INFORMATION ITEM 3A

RP-5 Expansion
Project Update: October 2020
Project Nos. EN19001 and EN19006

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Brian Wilson, P.E. CCM
October 2020

RP5: Project Schedule Overview



Data date: 9/30/2020
Days expended: 77
Total Contact Days:1640
Percent Time Expended: 4.7%

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5:Project Status

Role	Firm	Contract	Payments	% Complete
Contractor	WM Lyles	$ 329,982,900	$ -	0%
Designer	Parsons	$ 31,685,239	$ 22,193,325	70%
Construction Management	Arcadis	$ 21,125,523	$ 1,618,331	8%

	Award	Duration	Completion	% Complete
Construction Schedule	7/15/2020	1640	1/10/2025	4.7%

Data as of 9/30/2020

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5: Major Activities

- **W.M. Lyles:**
  - Preliminary Baseline Schedule
  - Preliminary Schedule of Values
  - Submittals
  - Subcontracts
  - Procurement contracts
  - Fence Site Screening
  - Preconstruction Video
  - Laydown area preparation

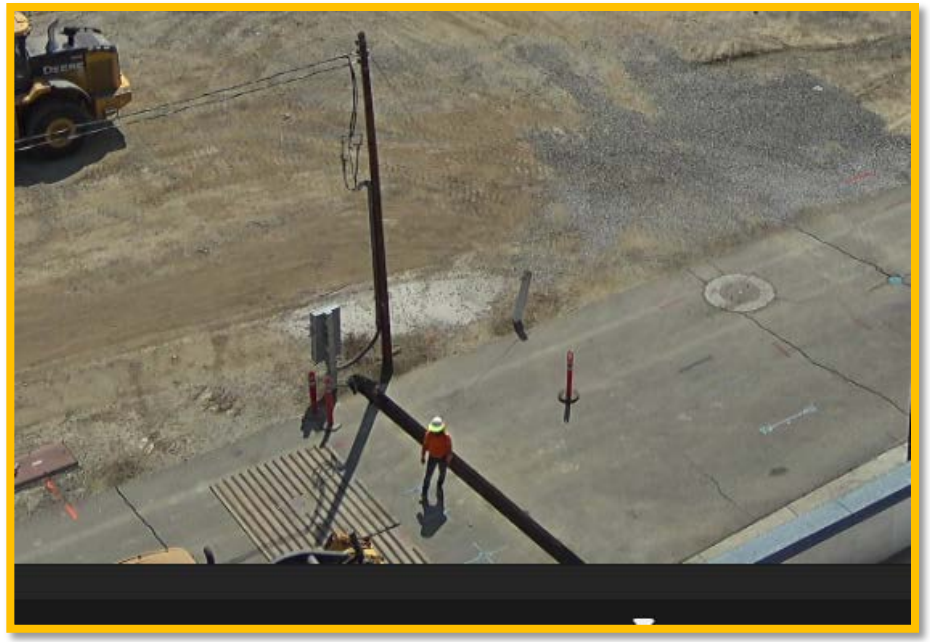
Trailer Complex Mobilization

- **Construction Start: Approximately November**

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5: Major Activities

- **Shutdown Plans**
  - Secondary Clarifier 4A (MBR Phase 1)
  - Switchgear 2 (Contractor trailer power)



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5: Major Activities

- **Wildfire Smoke**

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

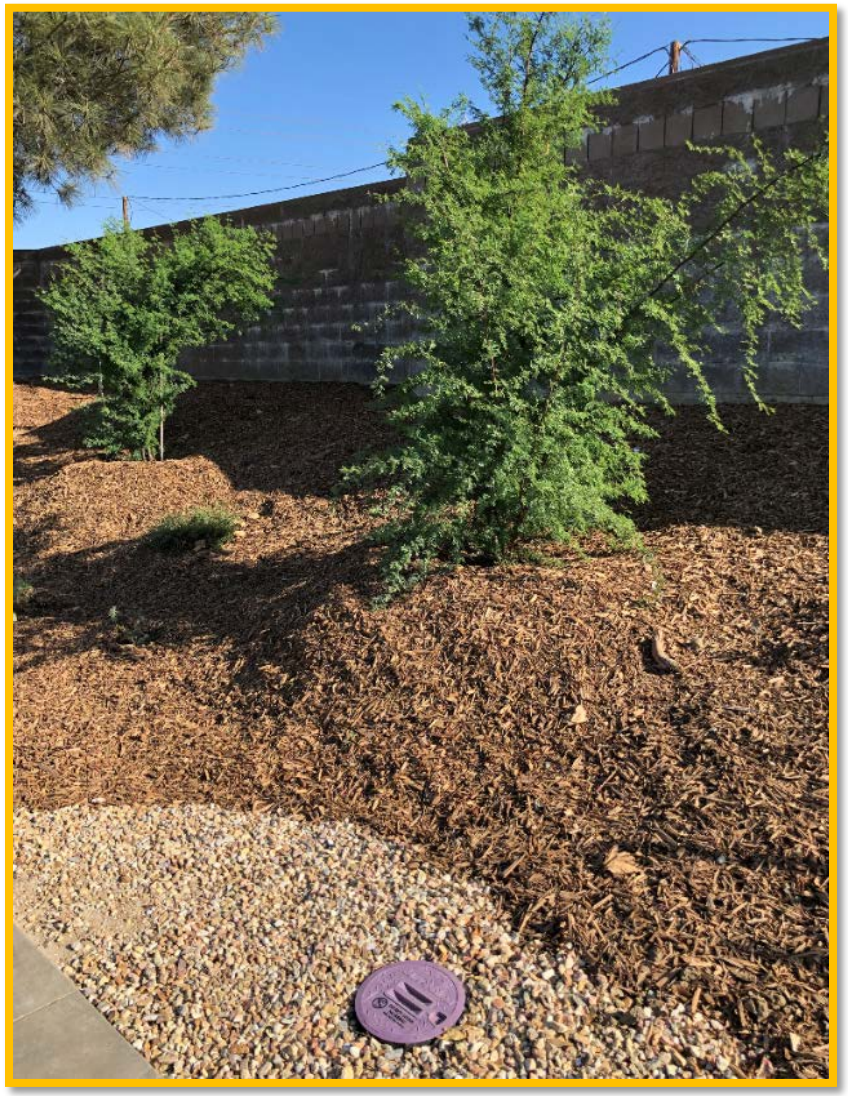
RP-5: Trailer Complex

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5: Kimball Ave Landscaping for RP-5 Expansion

- Landscaping to screen public view of RP-5 along Kimball Ave

- Completed end of September



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

INFORMATION ITEM 3B

Date: October 21, 2020

To: The Honorable Board of Directors **From:** Shivaji Deshmukh, General Manager

Committee: Engineering, Operations & Water Resources *10/14/20*

Executive Contact: Christiana Daisy, Executive Manager of Engineering/AGM

Subject: Planning & Environmental Resources Annual Reports (Water Use, Recycled Water, and Energy)

Executive Summary:

The Inland Empire Utilities Agency (IEUA) monitors and compiles water use data for the Annual Water Use Report. IEUA tracks overall water demands and sources of supply from each of its retail agencies. Total water consumption within IEUA's service area for FY 2019/20 was 192,100 AF, a 1.7% increase from FY 2018/19.

IEUA's Recycled Water Annual Report provides annual delivery data by retail member agencies, by usage types, and by customers. Total recycled water demands during FY 2019/20 were 30,495 acre-feet (AF), an increase of 8% from the previous fiscal year.

IEUA's energy consumption, renewable generation performance, and energy efficiency projects are reported in the Annual Energy Report. IEUA consumed 75,703 MWh of electricity, an increase of 3% from FY 2018/19, of which 10% was generated by its renewable sources.

Staff's Recommendation:

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

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* N *Amount for Requested Approval:* $ 0

Account/Project Name:

N/A

Fiscal Impact (explain if not budgeted):

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

Prior Board Action:

N/A

Environmental Determination:

Not Applicable

Business Goal:

The Planning & Environmental Resources Annual Reports (Water Use, Recycled Water, and Energy) are consistent with the Agency's Business Goals of Business Practices and Environmental Stewardship by providing an evaluation of Agency activities and being committed to the responsible use and protection of the environment through conservation and sustainable practices.

Attachments:

Attachment 1 - IEUA FY 2019/20 Annual Water Use Report
Attachment 2 - IEUA FY 2019/20 Annual Recycled Water Report
Attachment 3 - IEUA FY 2019/20 Annual Energy Report

2020

IEUA FY 2019-2020 Annual Water Use Report:

Retail Agency Water Use and Five Year History

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Table of Contents

Preface

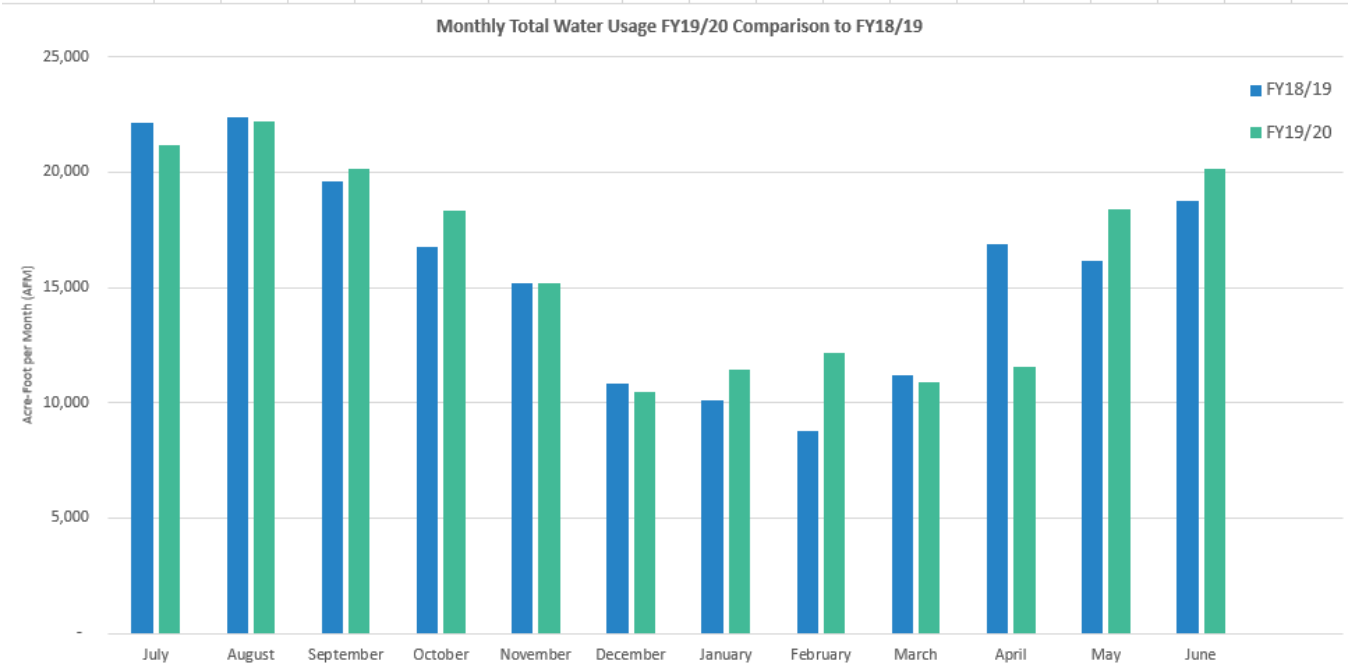
FY 2019-2020 Water Use Summary Report

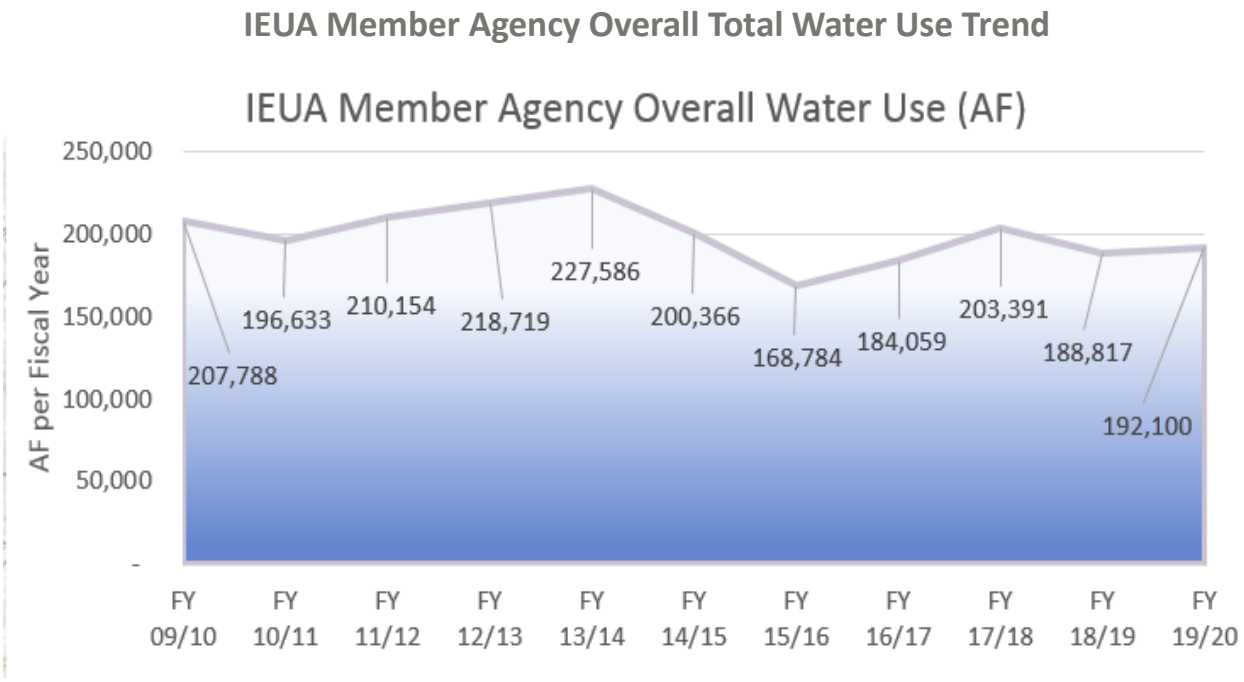
Inland Empire Utilities Agency (IEUA) monitors and compiles water use data from each of its retail agencies to track overall water demands and sources of supply. Each year, this data is compiled into an Annual Water Use Report. Data includes monthly water use by member agency and by source of supply, a five-year history of water use, and retail agency water usage as a percentage of the total water used in the service area.

Total water consumption within IEUA's service area for FY 19/20 was 192,100 AF. This is roughly a 1.7% increase (3,283 AF) from FY 2018/19 consumption of 188,817 AF. The region is now using approximately 15% less water than before the recent drought in FY 13/14 when consumption was at 227,586 AF. Despite an increase in overall usage from last year, Metropolitan Water District (MWD) Tier 1 imported water usage in the region has decreased from 63,230 AF in FY 18/19 to 49,035 AF in FY 19/20. The reduction in imported water was met by increased use of other local water sources, including a voluntary withdrawal of 17,395 AF from the MWD Dry Year Yield Conjunctive Use Program (DYY) by Cucamonga Valley Water District.

IEUA anticipates a slight increase in FY20/21 water usage due to the continually growing population in the region and the general climate change trend of projected temperature increases. However, long-term demands are not expected to exceed the peak 10 year demand of 227,586 AF reached during the FY 13/14 drought. Current water usage is below the low demand forecast outlined in IEUA's 2015 Integrated Resources Plan (IRP). This analysis came from demand modeling conducted as part of the IRP and Urban Water Management Plan (UWMP) which found

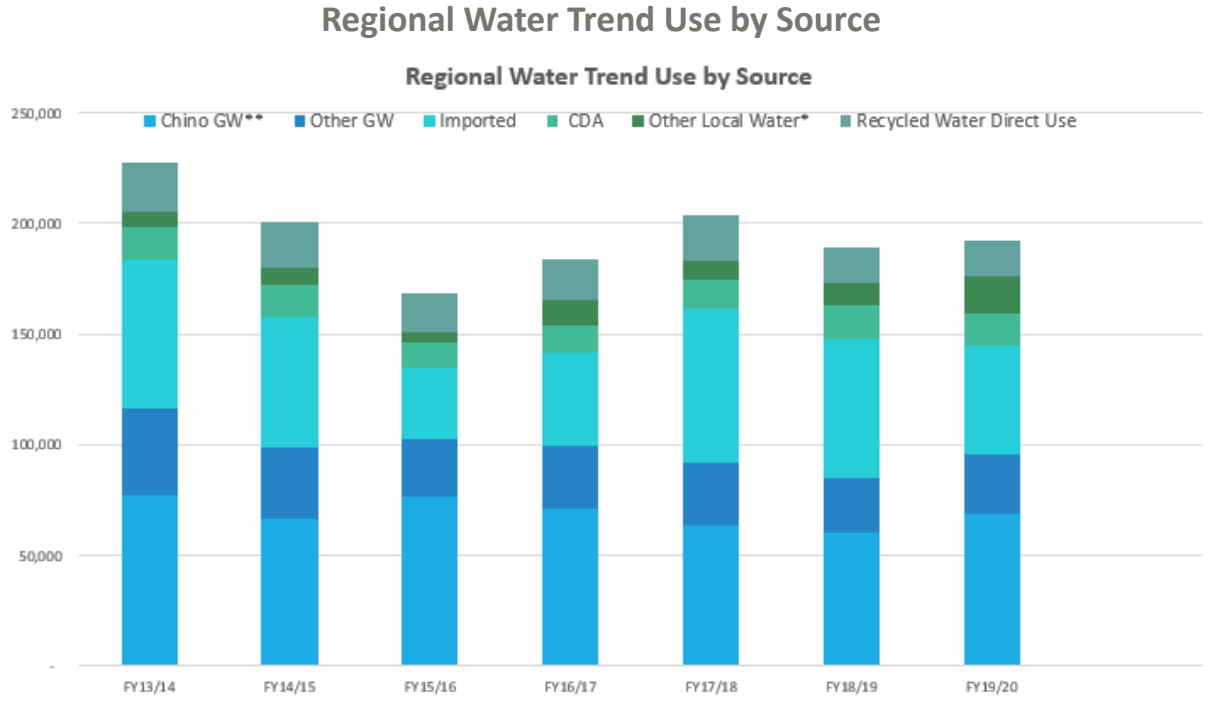
Total Regional Monthly Water Usage FY 19/20 Comparison to FY18/19





Note: Total Water Use Data includes imported water, surface water, groundwater, recycled and desalter production. Excludes IEUA groundwater recharge

that new developments in the region are more water efficient due to changes in the plumbing code, higher density developments with less landscaping, and compliance landscape ordinance requirements set forth in AB1881. FY19/20 usage is roughly 9% below the 2020 predicted usage found in the low demand IRP forecast. A continual focus on water use efficiency and per capita reductions, as required in SB X7-7, is anticipated to continue reducing per capita water use and demands.



**Other Local Water includes purchases from local water companies such as SAWCo and WECWC;*

***FY19/20 includes 17,395AF voluntary production from MWD's Dry Year Yield Conjunctive Use Program*

In addition, the region is continuing to diversify and maximize local resource development including recycled water, expand water use efficiency programs, and increase groundwater storage as outlined in the IRP. These efforts will continue to prepare the service area to cope with future dry years and increase regional resiliency in the face of climate change.

Below is a summary and update on the region's major water supply efforts and programs:

- *Water Use Efficiency (WUE)*: IEUA and its member agencies continue to offer water use efficiency programs outlined in the 2015-2020 Regional Water use Efficiency Business Plan. With outdoor irrigation accounting for 60% of total urban water demand, the recent focus has been to increase efficiency programs targeting outdoor irrigation. IEUA and the Metropolitan Water District (MWD) continue to provide a combined Turf Replacement Rebate of $3 per square foot of turf removed. IEUA's new WUE efforts include a pilot study, co-sponsored by MWD, whose goal is to quantify the water savings achieved by conducting minor irrigation repairs on residential homes. IEUA has also started to offer a direct discount program on smart home water usage trackers.

- *RP-5 Upgrade:* The addition of a new membrane bio-reactor to the RP-5 facility in Chino will allow for greater treatment and recycled water recovery. The RP-5 expansion project construction award was approved July 15th, 2020 and construction is scheduled to last until 2025. The project received $196.4 million in funding from the EPA in the form of a Water Infrastructure Finance and Innovation Act (WIFIA) Loan.

- *Lower Day Basin Improvements:* Improvements to the Lower Day Basin are currently under construction with the goal of improving the basin storage and stormwater capture capabilities for groundwater recharge. The total project budget is $4 million and construction is expected to be completed November 2020.

- *2020 Urban Water Management Plan (UWMP):* As required in the California Water Code, IEUA has begun preparation of the 2020 UWMP. The 2020 UWMP supports long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. The latest version of the UWMP will be focused on IEUA from a wholesale perspective. A draft available for public comment is expected for release Q1 of 2021, pending the release date of the 2020 UWMP guidebook by the California Department of Water Resources.

IEUA would like to thank its member agencies for their assistance in compiling the data contained in this report. Specifically, Amanda Coker (City of Chino), Mark Wiley (City of Chino Hills), Praseetha Krishnan & Eduardo Espinoza (Cucamonga Valley Water District), Cris Fealy & Josh Swift (Fontana Water Company), Van Jew & Michelle Licea (Monte Vista Water District), Chris Bonadurer (City of Ontario), Roberta Thomas (San Antonio Water Company), and John Robles, Norberto Ferreira, & Rosemary Hoerning (City of Upland).

SECTION 1

Total Water Resources Data from FY 19/20

Total IEUA Service Area Water Use For FY 19/20

FY 19-20		Total IEUA Service Area Water Use by Retail Agency for FY 19-20 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	4,960	1,700	6,509	3,390	14,343	9,212	8,921	0	49,035
	Recycled (Direct Use)	4,795	1,417	7,817	703	1,038	211	298	0	16,278
Subtotal		**9,755**	**3,117**	**14,326**	**4,093**	**15,381**	**9,423**	**9,218**	**0**	**65,313**
Production	Chino Groundwater	5,208	1,472	18,135	2,449	23,315**	10,427	7,524	614	69,144
	Other Groundwater	0	0	0	1,112	3,618	12,997	0	8,708	26,436
	Local Surface Water	0	0	0	0	4,744	4,957	0	6,951	16,652
Subtotal		**5,208**	**1,472**	**18,135**	**3,561**	**31,677**	**28,381**	**7,524**	**16,274**	**112,232**
Purchases from Other Agencies	CDA	4,341	3,669	6,639	0	0	0	0	0	14,649
	MVWD*	0	6,235	0	0	0	0	0	0	6,235
	SAWCo Water	0	0	566	9,015	0	0	0	0	9,581
	West End	0	0	0	1,851	0	0	0	0	1,851
	CVWD	0	0	0	0	0	0	0	0	0
Subtotal		**4,341**	**9,904**	**7,205**	**10,866**	**0**	**0**	**0**	**0**	**32,316**
Sales to Other Agencies*	Chino Hills	0	0	0	0	0	0	-7,707	0	-7,707
	Ontario	0	0	0	0	0	0	0	-565	-565
	Upland	0	0	0	0	0	0	0	-8,832	-8,832
	MVWD	0	0	0	0	0	0	0	-657	-657
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-7,707**	**-10,054**	**-17,761**
	Total	**19,303**	**14,493**	**39,666**	**18,520**	**47,059**	**37,804**	**9,035**	**6,219**	**192,100**

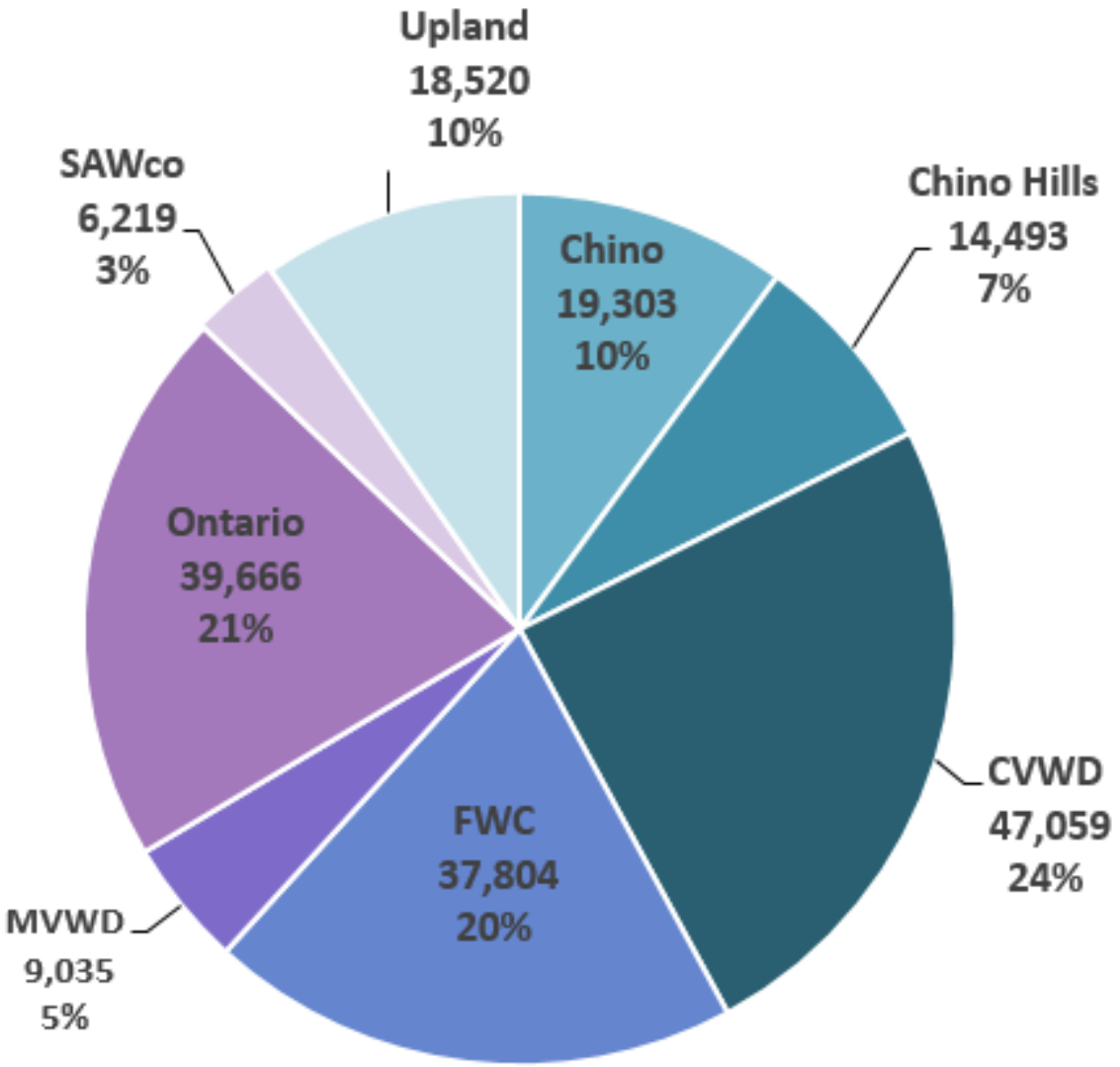
* MVWD sales are a blend of Chino Groundwater and Imported Water

**Chino Groundwater includes 17,395 AF of Dry Year Yield production by CVWD

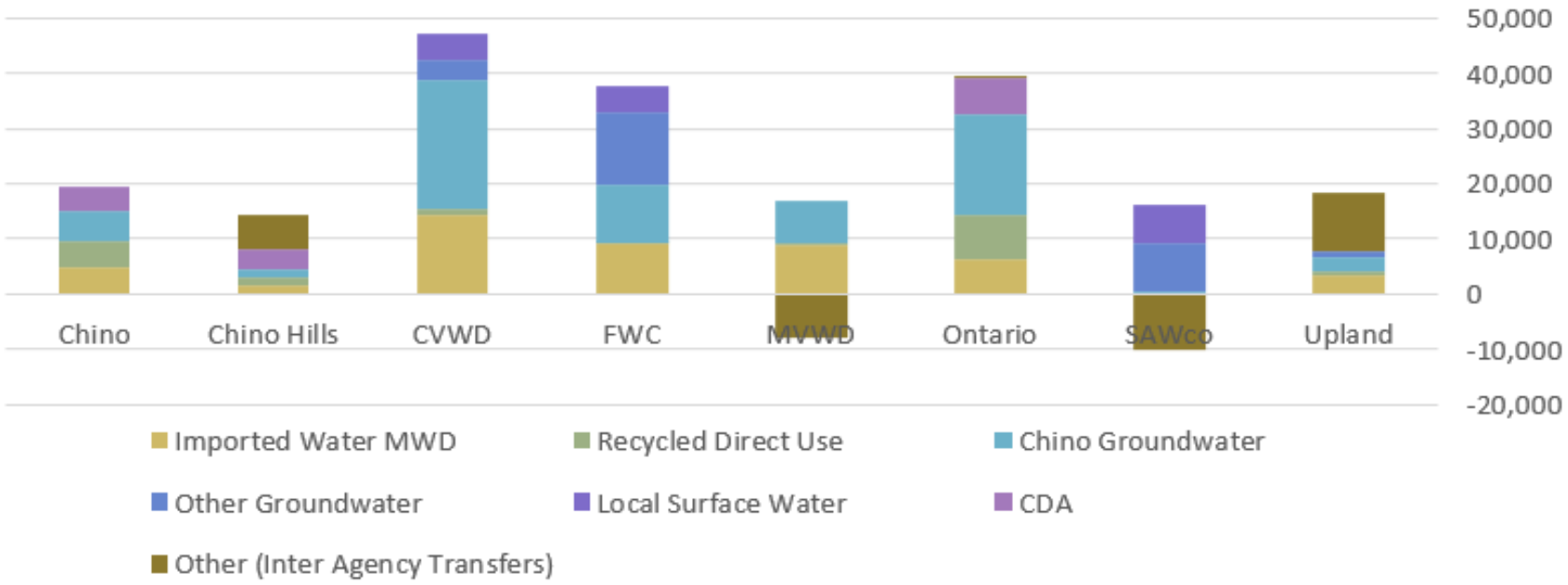
Note: All recycled water numbers in this report are based off IEUA operations data and are for direct use only.

Recycled water used for groundwater recharge may be found in the Recycled Water Report.

Total IEUA Service Area Water Use For FY 19/20



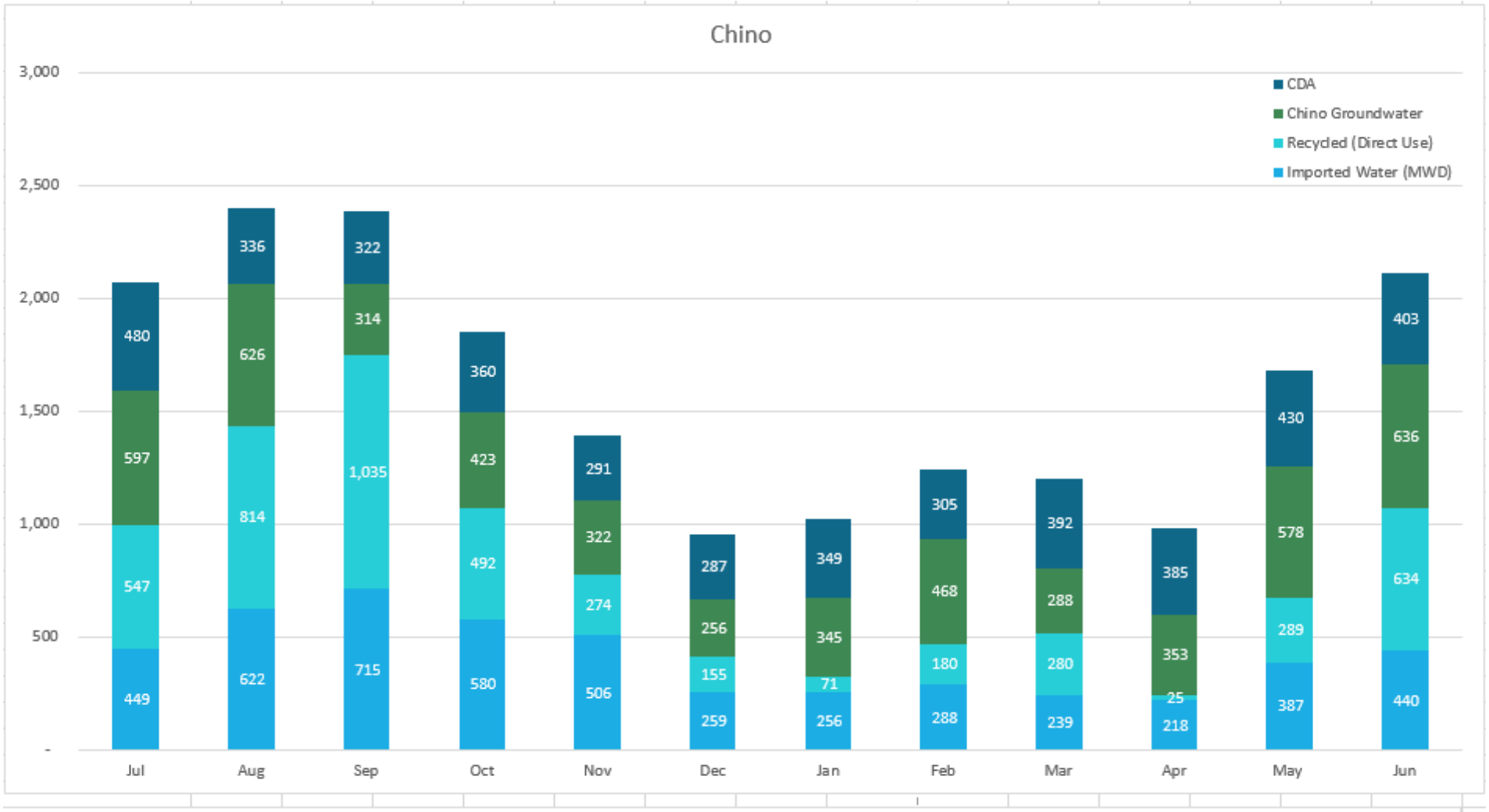
Total IEUA Service Area Water Use For FY 19/20



SECTION 2

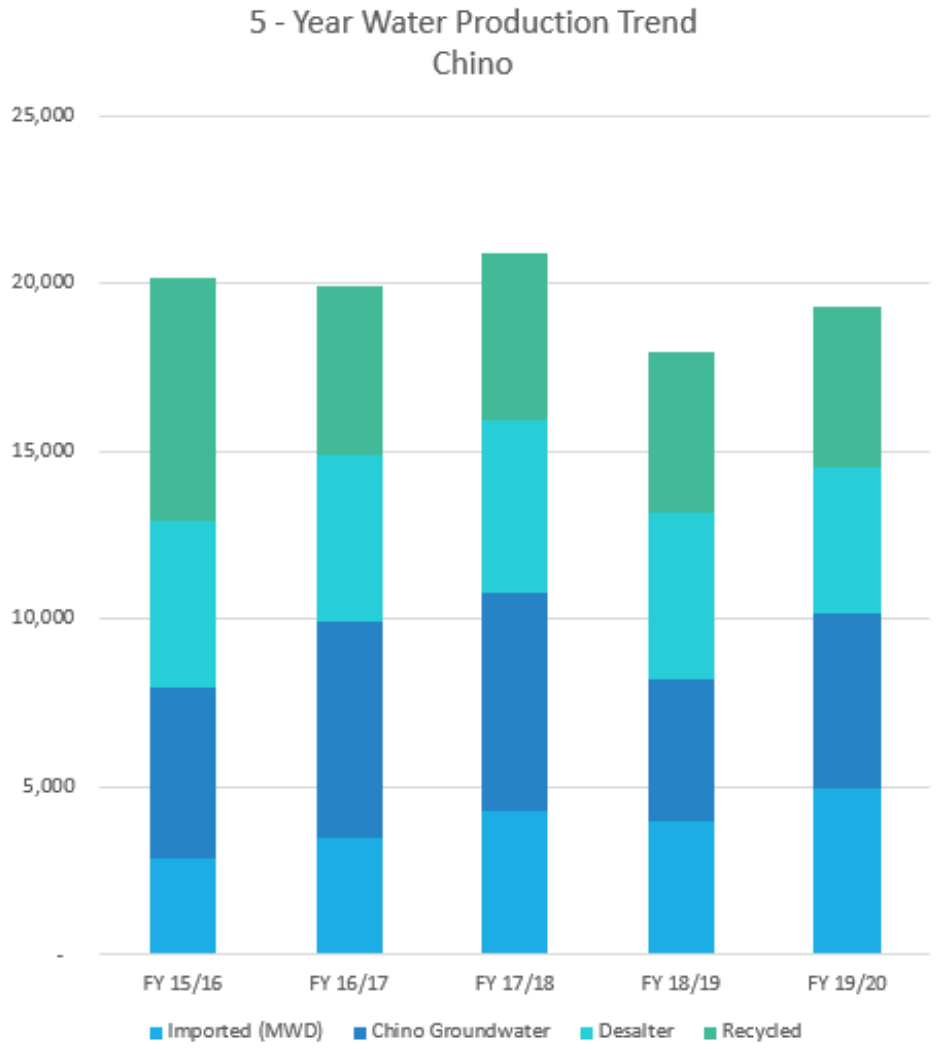
Retail Water Use Data from FY 19/20 by Agency

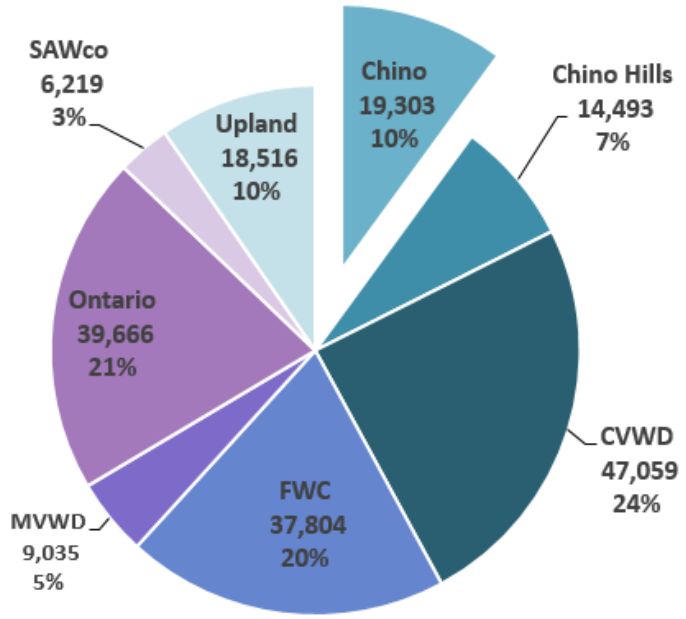
FY 19/20 Water Use Report City of Chino



FY 19/20 Water Use Report

City of Chino





In FY 2019/20, The City of Chino used 10% (19,303 AF) of 192,095 AF used in the IEUA service area.

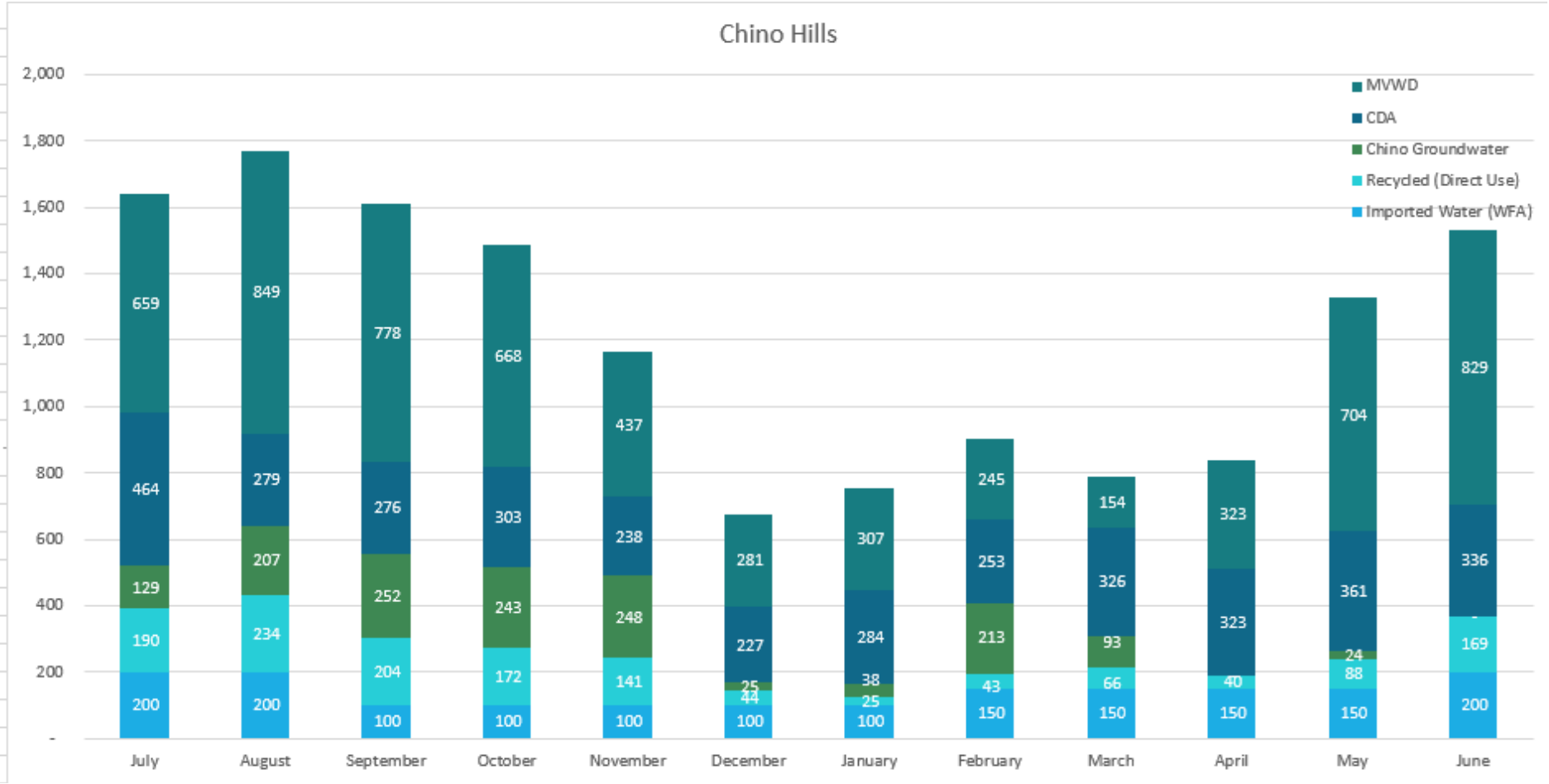
FY 19/20 Water Use Report

City of Chino

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										City of Chino		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (WFA)	449	622	715	580	506	259	256	288	239	218	387	440	4,960
	Recycle (Direct Use)	547	814	1,035	492	274	155	71	180	280	25	289	634	4,795
Subtotal		996	1,437	1,750	1,072	780	413	327	469	519	243	676	1,074	9,755
Production	Chino Groundwater	597	626	314	423	322	256	345	468	288	353	578	636	5,208
Subtotal		597	626	314	423	322	256	345	468	288	353	578	636	5,208
Purchases from other agencies	CDA	480	336	322	360	291	287	349	305	392	385	430	403	4,341
Subtotal		480	336	322	360	291	287	349	305	392	385	430	403	4,341
Total		2,074	2,399	2,386	1,855	1,393	957	1,021	1,242	1,199	981	1,684	2,113	19,303

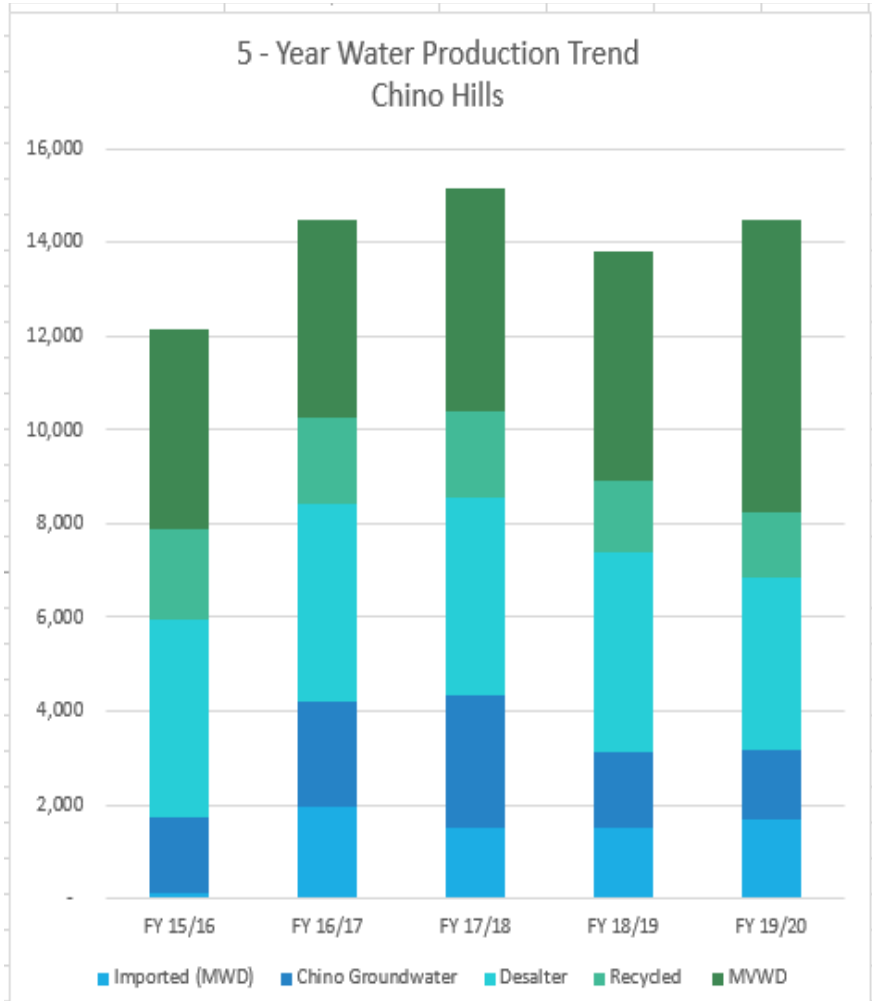
FY 19/20 Water Use Report

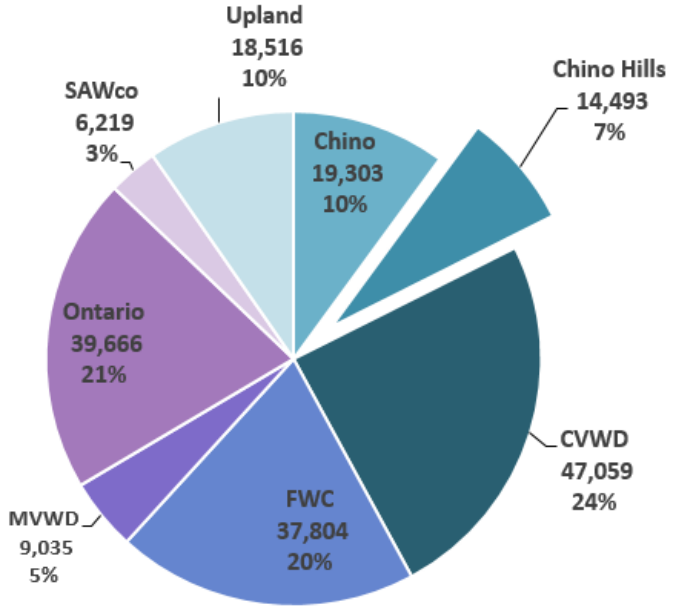
City of Chino Hills



FY 19/20 Water Use Report

City of Chino Hills





In FY 2019/20 The City of Chino Hills used 7% (14,493 AF) of 192,095 AF used in the IEUA service area.

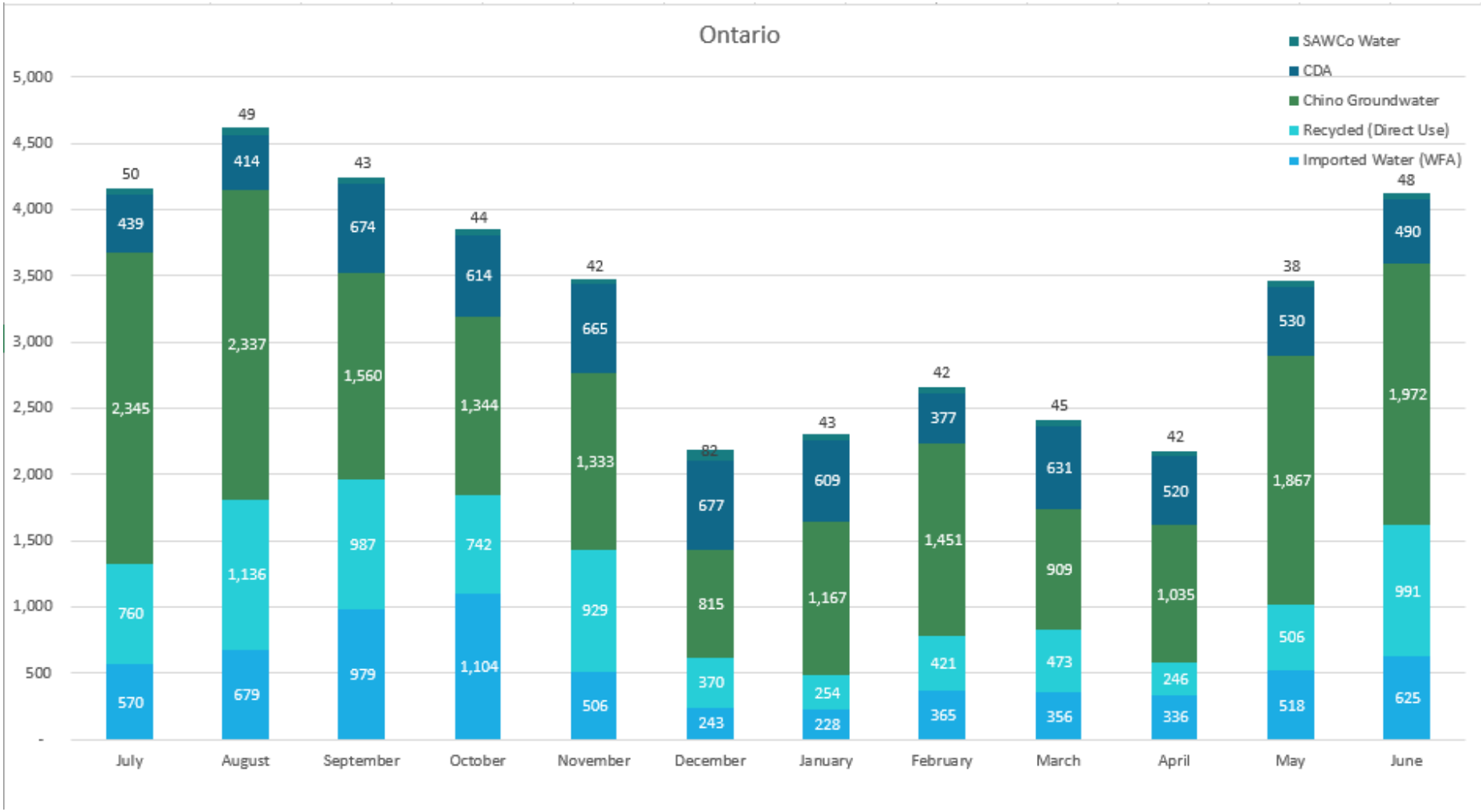
FY 19/20 Water Use Report

City of Chino Hills

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										City of Chino Hills		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (WFA)	200	200	100	100	100	100	100	150	150	150	150	200	1,700
	Recycle (Direct Use)	190	234	204	172	141	44	25	43	66	40	88	169	1,417
Subtotal		390	434	304	272	241	144	125	193	216	190	238	369	3,117
Production	Chino Groundwater	129	207	252	243	248	25	38	213	93	-	24	-	1,472
Subtotal		129	207	252	243	248	25	38	213	93	-	24	-	1,472
Purchase from other agencies	CDA	464	279	276	303	238	227	284	253	326	323	361	336	3,669
	MVWD	659	849	778	668	437	281	307	245	154	323	704	829	6,235
Subtotal		1,122	1,128	1,054	971	675	508	591	498	480	646	1,065	1,164	9,904
Total		1,641	1,769	1,611	1,486	1,164	677	754	904	789	836	1,328	1,533	14,493

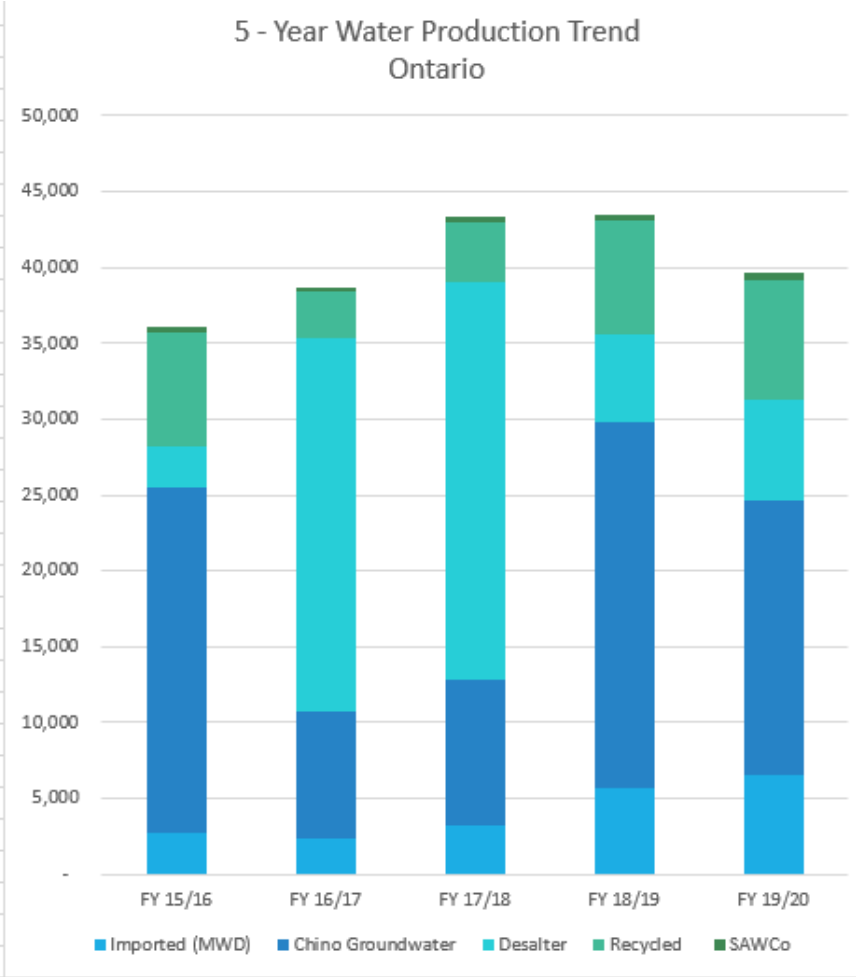
FY 19/20 Water Use Report

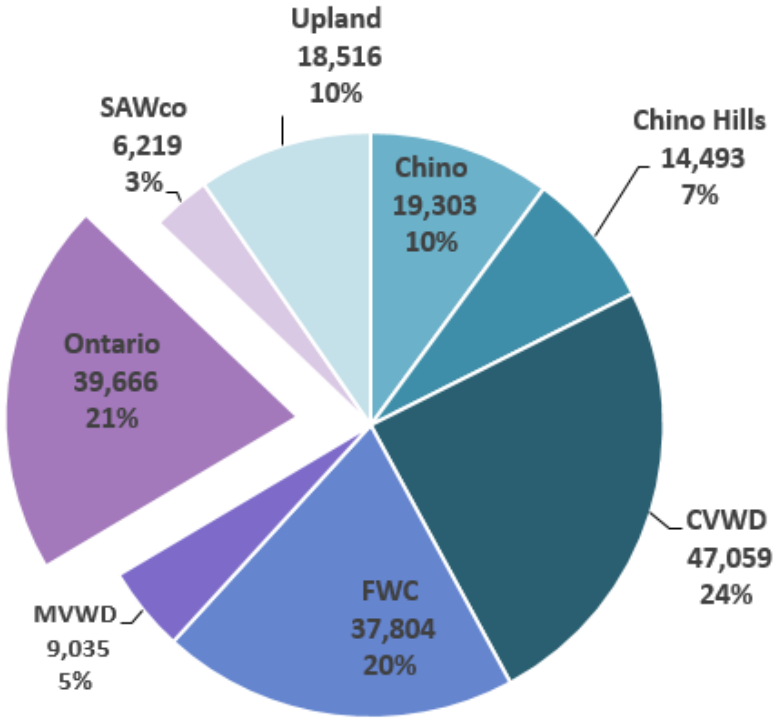
City of Ontario



FY 19/20 Water Use Report

City of Ontario





In FY 2019/20, The City of Ontario used 21% (39,666 AF) of 192,095 AF used in the IEUA service area.

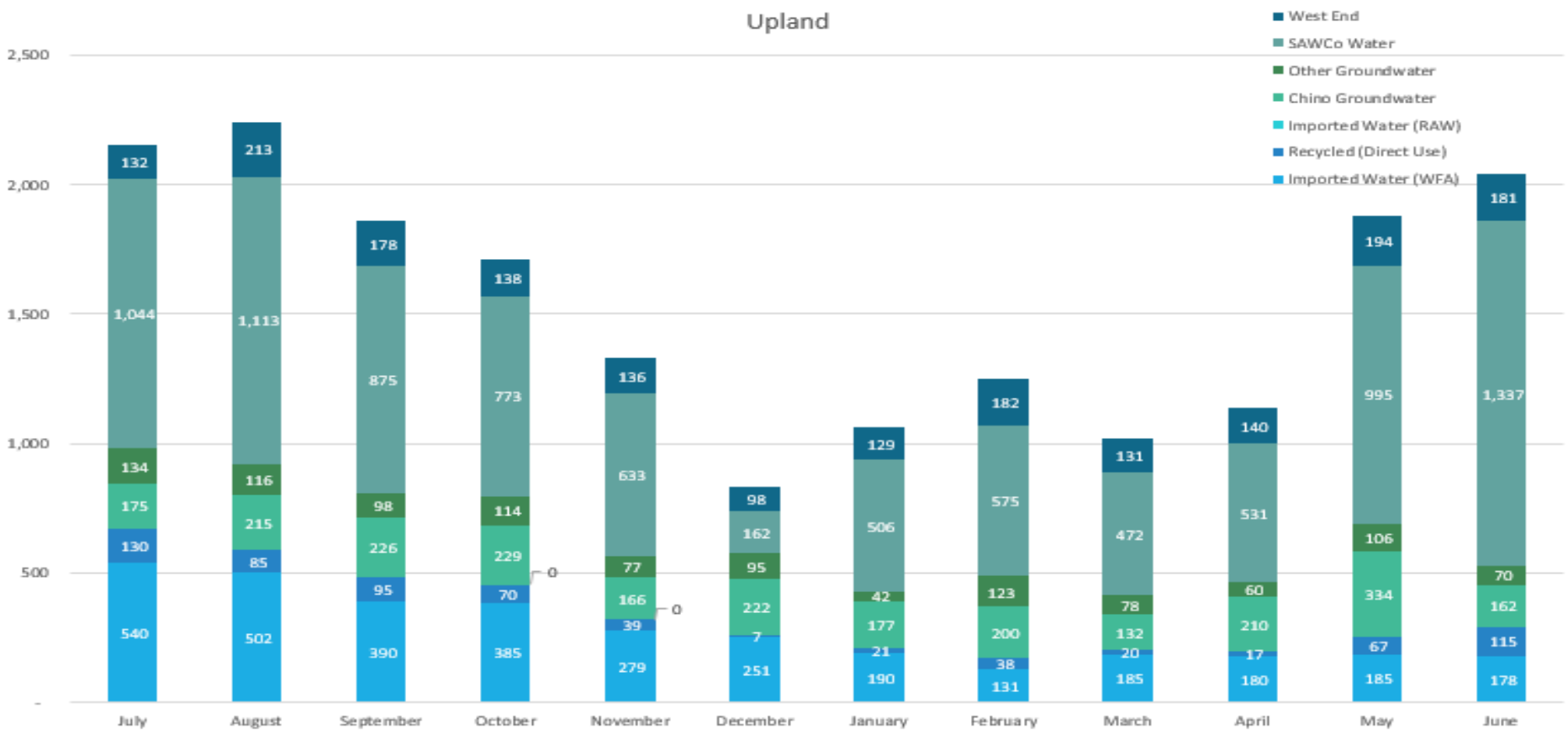
FY 19/20 Water Use Report

City of Ontario

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										City of Ontario		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (WFA)	570	679	979	1,104	506	243	228	365	356	336	518	625	6,509
	Recycle (Direct Use)	760	1,136	987	742	929	370	254	421	473	246	506	991	7,817
Subtotal		1,330	1,815	1,966	1,846	1,435	613	483	786	829	582	1,023	1,617	14,326
Production	Chino Groundwater	2,345	2,337	1,560	1,344	1,333	815	1,167	1,451	909	1,035	1,867	1,972	18,135
Subtotal		2,345	2,337	1,560	1,344	1,333	815	1,167	1,451	909	1,035	1,867	1,972	18,135
Purchase from other agencies	CDA	439	414	674	614	665	677	609	377	631	520	530	490	6,639
	SAWCo Water	50	49	43	44	42	82	43	42	45	42	38	48	566
Subtotal		489	463	716	657	708	758	652	418	676	562	568	538	7,205
Total		4,163	4,615	4,243	3,847	3,476	2,187	2,301	2,656	2,414	2,179	3,458	4,127	39,666

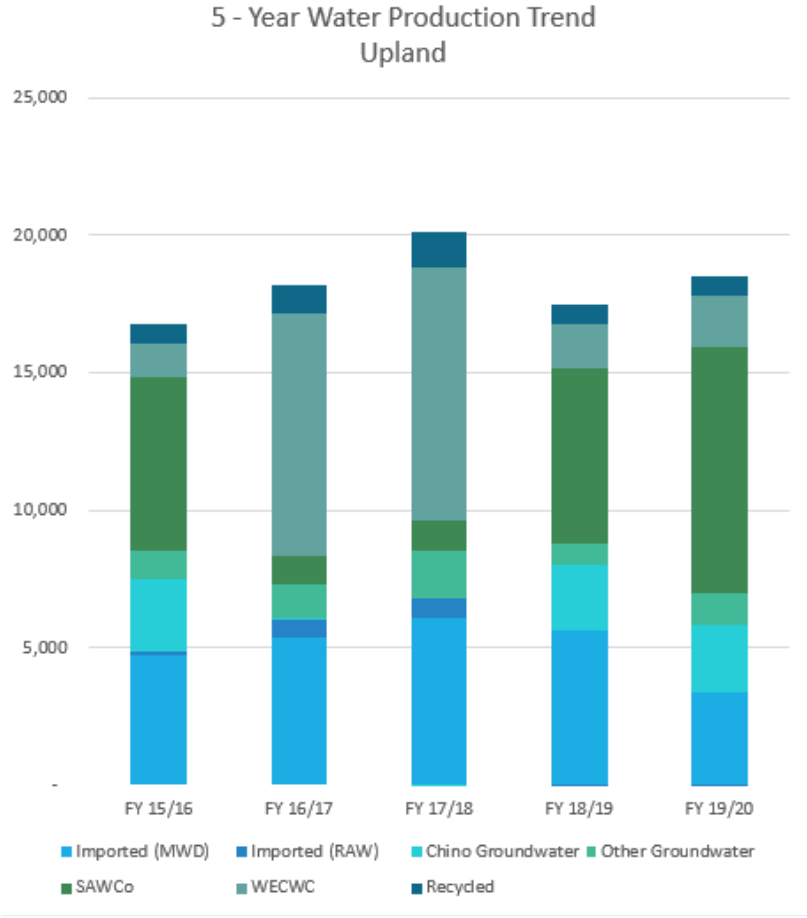
FY 19/20 Water Use Report

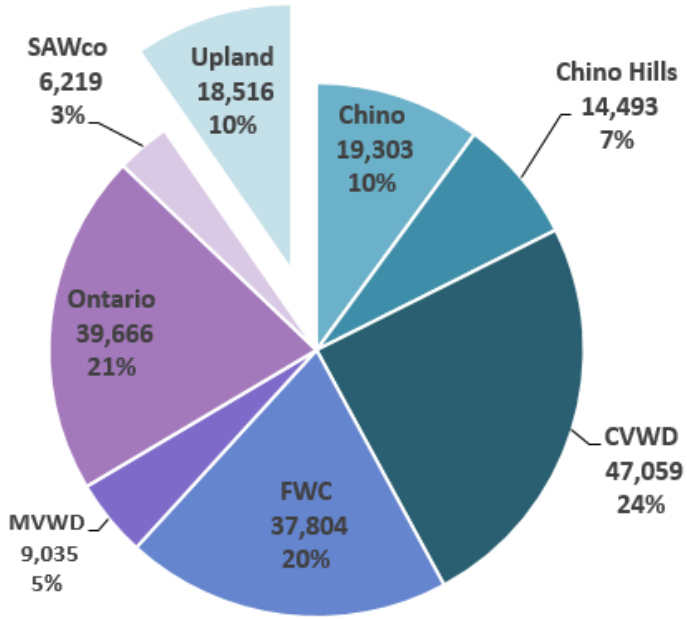
City of Upland



FY 19/20 Water Use Report

City of Upland





In FY 2019/20, The City of Upland used 10% (18,516 AF) of 192,095 AF used in the IEUA service area.

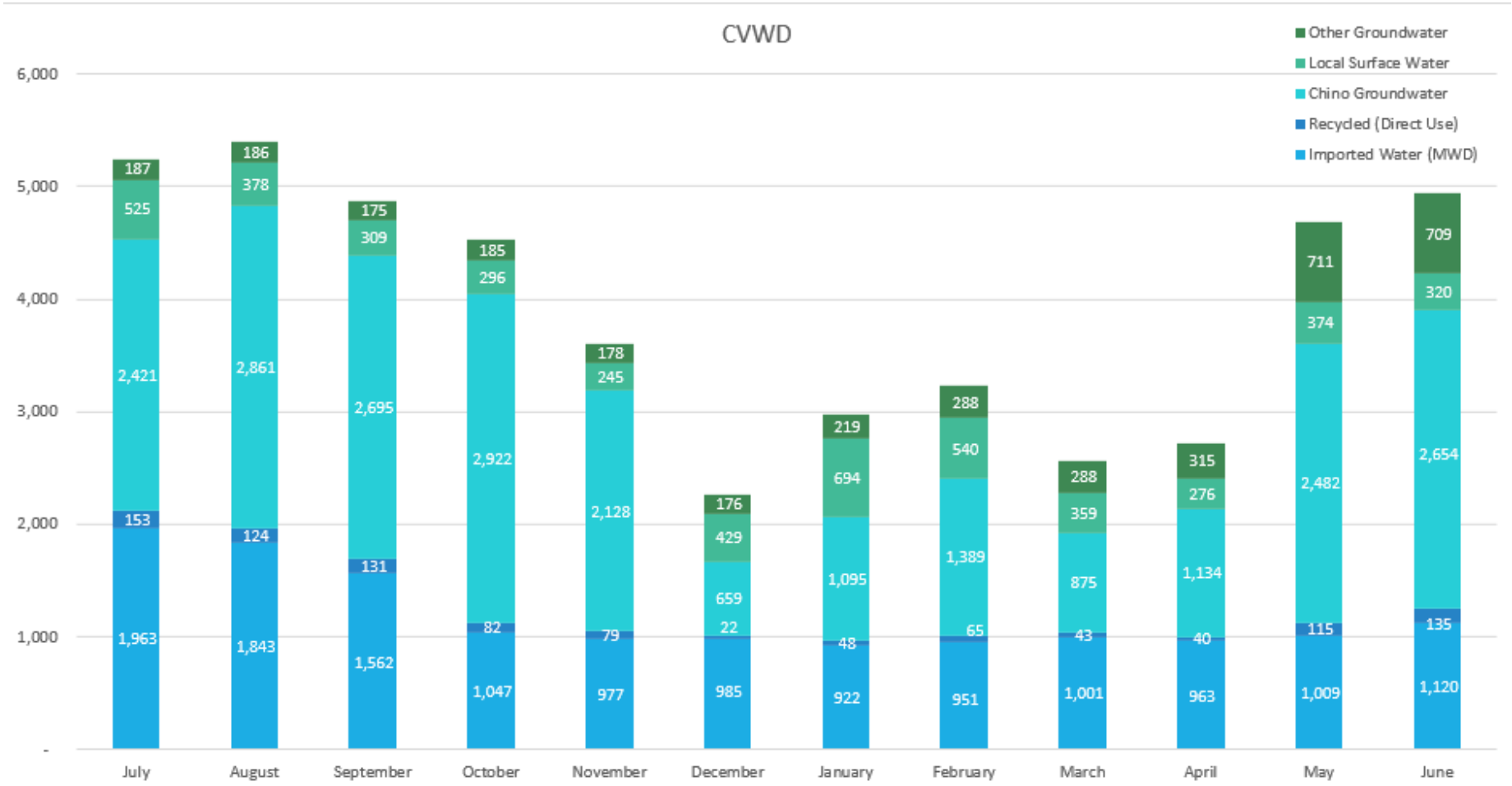
FY 19/20 Water Use Report

City of Upland

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										City of Upland		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (WFA)	540	502	390	385	279	251	190	131	185	180	185	178	3,395
	Recycle (Direct Use)	130	85	95	70	39	7	21	38	20	17	67	115	703
	Imported Water (RAW)	(2)	(3)	-	-	-	-	-	-	-	-	-	-	(5)
Subtotal		668	584	485	455	318	258	211	169	205	197	251	293	4,093
Production	Chino Groundwater	175	215	226	229	166	222	177	200	132	210	334	162	2,449
	Other Groundwater	134	116	98	114	77	95	42	123	78	60	106	70	1,112
Subtotal		310	331	324	343	243	317	219	323	210	270	440	232	3,561
Purchase from other agencies	SAWCo Water	1,044	1,113	875	773	633	162	506	575	472	531	995	1,337	9,015
	West End	132	213	178	138	136	98	129	182	131	140	194	181	1,851
Subtotal		1,175	1,326	1,053	911	769	259	634	757	603	671	1,189	1,518	10,866
Total		2,153	2,241	1,862	1,709	1,330	834	1,064	1,249	1,018	1,138	1,880	2,043	18,520

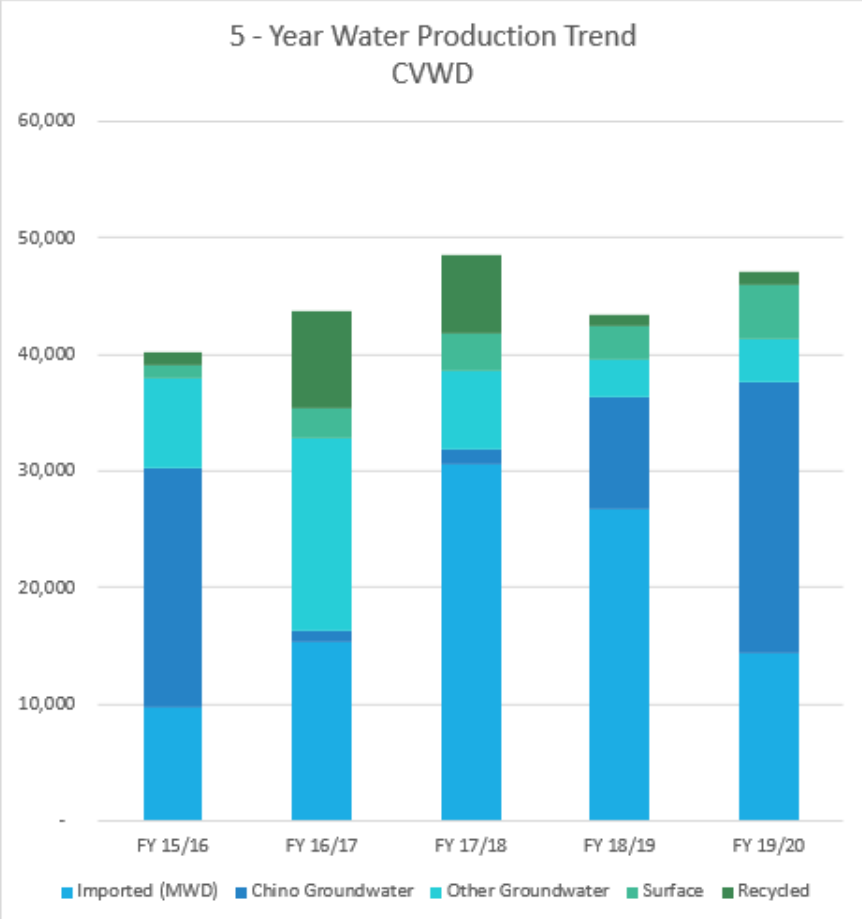
FY 19/20 Water Use Report

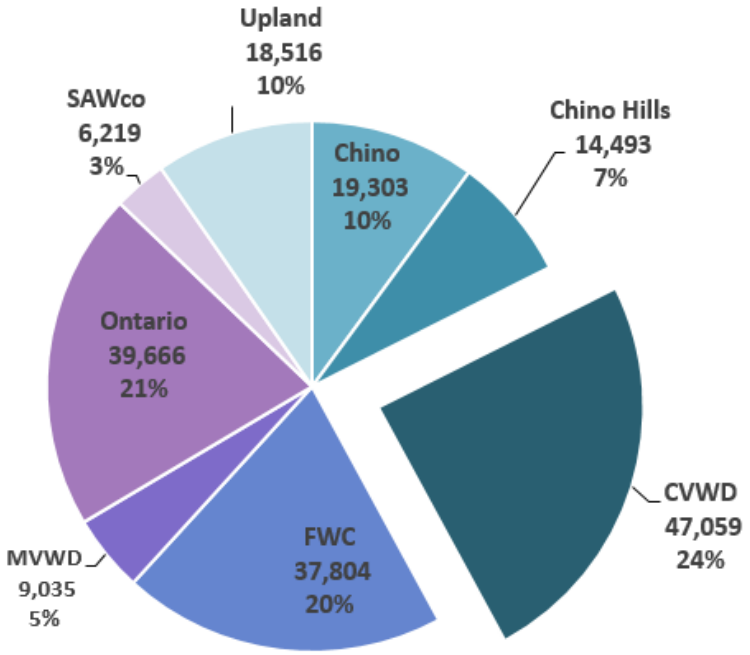
Cucamonga Valley Water District



FY 19/20 Water Use Report

Cucamonga Valley Water District





In FY 2019/20, Cucamonga Valley Water District used 24% (47,059) of 192,095 AF used in the IEUA service area.

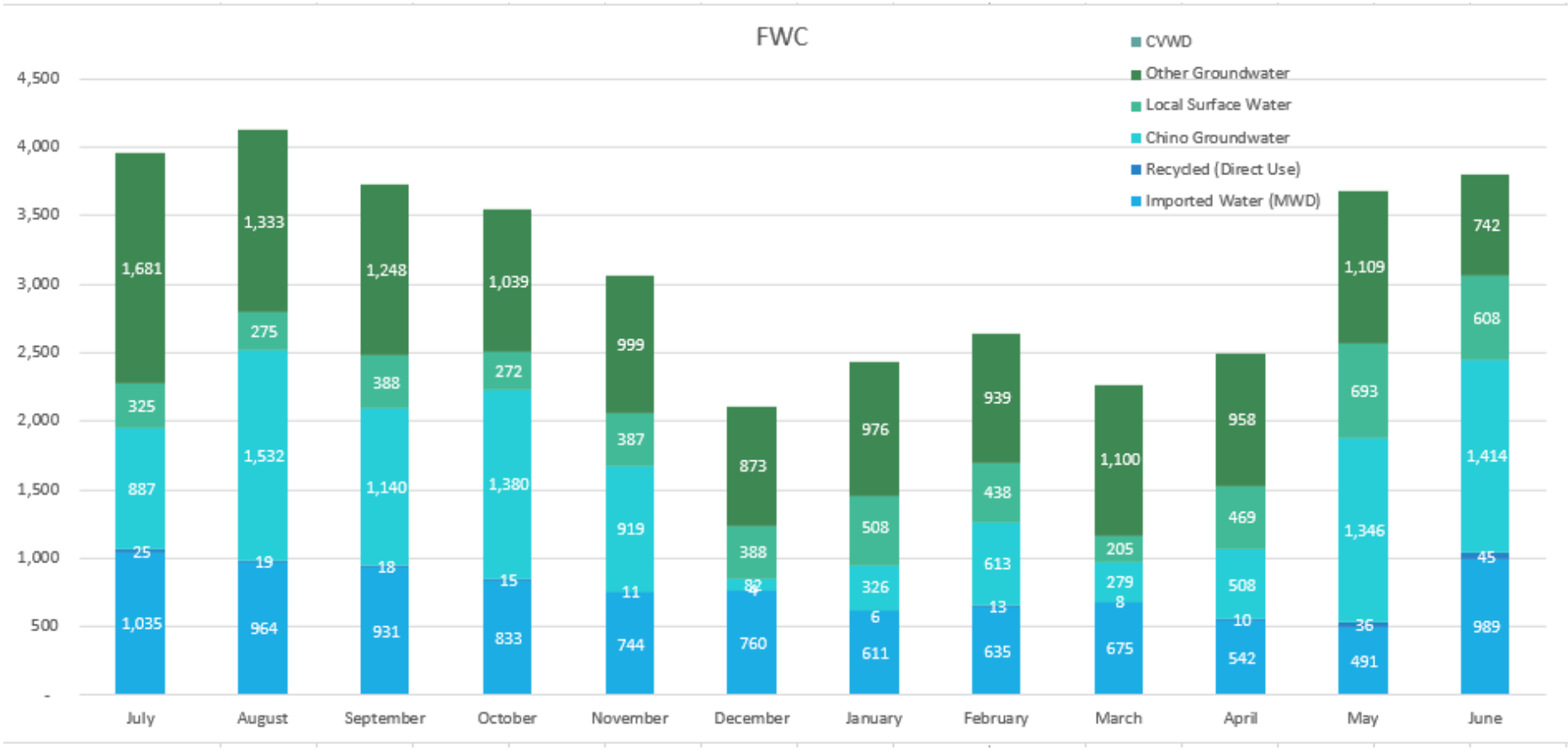
FY 19/20 Water Use Report

Cucamonga Valley Water District

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										CVWD		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (MWD)	1,963	1,843	1,562	1,047	977	985	922	951	1,001	963	1,009	1,120	14,343
	Recycle (Direct Use)	153	124	131	82	79	22	48	65	43	40	115	135	1,038
Subtotal		2,116	1,967	1,694	1,129	1,056	1,008	970	1,016	1,045	1,003	1,124	1,254	15,381
Production	Chino Groundwater	2,421	2,861	2,695	2,922	2,128	659	1,095	1,389	875	1,134	2,482	2,654	23,315
	Local Surface Water	525	378	309	296	245	429	694	540	359	276	374	320	4,744
	Other Groundwater	187	186	175	185	178	176	219	288	288	315	711	709	3,618
Subtotal		3,133	3,426	3,179	3,403	2,551	1,264	2,008	2,216	1,522	1,725	3,567	3,684	31,677
Total		5,249	5,393	4,872	4,532	3,607	2,272	2,977	3,233	2,567	2,728	4,691	4,938	47,059

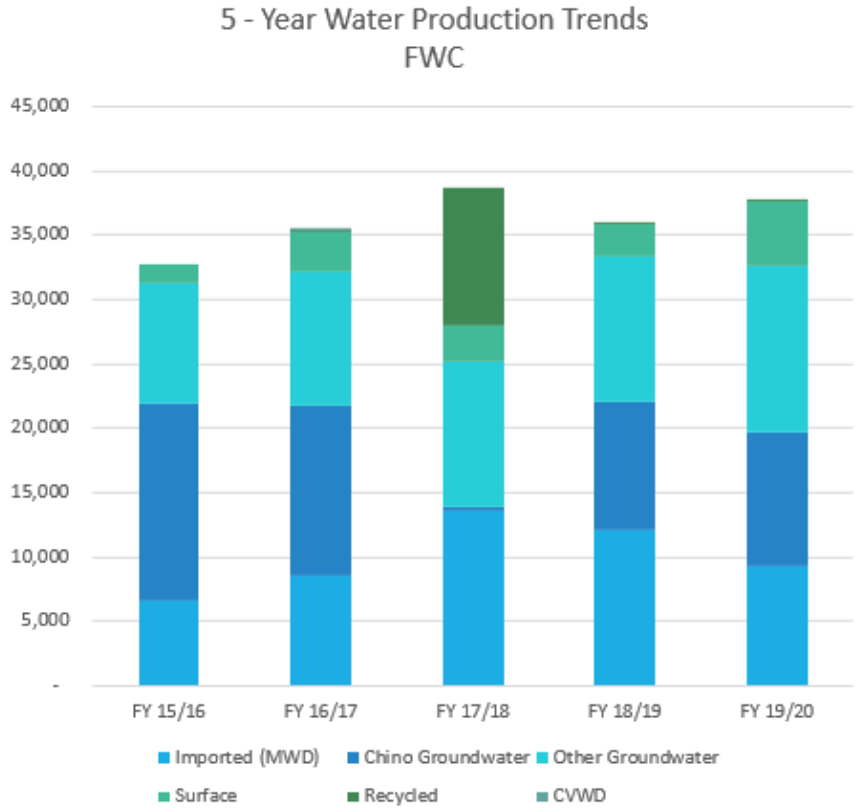
FY 19/20 Water Use Report

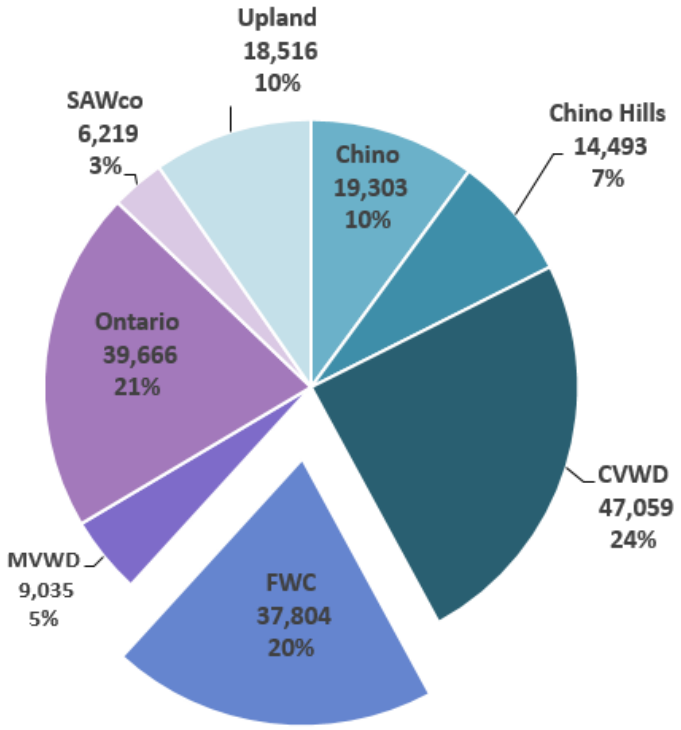
Fontana Water Company



FY 19/20 Water Use Report

Fontana Water Company





In FY 2019/20, Fontana Water Company used 20% (37,804 AF) of 192,095 AF used in the IEUA service area.

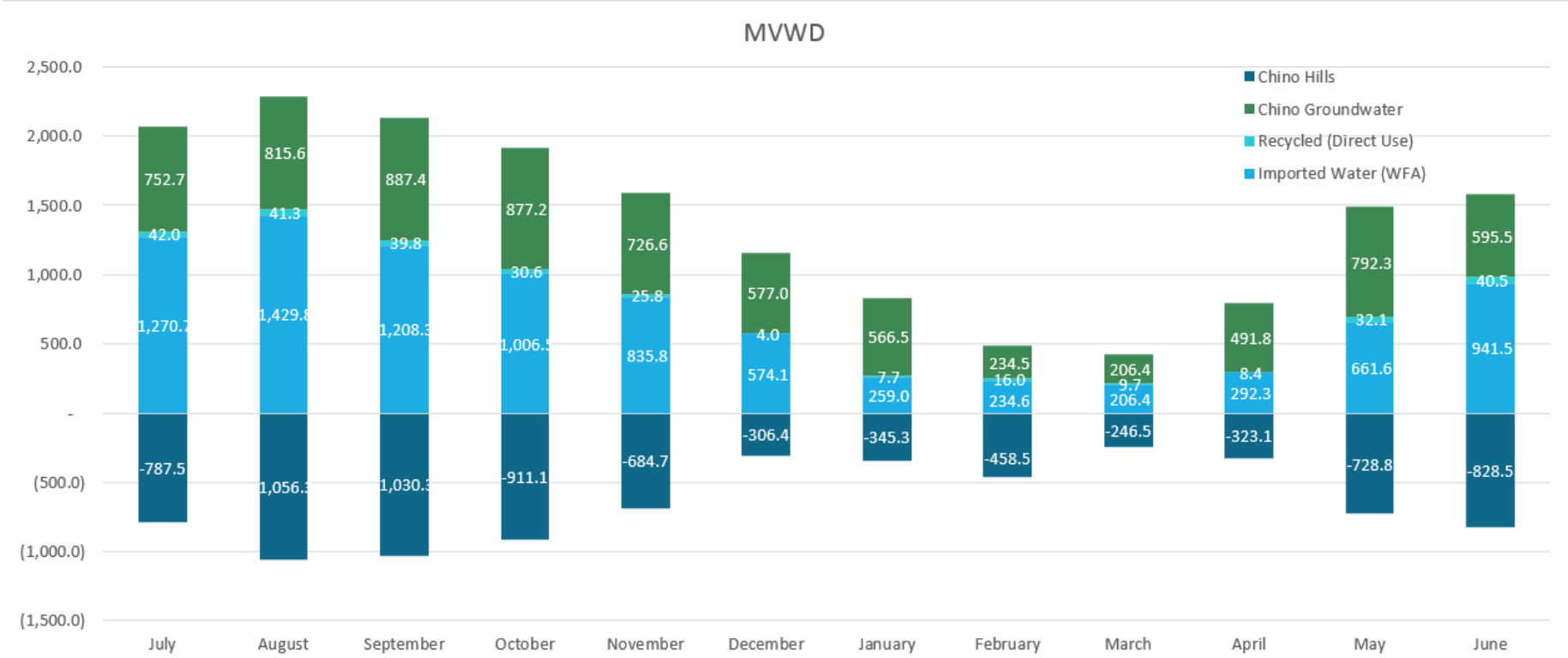
FY 19/20 Water Use Report

Fontana Water Company

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										FWC		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (MWD)	1,035	964	931	833	744	760	611	635	675	542	491	989	9,212
	Recycle (Direct Use)	25	19	18	15	11	4	6	13	8	10	36	45	211
Subtotal		1,060	983	949	849	756	764	617	648	683	552	527	1,034	9,423
Production	Chino Groundwater	887	1,532	1,140	1,380	919	82	326	613	279	508	1,346	1,414	10,427
	Local Surface Water	325	275	388	272	387	388	508	438	205	469	693	608	4,957
	Other Groundwater	1,681	1,333	1,248	1,039	999	873	976	939	1,100	958	1,109	742	12,997
Subtotal		2,894	3,140	2,776	2,691	2,304	1,343	1,811	1,991	1,585	1,935	3,148	2,764	28,381
Purchase from other agencies	CVWD	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal		-	-	-	-	-	-	-	-	-	-	-	-	-
Total		3,954	4,124	3,724	3,540	3,060	2,107	2,428	2,639	2,267	2,488	3,675	3,798	37,804

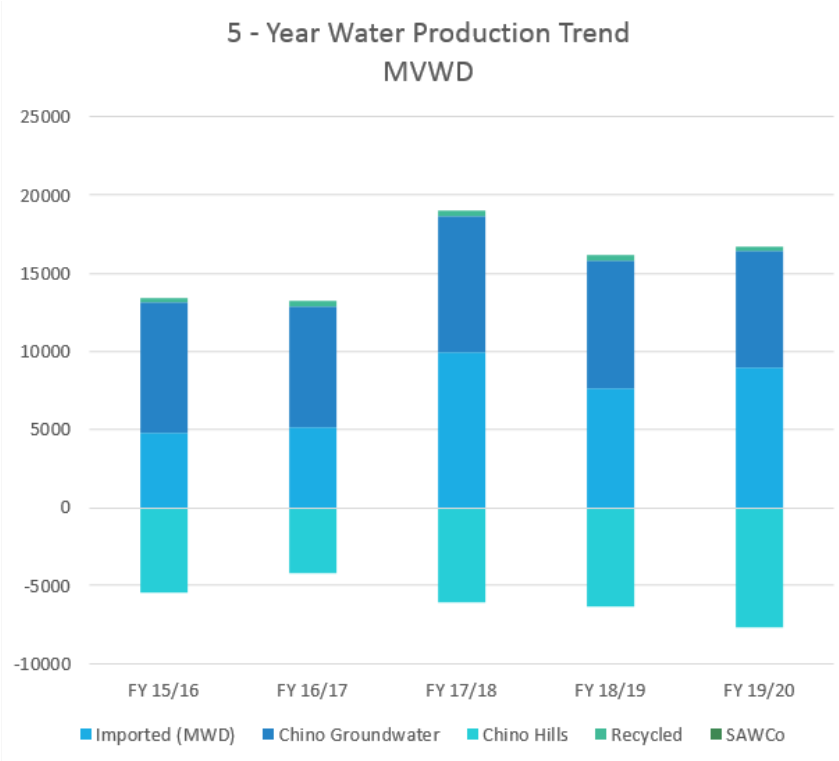
FY 19/20 Water Use Report

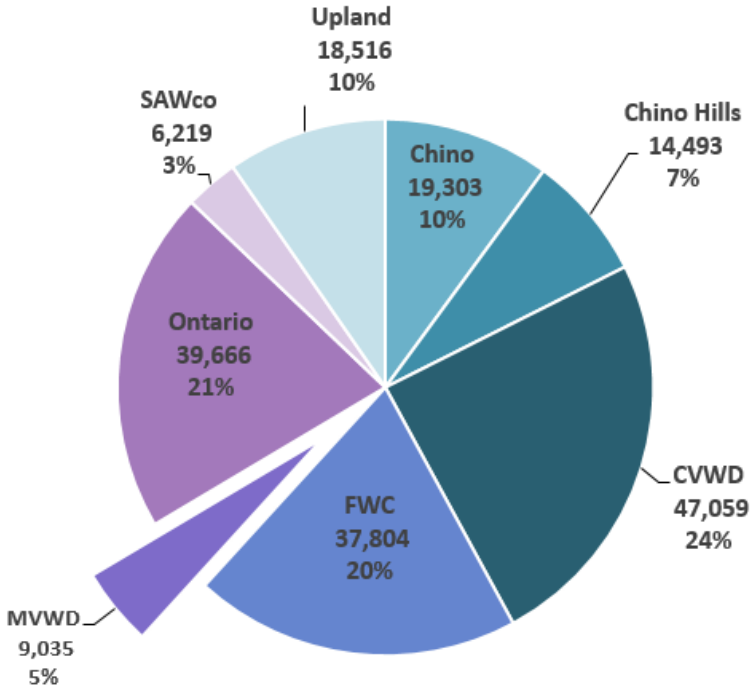
Monte Vista Water District



FY 19/20 Water Use Report

Monte Vista Water District





In FY 2019/20, Monte Vista Water District used 5% (9,035 AF) of 192,095 AF used in the IEUA service area.

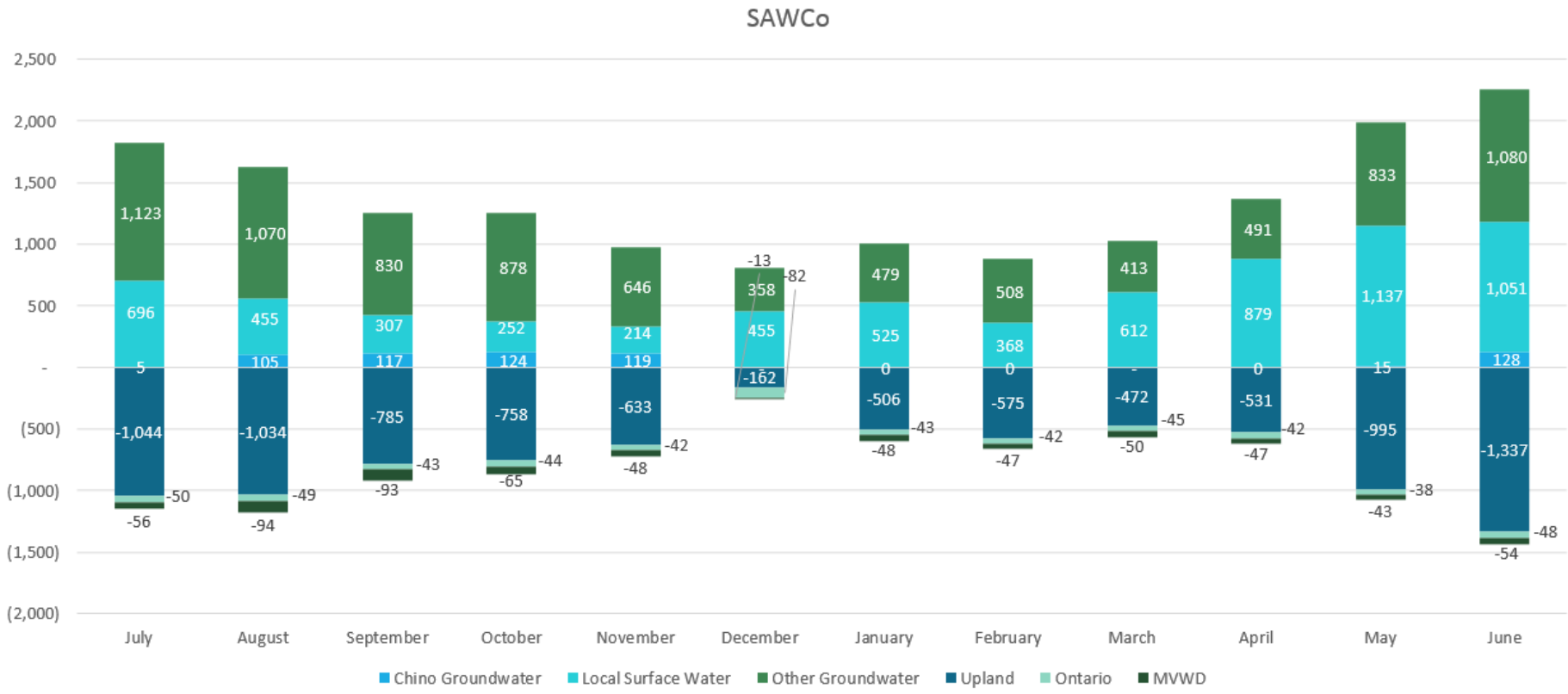
FY 19/20 Water Use Report

Monte Vista Water District

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										MVWD		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported Water (WFA)	1,271	1,430	1,208	1,007	836	574	259	235	206	292	662	942	8,921
	Recycle (Direct Use)	42	41	40	31	26	4	8	16	10	8	32	40	298
Subtotal		1,313	1,471	1,248	1,037	862	578	267	251	216	301	694	982	9,218
Production	Chino Groundwater	753	816	887	877	727	577	566	235	206	492	792	596	7,524
Subtotal		753	816	887	877	727	577	566	235	206	492	792	596	7,524
Sales to other agencies	Chino Hills	(788)	(1,056)	(1,030)	(911)	(685)	(306)	(345)	(459)	(247)	(323)	(729)	(829)	(7,707)
Subtotal		(788)	(1,056)	(1,030)	(911)	(685)	(306)	(345)	(459)	(247)	(323)	(729)	(829)	(7,707)
Total		1,278	1,230	1,105	1,003	904	849	488	27	176	469	757	749	9,035

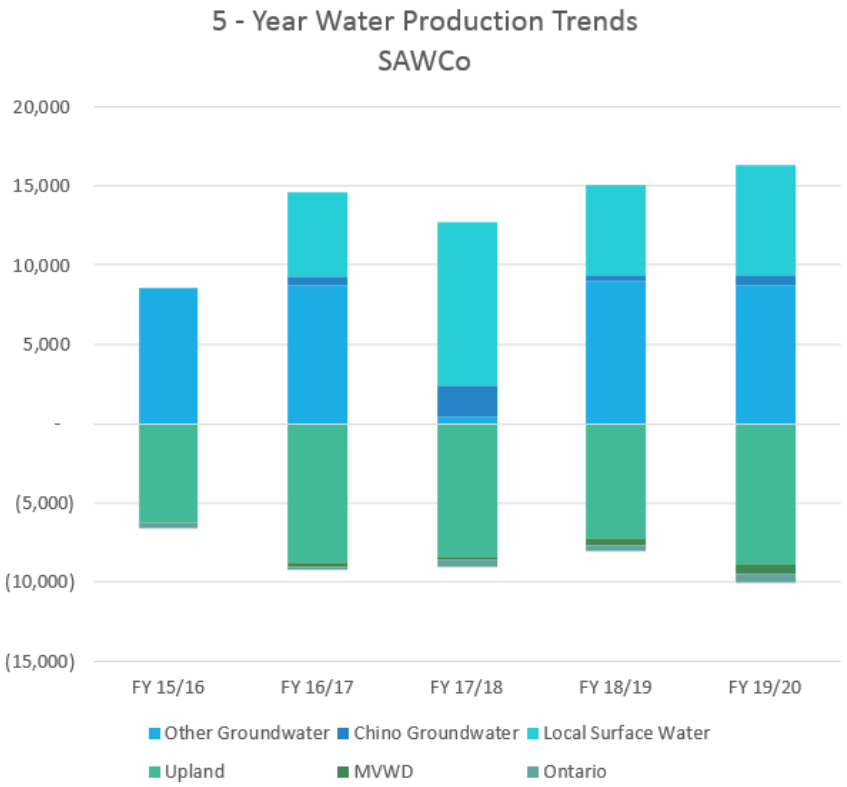
FY 19/20 Water Use Report

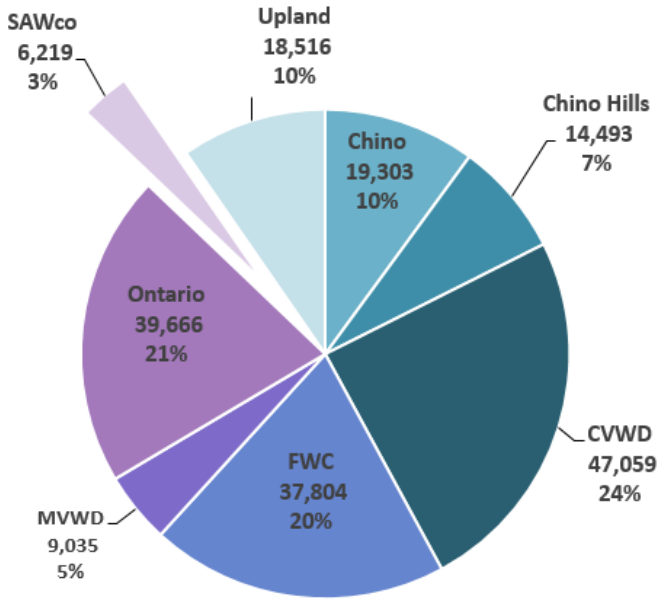
San Antonio Water Company



FY 19/20 Water Use Report

San Antonio Water Company





In FY 2019/20, San Antonio Water Company used 3% (6,219AF) of 192,095 AF used in the IEUA service area.

FY 19/20 Water Use Report

San Antonio Water Company

		Total IEUA Service Area Water Use By Agency for FY19-20 (AF)										SAWCo		
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Production	Chino Groundwater	5	105	117	124	119	-	0	0	-	0	15	128	614
	Local Surface Water	696	455	307	252	214	455	525	368	612	879	1,137	1,051	6,951
	Other Groundwater	1,123	1,070	830	878	646	358	479	508	413	491	833	1,080	8,708
Subtotal		1,824	1,630	1,254	1,254	978	813	1,004	876	1,025	1,370	1,986	2,259	16,274
Sales to other agencies	Upland	(1,044)	(1,034)	(785)	(758)	(633)	(162)	(506)	(575)	(472)	(531)	(995)	(1,337)	(8,832)
	Ontario	(50)	(49)	(43)	(44)	(42)	(82)	(43)	(42)	(45)	(42)	(38)	(48)	(565)
	MVWD	(56)	(94)	(93)	(65)	(48)	(13)	(48)	(47)	(50)	(47)	(43)	(54)	(657)
Subtotal		(1,149)	(1,177)	(921)	(866)	(723)	(256)	(597)	(664)	(566)	(620)	(1,076)	(1,438)	(10,054)
Total		675	453	333	388	255	557	407	212	459	750	909	820	6,219

APPENDIX A

Five year Historical Data Summary

FY 18-19		Total IEUA Service Area Water Use by Retail Agency for FY 18-19 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	3,955	1,500	5,737	5,602	26,691	12,075	7,669	0	63,230
	Recycled (Direct Use)	4,759	1,548	7,512	709	996	143	289	0	15,956
Subtotal		**8,715**	**3,048**	**13,249**	**6,311**	**27,687**	**12,219**	**7,958**	**0**	**79,186**
Production	Chino Groundwater	4,220	1,609	24,079	2,381	9,624	9,961	8,167	376	60,417
	Other Groundwater	0	0	0	762	3,259	11,280	0	8,993	24,294
	Local Surface Water	0	0	0	0	2,871	2,503	0	5,701	11,075
Subtotal		**4,220**	**1,609**	**24,079**	**3,142**	**15,754**	**23,743**	**8,167**	**15,070**	**95,786**
Purchases from Other Agencies	CDA	5,018	4,270	5,722	0	0	0	0	0	15,010
	MVWD*	0	4,893	0	0	0	0	0	0	4,893
	SAWCo Water	0	0	403	6,376	0	0	0	0	6,778
	West End	0	0	0	1,596	0	0	0	0	1,596
	CVWD	0	0	0	0	0	0	0	0	0
Subtotal		**5,018**	**9,162**	**6,125**	**7,972**	**0**	**0**	**0**	**0**	**28,277**
Sales to Other Agencies*	Chino Hills	0	0	0	0	0	0	-6,351	0	-6,351
	Ontario	0	0	0	0	0	0	0	-403	-403
	Upland	0	0	0	0	0	0	0	-7,225	-7,225
	MVWD	0	0	0	0	0	0	0	-454	-454
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-6,351**	**-8,081**	**-14,432**
	Total	**17,953**	**13,819**	**43,453**	**17,426**	**43,441**	**35,962**	**9,774**	**6,989**	**188,817**

* MVWD sales are a blend of Chino Groundwater and Imported Water

Note: All recycled water numbers in this report are based off IEUA operations data and are for direct use only.

Recycled water used for groundwater recharge may be found in the Recycled Water Report.

FY 17-18		Total IEUA Service Area Water Use by Retail Agency for FY 17-18 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	4,292	1,500	3,211	6,073	30,559	13,642	9,935	0	69,212
	Recycled (Direct Use)	6,480	1,858	9,654	706	1,263	176	318	0	20,455
Subtotal		**10,772**	**3,358**	**12,865**	**6,779**	**31,822**	**13,818**	**10,253**	**0**	**89,667**
Production	Chino Groundwater	5,149	2,839	26,109	1,764	6,819	11,392	8,755	428	63,254
	Other Groundwater	0	0	0	1,112	6,737	10,725	0	10,245	28,819
	Local Surface Water	0	0	0	0	3,195	2,735	0	2,020	7,950
Subtotal		**5,149**	**2,839**	**26,109**	**2,876**	**16,751**	**24,852**	**8,755**	**12,693**	**100,023**
Purchases from Other Agencies	CDA	4,999	4,211	4,032	0	0	0	0	0	13,242
	MVWD*	0	4,763	0	0	0	0	0	0	4,763
	SAWCo Water	0	0	341	9,197	0	0	0	0	9,538
	West End	0	0	0	1,298	0	0	0	0	1,298
	CVWD	0	0	0	0	0	0	0	0	0
Subtotal		**4,999**	**8,974**	**4,373**	**10,495**	**0**	**0**	**0**	**0**	**28,841**
Sales to Other Agencies	Chino Hills	0	0	0	0	0	0	-6,064	0	-6,064
	Ontario	0	0	0	0	0	0	0	-232	-232
	Upland	0	0	0	0	0	0	0	-8,401	-8,401
	MVWD	0	0	0	0	0	0	0	-444	-444
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-6,064**	**-9,077**	**-15,141**
	Total	**20,920**	**15,171**	**43,347**	**20,150**	**48,573**	**38,670**	**12,944**	**3,616**	**203,391**

* MVWD sales are a blend of Chino Groundwater and Imported Water

Note: All recycled water numbers in this report are based off IEUA operations data and are for direct use only.

Recycled water used for groundwater recharge may be found in the Recycled Water Report.

FY 16-17		Total IEUA Service Area Water Use by Retail Agency for FY 16-17 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	3,469	1,954	2,364	5,406	15,288	8,510	5,105	0	42,096
	Recycled (Direct Use)	6,447	1,838	8,352	652	1,056	52	306	0	18,703
Subtotal		**9,916**	**3,792**	**10,716**	**6,058**	**16,344**	**8,562**	**5,411**	**0**	**60,799**
Production	Chino Groundwater	4,972	2,245	24,672	1,260	16,549	13,251	7,786	537	71,272
	Other Groundwater	0	0	0	1,026	8,386	10,338	0	8,739	28,490
	Local Surface Water	0	0	0	0	2,448	3,230	0	5,282	10,960
Subtotal		**4,972**	**2,245**	**24,672**	**2,286**	**27,384**	**26,818**	**7,786**	**14,558**	**110,721**
Purchases from Other Agencies	CDA	5,008	4,206	3,077	0	0	0	0	0	12,292
	MVWD*	0	4,237	0	0	0	0	0	0	4,237
	SAWCo Water	0	0	171	8,791	0	0	0	0	8,961
	West End	0	0	0	1,068	0	0	0	0	1,068
	CVWD	0	0	0	0	0	39	0	0	39
Subtotal		**5,008**	**8,444**	**3,248**	**9,858**	**0**	**39**	**0**	**0**	**26,597**
Sales to Other Agencies*	Chino Hills	0	0	0	0	0	0	-4,818	0	-4,818
	Ontario	0	0	0	0	0	0	0	-171	-171
	Upland	0	0	0	0	0	0	0	-8,791	-8,791
	MVWD	0	0	0	0	0	0	0	-278	-278
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-4,818**	**-9,240**	**-14,058**
	Total	**19,896**	**14,481**	**38,636**	**18,203**	**43,728**	**35,419**	**8,379**	**5,318**	**184,060**

* MVWD sales are a blend of Chino Groundwater and Imported Water

Note: All recycled water numbers in this report are based off IEUA operations data and are for direct use only.

Recycled water used for groundwater recharge may be found in the Recycled Water Report.

FY 15-16		Total IEUA Service Area Water Use by Retail Agency for FY 15-16 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	2,843	110	2,755	4,890	9,712	6,613	4,799	0	31,722
	Recycled (Direct Use)	7,217	1,410	7,566	719	1,146	0	278	0	18,336
Subtotal		**10,060**	**1,520**	**10,321**	**5,609**	**10,857**	**6,613**	**5,078**	**0**	**50,058**
Production	Chino Groundwater	5,104	1,630	22,755	2,601	20,524	15,317	8,371	0	76,302
	Other Groundwater	0	0	0	1,054	7,783	9,253	0	8,517	26,607
	Local Surface Water	0	0	0	0	1,002	1,497	0	0	2,499
Subtotal		**5,104**	**1,630**	**22,755**	**3,655**	**29,309**	**26,067**	**8,371**	**8,517**	**105,408**
Purchases from Other Agencies	CDA	5,000	4,201	2,682	0	0	0	0	0	11,883
	MVWD	0	5,642	0	0	0	0	0	0	5,642
	SAWCo Water	0	0	338	6,297	0	0	0	0	6,635
	West End	0	0	0	1,246	0	0	0	0	1,246
Subtotal		**5,000**	**9,843**	**3,020**	**7,543**	**0**	**0**	**0**	**0**	**25,406**
Sales to Other Agencies*	Chino Hills	0	0	0	0	0	0	-5,437	0	-5,437
	Ontario	0	0	0	0	0	0	0	-338	-338
	Upland	0	0	0	0	0	0	0	-6,297	-6,297
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-5,437**	**-6,635**	**-12,072**
	Total	**20,163**	**12,993**	**36,096**	**16,807**	**40,166**	**32,681**	**8,012**	**1,882**	**168,800**

FY 14-15		Total IEUA Service Area Water Use by Retail Agency for FY 14-15 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	2,830	2,494	10,703	7,047	21,306	9,994	4,530	0	58,905
	Recycled (Direct Use)	8,324	1,827	8,018	636	1,400	0	308	0	20,513
Subtotal		**11,154**	**4,321**	**18,721**	**7,684**	**22,705**	**9,994**	**4,838**	**0**	**79,418**
Production	Chino Groundwater	6,497	2,904	17,426	3,416	14,490	13,344	8,407	0	66,485
	Other Groundwater	0	0	0	1,291	10,631	14,500	0	6,091	32,513
	Local Surface Water	0	0	0	0	1,076	1,969	0	0	3,044
Subtotal		**6,497**	**2,904**	**17,426**	**4,708**	**26,196**	**29,813**	**8,407**	**6,091**	**102,042**
Purchases from Other Agencies	CDA	5,232	4,426	4,827	0	0	0	0	0	14,485
	MVWD	0	4,436	0	0	0	0	0	0	4,436
	SAWCo Water	0	0	172	5,461	0	0	612	0	6,246
	West End	0	0	0	2,139	0	0	0	0	2,139
Subtotal		**5,232**	**8,862**	**5,000**	**7,601**	**0**	**0**	**612**	**0**	**27,306**
Sales to Other Agencies	Chino Hills	0	0	0	0	0	0	-4,439	0	-4,439
	MVWD	0	0	0	0	0	0	0	-612	-612
	Ontario	0	0	0	0	0	0	0	-172	-172
	Upland	0	0	0	0	0	0	0	-3,177	-3,177
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-4,439**	**-3,961**	**-8,400**
	Total	**22,884**	**16,087**	**41,147**	**19,992**	**48,902**	**39,807**	**9,419**	**2,129**	**200,366**

FY 13-14		Total IEUA Service Area Water Use by Retail Agency for FY 13-14 (AFY)								
		CHINO	CHINO HILLS	ONTARIO	UPLAND	CVWD	FWC	MVWD	SAWCo	TOTAL
Purchases from IEUA	Imported Water (MWD)	4,342	962	9,904	7,265	28,825	9,792	5,965	0	67,055
	Recycled (Direct Use)	8,916	2,002	8,428	869	1,652	0	339	0	22,205
Subtotal		**13,258**	**2,964**	**18,332**	**8,134**	**30,477**	**9,792**	**6,304**	**0**	**89,261**
Production	Chino Groundwater	6,725	2,138	21,723	2,822	16,122	15,378	12,522	0	77,430
	Other Groundwater	0	0	0	704	8,324	17,454	0	12,610	39,092
	Local Surface Water	0	0	0	0	1,254	2,405	0	0	3,658
Subtotal		**6,725**	**2,138**	**21,723**	**3,526**	**25,700**	**35,236**	**12,522**	**12,610**	**120,180**
Purchases from Other Agencies	CDA	5,198	4,396	5,141	0	0	0	0	0	14,735
	CVWD	0	0	0	0	0	757	0	0	757
	MVWD	0	8,427	0	0	0	0	0	0	8,427
	SAWCo Water	0	0	0	9,662	0	0	400	0	10,063
	West End	0	0	0	2,653	0	0	0	0	2,653
Subtotal		**5,198**	**12,824**	**5,141**	**12,316**	**0**	**757**	**400**	**0**	**36,636**
Sales to Other Agencies	Chino Hills	0	0	0	0	0	0	-8,428	0	-8,428
	MVWD	0	0	0	0	0	0	0	-400	-400
	Upland	0	0	0	0	0	0	0	-9,662	-9,662
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**-8,428**	**-10,063**	**-18,490**
	Total	**25,181**	**17,926**	**45,196**	**23,975**	**56,177**	**45,785**	**10,798**	**2,547**	**227,586**

APPENDIX B

Definitions

Chino Basin Groundwater – Water pumped from the Chino Basin Aquifer and treated by retail water agencies for all potable uses within the IEUA service area.

Desalter Water – Water pumped from Chino Basin Desalter I owned and operated by the Chino Basin Desalter Authority (CDA). Groundwater, with high levels of dissolved solids, is treated and distributed to several retail agencies within the IEUA's service area for potable uses.

Imported Water (MWD) – Water from Northern California and supplied by the Metropolitan Water District of Southern California (MWD), and water transferred from other groundwater basins to retail water agencies operating within the IEUA service area. All Tier I and Tier II deliveries are included in this category.

Other Groundwater – Water produced from other local groundwater basins to retail water agencies operating within IEUA's service area.

Surface Water – Water collected by retail water agencies from mountain runoff and storm flows, which is collected and treated for potable use.

Recycled Water – Title 22 recycled water produced by the IEUA at its water recycling plants for distribution through separate pipelines to retail water agency customers for all non-potable uses.

WECWC– West End Consolidated Water Company supplies some water to the City of Upland.

WVWD – West Valley Water District

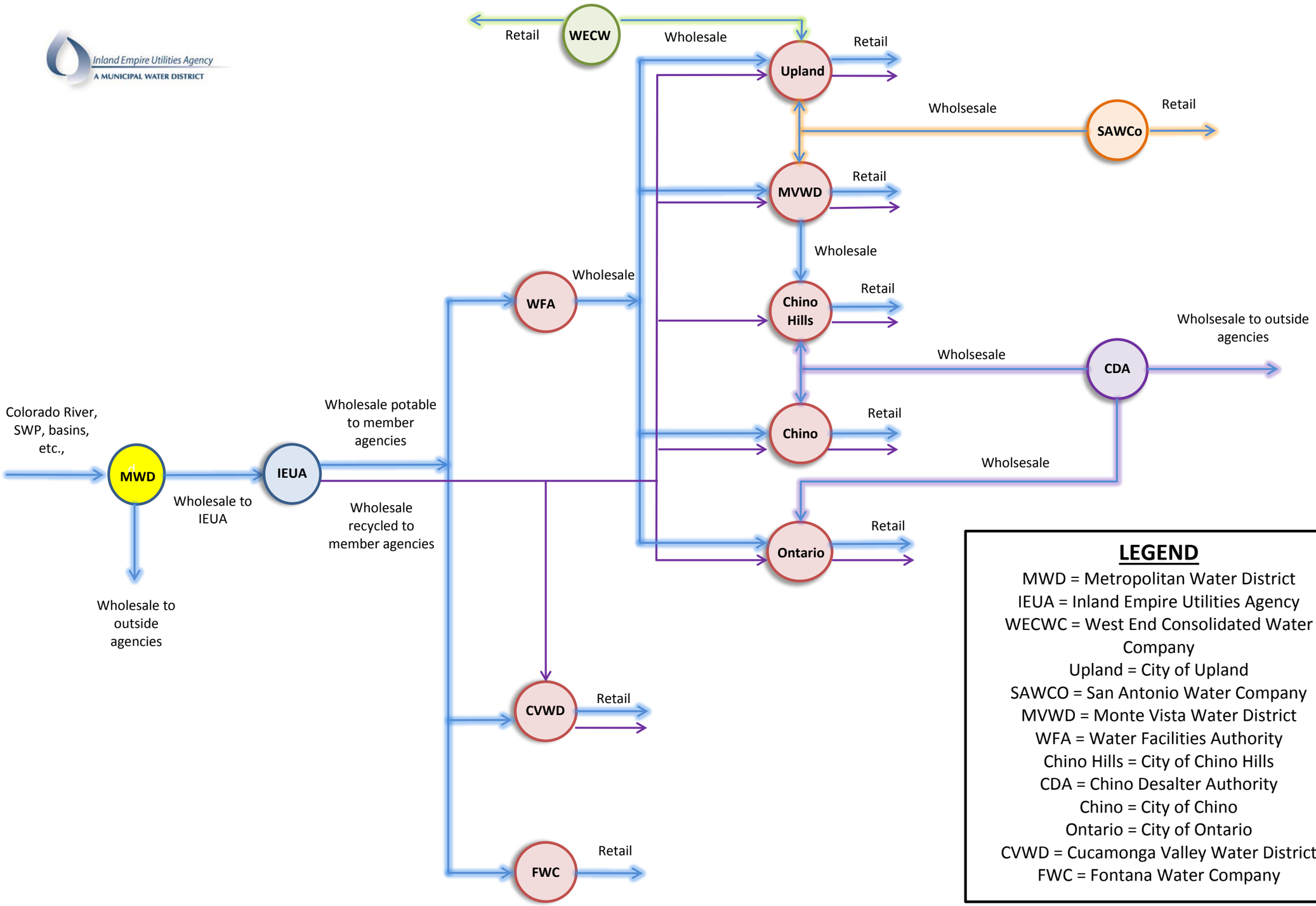
Production – Amount of water Agencies produce from their groundwater, surface water, or other water supplies that they have rights or jurisdiction over.

Use – Amount of water used within a member agency's jurisdiction, as reported by them to IUEA.

APPENDIX C

Member Agency Organizational Chart

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT



LEGEND

MWD = Metropolitan Water District
IEUA = Inland Empire Utilities Agency
WECWC = West End Consolidated Water Company
Upland = City of Upland
SAWCO = San Antonio Water Company
MVWD = Monte Vista Water District
WFA = Water Facilities Authority
Chino Hills = City of Chino Hills
CDA = Chino Desalter Authority
Chino = City of Chino
Ontario = City of Ontario
CVWD = Cucamonga Valley Water District
FWC = Fontana Water Company

2020

IEUA FY 2019-2020 Recycled Water Annual Report

Water Smart
Thinking in Terms of Tomorrow

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

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INTRODUCTION

The 2019/20 Recycled Water Annual Report for the Inland Empire Utilities Agency (IEUA) recycled water program provides annual delivery data by IEUA retail agencies, by usage types, and by customers. The report also gives an overview of the IEUA treatment plants, describes recent construction, and summarizes the program history. The 2019/20 report is for IEUA's fiscal year, which runs from July 2019 to June 2020.

As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and Cucamonga Valley Water District (CVWD) in the city of Rancho Cucamonga. Recycled water is generated through the water recycling process and delivered to its retail water agencies for use in the IEUA service area.

TREATMENT PLANTS

IEUA owns and operates five regional water recycling plants that serve over 875,000 people: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 2 (RP-2), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5), and Carbon Canyon Water Recycling Facility (CCWRF). **Figure 1** below shows the IEUA service area, its contracting agencies, and the locations of IEUA's treatment plants. Of the five plants, four produce tertiary-treated, Title 22-quality recycled water; RP-2 does not have any liquid treatment processes and as such does not produce any recycled water. The combined hydraulic capacity of the four plants is approximately 85 million gallons per day (MGD). With the planned plant expansion of RP-5 over the coming years, up to 15 MGD of additional hydraulic capacity may be achieved.

Appendices A and **B** contain the recycled water effluent monitoring data and recycled water compliance data, respectively, for the 2019 calendar year for the four recycled water facilities.

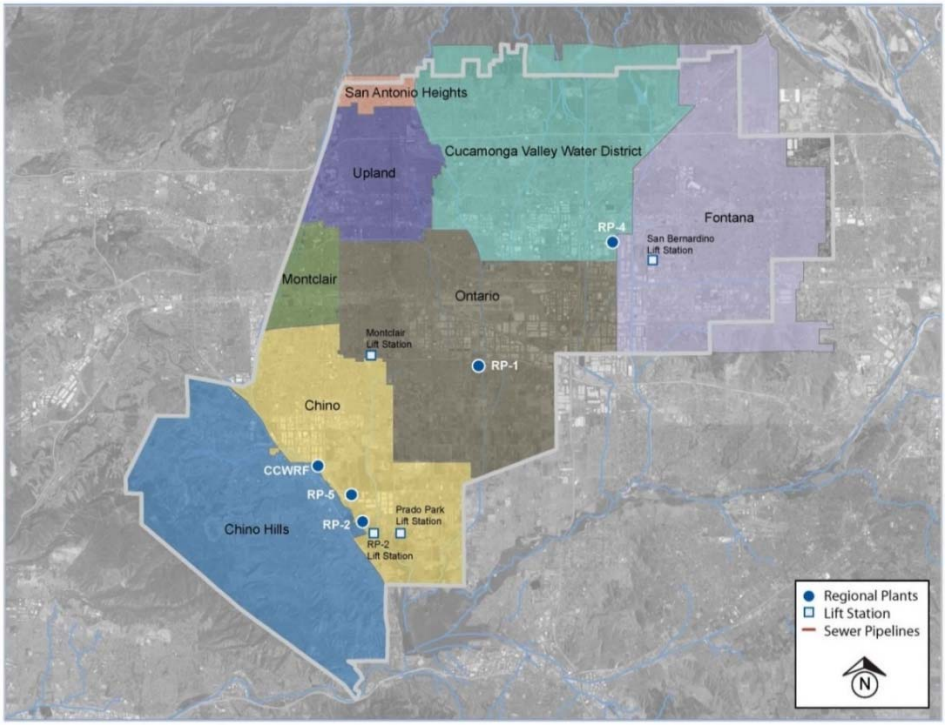

Figure 1 - IEUA Service Area

DEMANDS

During 2019/20, the average recycled water supply from IEUA's facilities was approximately 50 MGD, or 56,388 acre-feet per year (AFY). Recycled water groundwater recharge usage was 13,381 AFY and recycled water direct usage was 17,115 AFY. Total recycled water demands during 2019/20 were 30,495 AF (values throughout the report are rounded to the nearest acre-foot) an increase of 8% from the previous fiscal year. Recycled water recharge was up 16% and direct use was up 2%.

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 54 percent of the available supply. During the peak demand summer months (July through September), the total recycled water demands were approximately 75 percent of the available supply.

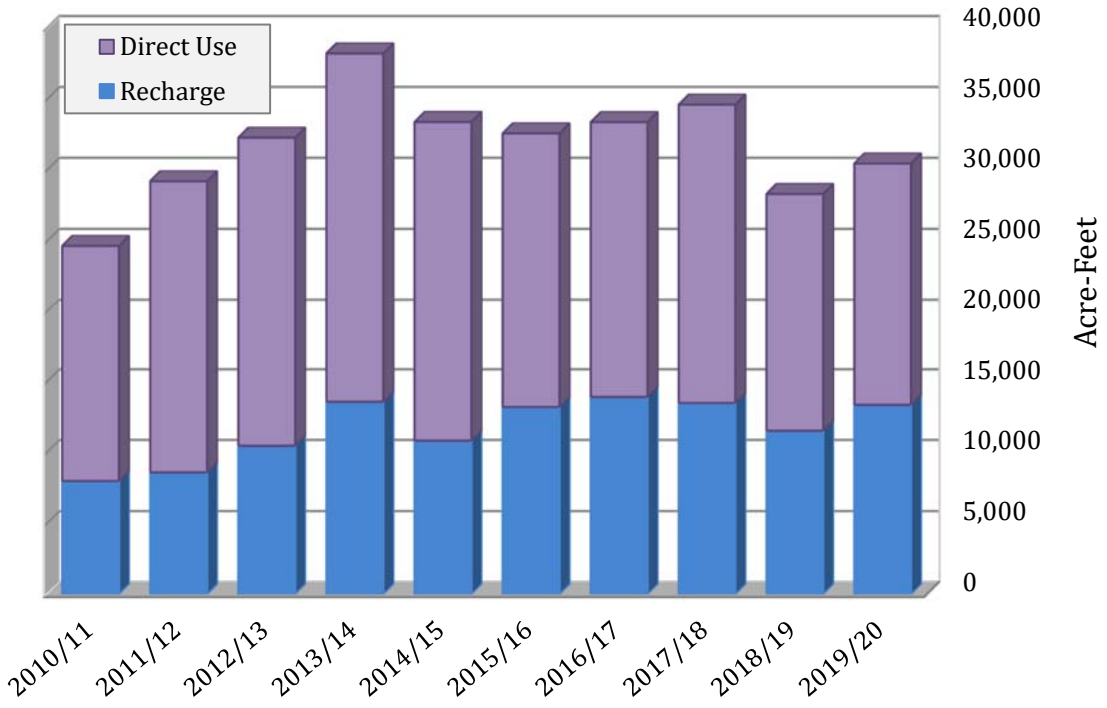

Figure 2 – Historical Recycled Water Direct Use and Groundwater Recharge

DEMANDS BY USE TYPE

Delivered recycled water was beneficially reused for a variety of applications including landscape irrigation, agricultural irrigation, industrial process water, construction, and groundwater recharge. **Table 1** and **Figure 3** show the 2019/20 recycled water demand by use type.

Table 1 – Recycled Water Demand by Use Type for 2019/20

Type of Use	Demand (AF)	Percent of Demand
Recharge	13,381	44%
Agriculture	5,757	19%
Landscape	9,716	32%
Industrial	1,004	3%
Construction	638	2%
Total Demand	**30,495**	**100%**

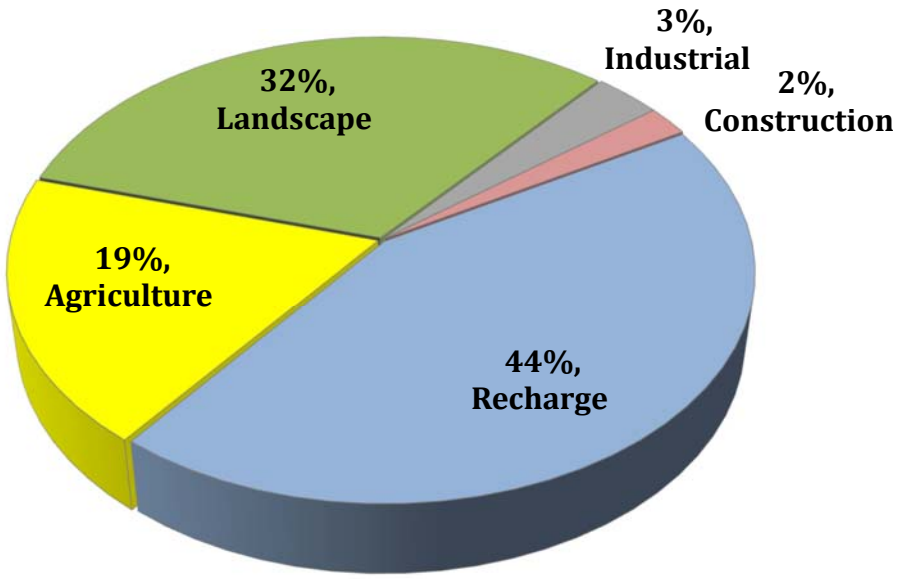

Figure 3 – Recycled Water Demand by Use Type for 2019/20

RETAIL DEMANDS

IEUA is the wholesale recycled water provider to its contracting agencies, which work as or with retail agencies to directly serve their customers. IEUA contracting/retail agencies which served recycled water in 2019/20 include:

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

Fontana Water Company (FWC) and Monte Vista Water District (MVWD) are the water retailers in the Cities of Fontana and Montclair, respectively, but are not IEUA contracting agencies. FWC and MVWD retail recycled water obtained from their overlying cities, which are IEUA contracting agencies. San Bernardino County is currently a direct use customer of IEUA based on long standing historical contracts.

Table 2 shows the 2019/20 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 the Chino Basin Regional Sewage Service Contract.

Table 2 – Recycled Water Demand by Agency for 2019/20

Retail Agency	Direct Use (AF)	Recharge (AF)	Agency Total (AF)
Chino	4,795	0	4,795
Chino Hills	1,417	1,188	2,605
CVWD	1,038	4,458	5,496
Fontana/FWC	211	2,693	2,904
Montclair/MVWD	298	781	1,079
Ontario	7,817	3,017	10,834
Upland	703	1,243	1,946
IEUA	773	0	773
San Bernardino County	65	0	65
Subtotal	**17,115**	**13,381**	**30,495**

CUSTOMERS DEMANDS

Table 3 lists the top ten largest direct reuse customer sites for the fiscal year (excluding groundwater recharge sites). During 2019/20, eighty-seven (87) new connections were made to the recycled water system with a total new demand estimated at 199 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 2019/20

Customer	Use (AF)	Type of Use	Retailer
Cleveland Farm	1,855	Agricultural	Chino/Ontario
Cal Poly Pomona	1,028	Agricultural	Chino
GH Dairy	931	Agricultural	Ontario
New Indy Ontario	870	Industrial	Ontario
Whispering Lakes Golf Course	631	Landscape	Ontario
IEUA Headquarters	630	Landscape	IEUA
Superior Sod	595	Agricultural	Chino
Weststeyn Dairy	473	Agricultural	Chino
City of Ontario	390	Landscape	Ontario
Upland Hills Country Club	389	Landscape	Upland
Subtotal	**7,792**		

ECONOMIC AND ENVIRONMENTAL IMPACTS

The 30,495 AF of recycled water used during the fiscal year is the equivalent of the water supply for roughly 40,945 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 1,940 kilowatt-hours (kWh) per AF, and an overall reduction of approximately 53 percent in carbon dioxide emissions.

IEUA's wholesale recycled water rate to its member agencies for 2019/20 was $490/AF for direct usage and $550/AF for recharge.

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 and 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 combined efforts 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 (RWQCB) to operate its recycled water groundwater recharge programs at five additional recharge sites (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 5,396 AF in 2004/05 to a peak of 38,251 AF in 2013/14. Over the past several years, recycled water demand has fallen slightly, which has been primarily driven by land use conversion from agriculture to urban.

APPENDIX A

RECYCLED WATER

EFFLUENT MONITORING DATA

FOR CALENDAR YEAR 2019

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-19	2.0	1.5	2.3	997	942	1068	6.9	6.6	7.1	<2	<2	<2	0.4	<2	<2	<2	0.4	6.0	5.2	6.7	578	558	594	4.8	4.5	5.5	5.6	5.2	6.3	<0.1	<0.1	<0.1
Feb-19	3.0	1.8	4.0	1002	929	1065	6.9	6.6	7.1	<2	<2	<2	0.7	<2	<2	<2	0.5	6.5	5.4	7.5	553	522	576	4.4	3.7	5.0	5.2	4.1	6.1	<0.1	<0.1	<0.1
Mar-19	2.6	1.3	3.5	1043	830	1171	7.0	6.6	7.3	2	<2	2	0.6	<2	<2	2	0.5	7.9	6.6	9.6	593	558	638	5.0	3.8	6.1	5.8	5.0	6.8	<0.1	<0.1	<0.1
Apr-19	2.8	1.6	3.1	1002	929	1065	7.1	6.9	7.2	2	<2	4	0.5	<2	<2	<2	0.5	8.4	7.3	14.4	527	502	564	4.4	3.3	6.5	5.5	4.6	6.2	<0.1	<0.1	<0.1
May-19	2.4	1.9	3.0	900	854	957	7.0	6.8	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	7.5	6.9	8.2	510	502	520	3.6	1.9	4.8	5.0	3.8	5.8	<0.1	<0.1	<0.1
Jun-19	1.9	1.2	2.1	944	892	980	7.1	6.8	7.2	<2	<2	2	0.5	<2	<2	2	0.5	7.4	6.9	8.2	545	524	562	2.3	0.8	4.1	3.8	2.2	5.0	<0.1	<0.1	<0.1
Jul-19	1.6	1.0	2.5	888	804	956	7.2	6.7	7.4	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.0	8.6	496	468	524	3.2	2.3	4.6	4.6	4.1	5.6	<0.1	<0.1	<0.1
Aug-19	1.4	1.0	1.8	834	796	1013	7.3	6.9	7.4	<2	<2	<2	0.5	<2	<2	<2	0.4	6.8	6.0	7.4	468	460	478	3.1	2.4	4.1	4.4	3.9	5.0	<0.1	<0.1	<0.1
Sep-19	1.8	0.1	2.6	858	811	981	7.2	6.8	7.5	<2	<2	2	0.5	<2	<2	<2	0.4	6.9	5.6	7.7	532	464	612	2.9	2.1	4.2	4.0	3.7	4.4	<0.1	<0.1	<0.1
Oct-19	2.7	2.5	3.0	825	789	871	7.1	6.7	7.5	<2	<2	2	0.5	<2	<2	<2	0.5	6.8	5.8	7.7	498	454	590	2.8	1.5	3.8	4.6	4.1	5.0	<0.1	<0.1	<0.1
Nov-19	2.1	0.0	2.5	877	845	927	7.0	6.7	7.3	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.3	7.9	478	456	500	3.4	2.1	4.2	4.9	4.5	5.2	<0.1	<0.1	0.2
Dec-19	1.9	1.5	2.5	889	783	922	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	7.0	5.9	8.1	474	456	490	4.4	3.6	5.4	6.0	5.3	6.7	<0.1	<0.1	<0.1
Avg	**2.2**	**1.3**	**2.8**	**921**	**850**	**998**	**7.1**	**6.7**	**7.3**	**<2**	**<2**	**2**	**0.5**	**<2**	**<2**	**<2**	**0.5**	**7.1**	**6.2**	**8.5**	**521**	**494**	**554**	**3.7**	**2.7**	**4.9**	**5.0**	**4.2**	**5.7**	**<0.1**	**<0.1**	**<0.1**
Min	**1.4**	**0.0**	**1.8**	**825**	**783**	**871**	**6.9**	**6.6**	**7.1**	**<2**	**<2**	**<2**	**0.4**	**<2**	**<2**	**<2**	**0.4**	**6.0**	**5.2**	**6.7**	**468**	**454**	**478**	**2.3**	**0.8**	**3.8**	**3.8**	**2.2**	**4.4**	**<0.1**	**<0.1**	**<0.1**
Max	**3.0**	**2.5**	**4.0**	**1043**	**942**	**1171**	**7.3**	**6.9**	**7.5**	**2**	**<2**	**4**	**0.7**	**<2**	**<2**	**2**	**0.5**	**8.4**	**7.3**	**14.4**	**593**	**558**	**638**	**5.0**	**4.5**	**6.5**	**6.0**	**5.3**	**6.8**	**<0.1**	**<0.1**	**0.2**

***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-19	25.5	13.2	41.3	740	676	805	6.8	6.6	7.1	<2	<2	2	0.5	<2	<2	5	0.6	6.1	5.0	7.8	481	428	508	6.1	6.1	6.1	6.9	6.9	6.9	<0.1	<0.1	<0.1
Feb-19	33.8	28.2	43.1	636	533	705	6.8	6.6	7.0	<2	<2	<2	0.6	<2	<2	<2	0.5	6.4	5.3	7.3	459	428	480	4.5	3.5	5.0	5.2	4.3	6.1	<0.1	<0.1	0.1
Mar-19	25.6	14.0	36.7	692	568	829	6.9	6.8	7.1	2	<2	2	0.6	<2	<2	2	0.5	7.8	6.7	9.4	465	424	480	5.0	3.5	6.1	6.6	6.5	6.7	<0.1	<0.1	<0.1
Apr-19	11.7	5.1	20.4	742	656	833	6.9	6.8	7.2	2	<2	3	0.5	<2	<2	<2	0.5	7.8	5.1	8.7	477	464	488	4.8	3.3	6.4	4.7	4.2	5.2	<0.1	<0.1	<0.1
May-19	14.2	4.4	28.4	773	707	834	7.0	6.8	7.4	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.1	7.8	478	464	492	3.7	2.1	5.4	6.0	6.0	6.0	<0.1	<0.1	<0.1
Jun-19	9.2	3.8	12.0	866	747	936	7.0	6.6	7.2	<2	<2	2	0.6	<2	<2	<2	0.5	7.1	6.7	7.8	484	476	490	2.6	1.4	4.2	4.7	4.7	4.7	<0.1	<0.1	0.1
Jul-19	6.7	0.3	14.2	815	750	869	7.0	6.7	7.2	<2	<2	3	0.6	<2	<2	<2	0.5	6.9	6.0	8.5	458	434	480	3.4	2.5	4.3	5.3	5.3	5.3	<0.1	<0.1	<0.1
Aug-19	0.9	0.3	2.6	819	736	900	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	6.7	5.7	9.1	472	456	498	3.2	2.4	4.2	5.4	5.4	5.4	<0.1	<0.1	<0.1
Sep-19	3.7	0.3	10.5	805	680	850	7.0	6.7	7.2	<2	<2	<2	0.5	<2	<2	<2	0.5	6.6	5.7	7.3	449	430	466	2.8	2.0	3.9	4.0	4.0	4.0	<0.1	<0.1	<0.1
Oct-19	2.3	0.3	8.9	720	626	803	6.9	6.6	7.2	<2	<2	<2	0.6	<2	<2	<2	0.5	6.6	5.6	7.4	452	448	458	3.1	1.6	4.5	4.7	4.7	4.7	<0.1	<0.1	<0.1
Nov-19	10.7	2.1	31.2	752	678	837	6.9	6.5	7.3	<2	<2	2	0.5	<2	<2	<2	0.5	6.8	6.0	7.9	471	456	484	3.3	2.2	4.9	3.8	3.8	3.8	<0.1	<0.1	0.2
Dec-19	22.7	9.7	33.7	705	576	793	6.8	6.6	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	6.9	5.5	7.8	444	416	460	4.1	3.5	5.2	6.1	6.1	6.1	<0.1	<0.1	0.1
Avg	**13.9**	**6.8**	**23.6**	**755**	**661**	**833**	**6.9**	**6.7**	**7.2**	**<2**	**<2**	**2**	**0.5**	**<2**	**<2**	**<2**	**0.5**	**6.9**	**5.8**	**8.1**	**466**	**444**	**482**	**3.9**	**2.8**	**5.0**	**5.3**	**5.2**	**5.4**	**<0.1**	**<0.1**	**<0.1**
Min	**0.9**	**0.3**	**2.6**	**636**	**533**	**705**	**6.8**	**6.5**	**7.0**	**<2**	**<2**	**<2**	**0.5**	**<2**	**<2**	**<2**	**0.5**	**6.1**	**5.0**	**7.3**	**444**	**416**	**458**	**2.6**	**1.4**	**3.9**	**3.8**	**3.8**	**3.8**	**<0.1**	**<0.1**	**<0.1**
Max	**33.8**	**28.2**	**43.1**	**866**	**750**	**936**	**7.0**	**6.8**	**7.4**	**2**	**<2**	**3**	**0.6**	**<2**	**<2**	**5**	**0.6**	**7.8**	**6.7**	**9.4**	**484**	**476**	**508**	**6.1**	**6.1**	**6.4**	**6.9**	**6.9**	**6.9**	**<0.1**	**<0.1**	**0.2**

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-19	5.8	4.2	8.0	914	866	966	6.8	6.6	6.9	<2	<2	<2	0.6	<2	<2	<2	0.6	5.0	4.6	5.2	572	556	596	8.2	8.2	8.2	8.9	8.9	8.9	<0.1	<0.1	<0.1
Feb-19	6.0	4.3	9.3	926	832	986	6.9	6.8	7.1	<2	<2	<2	0.5	<2	<2	<2	0.6	5.3	4.7	6.1	574	532	592	7.4	6.3	9.0	7.4	7.4	7.4	<0.1	<0.1	0.1
Mar-19	5.6	3.5	8.4	1005	946	1103	7.0	6.8	7.1	<2	<2	<2	0.9	<2	<2	3	0.9	5.6	4.9	6.3	600	566	646	10.5	7.3	17.2	12.4	12.4	12.4	<0.1	<0.1	<0.1
Apr-19	4.7	3.2	7.1	953	914	987	7.0	6.7	7.1	<2	<2	<2	0.6	<2	<2	<2	0.7	5.4	4.9	6.3	551	544	556	7.0	5.2	10.4	5.9	5.9	5.9	<0.1	<0.1	0.1
May-19	7.3	5.2	9.4	951	925	983	7.0	6.8	7.1	<2	<2	3	0.7	<2	<2	2	0.9	5.4	4.8	6.0	547	526	560	5.4	3.7	9.7	6.6	6.6	6.6	<0.1	<0.1	<0.1
Jun-19	3.8	2.1	6.8	992	970	1013	7.0	6.9	7.2	<2	<2	<2	0.7	<2	<2	<2	0.8	5.4	4.8	5.6	542	536	548	3.7	3.0	5.4	4.5	4.5	4.5	<0.1	<0.1	0.1
Jul-19	4.1	1.3	8.1	1003	982	1020	7.0	6.8	7.2	<2	<2	<2	0.5	<2	<2	7	0.4	5.7	5.3	6.6	515	500	530	2.7	1.3	3.9	3.5	3.5	3.5	<0.1	<0.1	<0.1
Aug-19	7.3	5.8	8.5	1016	977	1068	7.0	6.8	7.2	<2	<2	<2	0.7	<2	<2	3	0.6	5.5	4.6	6.2	513	492	530	4.0	2.1	5.9	2.9	2.9	2.9	<0.1	<0.1	<0.1
Sep-19	7.4	5.0	8.6	1030	985	1073	7.0	6.9	7.2	<2	<2	<2	0.8	<2	<2	<2	0.8	5.5	5.1	7.3	530	512	540	4.9	4.0	5.7	5.5	5.5	5.5	<0.1	<0.1	<0.1
Oct-19	6.7	5.1	8.8	946	897	1004	7.0	6.9	7.2	<2	<2	<2	0.6	<2	<2	<2	0.7	5.3	4.2	5.7	547	496	632	5.7	4.6	7.2	6.0	6.0	6.0	<0.1	<0.1	<0.1
Nov-19	7.7	4.8	9.8	918	841	940	6.9	6.7	7.2	<2	<2	2	0.5	<2	<2	<2	0.6	6.0	4.9	7.6	514	506	528	5.6	4.8	6.0	6.1	6.1	6.1	<0.1	<0.1	<0.1
Dec-19	9.4	8.0	11.0	869	798	909	6.8	6.6	7.0	<2	<2	<2	0.6	<2	<2	2	0.6	6.1	5.5	6.8	514	504	526	6.1	4.6	7.4	7.6	7.6	7.6	<0.1	<0.1	<0.1
Avg	**6.3**	**4.4**	**8.7**	**960**	**911**	**1004**	**7.0**	**6.8**	**7.1**	**<2**	**<2**	**<2**	**0.6**	**<2**	**<2**	**<3**	**0.7**	**5.5**	**4.9**	**6.3**	**543**	**523**	**565**	**5.9**	**4.6**	**8.0**	**6.4**	**6.4**	**6.4**	**<0.1**	**<0.1**	**<0.1**
Min	**3.8**	**1.3**	**6.8**	**869**	**798**	**909**	**6.8**	**6.6**	**6.9**	**<2**	**<2**	**<2**	**0.5**	**<2**	**<2**	**<2**	**0.4**	**5.0**	**4.2**	**5.2**	**513**	**492**	**526**	**2.7**	**1.3**	**3.9**	**2.9**	**2.9**	**2.9**	**<0.1**	**<0.1**	**<0.1**
Max	**9.4**	**8.0**	**11.0**	**1030**	**985**	**1103**	**7.0**	**6.9**	**7.2**	**<2**	**<2**	**3**	**0.9**	**<2**	**<2**	**7**	**0.9**	**6.1**	**5.5**	**7.6**	**600**	**566**	**646**	**10.5**	**8.2**	**17.2**	**12.4**	**12.4**	**12.4**	**<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-19	6.1	0.5	10.0	935	873	985	6.8	6.6	7.0	<2	<2	<2	0.5	<2	<2	<2	0.6	5.5	4.9	5.9	535	518	550	5.4	5.4	5.4	6.3	6.3	6.3	0.1	<0.1	0.2
Feb-19	7.4	5.5	11.4	942	835	986	6.9	6.7	7.1	<2	<2	2	0.4	<2	<2	2	0.6	6.5	5.3	7.7	523	478	546	5.1	4.3	5.6	6.6	6.3	6.8	<0.1	<0.1	0.1
Mar-19	5.5	0.7	8.0	959	908	1023	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	2	0.6	7.7	6.8	8.8	545	516	574	4.3	3.0	4.7	5.4	5.4	5.4	<0.1	<0.1	0.1
Apr-19	1.0	0.7	1.8	902	878	924	6.8	6.6	7.0	<2	<2	2	0.5	<2	<2	<2	0.6	6.8	6.3	7.6	511	506	514	4.3	3.0	5.1	4.9	4.9	4.9	<0.1	<0.1	<0.1
May-19	2.2	0.7	5.3	932	904	969	6.8	6.6	7.6	<2	<2	2	0.4	<2	<2	<2	0.5	7.0	6.2	7.7	535	508	548	4.0	2.7	4.8	4.7	4.7	4.7	<0.1	<0.1	<0.1
Jun-19	0.9	0.0	2.5	951	878	988	6.8	6.6	7.5	<2	<2	2	0.5	<2	<2	<2	0.5	7.1	6.4	7.7	542	532	550	4.9	3.5	5.8	6.5	6.5	6.5	<0.1	<0.1	<0.1
Jul-19	0.0	0.0	0.0	836	793	870	7.1	7.0	7.2	<2	<2	<2	0.6	<2	<2	<2	0.5	6.4	5.7	7.5				4.5	3.3	6.0	7.0	7.0	7.0			
Aug-19	0.0	0.0	0.0	815	794	854	7.1	7.0	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	6.6	5.8	7.9				4.8	4.1	5.7	5.8	5.8	5.8			
Sep-19	0.0	0.0	0.0	825	798	861	7.0	6.6	7.2	<2	<2	<2	0.5	<2	<2	<2	0.6	6.9	6.4	7.5				5.1	4.3	5.8	6.0	6.0	6.0			
Oct-19	0.0	0.0	0.0	794	742	837	7.1	7.0	7.2	<2	<2	<2	0.4	<2	<2	<2	0.5	6.7	5.8	7.5				5.0	3.8	5.9	6.7	6.7	6.7			
Nov-19	1.5	0.0	8.3	878	800	924	6.8	6.5	7.1	<2	<2	<2	0.5	<2	<2	<2	0.5	6.6	5.7	7.1	519	502	530	5.6	4.7	6.7	7.7	7.7	7.7	0.2	<0.1	0.3
Dec-19	4.6	2.6	6.8	881	780	929	6.8	6.6	7.0	<2	<2	<2	0.4	<2	<2	<2	0.5	6.6	5.9	7.4	482	464	500	5.4	4.6	7.2	6.5	6.5	6.5	<0.1	<0.1	0.1
Avg	**2.4**	**0.9**	**4.5**	**888**	**832**	**929**	**6.9**	**6.7**	**7.2**	**<2**	**<2**	**2**	**0.5**	**<2**	**<2**	**<2**	**0.5**	**6.7**	**5.9**	**7.5**	**524**	**503**	**539**	**4.8**	**3.9**	**5.7**	**6.2**	**6.1**	**6.2**	**<0.1**	**<0.1**	**0.1**
Min	**0.0**	**0.0**	**0.0**	**794**	**742**	**837**	**6.8**	**6.5**	**7.0**	**<2**	**<2**	**<2**	**0.4**	**<2**	**<2**	**<2**	**0.5**	**5.5**	**4.9**	**5.9**	**482**	**464**	**500**	**4.0**	**2.7**	**4.7**	**4.7**	**4.7**	**4.7**	**<0.1**	**<0.1**	**<0.1**
Max	**7.4**	**5.5**	**11.4**	**959**	**908**	**1023**	**7.1**	**7.0**	**7.6**	**<2**	**<2**	**2**	**0.6**	**<2**	**<2**	**2**	**0.6**	**7.7**	**6.8**	**8.8**	**545**	**532**	**574**	**5.6**	**5.4**	**7.2**	**7.7**	**7.7**	**7.7**	**0.2**	**<0.1**	**0.3**

RP-1 (M-001A) Effluent Monthly Toxicity Data **Table No. 4a**

CHRONIC TOXICITY - SURVIVAL (*Ceriodaphnia Dubia*)						CHRONIC TOXICITY - REPRODUCTION (*Ceriodaphnia dubia*)			
START DATE		END DATE	NOEC	TUc	2-Mo Median TUc	NOEC	TUc	2-Mo Median TUc	IC_{25}
01/14/19*	thru	01/18/19	100	1.0	1.0	100	1.0	1.0	100
02/25/19*	thru	03/01/19	100	1.0	1.0	<100	>1.0	1.0	96.2
03/18/19*	thru	03/22/19	100	1.0	1.0	100	1.0	1.0	100
04/22/19*	thru	04/26/19	100	1.0	1.0	100	1.0	1.0	100
05/13/19*	thru	05/17/19	100	1.0	1.0	100	1.0	1.0	100
06/17/19*	thru	06/21/19	100	1.0	1.0	100	1.0	1.0	100
07/20/19*	thru	07/26/19	100	1.0	1.0	100	1.0	1.0	100
08/03/19	thru	08/09/19	100	1.0	1.0	60	1.7	1.3	87.0
08/17/19	thru	08/23/19	100	1.0	1.0	100	1.0	1.0	100
08/31/19	thru	09/06/19	100	1.0	1.0	100	1.0	1.0	100
10/05/19	thru	10/11/19	100	1.0	1.0	100	1.0	1.0	100
11/02/19	thru	11/08/19	100	1.0	1.0	60	1.7	1.3	100
11/16/19	thru	11/22/19	100	1.0	1.0	100	1.0	1.0	100
11/30/19	thru	12/06/19	100	1.0	1.0	100	1.0	1.0	100

RP-1 (M-002A) Effluent Monthly Toxicity Data **Table No. 4b**

CHRONIC TOXICITY - SURVIVAL (*Ceriodaphnia Dubia*)						CHRONIC TOXICITY - REPRODUCTION (*Ceriodaphnia dubia*)			
START DATE		END DATE	NOEC	TUc	2-Mo Median TUc	NOEC	TUc	2-Mo Median TUc	IC_{25}
01/14/19*	thru	01/18/19	100	1.0	1.0	100	1.0	1.0	100
02/25/19*	thru	03/01/19	100	1.0	1.0	100	1.0	1.0	100
03/18/19*	thru	03/22/19	100	1.0	1.0	100	1.0	1.0	100
04/22/19*	thru	04/26/19	100	1.0	1.0	100	1.0	1.0	100
05/13/19*	thru	05/17/19	100	1.0	1.0	100	1.0	1.0	100
06/17/19*	thru	06/21/19	100	1.0	1.0	90	1.1	1.1	96.3
06/26/19*	thru	07/01/19	100	1.0	1.0	100	1.0	1.0	100
07/13/19*	thru	07/19/19	100	1.0	1.0	100	1.0	1.0	100
08/10/19	thru	08/16/19	100	1.0	1.0	100	1.0	1.0	100
09/07/19	thru	09/13/19	100	1.0	1.0	100	1.0	1.0	100
10/12/19	thru	10/18/19	100	1.0	1.0	100	1.0	1.0	100
11/09/19	thru	11/14/19	100	1.0	1.0	100	1.0	1.0	100
12/14/19	thru	12/20/19	100	1.0	1.0	100	1.0	1.0	100
12/16/19*	thru	12/20/19	100	1.0	1.0	100	1.0	1.0	100

* MBC Laboratory

RP-5 (M-003) Effluent Monthly Toxicity Data **Table No. 4c**

			CHRONIC TOXICITY - SURVIVAL (*Ceriodaphnia Dubia*)			CHRONIC TOXICITY - REPRODUCTION (*Ceriodaphnia dubia*)			
START DATE		END DATE	NOEC	TUc	2-Mo Median TUc	NOEC	TUc	2-Mo Median TUc	IC_{25}
01/14/19*	thru	01/18/19	100	1.0	1.0	100	1.0	1.0	100
02/25/19*	thru	03/01/19	100	1.0	1.0	100	1.0	1.0	100
03/18/19*	thru	03/22/19	100	1.0	1.0	100	1.0	1.0	100
04/22/19*	thru	04/26/19	100	1.0	1.0	100	1.0	1.0	100
05/13/19*	thru	05/17/19	100	1.0	1.0	100	1.0	1.0	100
06/17/19*	thru	06/21/19	100	1.0	1.0	100	1.0	1.0	100
07/20/19*	thru	07/26/19	100	1.0	1.0	100	1.0	1.0	100
08/17/19	thru	08/23/19	100	1.0	1.0	100	1.0	1.0	100
08/31/19	thru	09/06/19	100	1.0	1.0	100	1.0	1.0	100
10/05/19	thru	10/11/19	100	1.0	1.0	100	1.0	1.0	100
11/02/19	thru	11/08/19	100	1.0	1.0	100	1.0	1.0	100
11/30/19	thru	12/06/19	100	1.0	1.0	100	1.0	1.0	100

CCWRF (M-004) Effluent Monthly Toxicity Data **Table No. 4d**

			CHRONIC TOXICITY - SURVIVAL (*Ceriodaphnia Dubia*)			CHRONIC TOXICITY - REPRODUCTION (*Ceriodaphnia dubia*)			
START DATE		END DATE	NOEC	TUc	2-Mo Median TUc	NOEC	TUc	2-Mo Median TUc	IC_{25}
01/14/19*	thru	01/18/19	100	1.0	1.0	100	1.0	1.0	100
01/21/19*	thru	01/25/19	100	1.0	1.0	100	1.0	1.0	100
02/25/19*	thru	03/01/19	100	1.0	1.0	100	1.0	1.0	100
03/18/19*	thru	03/22/19	100	1.0	1.0	100	1.0	1.0	100
04/22/19*	thru	04/26/19	100	1.0	1.0	100	1.0	1.0	100
05/13/19*	thru	05/17/19	100	1.0	1.0	100	1.0	1.0	100
06/17/19*	thru	06/21/19	100	1.0	1.0	100	1.0	1.0	100
					No Discharge During July 2019				
					No Discharge During August 2019				
					No Discharge During September 2019				
					No Discharge During October 2019				
11/23/19	thru	11/29/19	100	1.0	1.0	100	1.0	1.0	100
12/07/19	thru	12/12/19	100	1.0	1.0	100	1.0	1.0	100

* MBC Laboratory

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-19	0.6	0.7	0.5	0.7	22.1	22.7	22.5	23.2	<2	29.2	<1	1.0	<2	29.2	<1	1.0	4	147	793	4	143	870
Feb-19	0.6	0.7	0.5	1.5	21.4	22.3	21.1	22.3	<1	2.0	<1	<1	<1	2.0	<1	<1	4	126	747	4	104	592
Mar-19	0.7	1.0	0.6	1.4	22.5	23.5	21.7	23.4	<1	2.0	<1	<1	<1	2.0	<1	<1	4	138	550	4	154	770
Apr-19	0.9	1.3	0.8	1.2	24.5	25.9	24.0	24.9	<1	10.9	<1	<1	<1	10.9	<1	<1	3	159	777	3	148	816
May-19	0.9	1.1	0.8	1.6	25.4	26.0	23.9	25.8	<1	2.0	<1	<1	<1	2.0	<1	<1	3	153	789	3	153	658
Jun-19	0.8	1.0	0.7	1.0	26.5	27.2	26.6	27.8	<1	6.3	<1	<1	<1	6.3	<1	<1	3	152	706	3	172	795
Jul-19	0.9	1.2	0.8	1.9	28.5	29.9	27.6	28.5	<1	14.5	<1	<1	<1	14.5	<1	<1	3	133	607	3	126	604
Aug-19	0.8	0.8	0.6	1.1	30.0	30.2	28.8	29.1	<1	2.0	<1	<1	<1	2.0	<1	<1	4	132	571	4	136	651
Sep-19	0.7	0.8	0.6	0.8	29.8	30.7	28.7	29.6	<10	261.3	<1	<1	<10	261.3	<1	<1	4	134	669	4	126	618
Oct-19	0.6	0.8	0.5	0.8	27.9	28.8	26.5	27.3	<1	5.2	<1	<1	<1	5.2	<1	<1	4	124	639	4	127	700
Nov-19	0.6	0.8	0.5	0.8	26.1	26.8	23.3	25.9	<1	5.0	<1	<1	<1	5.0	<1	<1	4	126	580	4	141	543
Dec-19	0.6	0.9	0.7	1.1	23.3	24.2	21.3	23.3	<1	4.1	<1	<1	<1	4.1	<1	<1	4	126	549	4	135	528
Avg	**0.7**	**0.9**	**0.6**	**1.2**	**25.7**	**26.5**	**24.7**	**25.9**	**<2**	**29**	**<1**	**<1**	**<2**	**29**	**<1**	**<1**	**4**	**138**	**670**	**4**	**139**	**679**
Min	**0.6**	**0.7**	**0.5**	**0.7**	**21.4**	**22.3**	**21.1**	**22.3**	**<1**	**2**	**<1**	**<1**	**<1**	**2**	**<1**	**<1**	**3**	**124**	**549**	**3**	**104**	**528**
Max	**0.9**	**1.3**	**0.8**	**1.9**	**30.0**	**30.7**	**28.8**	**29.6**	**<10**	**261**	**<1**	**1**	**<10**	**261**	**<1**	**1**	**4**	**159**	**793**	**4**	**172**	**870**

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-19	0.6	0.7	0.5	0.6	21.4	21.9	21.5	22.5	<1	2.0	<1	<1	<1	3.1	<1	<1	4	127	455	3	127	518
Feb-19	0.6	0.8	0.7	0.8	21.4	21.6	21.1	21.8	<1	1.0	<1	<1	<1	2.0	<1	<1	4	106	499	3	112	519
Mar-19	0.6	0.9	0.7	1.0	22.9	23.7	22.1	22.9	<1	2.0	<1	<1	<1	1.0	<1	<1	4	147	526	3	128	482
Apr-19	0.7	0.9	0.6	0.7	24.1	25.1	23.0	23.5	<1	2.0	<1	<1	<1	1.0	<1	<1	3	144	591	2	137	572
May-19	1.0	1.4	0.6	0.9	23.9	25.1	23.1	25.6	<1	4.1	<1	1	<1	1.0	<1	<1	3	135	580	2	115	497
Jun-19	0.8	1.1	0.7	0.8	25.7	26.1	25.4	27.6	<1	1.0	<1	<1	<1	1.0	<1	<1	3	134	531	2	129	517
Jul-19	1.0	1.3	0.6	0.9	27.6	30.1			<5	104.3	<1	<1	<6	145.0	<1	<1	3	138	558	2	127	538
Aug-19	1.0	1.6	0.6	0.7	29.1	29.4			<1	<1.0	<1	<1	<1	<1.0	<1	<1	3	151	550	2	128	568
Sep-19	0.9	1.2	0.5	0.6	27.6	28.1			<1	1.0	<1	<1	<1	<1	<1	<1	3	145	587	2	122	508
Oct-19	0.9	1.2	0.6	0.7	24.7	26.5			<1	<1	<1	<1	<1	1.0	<1	<1	3	126	598	2	136	579
Nov-19	0.9	1.5	0.6	1.0	24.0	25.0	20.0	23.3	<1	1	<1	<1	<1	1.0	<1	<1	4	119	511	2	110	578
Dec-19	1.0	1.4	0.7	0.8	21.6	23.0	20.5	21.6	<1	1	<1	<1	<1	2.0	<1	<1	3	133	507	2	116	480
Avg	**0.8**	**1.2**	**0.6**	**0.8**	**24.5**	**25.5**	**22.1**	**23.6**	**<1**	**10**	**<1**	**<1**	**<1**	**13**	**<1**	**<1**	**3**	**134**	**540**	**2**	**124**	**530**
Min	**0.6**	**0.7**	**0.5**	**0.6**	**21.4**	**21.6**	**20.0**	**21.6**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**3**	**106**	**455**	**2**	**110**	**480**
Max	**1.0**	**1.6**	**0.7**	**1.0**	**29.1**	**30.1**	**25.4**	**27.6**	**<5**	**104**	**<1**	**1**	**<6**	**145**	**<1**	**<1**	**4**	**151**	**598**	**3**	**137**	**579**

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-19	0.0	0.0	0.0	0.0	10.0	8.5	13.5	16.9	9.1	9.7	254	0.3	126	9	9.2	7.8	19.5	19.9	7.4	8.1	152	7
Feb-19	0.0	0.0	0.0	0.0	10.4	9.0	10.7	12.4	8.8	9.7	154	0.8			9.8	9.1	17.3	19.0	7.7	8.0		
Mar-19	0.0	0.0	0.0	0.0	10.3	8.4	16.2	17.7	8.9	10.1	270	<0.2			11.5	10.2	20.2	21.3	8.1	8.6		
Apr-19	0.0	0.0	0.0	0.0	10.3	9.6	16.5	18.5	9.1	10.6	308	0.3	138	5	10.1	8.6	20.7	22.5	8.1	9.1	145	3
May-19	0.0	0.0	0.0	0.0	10.4	9.2	18.1	19.1	9.3	10.0	332	1.0			11.4	8.8	20.9	22.6	8.5	9.0		
Jun-19	0.0	0.0	0.0	0.0	10.2	9.8	19.0	20.1	9.2	9.9	544	<0.2			10.4	10.0	22.2	24.2	8.3	8.7		
Jul-19	0.0	0.0	0.0	0.0	10.3	10.0	24.8	29.1	9.6	10.3	382	1.8	193	18	12.7	10.6	27.0	29.7	8.8	9.9	161	8
Aug-19	0.0	0.0	0.0	0.0	9.7	9.1	23.2	24.3	9.7	10.0	382	1.2			11.4	7.5	23.5	24.6	9.0	9.6		
Sep-19	0.0	0.0	0.0	0.0	9.8	9.2	23.0	24.8	9.6	9.9	272	<0.2			10.7	8.6	25.3	26.6	9.1	9.3		
Oct-19	0.0	0.0	0.0	0.0	10.3	9.7	16.6	17.3	9.4	9.7	544	0.6	152	4	9.6	7.2	21.4	23.8	8.1	9.2	164	24
Nov-19	0.0	0.0	0.0	0.0	11.7	10.6	16.9	21.0	9.6	10.6	418	<0.2			10.5	8.4	21.4	24.9	8.7	9.4		
Dec-19	0.0	0.0	0.0	0.0	12.2	10.9	11.4	14.3	8.9	9.8	150	1.0			10.1	8.5	19.9	21.0	8.1	8.6		
Avg	**0.0**	**0.0**	**0.0**	**0.0**	**10.5**	**9.5**	**17.5**	**19.6**	**9.3**	**10.0**	**334**	**0.7**	**152**	**9**	**10.6**	**8.8**	**21.6**	**23.3**	**8.3**	**9.0**	**156**	**11**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**9.7**	**8.4**	**10.7**	**12.4**	**8.8**	**9.7**	**150**	**<0.2**	**126**	**4**	**9.2**	**7.2**	**17.3**	**19.0**	**7.4**	**8.0**	**145**	**3**
Max	**0.0**	**0.0**	**0.0**	**0.0**	**12.2**	**10.9**	**24.8**	**29.1**	**9.7**	**10.6**	**544**	**1.8**	**193**	**18**	**12.7**	**10.6**	**27.0**	**29.7**	**9.1**	**9.9**	**164**	**24**

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-19	0.0	0.0	0.0	0.0	12.7	8.9	22.0	22.7	7.0	9.7	554	3.6	176	7	8.2	7.7	17.2	18.3	7.0	7.9	288	6	14.7	9.5	16.9	22.8	8.6	10.4	748	<0.2	396	32
Feb-19	0.0	0.0	0.0	0.0	12.1	9.8	18.5	22.8	7.2	9.2	1140	3.9			8.6	8.6	16.8	17.8	7.6	8.3			13.7	11.6	15.9	22.5	7.6	10.5	1120	2.8		
Mar-19	0.0	0.0	0.0	0.0	9.6	7.5	20.6	22.6	7.0	11.0	406	3.7			8.0	7.3	19.4	19.9	7.6	7.7			15.0	13.1	15.3	21.0	8.4	9.6	336	2.1		
Apr-19	0.0	0.0	0.0	0.0	13.5	12.7	19.6	24.9	7.5	8.6	518	3.1	155	3	7.3	6.8	21.6	24.8	7.4	8.0	379	2	14.1	12.9	18.8	25.1	8.3	8.9	648	2.4	365	31
May-19	0.0	0.0	0.0	0.0	12.3	8.0	24.3	25.6	7.6	8.8	912	1.2			7.1	6.7	22.9	23.7	7.2	8.1			13.5	12.2	23.3	26.1	8.4	10.6	972	1.4		
Jun-19	0.0	0.0	0.0	0.0	16.3	15.0	27.2	28.4	7.8	8.6	556	4.0			7.0	6.0	23.9	24.7	7.5	7.8			13.4	9.9	28.1	30.6	8.5	10.2	650	<0.2		
Jul-19	0.0	0.0			12.4	9.3	30.2	31.6	8.5	9.3	486	3.5	308	10	7.3	6.8	26.7	29.7	7.2	7.9	578	11	13.6	12.5	29.5	31.8	8.8	9.5	512	3.7	319	8
Aug-19	0.0	0.0			13.3	9.7	25.6	28.6	8.1	9.3	716	5.0			7.3	7.1	27.9	28.1	7.2	7.7												
Sep-19	0.0	0.0			13.5	11.7	23.4	29.9	8.4	9.6					7.0	6.5	25.9	28.1	7.4	7.9												
Oct-19	0.0	0.0			14.1	11.2	25.2	31.0	8.3	10.3	624	<0.2	323	32	7.2	6.8	24.1	26.6	5.2	8.2	270	<5	14.1	11.2	25.2	31.0	8.3	10.3	646	<0.2	322	38
Nov-19	0.0	0.0	0.0	0.0	11.7	8.2	20.9	24.0	7.4	10.0	696	2.7			7.1	6.8	22.7	23.4	7.0	7.9			13.3	11.6	20.8	24.0	7.9	10.4	710	0.7		
Dec-19	0.0	0.0	0.0	0.0	14.6	11.8	18.4	22.3	7.8	8.6	334	3.1			7.4	7.1	19.3	21.1	7.0	7.8			16.4	14.0	14.3	17.4	8.4	10.1	646	2.7		
Avg	**0.0**	**0.0**	**0.0**	**0.0**	**13.0**	**10.3**	**23.0**	**26.2**	**7.7**	**9.4**	**631**	**3.1**	**241**	**13**	**7.5**	**7.0**	**22.4**	**23.9**	**7.1**	**7.9**	**379**	**6**	**14.2**	**11.8**	**20.8**	**25.2**	**8.3**	**10.1**	**699**	**1.6**	**351**	**27**
Min	**0.0**	**0.0**	**0.0**	**0.0**	**9.6**	**7.5**	**18.4**	**22.3**	**7.0**	**8.6**	**334**	**<0.2**	**155**	**3**	**7.0**	**6.0**	**16.8**	**17.8**	**5.2**	**7.7**	**270**	**2**	**13.3**	**9.5**	**14.3**	**17.4**	**7.6**	**8.9**	**336**	**<0.2**	**319**	**8**
Max	**0.0**	**0.0**	**0.0**	**0.0**	**16.3**	**15.0**	**30.2**	**31.6**	**8.5**	**11.0**	**1,140**	**5.0**	**323**	**32**	**8.6**	**8.6**	**27.9**	**29.7**	**7.6**	**8.3**	**578**	**11**	**16.4**	**14.0**	**29.5**	**31.8**	**8.8**	**10.6**	**1,120**	**3.7**	**396**	**38**

* 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-19	2.3	6.9	0.6	793	<2	29.2	<1	1.0	<2	<2	475	5.8	6.8	0.5	884	<1	<1.0	<1	<1	<2	<2	469
Feb-19	0.1	6.9	0.6	747	<1	2.0	<1	<1.0	<2	<2	432	3.4	7.1	0.4	769	<1	3.1	<1	<1	<2	<2	427
Mar-19	2.8	7.0	0.7	550	<1	2.0	<1	<1.0	2	<2	452	5.9	7.1	0.4	841	<1	2.0	<1	<1	<2	<2	426
Apr-19	11.0	7.1	0.9	777	<1	10.9	<1	<1.0	2	<2	461	8.3	7.0	0.4	792	<1	<1.0	<1	<1	<2	<2	409
May-19	8.5	7.0	0.9	789	<1	2.0	<1	<1.0	<2	<2	469	7.2	7.0	0.3	919	<1	<1.0	<1	<1	<2	<2	424
Jun-19	12.5	7.1	0.8	706	<1	6.3	<1	<1.0	<2	<2	483	8.8	7.0	0.4	917	<1	<1.0	<1	<1	<2	<2	432
Jul-19	16.0	7.2	0.9	607	<1	14.5	<1	<1.0	<2	<2	438	9.0	7.1	0.5	754	<1	2.0	<1	<1	<2	<2	390
Aug-19	21.8	7.3	0.8	571	<1	2.0	<1	<1.0	<2	<2	438	9.0	7.1	0.5	755	<2	21.1	<1	<1	<2	<2	403
Sep-19	20.3	7.2	0.7	669	<10	261.3	<1	<1.0	<2	<2	434	9.0	7.2	0.5	824	<1	<1.0	<1	<1	<2	<2	411
Oct-19	21.1	7.1	0.6	639	<1	5.2	<1	<1	<2	<2	425	8.9	7.0	0.4	906	<1	<1	<1	<1	<2	<2	399
Nov-19	16.4	7.0	0.6	580	<1	5.0	<1	<1	<2	<2	445	7.4	7.0	0.6	817	<3	45.7	<1	<1	<2	<2	399
Dec-19	4.1	6.9	0.6	549	<1	4.1	<1	<1	<2	<2	430	7.5	6.8	0.9	1061	<13	365.4	<1	<1	<2	<2	449
Avg	**11.4**	**7.1**	**0.7**	**664**	**<2**	**29**	**<1**	**<1**	**<2**	**<2**	**448**	**7.5**	**7.0**	**0.5**	**856**	**<2**	**37**	**<1**	**<1**	**<2**	**<2**	**419**
Min	**0.1**	**6.9**	**0.6**	**549**	**<1**	**2**	**<1**	**<1**	**<2**	**<2**	**425**	**3.4**	**6.8**	**0.3**	**754**	**<1**	**<1**	**<1**	**<1**	**<2**	**<2**	**390**
Max	**21.8**	**7.3**	**0.9**	**793**	**<10**	**261**	**<1**	**1**	**2**	**<2**	**483**	**9.0**	**7.2**	**0.9**	**1061**	**<13**	**365**	**<1**	**<1**	**<2**	**<2**	**469**

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-19	2.7	6.8	0.6	455	<1	2.0	<1	<1	<2	<2	543	1.4	6.8	0.5	518	<1	3.1	<1	<1	<2	<2	513
Feb-19	1.0	6.9	0.6	499	<1	1.0	<1	<1	<2	<2	557	0.6	6.9	0.7	519	<1	2.0	<1	<1	<2	<2	515
Mar-19	1.5	7.0	0.6	526	<1	2.0	<1	<1	<2	<2	590	1.9	6.9	0.7	482	<1	1.0	<1	<1	<2	<2	517
Apr-19	2.5	7.0	0.7	591	<1	2.0	<1	<1	<2	<2	519	6.0	6.8	0.6	572	<1	1.0	<1	<1	<2	<2	489
May-19	1.3	7.0	1.0	580	<1	4.1	<1	1	<2	<2	512	4.8	6.8	0.6	497	<1	1.0	<1	<1	<2	<2	508
Jun-19	5.4	7.0	0.8	531	<1	1.0	<1	<1	<2	<2	524	6.6	6.8	0.7	517	<1	1.0	<1	<1	<2	<2	504
Jul-19	4.7	7.0	1.0	558	<5	104.3	<1	<1	<2	<2	492	6.8	7.1	0.6	538	<6	145.0	<1	<1	<2	<2	453
Aug-19	1.0	7.0	1.0	550	<1	<1.0	<1	<1	<2	<2	503	7.0	7.1	0.6	568	<1	<1.0	<1	<1	<2	<2	449
Sep-19	0.6	7.0	0.9	587	<1	1.0	<1	<1	<2	<2	509	7.2	7.0	0.5	508	<1	<1	<1	<1	<2	<2	452
Oct-19	0.0	7.0	0.9	598	<1	<1	<1	<1	<2	<2	488	6.7	7.1	0.6	579	<1	1.0	<1	<1	<2	<2	441
Nov-19	0.5	6.9	0.9	511	<1	1	<1	<1	<2	<2	501	5.6	6.8	0.6	578	<1	1.0	<1	<1	<2	<2	476
Dec-19	0.3	6.8	1.0	507	<1	1	<1	<1	<2	<2	496	3.3	6.8	0.7	480	<1	2.0	<1	<1	<2	<2	458
Avg	**1.8**	**7.0**	**0.8**	**537**	**<1**	**10**	**<1**	**<1**	**<2**	**<2**	**519**	**4.8**	**6.9**	**0.6**	**532**	**<1**	**13**	**<1**	**<1**	**<2**	**<2**	**481**
Min	**0.0**	**6.8**	**0.6**	**455**	**<1**	**<1**	**<1**	**<1**	**<2**	**<2**	**488**	**0.6**	**6.8**	**0.5**	**480**	**<1**	**<1**	**<1**	**<1**	**<2**	**<2**	**441**
Max	**5.4**	**7.0**	**1.0**	**598**	**<5**	**104**	**<1**	**1**	**<2**	**<2**	**590**	**7.2**	**7.1**	**0.7**	**579**	**<6**	**145**	**<1**	**<1**	**<2**	**<2**	**517**

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-19	150			45				10			<0.5		<2	<0.5				36			
Feb-19	148	153	0.2	44	0	111	0.2	9	91	43	<0.25	<0.5	5	<0.5		<2	<0.25	40			
Mar-19	151	156	0.2	45	0	99	0.4	9	99	45	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	39			
Apr-19	143	162	0.3	43	0	98	0.2	9	95	49	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	44			
May-19	144	148	0.3	43	0	112	0.3	9	87	47	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	41	2	15	
Jun-19	149	123	0.3	43	0	123	0.2	10	99	48	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	41			
Jul-19	146	155	0.2	44	0	109	0.2	9	94	47	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	42	2	19	
Aug-19	150	178	0.2	47	0	94	0.2	8	96	40	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	39			
Sep-19	138	166	0.2	42	0	100	0.2	8	91	44	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	32			
Oct-19	137	162	0.2	41	0	96	0.2	8	93	41	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	36	2	18	
Nov-19	152	164	0.3	46	0	112	0.2	9	100	45	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	32			0.000
Dec-19	142	135	0.3	43	0	103	0.2	10	92	46	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	48			
Avg	**146**	**155**	**0.2**	**44**	**0**	**105**	**0.2**	**9**	**94**	**45**	**<0.27**	**<0.5**	**4**	**<0.5**	**<0.05**	**<2**	**<0.25**	**39**	**2**	**17**	**0.000**
Min	**137**	**123**	**0.2**	**41**	**0**	**94**	**0.2**	**8**	**87**	**40**	**<0.25**	**<0.5**	**<2**	**<0.5**	**<0.03**	**<2**	**<0.25**	**32**	**2**	**15**	**0.000**
Max	**152**	**178**	**0.3**	**47**	**0**	**123**	**0.4**	**10**	**100**	**49**	**<0.50**	**<0.5**	**6**	**<0.5**	**<0.05**	**<2**	**<0.25**	**48**	**2**	**19**	**0.000**

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-19	140			40		115		10			<0.5		<2	<0.5				44			
Feb-19	147	143	0.2	44	0	110	0.2	9	96	60	<0.25	<0.5	6	<0.5		<2	<0.25	42			
Mar-19	150	149	0.2	45	0	103	0.3	9	94	61	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	40	2	14	
Apr-19	149	156	0.2	45	0	100	0.2	9	102	63	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	45			
May-19	150	140	0.3	45	0	114	0.2	9	94	60	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	44	2	15	
Jun-19	145	119	0.3	42	0	119	0.2	10	100	61	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	41			
Jul-19	144	150	0.2	43	0	107	0.2	9	97	62	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	43	2	14	
Aug-19	151	163	0.2	48	0	94	0.2	8	104	64	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	40			
Sep-19	134	150	0.2	40	0	101	0.2	8	97	68	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	33			
Oct-19	137	153	0.2	41	0	95	0.2	8	98	54	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	35	2	16	
Nov-19	149	160	0.2	45	0	112	0.3	9	107	72	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	31			0.000
Dec-19	139	135	0.3	43	0	105	0.2	10	95	58	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	45			
Avg	**145**	**147**	**0.2**	**43**	**0**	**106**	**0.2**	**9**	**99**	**62**	**<0.27**	**<0.5**	**5**	**<0.5**	**<0.05**	**<2**	**<0.25**	**40**	**2**	**15**	**0.000**
Min	**134**	**119**	**0.2**	**40**	**0**	**94**	**0.2**	**8**	**94**	**54**	**<0.25**	**<0.5**	**<2**	**<0.5**	**<0.03**	**<2**	**<0.25**	**31**	**2**	**14**	**0.000**
Max	**151**	**163**	**0.3**	**48**	**0**	**119**	**0.3**	**10**	**107**	**72**	**<0.50**	**<0.5**	**6**	**<0.5**	**<0.05**	**<2**	**<0.25**	**45**	**2**	**16**	**0.000**

*Free Cyanide is analyzed using ASTM-D7237 for analysis of 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-19	210			59				15			<0.5		4	<0.5				52	3	13	0.000
Feb-19	244	144	0.2	69	0	167	0.1	17	103	74	<0.25	<0.5	7	<0.5		<2	<0.25	40	3	13	0.000
Mar-19	240	155	0.2	67	0	163	0.1	17	104	72	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	47			0.000
Apr-19	210	139	0.2	61	0	148	0.2	14	103	67	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	53	4	24	0.000
May-19	189	118	0.2	54	0	151	0.1	13	92	55	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	56	3	15	0.000
Jun-19	192	143	0.3	55	0	161	0.1	14	98	59	<0.25	<0.5	8	0.6	<0.05	<2	<0.25	46	3	15	0.000
Jul-19	194	137	0.2	59	0	166	0.1	11	107	63	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	33	3	17	0.000
Aug-19	181	138	0.3	54	0	148	0.1	11	104	50	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	41	2	16	0.000
Sep-19	176	130	0.2	51	0	155	0.1	12	100	54	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	50	3	17	0.000
Oct-19	187	127	0.2	54	0	155	0.1	13	106	54	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	56	8	23	0.000
Nov-19	183	129	0.3	52	0	153	0.2	13	101	56	<0.25	<0.5	7	<0.5	<0.025	<2	<0.25	53	3	14	NA*
Dec-19	183	116	0.3	53	0	157	0.1	14	104	58	<0.25	<0.5	7	<0.5	<0.025	<2	<0.25	47	3	16	0.000
Avg	**199**	**134**	**0.3**	**57**	**0**	**157**	**0.1**	**14**	**102**	**60**	**<0.27**	**<0.5**	**7**	**<0.5**	**<0.05**	**<2**	**<0.25**	**48**	**3**	**17**	**0.000**
Min	**176**	**116**	**0.2**	**51**	**0**	**148**	**0.1**	**11**	**92**	**50**	**<0.25**	**<0.5**	**4**	**<0.5**	**<0.03**	**<2**	**<0.25**	**33**	**2**	**13**	**0.000**
Max	**244**	**155**	**0.3**	**69**	**0**	**167**	**0.2**	**17**	**107**	**74**	**<0.50**	**<0.5**	**8**	**0.6**	**<0.05**	**<2**	**<0.25**	**56**	**8**	**24**	**0.000**

NA* - Not reported due to the effluent being higher than the influent. Highly suspect that the samples may have been switched. Since the original samples were disposed of, the sub lab is not able to confirm.

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-19	160			45				12			<0.5		4	<0.5				58	5	20	0.000
Feb-19	170	125	0.2	48	0	153	0.1	12	112	73	<0.25	<0.5	7	<0.5		<2	<0.25	59	4	18	
Mar-19	192	125	0.2	53	0	158	0.1	14	112	80	<0.25	<0.5	9	<0.5	<0.05	<2	<0.25	58			
Apr-19	159	120	0.2	46	0	128	0.2	11	108	81	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	54	5	26	0.000
May-19	151	134	0.3	44	0	139	0.1	10	112	86	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	50	3	20	
Jun-19	157	112	0.3	44	0	148	0.1	11	110	91	<0.25	<0.5	9	<0.5	<0.05	<2	<0.25	53	3	17	
Jul-19	149	111	0.2	43	0	134	0.1	10	101	54	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	47	4	23	0.000
Aug-19	137	109	0.3	39	0	125	<0.1	9	97	47	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	51	3	22	
Sep-19	141	119	0.2	36	0	125	<0.1	10	94	53	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	49	4	22	
Oct-19	144	114	0.2	41	0	120	0.1	10	97	47	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	63			
Nov-19	140	102	0.3	39	0	132	0.1	10	123	110	<0.25	<0.5	8	<0.5	<0.025	<2	<0.25	60	4	20	0.000
Dec-19	144	109	0.3	44	0	136	0.2	11	108	74	<0.25	<0.5	6	<0.5	<0.025	<2	<0.25	50	3	15	
Avg	**154**	**116**	**0.2**	**44**	**0**	**136**	**0.1**	**11**	**107**	**72**	**<0.27**	**<0.5**	**7**	**<0.5**	**<0.05**	**<2**	**<0.25**	**54**	**4**	**20**	**0.000**
Min	**137**	**102**	**0.2**	**36**	**0**	**120**	**0.1**	**9**	**94**	**47**	**<0.25**	**<0.5**	**4**	**<0.5**	**<0.03**	**<2**	**<0.25**	**47**	**3**	**15**	**0.000**
Max	**192**	**134**	**0.3**	**53**	**0**	**158**	**0.2**	**14**	**123**	**110**	**<0.50**	**<0.5**	**9**	**<0.5**	**<0.05**	**<2**	**<0.25**	**63**	**5**	**26**	**0.000**

RP-1 (M-001B) Effluent Quarterly Data — **Table No. 9a**

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Jan-19	NR	NR	NR	NR	NR	NR
Feb-19	65	<1	<2	14	<1	3
Mar-19	91	<1	<2	15	<1	3
Apr-19	84	<1	<2	20	<1	3
May-19	73	<1	<2	19	<1	3
Jun-19	68	<1	<2	20	<1	3
Jul-19	57	<1	<2	14	<1	3
Aug-19	110	<1	<2	20	<1	14
Sep-19	109	<1	<2	20	<1	3
Oct-19	105	<1	<2	16	<1	14
Nov-19	70	<1	2	23	<1	3
Dec-19	80	<1	<2	11	<1	3
Avg	**83**	**<1**	**<2**	**17**	**<1**	**5**
Min	**57**	**<1**	**<2**	**11**	**<1**	**3**
Max	**110**	**<1**	**2**	**23**	**<1**	**14**

RP-1/RP-4 (M-002A) Effluent Quarterly Data — **Table No. 9b**

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NR	NR	NR	NR	NR	NR	NR
100	<1	<2	14	<1	3	
98	<1	<2	15	<1	3	
87	<1	<2	20	<1	3	
72	<1	<2	19	<1	3	
72	<1	<2	20	<1	3	
59	<1	<2	14	<1	3	
108	<1	<2	21	<1	13	
104	<1	<2	20	<1	3	
108	<1	2	17	<1	14	
72	<1	2	24	<1	3	
92	<1	<2	11	<1	3	
88	**<1**	**<2**	**18**	**<1**	**5**	
59	**<1**	**<2**	**11**	**<1**	**3**	
108	**<1**	**2**	**24**	**<1**	**14**	

RP-5 (M-003) Effluent Quarterly Data — **Table No. 9c**

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Jan-19	NR	NR	NR	NR	NR	NR
Feb-19	<25	<1	<2	33	<1	4
Mar-19	<25	<1	<2	38	<1	4
Apr-19	<25	<1	<2	37	<1	3
May-19	<25	<1	<2	34	<1	4
Jun-19	<25	<1	2	30	<1	4
Jul-19	<25	<1	<2	35	<1	4
Aug-19	<25	<1	<2	24	<1	3
Sep-19	<25	<1	2	47	<1	3
Oct-19	<25	<1	3	34	<1	4
Nov-19	<25	<1	3	31	<1	3
Dec-19	<25	<1	<2	31	<1	4
Avg	**<25**	**<1**	**<2**	**34**	**<1**	**4**
Min	**<25**	**<1**	**<2**	**24**	**<1**	**3**
Max	**<25**	**<1**	**3**	**47**	**<1**	**4**

CCWRF (M-004) Effluent Quarterly Data — **Table No. 9d**

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NR	NR	NR	NR	NR	NR	NR
131	<1	<2	11	<1	3	
108	<1	<2	10	<1	4	
127	<1	<2	10	<1	3	
112	<1	<2	11	<1	4	
104	<1	2	11	<1	4	
64	<1	<2	8	<1	3	
107	<1	<2	9	<1	3	
43	<1	2	7	<1	4	
81	<1	2	7	<1	4	
87	<1	2	8	<1	3	
83	<1	2	10	<1	3	
95	**<1**	**<2**	**9**	**<1**	**3**	
43	**<1**	**<2**	**7**	**<1**	**3**	
131	**<1**	**2**	**11**	**<1**	**4**	

Table No. 10

	Flow				TIN								Agency-wide TIN				
	DP 001	DP 002	DP 003	DP 004	M-001B		M-002A		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	lbs/day	mg/L
Jan-19	2.0	25.5	5.8	6.1	4.8	80	6.1	1,290	8.2	390	5.4	270	6.2	2,030	8	5,338	5.0
Feb-19	3.0	33.8	6.0	7.4	4.4	110	4.5	1,270	7.4	370	5.1	320	4.9	2,070	8	5,338	5.0
Mar-19	2.6	25.6	5.6	5.5	5.0	110	5.0	1,070	10.5	490	4.3	200	5.7	1,870	8	5,338	5.1
Apr-19	2.8	11.7	4.7	1.0	4.4	100	4.8	460	7.0	270	4.3	40	5.2	870	8	5,338	5.1
May-19	2.4	14.2	7.3	2.2	3.6	70	3.7	440	5.4	330	4.0	70	4.2	910	8	5,338	5.0
Jun-19	1.9	9.2	3.8	0.9	2.3	40	2.6	200	3.7	120	4.9	40	3.0	400	8	5,338	4.9
Jul-19	1.6	6.7	4.1	0.0	3.2	40	3.4	190	2.7	90	NA	0	3.2	320	8	5,338	4.8
Aug-19	1.4	0.9	7.3	0.0	3.1	40	3.2	20	4.0	240	NA	0	3.8	300	8	5,338	4.4
Sep-19	1.8	3.7	7.4	0.0	2.9	40	2.8	90	4.9	300	NA	0	4.0	430	8	5,338	4.7
Oct-19	2.7	2.3	6.7	0.0	2.8	60	3.1	60	5.7	320	NA	0	4.5	440	8	5,338	4.6
Nov-19	2.1	10.7	7.7	1.5	3.4	60	3.3	300	5.6	360	5.6	70	3.9	790	8	5,338	4.6
Dec-19	1.9	22.7	9.4	4.6	4.4	70	4.1	780	6.1	480	5.4	200	4.1	1,530	8	5,338	4.4
12-Mo Avg	2.2	13.9	6.3	2.4	3.7	70	3.9	510	5.9	310	4.9	100	4.4	1,000	8	5,338	**4.8**
Min	1.4	0.9	3.8	0.0	2.3	40	2.6	20	2.7	90	4.0	0	3.0	300	8	5,338	**4.4**
Max	3.0	33.8	9.4	7.4	5.0	110	6.1	1,290	10.5	490	5.6	320	6.2	2,070	8	5,338	**5.1**

NA: Not Analyzed, due to no discharge

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-19	2.0	2.3	25.5	5.8	5.8	2.7	6.1	1.4	578	475	481	469	572	543	535	513	503	216,860	550	366,960	490
Feb-19	3.0	0.1	33.8	3.4	6.0	1.0	7.4	0.6	553	432	459	427	574	557	523	515	485	223,550	550	366,960	490
Mar-19	2.6	2.8	25.6	5.9	5.6	1.5	5.5	1.9	593	452	465	426	600	590	545	517	495	211,930	550	366,960	489
Apr-19	2.8	11.0	11.7	8.3	4.7	2.5	1.0	6.0	527	461	477	409	551	519	511	489	476	190,620	550	366,960	489
May-19	2.4	8.5	14.2	7.2	7.3	1.3	2.2	4.8	510	469	478	424	547	512	535	508	487	195,100	550	366,960	488
Jun-19	1.9	12.5	9.2	8.8	3.8	5.4	0.9	6.6	545	483	484	432	542	524	542	504	489	199,960	550	366,960	488
Jul-19	1.6	16.0	6.7	9.0	4.1	4.7	0.0	6.8	496	438	458	390	515	492	NA	453	447	181,920	550	366,960	485
Aug-19	1.4	21.8	0.9	9.0	7.3	1.0	0.0	7.0	468	438	472	403	513	503	NA	449	447	180,140	550	366,960	482
Sep-19	1.8	20.3	3.7	9.0	7.4	0.6	0.0	7.2	532	434	449	411	530	509	NA	452	452	188,380	550	366,960	481
Oct-19	2.7	21.1	2.3	8.9	6.7	0.0	0.0	6.7	498	425	452	399	547	488	NA	441	445	179,360	550	366,960	477
Nov-19	2.1	16.4	10.7	7.4	7.7	0.5	1.5	5.6	478	445	471	427	514	501	519	476	465	201,020	550	366,960	473
Dec-19	1.9	4.1	22.7	7.5	9.4	0.3	4.6	3.3	474	430	444	449	514	496	482	458	461	206,940	550	366,960	471
Avg	**2.2**	**11.4**	**13.9**	**7.5**	**6.3**	**1.8**	**2.4**	**4.8**	**521**	**448**	**466**	**422**	**543**	**519**	**524**	**481**	**471**	**197,980**	**550**	**366,960**	**484**
Min	**1.4**	**0.1**	**0.9**	**3.4**	**3.8**	**0.0**	**0.0**	**0.6**	**468**	**425**	**444**	**390**	**513**	**488**	**482**	**441**	**445**	**179,360**	**550**	**366,960**	**471**
Max	**3.0**	**21.8**	**33.8**	**9.0**	**9.4**	**5.4**	**7.4**	**7.2**	**593**	**483**	**484**	**469**	**600**	**590**	**545**	**517**	**503**	**223,550**	**550**	**366,960**	**490**

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 2019

INLAND EMPIRE UTILITIES AGENCY

Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report

RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutants

Table 15a

RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutant Metals & CN, mg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Arsenic (As)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Beryllium (Be)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Cadmium (Cd)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Chromium (Cr)			<0.01			<0.01	0.03			<0.01			**0.03**
Copper (Cu)			0.04			0.09	0.54			0.03			**0.54**
Lead (Pb)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Mercury (Hg)			<0.0005			<0.0005	0.0010				0.0006		**0.001**
Nickel (Ni)			<0.01			<0.01	0.02			<0.01			**0.02**
Selenium (Se)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Silver (Ag)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Thallium (Tl)			<0.05			<0.05	<0.05			<0.05			**<0.05**
Zinc (Zn			0.13			0.19	1.44			0.13			**1.44**
CN, Aquatic Free		<2		3					<2	<2			**3**

RP-5 (M-INF 3C) RP-2 Recycle Flow Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<5			**<5**
1,1,2,2-Tetrachloroethane										<2.5			**<2.5**
1,1,2-Trichloroethane										<5			**<5**
1,1-Dichloroethane										<2.5			**<2.5**
1,1-Dichloroethene										<5			**<5**
1,2-Dichlorobenzene										<5			**<5**
1,2-Dichloroethane										<2.5			**<2.5**
1,2-Dichloropropane										<2.5			**<2.5**
1,3-Dichlorobenzene										<5			**<5**
1,4-Dichlorobenzene										<5			**<5**
2-Chloroethyl vinyl ether										<5			**<5**
Benzene										<5			**<5**
Bromodichloromethane										<5			**<5**
Bromoform										<5			**<5**
Bromomethane										<5			**<5**
Carbon tetrachloride										<2.5			**<2.5**
Chlorobenzene										<5			**<5**
Chloroethane										<5			**<5**
Chloroform										29			**29**
Chloromethane										<5			**<5**
cis-1,3-Dichloropropene										<2.5			**<2.5**
Dibromochloromethane										<5			**<5**
Ethylbenzene										<5			**<5**
Methylene chloride										<5			**<5**
Tetrachloroethene										<5			**<5**
Toluene										<5			**<5**
trans-1,2-Dichloroethene										<2.5			**<2.5**
trans-1,3-Dichloropropene										<2.5			**<2.5**
Trichloroethene										<5			**<5**
Trichlorofluoromethane										<10			**<10**
Vinyl chloride										<2.5			**<2.5**
Acrolein										<10			**<10**
Acrylonitrile										<1.25			**<1.25**

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RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutants

Table 15b

RP-5 (M-INF 3C) RP-2 Recycle Flow 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										<10			**<10**
1,2-Dichlorobenzene										<10			**<10**
1,3-Dichlorobenzene										<10			**<10**
1,4-Dichlorobenzene										<10			**<10**
2,4,6-Trichlorophenol										<10			**<10**
2,4-Dichlorophenol										<20			**<20**
2,4-Dimethylphenol										<10			**<10**
2,4-Dinitrophenol										<30			**<30**
2,4-Dinitrotoluene										<10			**<10**
2,6-Dinitrotoluene										<20			**<20**
2-Chloronaphthalene										<10			**<10**
2-Chlorophenol										<10			**<10**
2-Methyl-4,6-dinitrophenol										<20			**<20**
2-Nitrophenol										<10			**<10**
3,3-Dichlorobenzidine										<50			**<50**
4-Bromophenyl phenyl ether										<10			**<10**
4-Chloro-3-methylphenol										<10			**<10**
4-Chlorophenyl phenyl ether										<10			**<10**
4-Nitrophenol										<30			**<30**
Acenaphthene										<10			**<10**
Acenaphthylene										<10			**<10**
Anthracene										<10			**<10**
Azobenzene										<10			**<10**
Benzidine										<50			**<50**
Benzo(a)anthracene										<50			**<50**
Benzo(a)pyrene										<10			**<10**
Benzo(b)fluoranthene										<10			**<10**
Benzo(g,h,i)perylene										<20			**<20**
Benzo(k)fluoranthene										<10			**<10**
Bis(2-chloroethoxy)methane										<20			**<20**
Bis(2-chloroethyl)ether										<10			**<10**
Bis(2-chloroisopropyl)ether										<10			**<10**
Bis(2-ethylhexyl)phthalate			<15		<15		<15			<15			**<15**
Butyl benzyl phthalate										<7.5			**<7.5**
Chrysene										<10			**<10**
Dibenzo(a,h)anthracene										<10			**<10**
Diethyl phthalate										<15			**<15**
Dimethyl phthalate										<10			**<10**
Di-n-butyl phthalate										<10			**<10**
Di-n-octyl phthalate										<10			**<10**
Fluoranthene										<10			**<10**
Fluorene										<10			**<10**
Hexachlorobenzene										<10			**<10**
Hexachlorobutadiene										<10			**<10**
Hexachlorocyclopentadiene										<50			**<50**
Hexachloroethane										<10			**<10**
Indeno(1,2,3-cd)pyrene										<20			**<20**
Isophorone										<10			**<10**
Naphthalene										<10			**<10**
Nitrobenzene										<10			**<10**
N-Nitrosodimethylamine										<10			**<10**
N-Nitroso-di-n-propylamine										<10			**<10**
N-Nitrosodiphenylamine										<10			**<10**
Pentachlorophenol										<20			**<20**
Phenanthrene										<10			**<10**
Phenol										<10			**<10**
Pyrene										<10			**<10**

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RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutants

Table 15c

RP-5 (M-INF 3C) RP-2 Recycle Flow Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD										<0.06			**<0.06**
4,4-DDE										<0.06			**<0.06**
4,4-DDT										<0.08			**<0.08**
Aldrin										<0.04			**<0.04**
Alpha-BHC										<0.08			**<0.08**
Beta-BHC										<0.05			**<0.05**
Delta-BHC										<0.07			**<0.07**
Dieldrin										<0.06			**<0.06**
Endosulfan I										<0.1			**<0.1**
Endosulfan II										<0.07			**<0.07**
Endosulfan Sulfate										<0.09			**<0.09**
Endrin										<0.09			**<0.09**
Endrin aldehyde										<0.06			**<0.06**
Gamma-BHC										<0.1			**<0.1**
Heptachlor										<0.06			**<0.06**
Heptachlor epoxide										<0.07			**<0.07**
Chlordane										<1			**<1**
PCB-1016										<5			**<5**
PCB-1221										<5			**<5**
PCB-1232										<5			**<5**
PCB-1242										<5			**<5**
PCB-1248										<5			**<5**
PCB-1254										<5			**<5**
PCB-1260										<5			**<5**
Toxaphene										<5			**<5**

RP-5 (M-INF 3C) RP-2 Recycle Flow Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*										0.000			**0.000**

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

INLAND EMPIRE UTILITIES AGENCY

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RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants

Table 16a

RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutant Metals & CN, mg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Arsenic (As)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Beryllium (Be)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Cadmium (Cd)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Chromium (Cr)			<0.01			<0.01	0.01			<0.01			**0.01**
Copper (Cu)			0.03			0.08	0.23			0.04			**0.23**
Lead (Pb)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Mercury (Hg)			<0.0005			<0.0005	0.0006				<0.0005		**0.0006**
Nickel (Ni)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Selenium (Se)			<0.02			<0.02	<0.02			<0.02			**<0.02**
Silver (Ag)			<0.01			<0.01	<0.01			<0.01			**<0.01**
Thallium (Tl)			<0.05			<0.05	<0.05			<0.05			**<0.05**
Zinc (Zn			0.09			0.17	0.65			0.14			**0.65**
CN, Aquatic Free		<2		<2					8	<2			**8**

RP-5 (M-INF 3D) RP-2 Lift Station Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<5			**<5**
1,1,2,2-Tetrachloroethane										<2.5			**<2.5**
1,1,2-Trichloroethane										<5			**<5**
1,1-Dichloroethane										<2.5			**<2.5**
1,1-Dichloroethene										<5			**<5**
1,2-Dichlorobenzene										<5			**<5**
1,2-Dichloroethane										<2.5			**<2.5**
1,2-Dichloropropane										<2.5			**<2.5**
1,3-Dichlorobenzene										<5			**<5**
1,4-Dichlorobenzene										<5			**<5**
2-Chloroethyl vinyl ether										<5			**<5**
Benzene										<5			**<5**
Bromodichloromethane										<5			**<5**
Bromoform										<5			**<5**
Bromomethane										<5			**<5**
Carbon tetrachloride										<2.5			**<2.5**
Chlorobenzene										<5			**<5**
Chloroethane										<5			**<5**
Chloroform										34			**34**
Chloromethane										<5			**<5**
cis-1,3-Dichloropropene										<2.5			**<2.5**
Dibromochloromethane										<5			**<5**
Ethylbenzene										<5			**<5**
Methylene chloride										<5			**<5**
Tetrachloroethene										<5			**<5**
Toluene										<5			**<5**
trans-1,2-Dichloroethene										<2.5			**<2.5**
trans-1,3-Dichloropropene										<2.5			**<2.5**
Trichloroethene										<5			**<5**
Trichlorofluoromethane										<10			**<10**
Vinyl chloride										<2.5			**<2.5**
Acrolein										<10			**<10**
Acrylonitrile										<1.25			**<1.25**

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RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants

Table 16b

RP-5 (M-INF 3D) RP-2 Lift Station 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										<10			**<10**
1,2-Dichlorobenzene										<10			**<10**
1,3-Dichlorobenzene										<10			**<10**
1,4-Dichlorobenzene										<10			**<10**
2,4,6-Trichlorophenol										<10			**<10**
2,4-Dichlorophenol										<20			**<20**
2,4-Dimethylphenol										<10			**<10**
2,4-Dinitrophenol										<30			**<30**
2,4-Dinitrotoluene										<10			**<10**
2,6-Dinitrotoluene										<20			**<20**
2-Chloronaphthalene										<10			**<10**
2-Chlorophenol										<10			**<10**
2-Methyl-4,6-dinitrophenol										<20			**<20**
2-Nitrophenol										<10			**<10**
3,3-Dichlorobenzidine										<50			**<50**
4-Bromophenyl phenyl ether										<10			**<10**
4-Chloro-3-methylphenol										<10			**<10**
4-Chlorophenyl phenyl ether										<10			**<10**
4-Nitrophenol										<30			**<30**
Acenaphthene										<10			**<10**
Acenaphthylene										<10			**<10**
Anthracene										<10			**<10**
Azobenzene										<10			**<10**
Benzidine										<50			**<50**
Benzo(a)anthracene										<50			**<50**
Benzo(a)pyrene										<10			**<10**
Benzo(b)fluoranthene										<10			**<10**
Benzo(g,h,i)perylene										<20			**<20**
Benzo(k)fluoranthene										<10			**<10**
Bis(2-chloroethoxy)methane										<20			**<20**
Bis(2-chloroethyl)ether										<10			**<10**
Bis(2-chloroisopropyl)ether										<10			**<10**
Bis(2-ethylhexyl)phthalate			<15		<15		<15			<15			**<15**
Butyl benzyl phthalate										<7.5			**<7.5**
Chrysene										<10			**<10**
Dibenzo(a,h)anthracene										<10			**<10**
Diethyl phthalate										<15			**<15**
Dimethyl phthalate										<10			**<10**
Di-n-butyl phthalate										<10			**<10**
Di-n-octyl phthalate										<10			**<10**
Fluoranthene										<10			**<10**
Fluorene										<10			**<10**
Hexachlorobenzene										<10			**<10**
Hexachlorobutadiene										<10			**<10**
Hexachlorocyclopentadiene										<50			**<50**
Hexachloroethane										<10			**<10**
Indeno(1,2,3-cd)pyrene										<20			**<20**
Isophorone										<10			**<10**
Naphthalene										<10			**<10**
Nitrobenzene										<10			**<10**
N-Nitrosodimethylamine										<10			**<10**
N-Nitroso-di-n-propylamine										<10			**<10**
N-Nitrosodiphenylamine										<10			**<10**
Pentachlorophenol										<20			**<20**
Phenanthrene										<10			**<10**
Phenol										<10			**<10**
Pyrene										<10			**<10**

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RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants

Table 16c

RP-5 (M-INF 3D) RP-2 Lift Station Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD										<0.06			**<0.06**
4,4-DDE										<0.06			**<0.06**
4,4-DDT										<0.08			**<0.08**
Aldrin										<0.04			**<0.04**
Alpha-BHC										<0.08			**<0.08**
Beta-BHC										<0.05			**<0.05**
Delta-BHC										<0.07			**<0.07**
Dieldrin										<0.06			**<0.06**
Endosulfan I										<0.1			**<0.1**
Endosulfan II										<0.07			**<0.07**
Endosulfan Sulfate										<0.09			**<0.09**
Endrin										<0.09			**<0.09**
Endrin aldehyde										<0.06			**<0.06**
Gamma-BHC										<0.1			**<0.1**
Heptachlor										<0.06			**<0.06**
Heptachlor epoxide										<0.07			**<0.07**
Chlordane										<1			**<1**
PCB-1016										<5			**<5**
PCB-1221										<5			**<5**
PCB-1232										<5			**<5**
PCB-1242										<5			**<5**
PCB-1248										<5			**<5**
PCB-1254										<5			**<5**
PCB-1260										<5			**<5**
Toxaphene										<5			**<5**

RP-5 (M-INF 3D) RP-2 Lift Station Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*	0.028	0.000	0.000	0.031	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.082	**0.082**

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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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)		<1	<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**
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**
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**
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Copper (Cu)		5.1	5.8	5.1	4.4	6.1	4.9	3.9	4.4	4.2	3.7	4.4	**6.1**
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**
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<0.05**
Nickel (Ni)		2.9	3.0	2.9	3.3	3.2	3.4	13.5	3.1	14.2	3.1	2.8	**14.2**
Selenium (Se)		<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**
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**
Zinc (Zn)	36	40	39	44	41	41	42	39	32	36	32	48	**48**
CN, 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			**<1**
Benzene										<1			**<1**
Bromodichloromethane			<1		15		19			18			**19**
Bromoform			<1		<1		<1			<1			**<1**
Bromomethane										<1			**<1**
Carbon tetrachloride										<0.5			**<0.5**
Chlorobenzene										<1			**<1**
Chloroethane										<1			**<1**
Chloroform			<1		65		96			75			**96**
Chloromethane										<1			**<1**
cis-1,3-Dichloropropene										<0.5			**<0.5**
Dibromochloromethane			<1		2		2			2			**2**
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			**<2**
Acrylonitrile									<0.25	0.58			**0.58**

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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**
1,2-Dichlorobenzene									<1			<1	**<1**
1,3-Dichlorobenzene									<1			<1	**<1**
1,4-Dichlorobenzene									<1			<1	**<1**
2,4,6-Trichlorophenol									<1			<1	**<1**
2,4-Dichlorophenol									<2			<2	**<2**
2,4-Dimethylphenol									<1			<1	**<1**
2,4-Dinitrophenol									<3			<3	**<3**
2,4-Dinitrotoluene									<1			<1	**<1**
2,6-Dinitrotoluene									<2			<2	**<2**
2-Chloronaphthalene									<1			<1	**<1**
2-Chlorophenol									<1			<1	**<1**
2-Methyl-4,6-dinitrophenol									<2			<2	**<2**
2-Nitrophenol									<1			<1	**<1**
3,3-Dichlorobenzidine									<5			<5	**<5**
4-Bromophenyl phenyl ether									<1			<1	**<1**
4-Chloro-3-methylphenol									<1			<1	**<1**
4-Chlorophenyl phenyl ether									<1			<1	**<1**
4-Nitrophenol									<3			<3	**<3**
Acenaphthene									<1			<1	**<1**
Acenaphthylene									<1			<1	**<1**
Anthracene									<1			<1	**<1**
Azobenzene									<1			<1	**<1**
Benzidine									<5			<5	**<5**
Benzo(a)anthracene									<5			<5	**<5**
Benzo(a)pyrene									<1			<1	**<1**
Benzo(b)fluoranthene									<1			<1	**<1**
Benzo(g,h,i)perylene									<2			<2	**<2**
Benzo(k)fluoranthene									<1			<1	**<1**
Bis(2-chloroethoxy)methane									<2			<2	**<2**
Bis(2-chloroethyl)ether									<1			<1	**<1**
Bis(2-chloroisopropyl)ether									<1			<1	**<1**
Bis(2-ethylhexyl)phthalate			<2		<2		<2		9	<2		<2	**9**
Butyl benzyl phthalate									<1			2	**2**
Chrysene									<1			<1	**<1**
Dibenzo(a,h)anthracene									<1			<1	**<1**
Diethyl phthalate									<2			<2	**<2**
Dimethyl phthalate									<1			<1	**<1**
Di-n-butyl phthalate									<1			<1	**<1**
Di-n-octyl phthalate									<1			<1	**<1**
Fluoranthene									<1			<1	**<1**
Fluorene									<1			<1	**<1**
Hexachlorobenzene									<1			<1	**<1**
Hexachlorobutadiene									<1			<1	**<1**
Hexachlorocyclopentadiene									<5			<5	**<5**
Hexachloroethane									<1			<1	**<1**
Indeno(1,2,3-cd)pyrene									<2			<2	**<2**
Isophorone									<1			<1	**<1**
Naphthalene									<1			<1	**<1**
Nitrobenzene									<1			<1	**<1**
N-Nitrosodimethylamine									<1			<1	**<1**
N-Nitroso-di-n-propylamine									<1			<1	**<1**
N-Nitrosodiphenylamine									<1			<1	**<1**
Pentachlorophenol									<2			<2	**<2**
Phenanthrene									<1			<1	**<1**
Phenol									<1			<1	**<1**
Pyrene									<1			<1	**<1**

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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													
4,4-DDE													
4,4-DDT													
Aldrin													
Alpha-BHC													
Beta-BHC													
Delta-BHC													
Dieldrin													
Endosulfan I													
Endosulfan II													
Endosulfan Sulfate													
Endrin													
Endrin aldehyde													
Gamma-BHC													
Heptachlor													
Heptachlor epoxide													
Chlordane													
PCB-1016													
PCB-1221													
PCB-1232													
PCB-1242													
PCB-1248													
PCB-1254													
PCB-1260													
Toxaphene													

RP-1 (M-001B) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*											0.000		**0.000**

*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

Table 19a

RP-1/RP-4 (M-002A) 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	<1	<1.0
Arsenic (As)		<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**
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**
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Copper (Cu)		5.7	5.4	5.3	4.6	6.0	6.5	4.2	4.8	4.6	4.0	4.4	**6.5**
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**
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<0.05**
Nickel (Ni)		3.0	3.1	3.0	3.3	3.3	3.5	13.3	3.4	14.1	3.2	2.9	**14.1**
Selenium (Se)		<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**
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**
Zinc (Zn)	44	42	40	45	44	41	43	40	33	35	31	45	**45**
CN, Free		<2		<2					4	<2			**4**

RP-1/RP-4 (M-002A) 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			14		15		14			16			**16**
Bromoform			<1		<1		<1			<1			**<1**
Bromomethane										<1			**<1**
Carbon tetrachloride										<0.5			**<0.5**
Chlorobenzene										<1			**<1**
Chloroethane										<1			**<1**
Chloroform			55		63		69			65			**69**
Chloromethane										<1			**<1**
cis-1,3-Dichloropropene										<0.5			**<0.5**
Dibromochloromethane			2		2		2			2			**2**
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										0.53			**0.53**

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RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants

Table 19b

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**
1,2-Dichlorobenzene					<1							<1	**<1**
1,3-Dichlorobenzene					<1							<1	**<1**
1,4-Dichlorobenzene					<1							<1	**<1**
2,4,6-Trichlorophenol					<1							<1	**<1**
2,4-Dichlorophenol					<2							<2	**<2**
2,4-Dimethylphenol					<1							<1	**<1**
2,4-Dinitrophenol					<3							<3	**<3**
2,4-Dinitrotoluene					<1							<1	**<1**
2,6-Dinitrotoluene					<2							<2	**<2**
2-Chloronaphthalene					<1							<1	**<1**
2-Chlorophenol					<1							<1	**<1**
2-Methyl-4,6-dinitrophenol					<2							<2	**<2**
2-Nitrophenol					<1							<1	**<1**
3,3-Dichlorobenzidine					<5							<5	**<5**
4-Bromophenyl phenyl ether					<1							<1	**<1**
4-Chloro-3-methylphenol					<1							<1	**<1**
4-Chlorophenyl phenyl ether					<1							<1	**<1**
4-Nitrophenol					<3							<3	**<3**
Acenaphthene					<1							<1	**<1**
Acenaphthylene					<1							<1	**<1**
Anthracene					<1							<1	**<1**
Azobenzene					<1							<1	**<1**
Benzidine					<5							<5	**<5**
Benzo(a)anthracene					<5							<5	**<5**
Benzo(a)pyrene					<1							<1	**<1**
Benzo(b)fluoranthene					<1							<1	**<1**
Benzo(g,h,i)perylene					<2							<2	**<2**
Benzo(k)fluoranthene					<1							<1	**<1**
Bis(2-chloroethoxy)methane					<2							<2	**<2**
Bis(2-chloroethyl)ether					<1							<1	**<1**
Bis(2-chloroisopropyl)ether					<1							<1	**<1**
Bis(2-ethylhexyl)phthalate			<2		<2		<2			<2		<2	**<2**
Butyl benzyl phthalate					<1							<1	**<1**
Chrysene					<1							<1	**<1**
Dibenzo(a,h)anthracene					<1							<1	**<1**
Diethyl phthalate					<2							<2	**<2**
Dimethyl phthalate					<1							<1	**<1**
Di-n-butyl phthalate					<1							<1	**<1**
Di-n-octyl phthalate					<1							<1	**<1**
Fluoranthene					<1							<1	**<1**
Fluorene					<1							<1	**<1**
Hexachlorobenzene					<1							<1	**<1**
Hexachlorobutadiene					<1							<1	**<1**
Hexachlorocyclopentadiene					<5							<5	**<5**
Hexachloroethane					<1							<1	**<1**
Indeno(1,2,3-cd)pyrene					<2							<2	**<2**
Isophorone					<1							<1	**<1**
Naphthalene					<1							<1	**<1**
Nitrobenzene					<1							<1	**<1**
N-Nitrosodimethylamine					<1							<1	**<1**
N-Nitroso-di-n-propylamine					<1							<1	**<1**
N-Nitrosodiphenylamine					<1							<1	**<1**
Pentachlorophenol					<2							<2	**<2**
Phenanthrene					<1							<1	**<1**
Phenol					<1							<1	**<1**
Pyrene					<1							<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*											0.000		**0.000**

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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RP-5 (M-003) Effluent Remaining Priority Pollutants

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	<1	<1.0
Arsenic (As)		<2	<2	<2	<2	2	<2	<2	2	3	3	<2	**3**
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**
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**
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Copper (Cu)		7.1	7.3	6.5	7.8	8.3	5.0	4.8	7.5	6.3	6.9	6.8	**8.3**
Lead (Pb)		<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<0.05**
Nickel (Ni)		4.2	4.1	3.5	3.8	3.7	3.5	3.5	3.3	3.9	3.4	3.6	**4.2**
Selenium (Se)		<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**
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**
Zinc (Zn)	52	40	47	53	56	46	33	41	50	56	53	47	**56**
CN, Free		<2		<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	13	13		24	15	15	17	16	17	23	14	16	**24**
Bromoform	<1	<1		<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	38	36		66	48	47	52	62	47	39	43	41	**66**
Chloromethane										<1			**<1**
cis-1,3-Dichloropropene										<0.5			**<0.5**
Dibromochloromethane	3	3		4	3	3	3	2	3	8	3	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										0.29			**0.29**

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RP-5 (M-003) Effluent Remaining Priority Pollutants

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		3		<2			<2			**3**
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*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NA*	0.000	**0.000**

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

NA* - Not reported due to the effluent being higher than the influent. Highly suspect that the samples may have been switched. Since the original samples were disposed of, the sub lab is not able to confirm

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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)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Arsenic (As)		<2	<2	<2	<2	2	<2	<2	2	3	2	2	**3**
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**
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**
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**<0.5**
Copper (Cu)		7.2	9.1	7.0	8.3	8.8	8.4	8.4	8.0	7.3	8.0	6.3	**9.1**
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**
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**<0.05**
Nickel (Ni)		3.4	3.8	3.4	3.5	4.1	3.4	3.2	3.6	3.7	3.2	3.1	**4.1**
Selenium (Se)		<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**
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**<1**
Zinc (Zn)	58	59	58	54	50	53	47	51	49	63	60	50	**63**
CN, 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	20	18		26	20	17	23	22	22		20	15	**26**
Bromoform	<1	<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	50	41		50	63	51	78	82	64		52	44	**82**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<0.5		**<0.5**
Dibromochloromethane	5	4		5	3	3	4	3	4		4	3	**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											0.42		**0.42**

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CCWRF (M-004) Effluent Remaining Priority Pollutants

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**
1,2-Dichlorobenzene											<1	<1	**<1**
1,3-Dichlorobenzene											<1	<1	**<1**
1,4-Dichlorobenzene											<1	<1	**<1**
2,4,6-Trichlorophenol											<1	<1	**<1**
2,4-Dichlorophenol											<2	<2	**<2**
2,4-Dimethylphenol											<1	<1	**<1**
2,4-Dinitrophenol											<3	<3	**<3**
2,4-Dinitrotoluene											<1	<1	**<1**
2,6-Dinitrotoluene											<2	<2	**<2**
2-Chloronaphthalene											<1	<1	**<1**
2-Chlorophenol											<1	<1	**<1**
2-Methyl-4,6-dinitrophenol											<2	<2	**<2**
2-Nitrophenol											<1	<1	**<1**
3,3-Dichlorobenzidine											<5	<5	**<5**
4-Bromophenyl phenyl ether											<1	<1	**<1**
4-Chloro-3-methylphenol											<1	<1	**<1**
4-Chlorophenyl phenyl ether											<1	<1	**<1**
4-Nitrophenol											<3	<3	**<3**
Acenaphthene											<1	<1	**<1**
Acenaphthylene											<1	<1	**<1**
Anthracene											<1	<1	**<1**
Azobenzene											<1	<1	**<1**
Benzidine											<5	<5	**<5**
Benzo(a)anthracene											<5	<5	**<5**
Benzo(a)pyrene											<1	<1	**<1**
Benzo(b)fluoranthene											<1	<1	**<1**
Benzo(g,h,i)perylene											<2	<2	**<2**
Benzo(k)fluoranthene											<1	<1	**<1**
Bis(2-chloroethoxy)methane											<2	<2	**<2**
Bis(2-chloroethyl)ether											<1	<1	**<1**
Bis(2-chloroisopropyl)ether											<1	<1	**<1**
Bis(2-ethylhexyl)phthalate			<2		<2						<2	<2	**<2**
Butyl benzyl phthalate											<1	<1	**<1**
Chrysene											<1	<1	**<1**
Dibenzo(a,h)anthracene											<1	<1	**<1**
Diethyl phthalate											<2	<2	**<2**
Dimethyl phthalate											<1	<1	**<1**
Di-n-butyl phthalate											<1	<1	**<1**
Di-n-octyl phthalate											<1	<1	**<1**
Fluoranthene											<1	<1	**<1**
Fluorene											<1	<1	**<1**
Hexachlorobenzene											<1	<1	**<1**
Hexachlorobutadiene											<1	<1	**<1**
Hexachlorocyclopentadiene											<5	<5	**<5**
Hexachloroethane											<1	<1	**<1**
Indeno(1,2,3-cd)pyrene											<2	<2	**<2**
Isophorone											<1	<1	**<1**
Naphthalene											<1	<1	**<1**
Nitrobenzene											<1	<1	**<1**
N-Nitrosodimethylamine											<1	<1	**<1**
N-Nitroso-di-n-propylamine											<1	<1	**<1**
N-Nitrosodiphenylamine											<1	<1	**<1**
Pentachlorophenol											<2	<2	**<2**
Phenanthrene											<1	<1	**<1**
Phenol											<1	<1	**<1**
Pyrene											<1	<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			<0.006		**<0.006**
4,4-DDE					<0.006			<0.006			<0.006		**<0.006**
4,4-DDT					<0.008			<0.008			<0.008		**<0.008**
Aldrin					<0.004			<0.004			<0.004		**<0.004**
Alpha-BHC					<0.008			<0.008			<0.008		**<0.008**
Beta-BHC					<0.005			<0.005			<0.005		**<0.005**
Delta-BHC					<0.007			<0.007			<0.007		**<0.007**
Dieldrin					<0.006			<0.006			<0.006		**<0.006**
Endosulfan I			0.05		<0.01			<0.01			<0.01		**0.05**
Endosulfan II					<0.007			<0.007			<0.007		**<0.007**
Endosulfan Sulfate					<0.009			<0.009			<0.009		**<0.009**
Endrin					<0.009			<0.009			<0.009		**<0.009**
Endrin aldehyde					<0.006			<0.006			<0.006		**<0.006**
Gamma-BHC					<0.01			<0.01			<0.01		**<0.01**
Heptachlor					<0.006			<0.006			<0.006		**<0.006**
Heptachlor epoxide					<0.007			<0.007			<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*	0.000			0.000			No Discharge				0.000		**0.000**

*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants

Table 22a

RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		**<0.05**
Ag, Total Dissolved											<0.25		**<0.25**
As, Total Dissolved											<2		**<2**
Be, Total Dissolved											<0.5		**<0.5**
Cd, Total Dissolved											<0.25		**<0.25**
Cr, Total Dissolved											1.8		**1.8**
Cu, Total Dissolved											5.9		**5.9**
Ni, Total Dissolved											3		**3**
Pb, Total Dissolved											<0.5		**<0.5**
Sb, Total Dissolved											<1		**<1**
Se, Total Dissolved											<2		**<2**
Tl, Total Dissolved											<1		**<1**
Zn, Total Dissolved											8		**8**
CN, Free											<2		**<2**

Table 22b

RP-1 Cucamonga Creek Upstream (R-002U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
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											<1		**<1**
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											<1		**<1**
Bromoform											<1		**<1**
Bromomethane											<1		**<1**
Carbon tetrachloride											<1		**<1**
Chlorobenzene											<1		**<1**
Chloroethane											<1		**<1**
Chloroform											<1		**<1**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<1		**<1**
Dibromochloromethane											<1		**<1**
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											<1		**<1**
Trichloroethene											<1		**<1**
Trichlorofluoromethane											<2		**<2**
Vinyl chloride											<1		**<1**
Acrolein											<2		**<2**
Acrylonitrile											<2		**<2**

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants

Table 22c

RP-1 Cucamonga Creek Upstream (R-002U) 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		**<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**
TCDD Scan											ND		**ND**

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants

Table 22d

RP-1 Cucamonga Creek Upstream (R-002U) 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**

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants

Table 23a

RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		**<0.05**
Ag, Total Dissolved											<0.25		**<0.25**
As, Total Dissolved											<2		**<2**
Be, Total Dissolved											<0.5		**<0.5**
Cd, Total Dissolved											<0.25		**<0.25**
Cr, Total Dissolved											0.8		**0.8**
Cu, Total Dissolved											4.0		**4.0**
Ni, Total Dissolved											3		**3**
Pb, Total Dissolved											<0.5		**<0.5**
Sb, Total Dissolved											<1		**<1**
Se, Total Dissolved											<2		**<2**
Tl, Total Dissolved											<1		**<1**
Zn, Total Dissolved											33		**33**

Table 23b

RP-1 Cucamonga Creek Downstream (R-002D) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
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											<1		**<1**
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											5		**5**
Bromoform											<1		**<1**
Bromomethane											<1		**<1**
Carbon tetrachloride											<1		**<1**
Chlorobenzene											<1		**<1**
Chloroethane											<1		**<1**
Chloroform											23		**23**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<1		**<1**
Dibromochloromethane											<1		**<1**
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											<1		**<1**
Trichloroethene											<1		**<1**
Trichlorofluoromethane											<2		**<2**
Vinyl chloride											<1		**<1**
Acrolein											<2		**<2**
Acrylonitrile											0.55		**0.55**

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants

Table 23c

RP-1 Cucamonga Creek Downstream (R-002D) 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		**<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**
TCDD Scan											ND		**ND**

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants

Table 23d

RP-1 Cucamonga Creek Downstream (R-002D) 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**

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RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants

Table 24a

RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		**<0.05**
Ag, Total Dissolved											<0.25		**<0.25**
As, Total Dissolved											<2		**<2**
Be, Total Dissolved											<0.5		**<0.5**
Cd, Total Dissolved											<0.25		**<0.25**
Cr, Total Dissolved											0.9		**0.9**
Cu, Total Dissolved											5.6		**5.6**
Ni, Total Dissolved											4		**4**
Pb, Total Dissolved											<0.5		**<0.5**
Sb, Total Dissolved											<1		**<1**
Se, Total Dissolved											3		**3**
Tl, Total Dissolved											<1		**<1**
Zn, Total Dissolved											6		**6**

Table 24b

RP-5 Chino Creek Upstream (R-003U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
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											<1		**<1**
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											<1		**<1**
Bromoform											<1		**<1**
Bromomethane											<1		**<1**
Carbon tetrachloride											<1		**<1**
Chlorobenzene											<1		**<1**
Chloroethane											<1		**<1**
Chloroform											<1		**<1**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<1		**<1**
Dibromochloromethane											<1		**<1**
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											<1		**<1**
Trichloroethene											<1		**<1**
Trichlorofluoromethane											<2		**<2**
Vinyl chloride											<1		**<1**
Acrolein											<2		**<2**
Acrylonitrile											<2		**<2**

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RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants

Table 24c

RP-5 Chino Creek Upstream (R-003U) 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		**<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**
TCDD Scan											ND		**ND**

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report

RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants

Table 24d

RP-5 Chino Creek Upstream (R-003U) 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		**<0.010**
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**

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report

RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants

Table 25a

RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		**<0.05**
Ag, Total Dissolved											<0.25		**<0.25**
As, Total Dissolved											<2		**<2**
Be, Total Dissolved											<0.5		**<0.5**
Cd, Total Dissolved											<0.25		**<0.25**
Cr, Total Dissolved											0.7		**0.7**
Cu, Total Dissolved											6.2		**6.2**
Ni, Total Dissolved											4		**4**
Pb, Total Dissolved											<0.5		**<0.5**
Sb, Total Dissolved											<1		**<1**
Se, Total Dissolved											<2		**<2**
Tl, Total Dissolved											<1		**<1**
Zn, Total Dissolved											41		**41**

Table 25b

RP-5 Chino Creek Downstream (R-003D) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
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											<1		**<1**
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											9		**9**
Bromoform											<1		**<1**
Bromomethane											<1		**<1**
Carbon tetrachloride											<1		**<1**
Chlorobenzene											<1		**<1**
Chloroethane											<1		**<1**
Chloroform											28		**28**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<1		**<1**
Dibromochloromethane											<1		**<1**
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											<1		**<1**
Trichloroethene											<1		**<1**
Trichlorofluoromethane											<2		**<2**
Vinyl chloride											<1		**<1**
Acrolein											<2		**<2**
Acrylonitrile											0.26		**0.26**

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RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants

Table 25c

RP-5 Chino Creek Downstream (R-003D) 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		**<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**
TCDD Scan											ND		**ND**

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report

RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants

Table 25d

RP-5 Chino Creek Downstream (R-003D) 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		**<0.010**
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**

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report

CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26a

CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		**<0.05**
Ag, Total Dissolved											<0.25		**<0.25**
As, Total Dissolved											2		**2**
Be, Total Dissolved											<0.5		**<0.5**
Cd, Total Dissolved											<0.25		**<0.25**
Cr, Total Dissolved											0.9		**0.9**
Cu, Total Dissolved											7.6		**7.6**
Ni, Total Dissolved											4		**4**
Pb, Total Dissolved											0.6		**0.6**
Sb, Total Dissolved											<1		**<1**
Se, Total Dissolved											3		**3**
Tl, Total Dissolved											<1		**<1**
Zn, Total Dissolved											7		**7**

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26b

CCWRF Chino Creek Upstream (R-004U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
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											<1		**<1**
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											<1		**<1**
Bromoform											<1		**<1**
Bromomethane											<1		**<1**
Carbon tetrachloride											<1		**<1**
Chlorobenzene											<1		**<1**
Chloroethane											<1		**<1**
Chloroform											<1		**<1**
Chloromethane											<1		**<1**
cis-1,3-Dichloropropene											<1		**<1**
Dibromochloromethane											<1		**<1**
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											<1		**<1**
Trichloroethene											<1		**<1**
Trichlorofluoromethane											<2		**<2**
Vinyl chloride											<1		**<1**
Acrolein											<2		**<2**
Acrylonitrile											<2		**<2**

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26c

CCWRF Chino Creek Upstream (R-004U) 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		**<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**
TCDD Scan											ND		**ND**

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26d

CCWRF Chino Creek Upstream (R-004U) 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**


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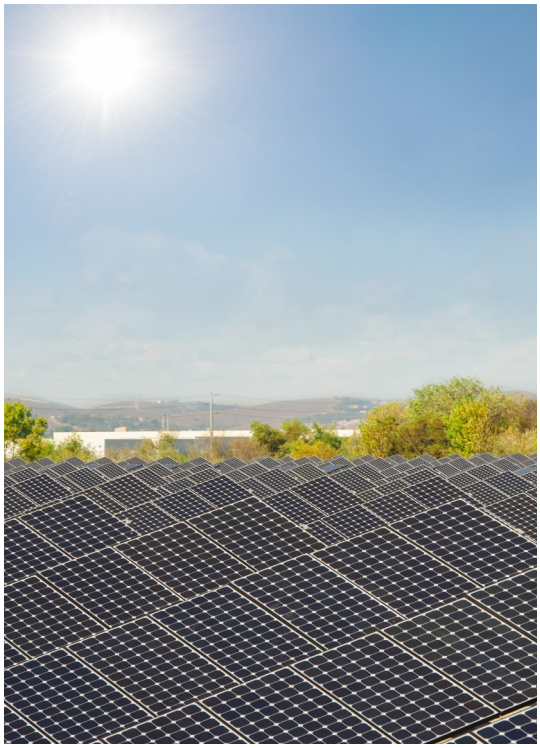

IEUA FY 2019-2020 Annual Energy Report

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IEUA is committed to optimizing facility energy use and effectively managing renewable resources to contain future energy costs and provide for future rate stabilization.

Introduction

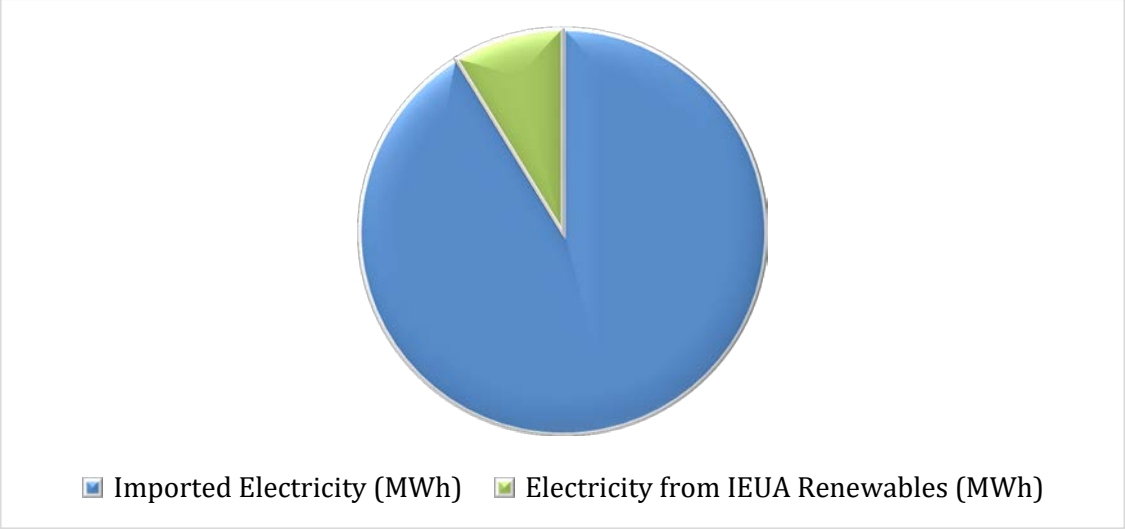
The 2019/20 Energy Report tracks IEUA's energy consumption and portfolio, renewable generation performance and savings, and energy efficiency projects for the fiscal year. The report includes a brief description of upcoming projects and initiatives that will be implemented over the next few years.

Summary

In 2019/20, IEUA:

- Consumed 75,703 MWh of electricity (Figure 1).
- Generated 10% of the electricity consumed from renewable energy (Figure 1). Savings to date since 2008 is approximately $1,040,000.
- Spent $7.6 million for utilities, that includes imported electricity, renewable energy and natural gas, and energy management services.
- Completed an energy efficiency project at RP-1.
- Commissioned 70 kW of solar on the RP-5 Lab rooftop.

Figure 1: IEUA Electricity Source for 2019/20



Did you know?

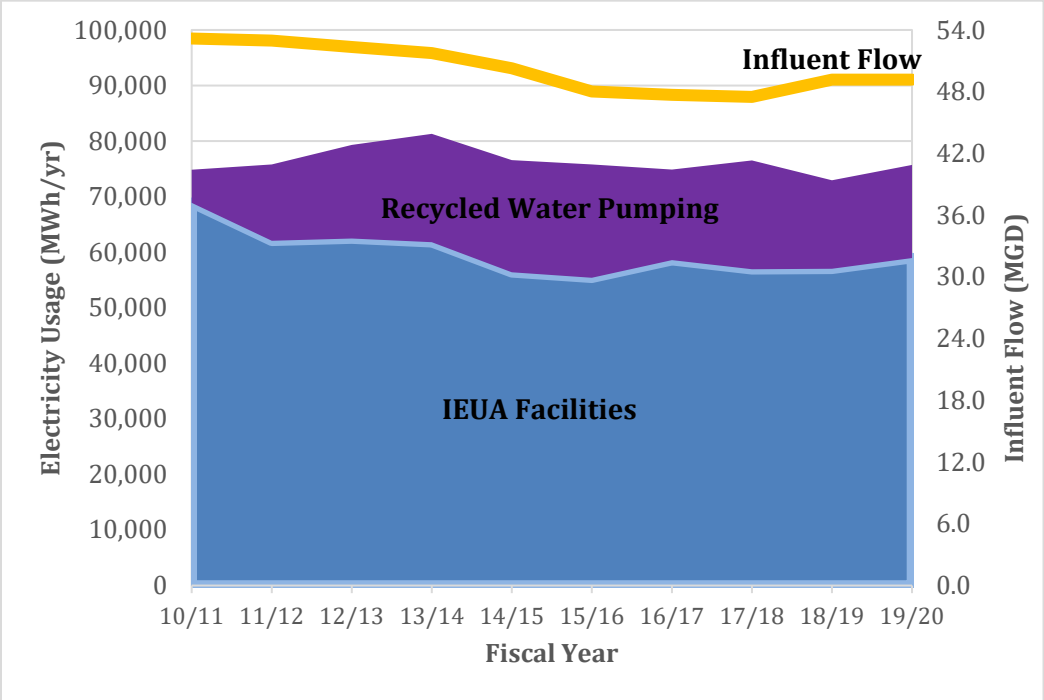
** In 2018 a typical U.S. household used 12,146 kWh (U.S. Energy Information Administration).*
** The renewable energy generated by IEUA would be able to provide electricity to at least 648 homes.*

Flow and Energy Consumption

- In 2019/20, the annual average influent flow to the regional water recycling plants was 49.2 MGD which was a slight increase of 0.1% as compared to the previous fiscal year of 49.1 MGD (Figure 2).

- In 2019/20, IEUA facilities which include the regional water recycling plants, composting facility, and recycled water pumping used approximately 75,703 MWh of electricity (Figure 2). The electricity consumption for 2019/20 increased by 2.9% as compared to the previous fiscal year of 73,598 MWh. This was due to the increased recycled water pumping and groundwater recharge activity

Figure 2: IEUA Electricity Use and Regional Influent Flows



Utility Change in Time-of-Use (TOU)

- Southern California Edison (SCE) changed their peak time of use from 12 p.m.-6 p.m. to 4 p.m.-9 p.m. starting on March 2019. This change is due to the significant impact of solar installations across their service area and statewide. During the late afternoon to nighttime, there is typically a surge in imported demand after the solar is no longer producing power. Although, wastewater treatment is an around the clock process, there are some processes in Agency facilities that are offline during the new peak time such as the composting facility and dewatering, which results in reduced on-peak demand. Additionally, SCE decreased facility demand rates.

Expenditure

- The cost of electricity remains the highest non-labor operations and maintenance (O&M) expenditure for IEUA. In 2019/20, the annual cost for energy related utilities and energy management was $7.6 million which had a decrease of 5% as compared to the previous fiscal year of $8.0 million due to the increase in renewable generation and energy demand management from the battery storage systems.

IEUA has a diversified energy procurement approach, that includes on-site generation Power Purchase Agreements (PPA), energy demand management, electricity purchase from Southern California Edison, and direct access contract with Shell Energy North America, continues to provide rate stabilization and cost effectiveness.

Renewable Energy Production and Storage

- IEUA's diverse renewable portfolio consists of 5.0 MW solar, 1.0 MW of wind, 3.0 MW of engines, and 4.0 MW battery (Figure 3). The battery storage optimizes energy management by charging from the grid during off-peak periods and discharging during on-peak periods, therefore it is not considered as onsite generation. In order to increase onsite renewable generation, IEUA plans to complete the installation of the necessary emissions control required by South Coast Air Quality Management District to have the REEP engines operating as part of the RP-5 Expansion project.

Figure 3: IEUA's Diverse Renewable Portfolio

- In 2019/20, 7,867 MWh of electricity was generated onsite, 23% more than 2018/19. The increase is due to the operation of the 1.5 MW of additional solar at Inland Empire Regional Composting Facility (IERCF) for a full year.

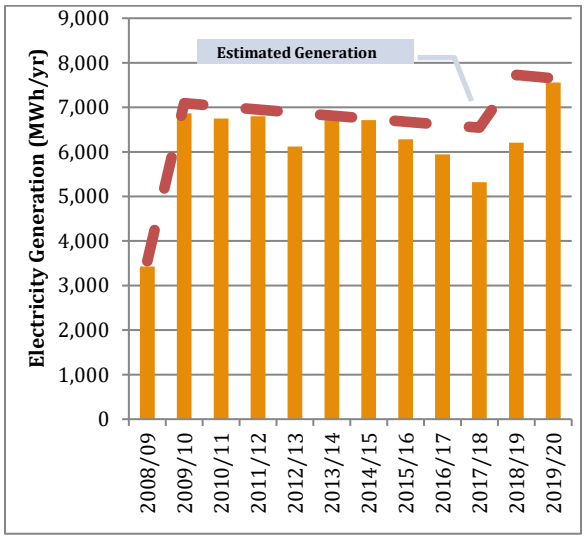
- IEUA's renewable portfolio generated 10% of the electricity used in 2019/20. Of the electricity consumed by IEUA;
    - 7,556 MWh was produced by the solar across IEUA facilities; and
    - 311 MWh was produced by the wind turbine at RP-4.
- Although PPA average rates have been typically higher than the average grid price in previous years, renewable energy projects provided savings, as a result of lower standby charges compared to the facility demand charge rate. Due to the decrease in facility demand rates from the new SCE tariffs, PPA renewable energy projects received overall no savings in 2019/20. IEUA paid an estimated $26,000 more on renewable energy than the grid.
- Generated solar electricity varies throughout the year due to the different number of sunlight hours, solar generation is usually higher in the summer and lower in the winter. In addition, CCWRF solar was inoperable beginning the second half of the previous fiscal year but was repaired and has been fully operational since November 2019.
- As a requirement by Southern California Edison (SCE), during the installation of the new solar at IERCF, the wind turbine had to be put offline in December 2018 until the proper protections were put in place to prevent impact to the transmission line. The wind turbine was put back online December 2019.
- The REEP engine has been offline since August 2017, they are expected to restart operation subsequent to the completion of the RP-5 Biosolids Facility project and the installation of the emission control equipment, which is anticipated in 2025.
- In 2015, IEUA partnered with Advanced Microgrid Solutions (AMS) through an energy management services (EMS) agreement to install 4 MW of battery storage and 1.5 MW of solar to optimize energy management and achieve cost savings through strategic procurement. The RP-1, RP-5, and CCWRF battery storage systems started commercial operation in November 2018. While the RP-4 and IERCF battery storage and solar system began commercial operation in March 2019. All facilities have completed their first year of operation. As of April 2020, the battery systems are now being operated and maintained by Enel X.

Solar

Solar Performance

- Solar across IEUA facilities generated 7,556 MWh of renewable energy, 21.7% more than 2018/19. The increased output was due to the 1.5 MW addition of solar at IERCF operating for a full year and the CCWRF solar going back online during the fiscal year. The disturbance in solar output, starting in FY2015/16 is caused by multiple solar inverters going offline. It should be noted that the existing 3.5 MW of solar is through a PPA with SunPower and the new solar is through an EMS contract.

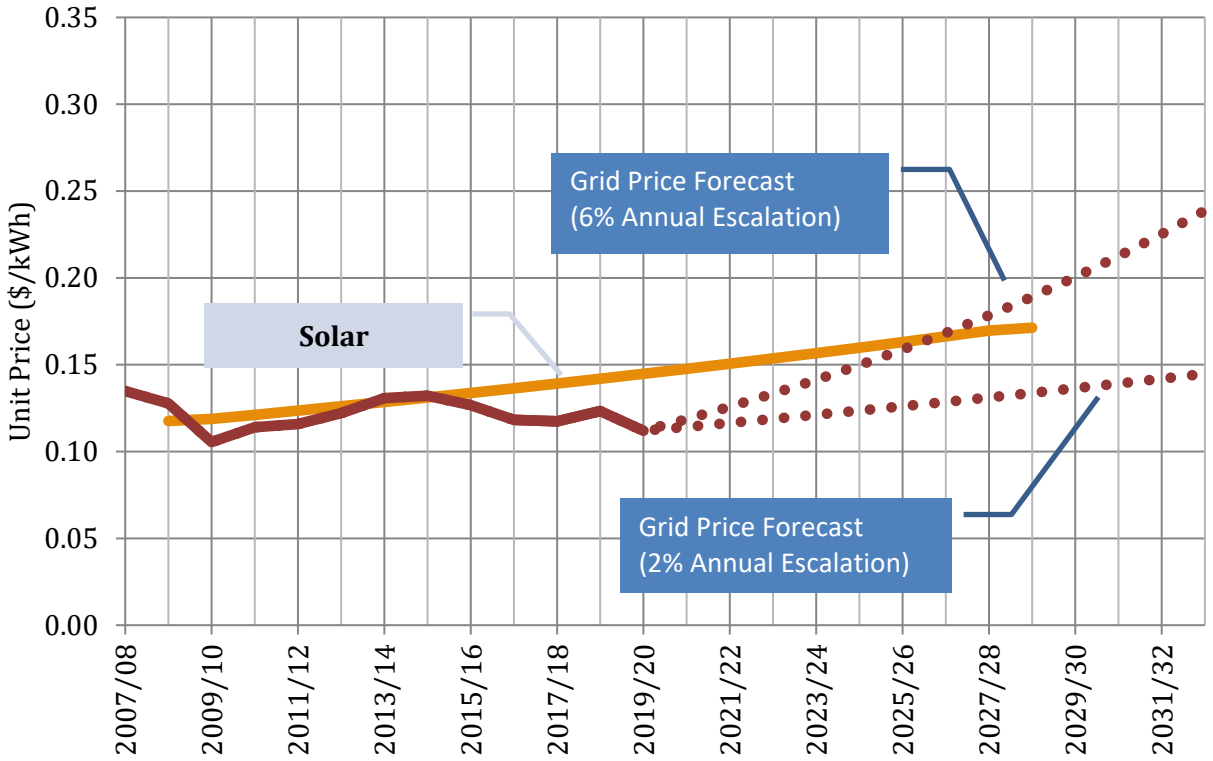
Figure 4: Solar Electricity Generation



Solar Cost

- For 2019/20, the SunPower PPA rate for the solar was higher than the average grid price. The solar projects provided no savings, as a result of lower facility demand charge rates compared to the standby charge rates. IEUA paid an estimated $32,000 more than the grid.
- The current SunPower PPA will expire in 2029. Staff will negotiate with the provider to extend the contract or purchase the solar, whichever is most cost-effective for the Agency.

Figure 5: Cost of Solar Power from PPA vs Grid Import



- Solar generated an overall savings of $342,327 from 2008/09 to 2019/20.

Table 1: Savings from Solar Power PPA

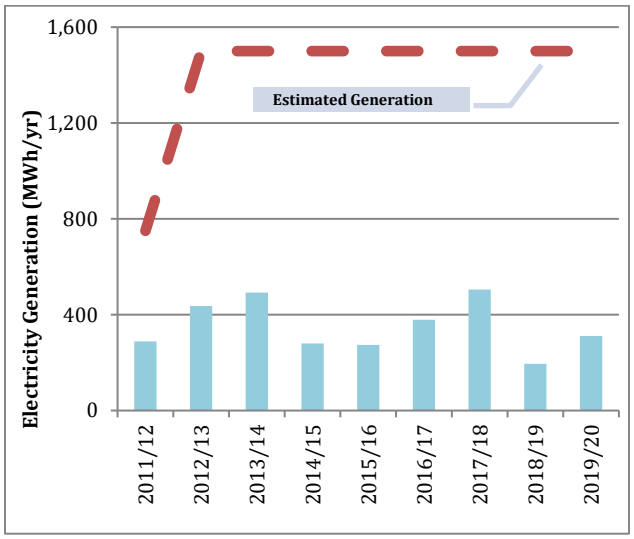
Savings FY 08/09 – FY 19/20	$250,000
Range of Savings PPA Term (FY 08/09 – FY 28/29)	-$475,000 (2% Esc) $1,069,000 (6% Esc)

Wind

Wind Performance

- In FY 2019/20 the wind turbine at RP-4 generated 311 MWh of renewable energy, 59% higher than 2018/19 due to the system being offline more than half of the previous fiscal year.

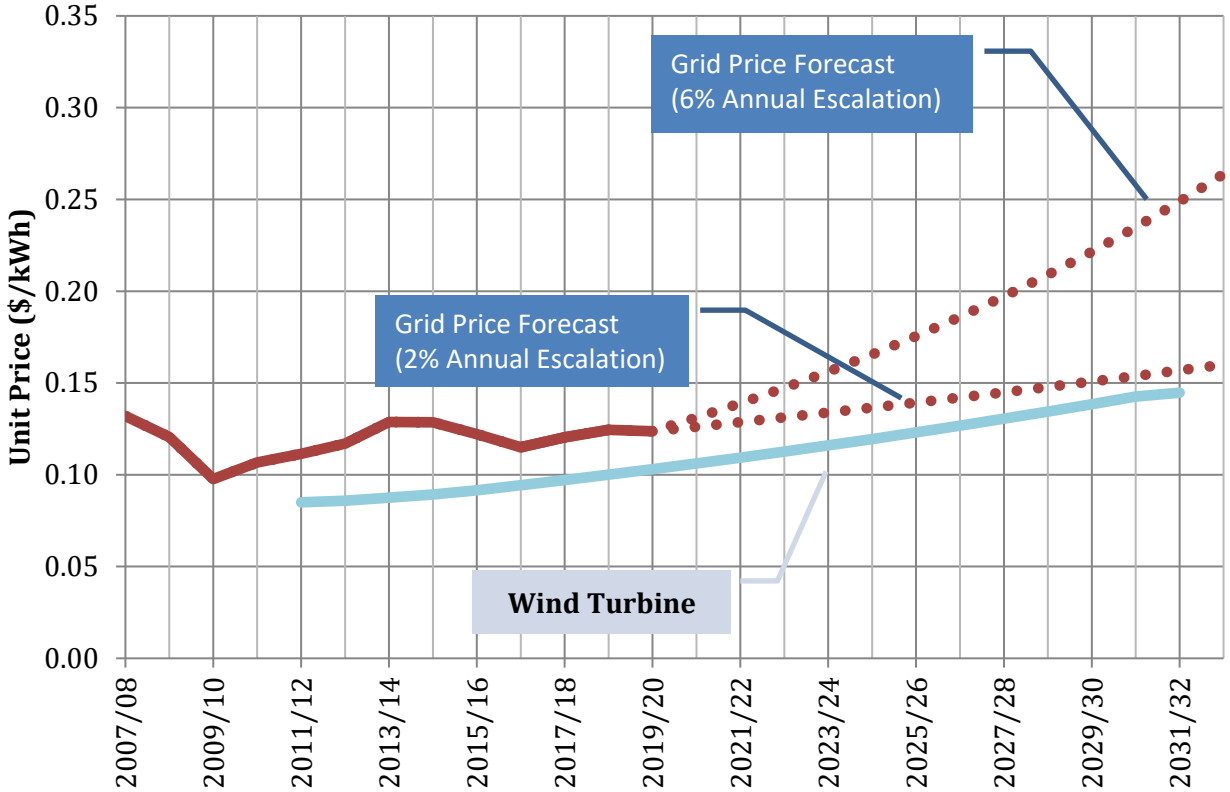
Figure 6: Wind Electricity Generation



Wind Cost

- For 2019/20, the PPA rate for the wind turbine was 20% lower than the average grid price. The wind turbine provided approximately $6,000 in savings.

Figure 7: Cost of Wind Power vs Grid Import



- Wind generated $84,000 in savings from 2011/12 to 2019/20.

Table 2: Savings from Wind Power

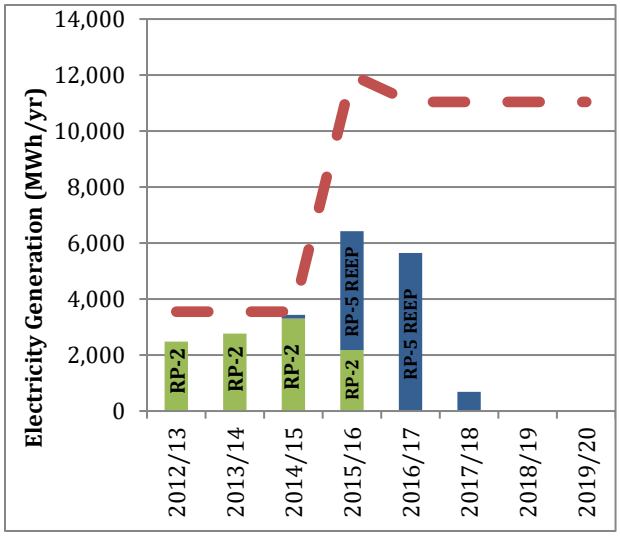
Savings FY 11/12 – FY 19/20	$84,000
Range of Savings PPA Term (FY 11/12 – FY 31/32)	$152,000 (2% Esc) $338,000 (6% Esc)

Engine

Engine Performance

- Renewable energy was not generated by the REEP engines since they did not operate the entire fiscal year. The REEP engines at RP-5 were put offline in August 2017. The engines are expected to go back online in 2025 after the completion of the RP-5 Biosolids Facility project, and the installation of the SCAQMD required emission controls.

Figure 8: Engine(s) Electricity Generation



Battery Storage + Solar

Battery Storage + Solar Performance

- The AMS battery storage at RP-1, RP-5 and CCWRF (2.5 MW combined) started commercial operation in November 2018, and the 1.5 MW battery storage at RP-4 and 1.5 MW of solar at IERCF started commercial operation on March 2019. In the first year of commercial operation, RP-1, RP-5, and CCWRF experienced a combined average demand reduction of 333 kW with a total bill savings of $124,000. While the system at IERCF and RP-4 achieved an average demand reduction of 334 kW and solar generation of 2,255 MWh with a total bill savings of $297,000 in the first term year. Since the minimum guaranteed savings per the contract was not met, the battery system owners reconciled the remainder of the expected savings to the Agency.

Energy Efficiency Projects

- IEUA continues to work with Southern California Edison (SCE) and Southern California Regional Energy Network (SoCalREN) to conduct comprehensive energy audits and to implement projects to reduce electricity consumption and demand throughout its facilities and operations. In FY 19/20, the following process optimization project was completed:
  - Automated ammonia controls installation at the RP-1 aeration basins.
    - Completed: August 2019
    - Expected annual savings: 326,00 kWh and $41,000
    - Incentive: $32,000
      Avoided power usage: 37 kW
- Since the start of the partnership in 2015, the Agency's implementation of energy efficiency projects has accumulated:
    - Expected annual savings: 4,308,000 kWh and $499,000
    - Incentive: $405,000
    - Avoided power usage: 227 kW

RP-5 Lab Rooftop Solar

- As part of the RP-5 Lab Project, 70 kw of solar was installed on the rooftop of the Lab building. The solar was commissioned in November 2019.

Upcoming Projects

Pumping Project

- This project will replace 4 recycled water pumps at RP-1. The project is expected to be completed in September 2020.

Greenhouse Gas Emissions Annual Reporting

- IEUA will continue to voluntarily report its greenhouse gas emissions to The Climate Registry.

Beneficial Use of Biogas

- IEUA evaluated opportunities to beneficially use the biogas generated at RP-1 in addition to onsite use for digesters heating. From the study, the following alternatives were explored:
    - Internal Combustion Engines
    - Microturbines
    - Fuel Cell through a PPA
    - Pipeline Injection
    - Compressed Natural Gas (CNG) Station

- It was concluded that the Internal Combustion Engine would be the most cost-effective.

Other Energy Related Activities

New Direct Access Contract

- IEUA issued a Request for Proposal (RFP) for an electric energy service provider. Two proposals were received, and Shell Energy North America was awarded the contract. On average, direct access account rates are about $0.02/kWh lower than bundled account rates.

In-Conduit Hydroelectric Power Generation

- IEUA has issued a Request For Information (RFI) for recommendations for feasible and cost-effective in-conduit hydropower technology projects. The responses received included expected electricity generation, installation impact to current recycled water operation, and interconnection agreement challenges with SCE. Staff will evaluate again this technology at a later time.

University of California Office of President (UCOP) Biomethane Purchase Partnership

- UCOP is looking to purchase Renewable Natural Gas (RNG) via pipeline injection. After IEUA's discussions with UCOP and similarity in scenarios presented in the Beneficial Use of Biogas study, it was concluded that this option was not cost-effective for the Agency.

SCE Overgeneration Pilot Study

- IEUA participated in a pilot study executed by SCE to explore the possibilities of using water pumping to ease the grid during times when energy production is higher than demand. The study found that water agencies in the SCE service area are open to support grid reliability and participate in over-generation events with the implementation of changes in the Demand Response program.

Air Source Heat Pumps for Preheating of Emergency Backup Generators

- IEUA is currently evaluation electricity and cost savings associated with heat pump technology for preheating standby generators.

Engineering, Operations, and Water Resources Committee

INFORMATION ITEM 3C

1st Quarter Planning & Environmental Resources Updates

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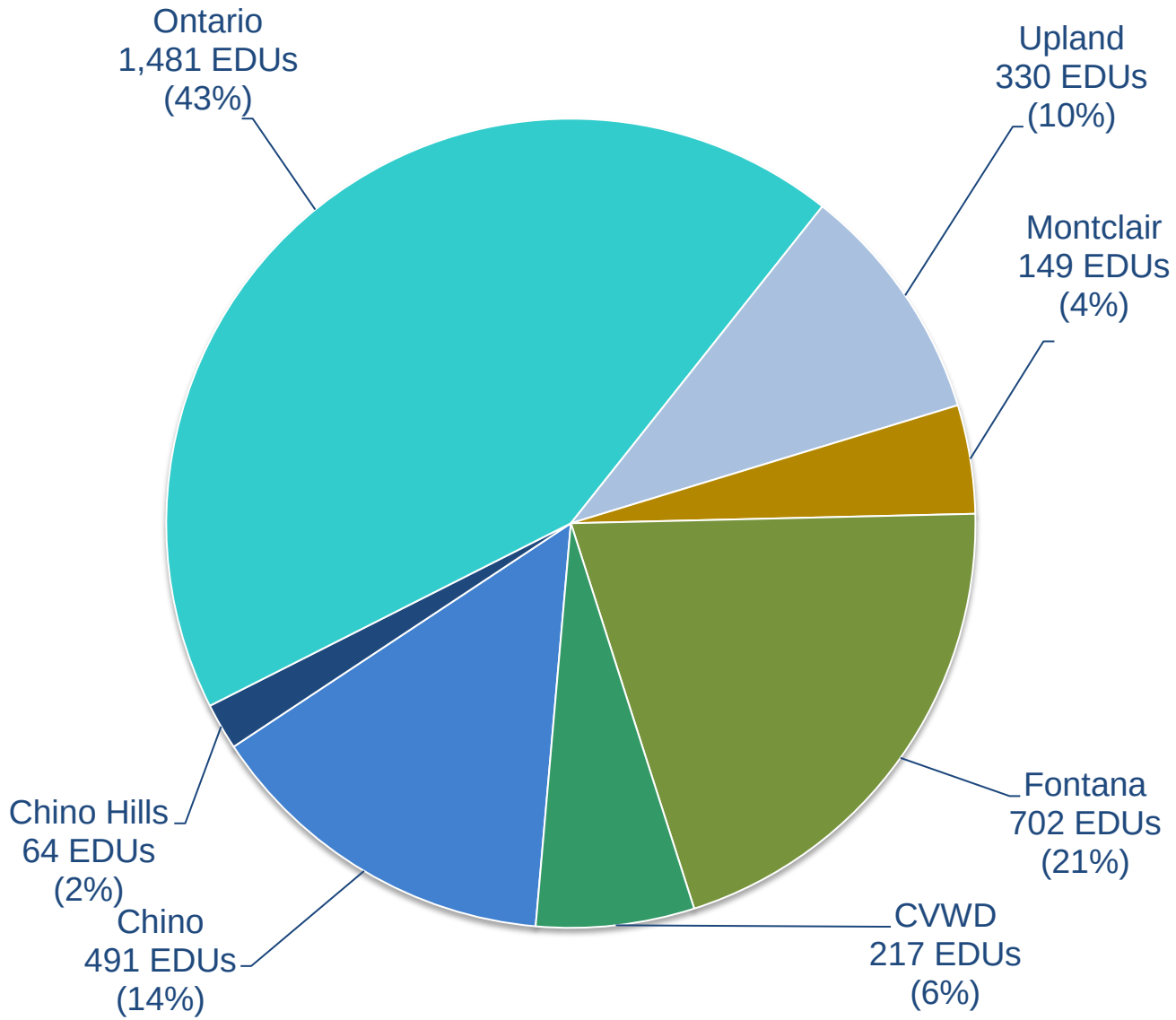
A MUNICIPAL WATER DISTRICT

Pietro Cambiaso
October 2020

FY19/20 Building Activity

3,434 EDUs Resulted in $23.9M Funding



South Service Area
2,036 EDUs
(59%)

North Service Area
1,398 EDUs
(41%)

- EDU = Equivalent Dwelling Unit
- Partial EDU rounded to the nearest whole number

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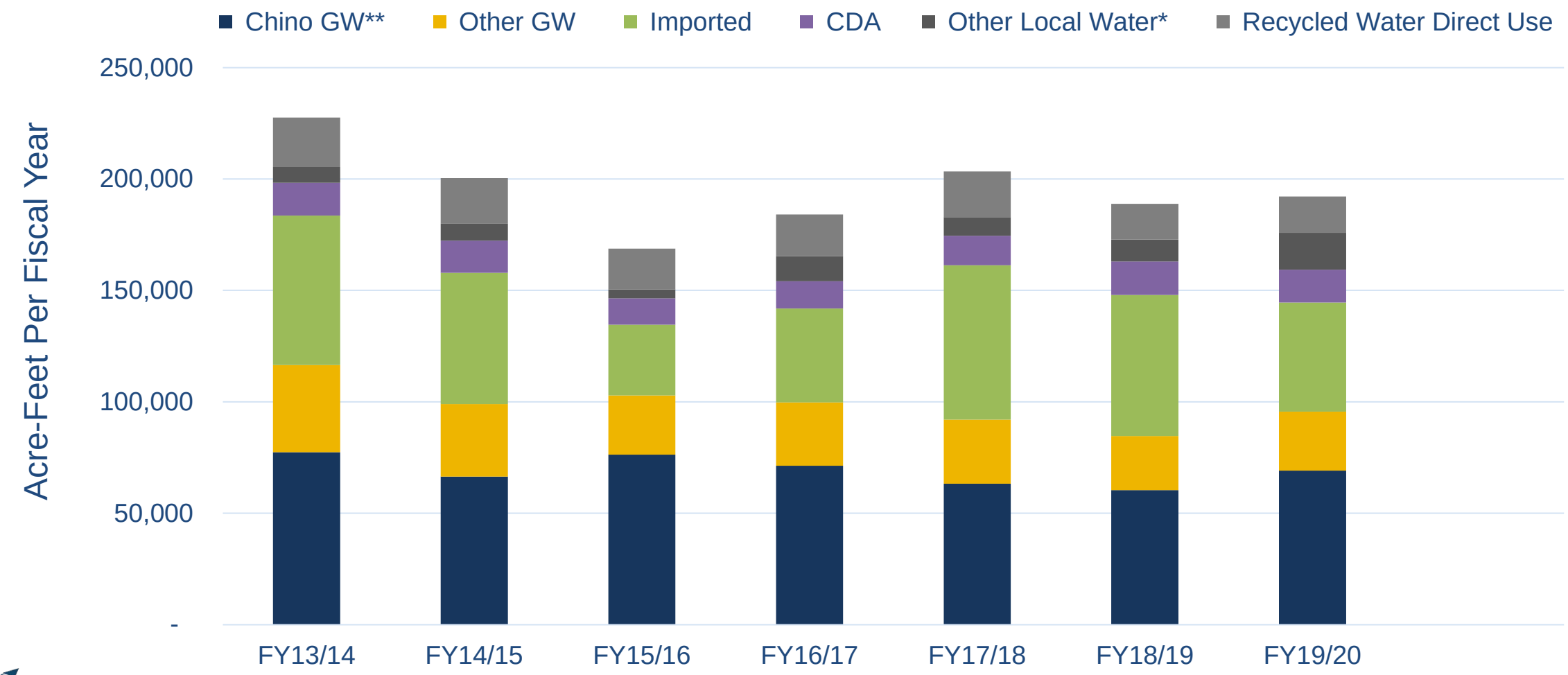
Regional Water Use Trend By Source



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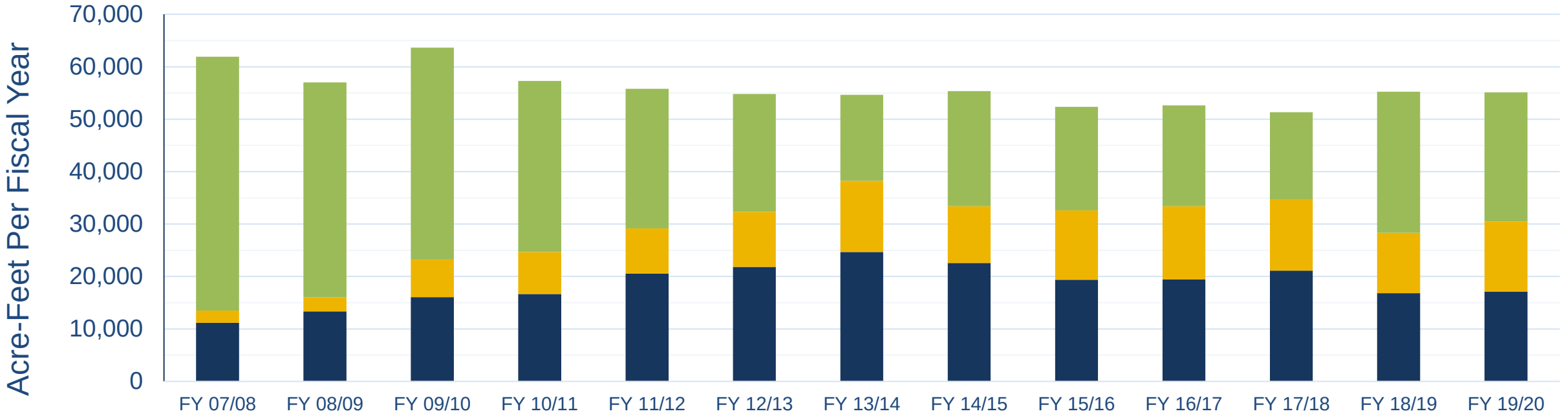
**Other Local Water includes purchases from local water companies such as SAWCo and WECWC;*
***FY 19/20 includes 17,395 AF of voluntary Dry Year Yield extraction by Cucamonga Valley Water District*

Recycled Water Deliveries



	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	FY 17/18	FY 18/19	FY 19/20
Direct	11,153	13,361	16,057	16,656	20,556	21,840	24,659	22,850	19,397	19,477	21,132	16,803	17,115
GWR	2,340	2,684	7,208	8,028	8,634	10,479	13,593	10,840	13,222	13,934	13,510	11,542	13,381
Effluent	48,412	40,962	40,379	32,607	26,607	22,487	16,399	21,961	19,752	19,226	16,707	26,888	24,635
Total	61,905	57,007	63,644	57,291	55,797	54,806	54,651	55,651	52,371	52,637	51,349	55,233	55,131

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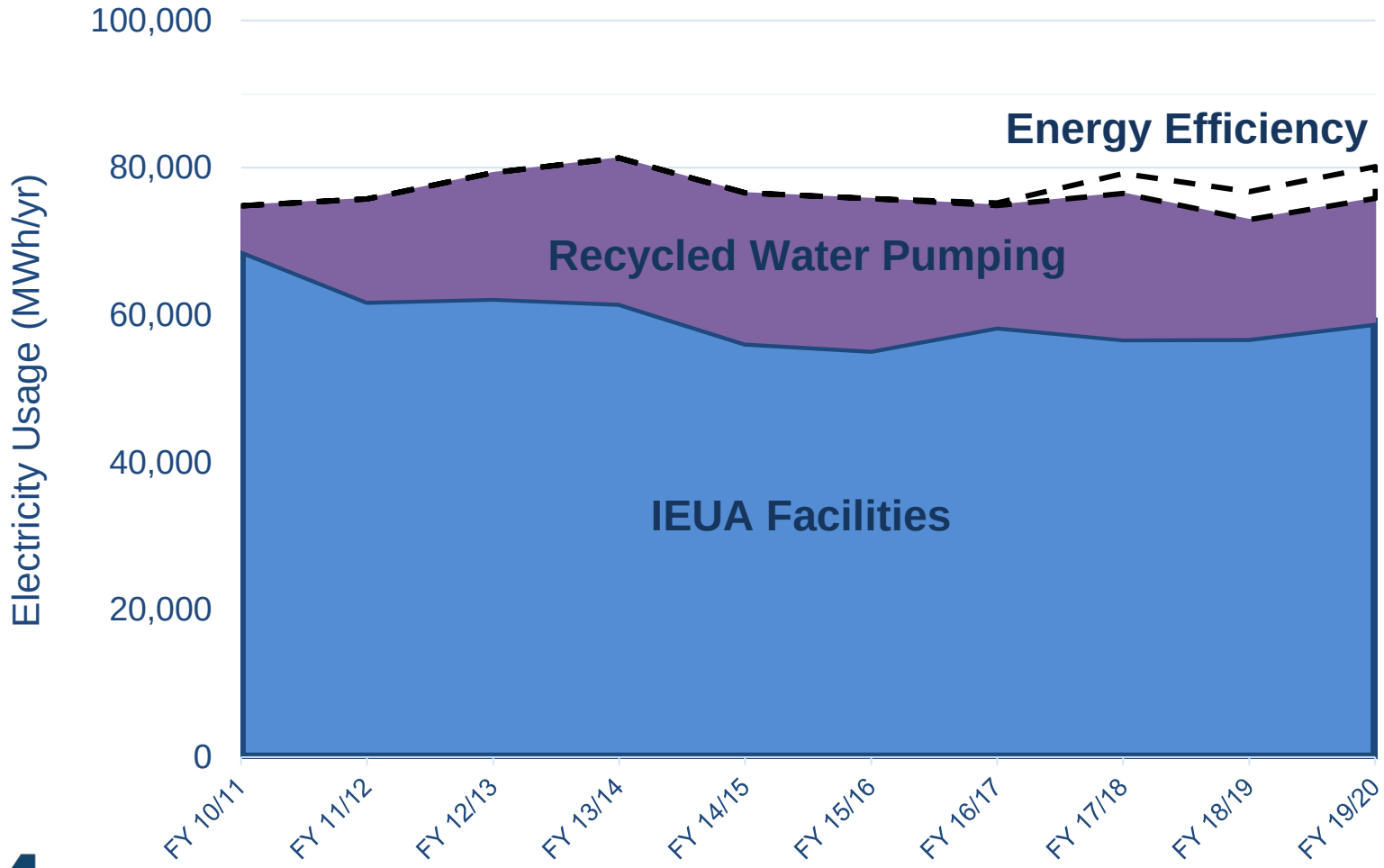
A MUNICIPAL WATER DISTRICT

Electricity Usage



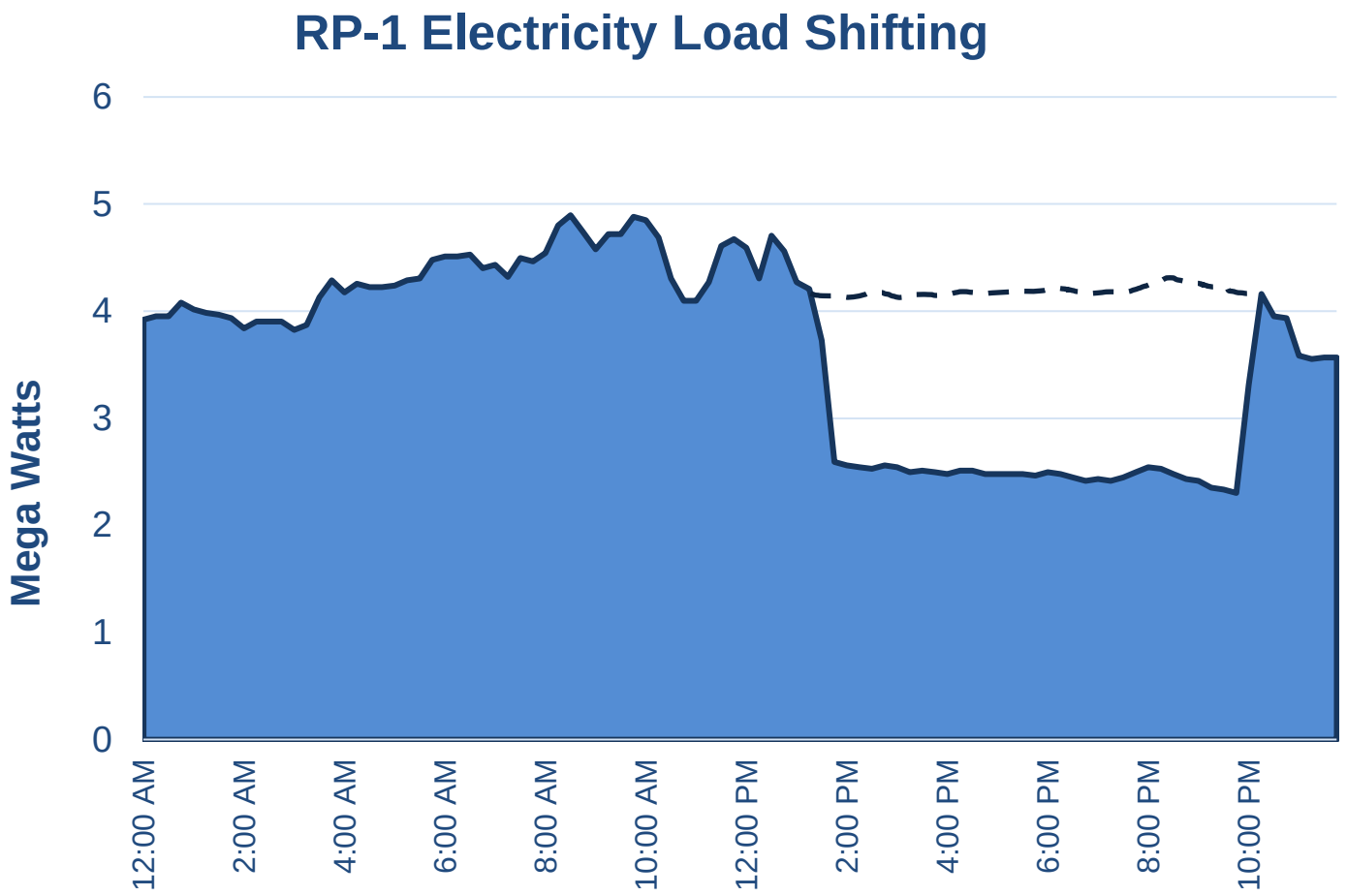
FY 2019/20 Energy Statistics

- 75,703 MWh of electricity consumption
- 10% of electricity from renewable energy
- Annual Cost: $7.6 M
- RP1 Energy efficiency project completed with projected annual savings of $41,000

Renewable Energy Projects
2008 – 2020 savings: $1,040,000

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Governor's Executive Order | Summer 2020 Heat Wave & Energy Shortage



- **Extreme heat event Aug 17, 18, and 19**
- **Governor actions**
  - State of Emergency Proclamation
  - Executive Order N-74-20
- **Rotating power interruptions**
- **IEUA response**
  - Load shifting (2 Mega Watts)
  - Energy storage (1 Mega Watt)

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INFORMATION ITEM 3D

Operations Division
Quarterly Update

Don Hamlett
Acting Deputy Manager of Integrated Systems Services
October 2020

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

COVID-19

- Staff and community safety are priority
- IEUA operations continuing to run at full capacity
- Maximizing social distancing and minimizing cross contamination
  - >30% O&M staff working remotely
  - Still completing all essential work

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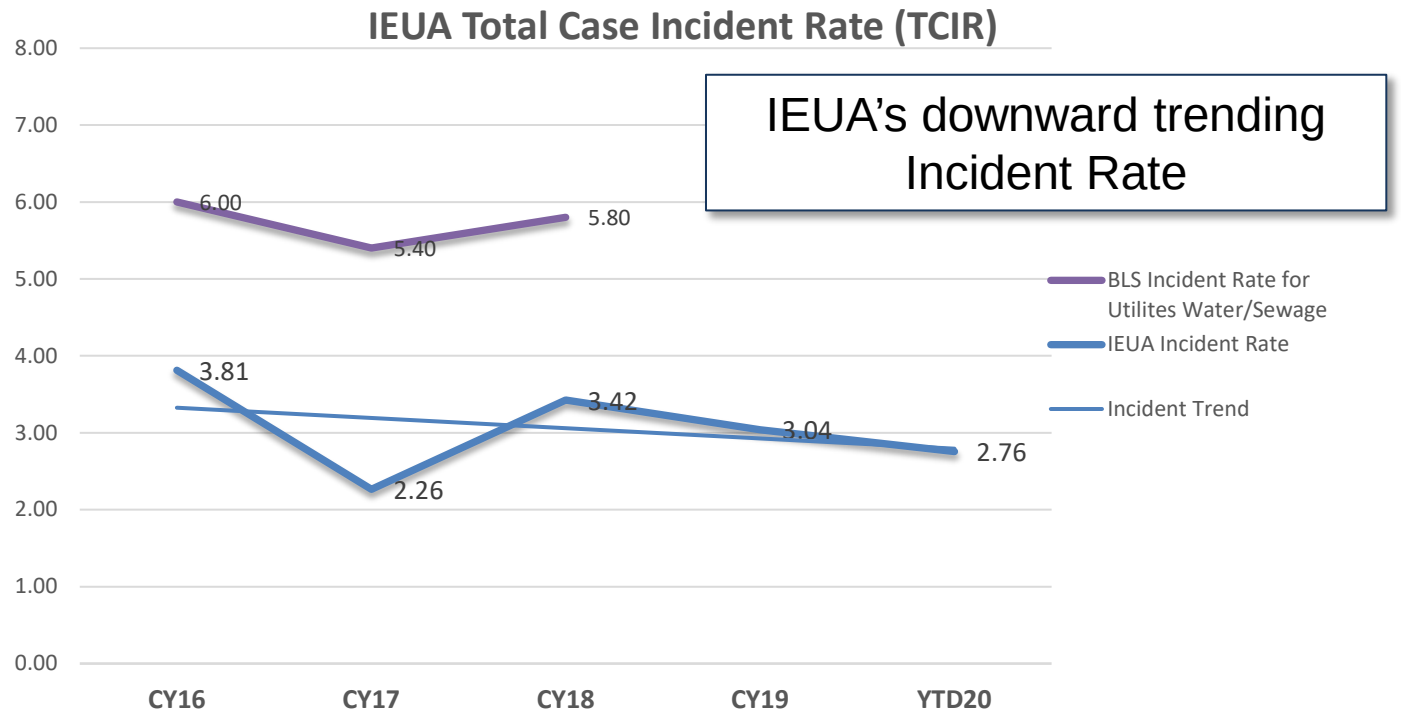
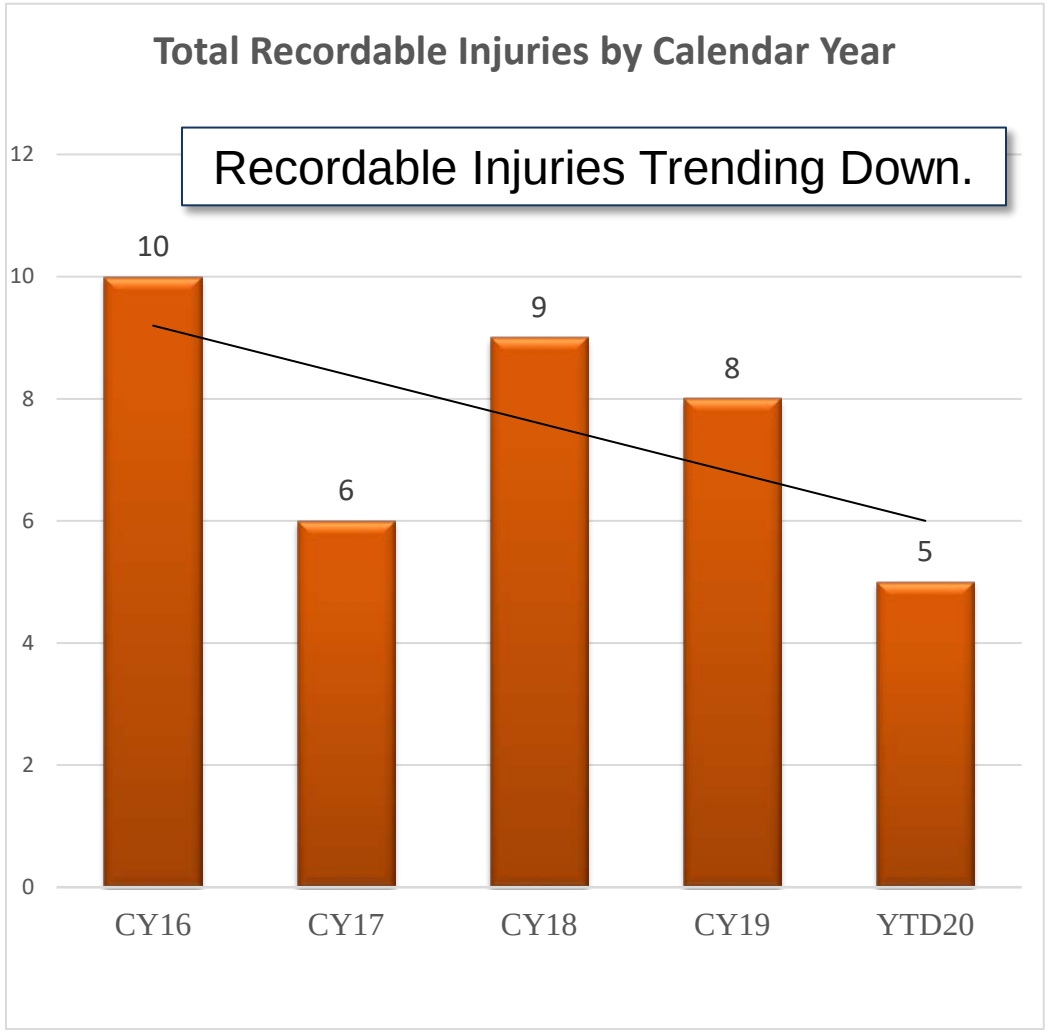
IEUA Incident Rates vs Industry & Total Recordable Injuries





- Incident Rate= Recordable Incidents X 200,000 / Number of hours worked
- RECORDABLE INCIDENT RATE - Incident rates are a metric used to compare a company's safety performance against a national. This comparison is a safety benchmark to gauge performance with other companies in the same business group, so you can make an "apples to apples" comparison

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Information Security

Identify	Information Security Policy, Asset Inventory, and blocking of Malicious Domains
Protect	Improved Phishing Training, Password Filtering, Improved Antivirus
Detect	Zero Security Breaches, Improved Intrusion Detection and New Virus Detection
Respond	Quarterly Cybersecurity Incident Response exercise, Malware Outbreak
Recover	Offline Backup of Critical Systems and Semi-Annual Disaster Recovery Drill

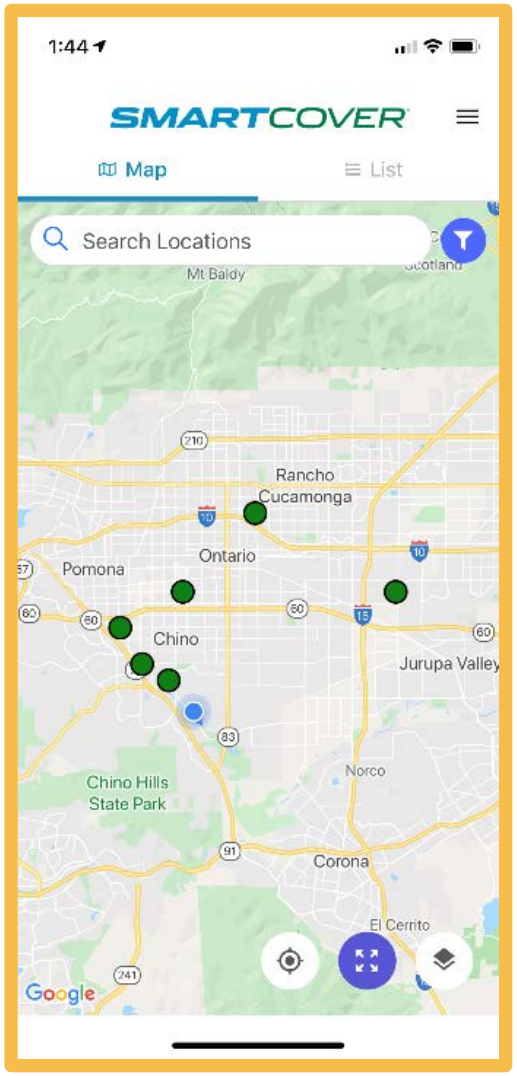
Integrated Systems Services

- Working From Home (last 90 days)
  - 373 TEAMS Users
  - 57,000 TEAMS Activities
    - 6,200 TEAMS Meetings
    - File sharing and chats
  - 1,300,000 emails sent or received
  - 47,000 Multifactor Authentications (to ensure secured login)
  - Multifactor Authentication Success Rate 92%

- Chino Preserve Lift Station Improvements
  - Automated cleaning cycle and schedule
  - Independent pump de-ragging
  - Cleaning and de-ragging controllable from RP-5 SCADA

Collections: Operating using Technologies

- Smart Covers
  - Provides real time information to help prevent sewer overflows
  - Measures sewer level at critical points in collection system
  - Identifies areas in need of cleaning and/or immediate response
  - Uses cloud and cellular services
  - Installations
    - 6 sensors installed
    - 8 more later this year



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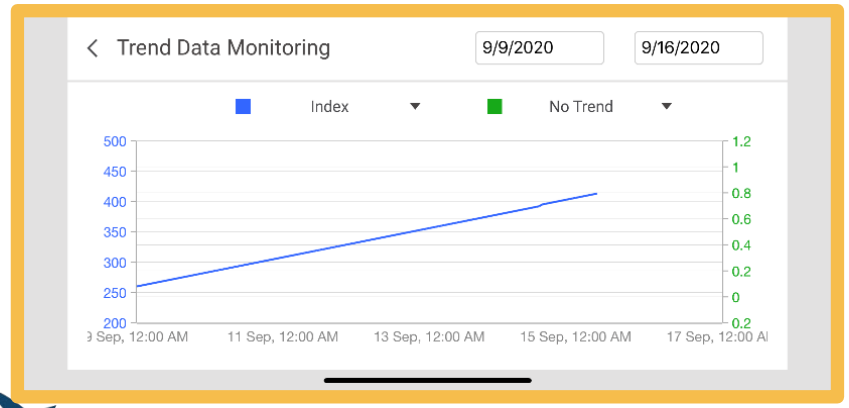
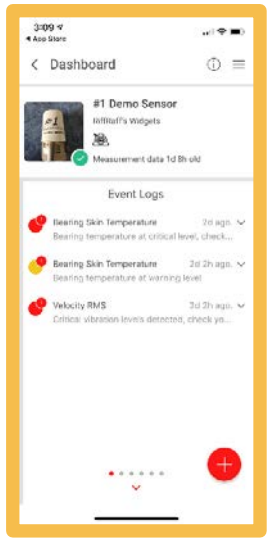
Regional Compost Facility: Operating Using Technologies

- Smart Bearing Sensors
  - Trial of new technology at Compost Facility
  - Proactive monitoring of asset:
    - Condition-based maintenance
    - Alert staff on change in bearing condition

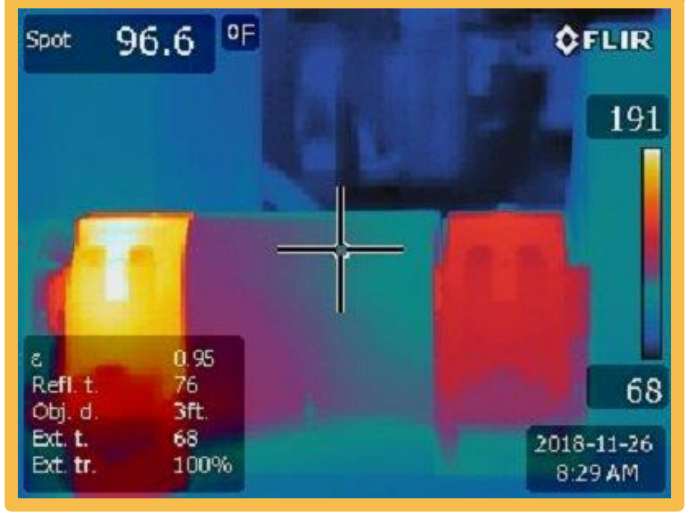
Smart Bearing Sensor

Smart Phone App





Sensor Installed at IERCF



Normal photo vs. thermal image of over-heating bearing

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INFORMATION ITEM 3E

Engineering and Construction Management Project Updates

Jerry Burke, P.E.

October 2020

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-4 Primary Clarifier and Process Improvements

Project Goal: Extend Asset Life and Improve Efficiencies

Total Project Budget: $18M

Project Completion: November 2021

Construction Percent Complete: 20%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design	Carollo Engineering	$1M	26%
Construction (Current)	W.M. Lyles	$11M	1%

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A MUNICIPAL WATER DISTRICT

Agency-Wide Chemical Containment Coating Rehabilitation

Project Goal: Extend Asset Life

Total Project Budget: $350K
Project Completion: September 2020
Construction Percent Complete:100%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design	Harper & Associates Eng.	34K	N/A
Construction	MC Painting	$252K	3%

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A MUNICIPAL WATER DISTRICT

Non-Reclaimable/Wastewater System Manhole Upgrades

Project Goal: Extend Asset Life

Total Project Budget: $810K
Project Completion: August 2020
Construction Percent Complete: 100%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design	In-house	$0	0%
Construction (Current)	Ferreira Construction	$558K	33%

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A MUNICIPAL WATER DISTRICT

Damaged Glulam Repair

Project Goal: Maintain Safe Work Environment

Total Project Budget: $250K
Project Completion: September 2020
Construction Percent Complete: 100%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design	Tetra Tech	$25K	0%
Construction	Atom Engineering	$176K	18%

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