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

WEDNESDAY, OCTOBER 13, 2021
10:00 A.M.

INLAND EMPIRE UTILITIES AGENCY*
VIEW THE MEETING LIVE ONLINE AT IEUA.ORG
TELEPHONE ACCESS: (415) 856-9169 / Conf Code: 316 524 615#

PURSUANT TO RESOLUTION NO. 2021-10-1, ADOPTED BY THE IEUA BOARD OF DIRECTORS ON OCTOBER 6, 2021, IEUA BOARD AND COMMITTEE MEETINGS WILL CONTINUE TO BE CONDUCTED THROUGH TELECONFERENCE. IN AN EFFORT TO PROTECT PUBLIC HEALTH AND PREVENT THE SPREAD OF COVID-19, THERE WILL BE NO PUBLIC LOCATION AVAILABLE FOR ATTENDING THE MEETING IN PERSON.

The public may participate and provide public comment during the meeting by dialing into the number provided above. Comments may also be submitted by email to the Board Secretary/Office Manager Denise Garzaro at dgarzaro@ieua.org prior to the completion of the Public Comment section of the meeting. Comments will be distributed to the Board of Directors.

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 prior to the public comment section or request to 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.

*A Municipal Water District

1. CONSENT ITEMS

A. MINUTES

Approve Minutes of the September 8, 2021 Engineering, Operations, and Water Resources Committee meeting.

B. NORTH SYSTEM NORTH TRUNK SEWER SIPHON REPLACEMENT PROJECT SOCALGAS LINE RELOCATION COLLECTIBLE WORK AGREEMENT

Staff recommends that the Committee/Board authorize the General Manager to execute the collectible work agreement with SoCalGas in the amount of $390,156.10, subject to non-substantive changes.

2. ACTION ITEMS

A. HEADQUARTERS PARKING LOT AND DRIVEWAY IMPROVEMENTS CONSTRUCTION CONTRACT AWARD

Staff recommends that the Committee/Board:

1. Award a construction contract for the Headquarters Parking Lot and Driveway Improvements, Project Nos. EN20008 and EN20040, to W.A. Rasic Construction Company, Inc. in the amount of $696,288 ($426,000 for Project No. EN20008 and $270,288 for Project No. EN20040);

2. Amend the Total Project Budget and FY 2021/22 Budget for Headquarters Parking Lot Project No. EN20008 in the amount of $150,000, increasing the budget from $440,000 to $590,000 (34% increase) in the General Administrative (GG) fund; and

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

B. GLEN MEADE TRUNK CRITICAL PROJECT CONSTRUCTION CONTRACT AWARD

Staff recommends that the Committee/Board:

1. Approve a construction contract for the Glen Meade Trunk Critical Repair, Project No. EN19024, to Tharsos, Inc., in the amount of $168,540; and

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

C. RP-1 FLARE IMPROVEMENTS PROJECT CHANGE ORDERS

Staff recommends that the Committee/Board:

1. Approve two construction change orders for the RP-1 Flare Improvement, Project No. EN18006, to WM Lyles Co., for the not-to-exceed amount of $324,977, increasing the contract from $5,589,431 to $5,914,408 (approximately 5.8% increase); and

2. Authorize the General Manager to execute the change orders and budget amendment, subject to non-substantive changes.

D. 42-INCH RECYCLED WATER LEAK EMERGENCY PROJECT RATIFICATION

Staff recommends that the Committee/Board:

1. Ratify the emergency task order for the 42-inch Recycled Water Leak, Project No. EN22017.02, to W.A. Rasic Construction Company, Inc., in the amount of $331,053.57;

2. Amend the Total Project Budget and FY 2021/22 Budget for the WC Emergency, Project No. EN22017, in the amount of $350,000, increasing the budget from $150,000 to $500,000 (334% increase) in the Recycled Water (WC) fund; and

3. Authorize the General Manager to approve the emergency task order and budget amendment, subject to non-substantive changes.

E. HORIBA AMMONIA NITROGEN METER STANDARDIZATION

Staff recommends that the Committee/Board:

1. Adopt a finding pursuant to Public Contract Code 3400(c) that the use of Horiba Advanced Techno Company Ammonia Nitrogen Meters, specifically conditions (2) to match existing product that will be in use at Regional Plant No. 5 after the completion of the expansion project; and (3) the ammonia nitrogen meters are only available from Horiba; and

2. Authorize the standardization selection and sole source procurement for future O&M and capital projects.

3. INFORMATION ITEMS

A. OPERATIONS DIVISION QUARTERLY UPDATE (POWERPOINT)

B. STRATEGIC PLANNING & RESOURCES ANNUAL REPORT & ANNUAL ENERGY REPORT (WRITTEN/POWERPOINT)

C. RP-5 EXPANSION PROJECT UPDATE (POWERPOINT)

RECEIVE AND FILE INFORMATION ITEMS

D. COVID-19 PANDEMIC IMPACT ON CAPITAL IMPROVEMENT PROJECTS (WRITTEN/POWERPOINT)

E. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES (POWERPOINT)

4. GENERAL MANAGER'S COMMENTS

5. COMMITTEE MEMBER COMMENTS

6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS

ADJOURN

DECLARATION OF POSTING

I, Denise Garzaro, CMC, Board Secretary/Office Manager of the Inland Empire Utilities Agency*, a Municipal Water District, hereby certify that, per Government Code Section 54954.2, a copy of this agenda has been posted at the Agency's main office, 6075 Kimball Avenue, Building A, Chino, CA and on the Agency's website at www.ieua.org at least seventy-two (72) hours prior to the meeting date and time above.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary at (909) 993-1736 or dgarzaro@ieua.org, 48 hours prior to the scheduled meeting so that IEUA can make reasonable arrangements to ensure accessibility.

CONSENT ITEM 1A

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

WEDNESDAY, SEPTEMBER 8, 2021
10:00 A.M.

COMMITTEE MEMBERS PRESENT via Video/Teleconference

Michael Camacho, Chair
Marco Tule

STAFF PRESENT

Shivaji Deshmukh, General Manager
Christiana Daisy, Deputy General Manager
Mike Baker, Network Administrator
Denise Garzaro, Board Secretary/Office Manager
Nolan King, Network Administrator

STAFF PRESENT via Video/Teleconference

Jasmin A. Hall, President
Kathy Besser, Executive Manager of External & Government Affairs/AGM
Randy Lee, Executive Manager of Operations/AGM
Christina Valencia, Executive Manager of Finance & Administration/AGM
Adham Almasri, Principal Engineer
Jerry Burke, Manager of Engineering
Andy Campbell, Groundwater Recharge Coordinator/Hydrogeologist
Javier Chagoyen-Lazaro, Manager of Finance & Accounting
Robert Delgado, Manager of Operations & Maintenance
Don Hamlett, Acting Deputy Manager of Integrated System Services
Jennifer Hy-Luk, Acting Executive Assistant
Scott Lening, Deputy Manager of Operations
Jason Marseilles, Deputy Manager of Engineering
Scott Oakden, Manager of Operations & Maintenance
Joshua Oelrich, Deputy Manager of Maintenance
Cathleen Pieroni, Manager of Inter-Agency Relations
Sushmitha Reddy, Manager of Laboratories
Jeanina Romero, Executive Assistant
Victoria Salazar, Associate Engineer
James Spears, Senior Engineer
Travis Sprague, Principal Engineer
Yvonne Taylor, Administrative Assistant II
Wilson To, Technology Specialist II
Teresa Velarde, Manager of Internal Audit
Brian Wilson, Senior Engineer

CALL TO ORDER
Committee Chair Michael Camacho called the meeting to order at 10:00 a.m. He 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.

1A – 1C. CONSENT ITEMS
The Committee:

- Approved Minutes of the July 14, 2021 Engineering, Operations, and Water Resources Committee meeting.

- Recommended that the Board:

    1. Approve the sole source purchase for continued services with Royal Industrial Solutions/Rockwell Automation for a seven-year technical support contract for a not-to-exceed amount of $1,065,320; and

    2. Authorize the General Manager to execute the contract;

- and

    1. Approve the award of Contract No. 4600003063 to Powerhouse Combustion & Mechanical Corporation to provide Boiler Maintenance Services for a total not-to-exceed amount of $153,260 over five years with a fixed price for one year and potential Consumer Price Index increases for the remainder of the contract; and

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

  as Consent Calendar items on the September 15, 2021 Board meeting agenda.

2A – 2B. ACTION ITEMS
The Committee:

- Recommended that the Board:

    1. Award a construction contract for the RP-1 Aeration Membrane Replacement, Project No. PA17006.03 to J.F. Shea Construction, Inc., for the not-to-exceed amount of $1,738,000; and

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

  as a Consent Calendar item on the September 15, 2021 Board meeting agenda.

- Recommended that the Board:

    1. Approve a construction change order for the RP-5 Expansion, Project No. EN19001, to W.M. Lyles Co., for the not-to-exceed amount of $631,382 increasing the contract from $330,628,258 to $331,259,640 (approximately 0.19% increase) (Note – Staff conveyed that these numbers would be adjusted downwards when

the item is presented to the Board for approval pursuant to a reduced bid amount); and

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

as an Action item on the September 15, 2021 Board meeting agenda.

3A – 3D. INFORMATION ITEMS
The following information items were presented or received and filed by the Committee:

- Recycled Water Groundwater Recharge Update
- Laboratory Semi-Annually Update
- RP-5 Expansion Project Update: September 2021
- Engineering and Construction Management Project Updates

4. GENERAL MANAGER'S COMMENTS
General Manager Shivaji Deshmukh stated that a meet and greet with MWD General Manager Adel Hagekhalil is scheduled for Friday, September 10, 2021 at 9:00 a.m. outdoors at IEUA headquarters. An invitation was sent to Boards and City Councils as well as General Managers and City Managers from member agencies and other regional stakeholders.

5. COMMITTEE MEMBER COMMENTS
There were no Committee member comments.

6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS
Committee Chair Camacho requested staff schedule the next RP-5 tour for the Committee members.

ADJOURNMENT
With no further business, Committee Chair Camacho adjourned the meeting at 10:59 a.m.

Respectfully submitted,

Denise Garzaro
Board Secretary/Office Manager

*A Municipal Water District

APPROVED: OCTOBER 13, 2021

CONSENT ITEM 1B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: NSNT Sewer Siphon Replacement Project SoCalGas Line Relocation Collectible Work Agreement

Executive Summary:

The existing siphon located on the North System North Trunk Sewer (NSNT) system has reduced flow as the result of the closure of the energy production plant as well as minimal slope. These factors have resulted in a build-up of solids which causes odors. A project was launched to relocate the sewer and associated siphon to Hellman Avenue in order to provide a long-term solution to odor-related issues. The project scope includes installing approximately 3,369 linear feet of 12-inch sewer pipeline along Hellman Avenue between 5th Street and 8th Street in Rancho Cucamonga.

During design, a conflict with an existing 2-inch gas line was identified on Hellman Avenue. Staff reached out to SoCalGas and were able to come to an agreement to relocate approximately 1,500 linear feet of the gas line in conflict away from the proposed sewer. The gas line will need to be relocated prior to construction for safety reasons, as the gas line would be in the same trench as the sewer pipeline and cannot be shut off for an extended duration. There are sufficient funds to cover the cost in the total project budget.

Staff recommends executing the agreement with SoCalGas in the amount of $390,156.10 to relocate the conflicting 2-inch gas line.

Staff's Recommendation:

1. Authorize the General Manager to execute the collectible work agreement with SoCalGas in the amount of $390,156.10, 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:

On October 21, 2020, the Board of Directors awarded a consultant contract for the NSNT Sewer Siphon Replacement, Project No. EN20064, to Michael Baker International in the amount of $241,130.

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 - Gas Company Collectible Work Agreement

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

NSNT Sewer Siphon Replacement

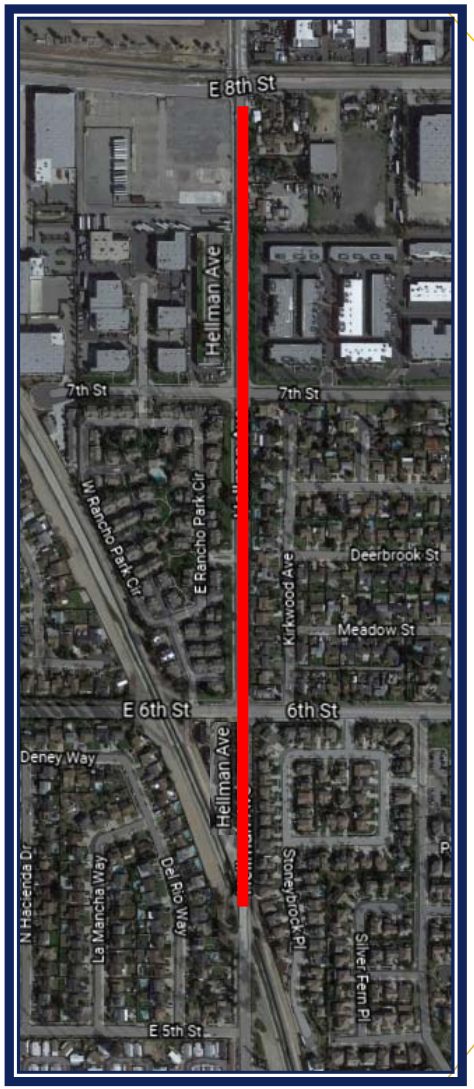
Collectible Work Agreement for SoCalGas Line Relocation

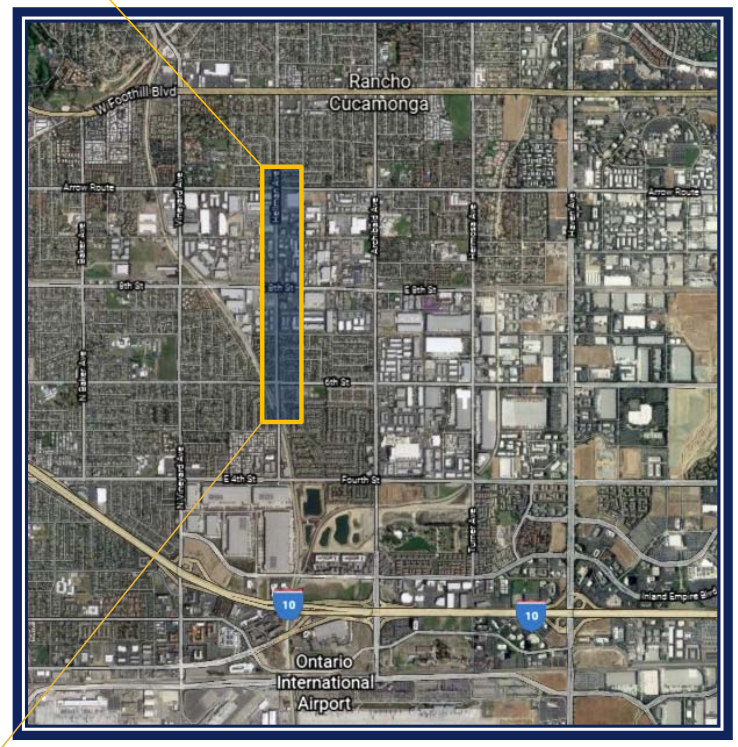
Project No. EN20064

Jonathan Wu, PE
Project Manager I

October 2021

Location

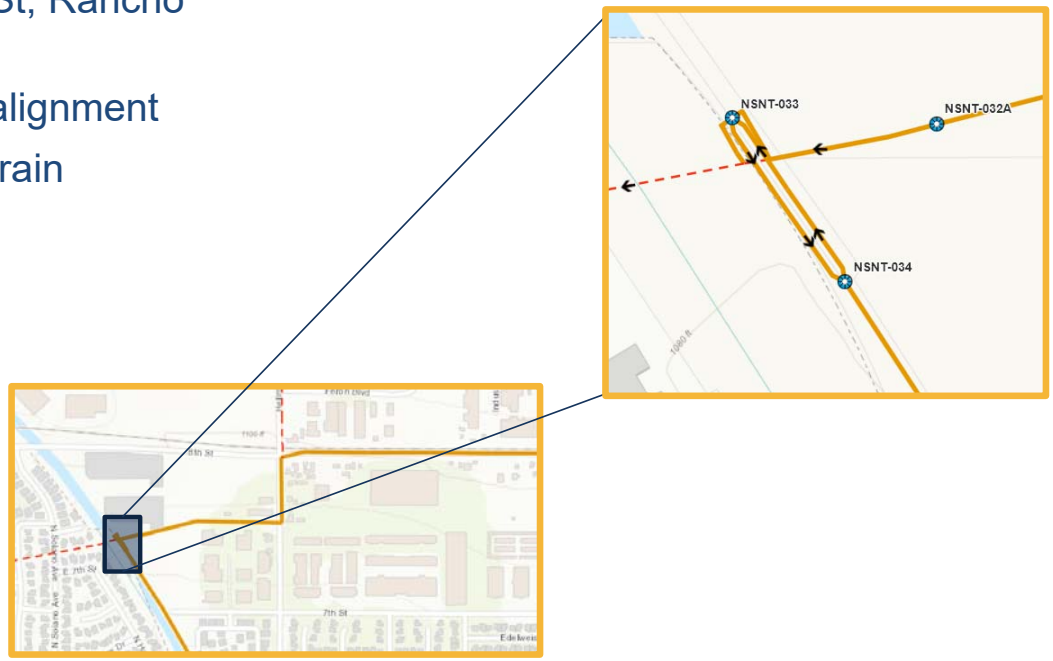

E 8th St
Hellman Ave
7th St
7th St
W Rancho Park Cir
E Rancho Park Cir
Kirkwood Ave
Deerbrook St
Meadow St
E 6th St
6th St
Deney Way
Hellman Ave
N Hacienda Dr
La Mancha Way
Del Rio Way
Stonybrook Pl
Silver Fern Pl
E 5th St


Rancho
Cucamonga
W Foothill Blvd
Arrow Route
Ontario
International
Airport
10
10

Scope

- Installing 3,369 LF of 12-inch sewer pipeline to relocate siphon
- Located on Hellman Ave between 8th St and 5th St, Rancho Cucamonga
- SoCal Gas line runs 2-feet parallel to proposed alignment
- Alignment constrained by water line and storm drain

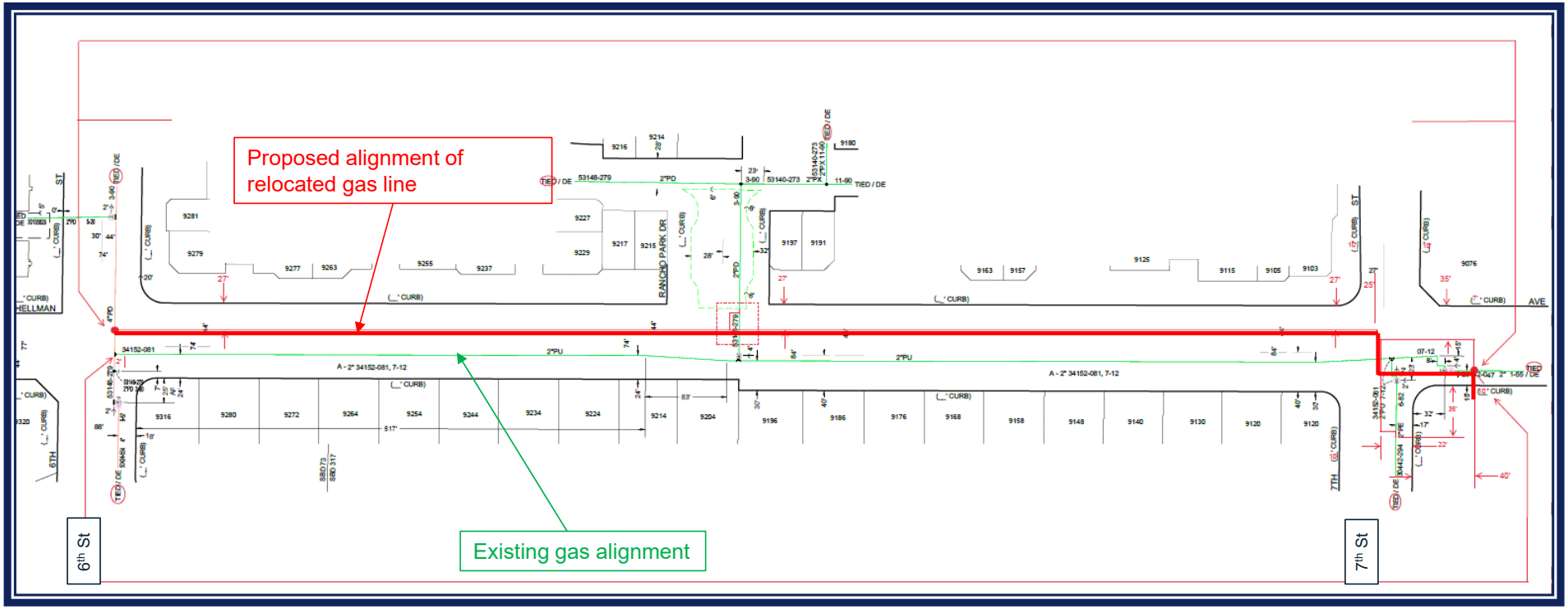
Example of Potholing Location Along Hellman Avenue



Siphon Along the Cucamonga Creek Channel to be Relocated

Gas Line Relocation

- Relocate 1,409-feet of 2-inch gas main plus 40-feet of steel gas main
- To be relocated prior to construction for safety reasons; SoCal Gas requires work be completed by their contractor



Project Budget & Schedule

Description	Estimated Cost
Design Services	***$352,044***
Design Consultant Contract	$241,130
IEUA Design Services (actuals)	$110,914
Gas Line Relocation	***$390,156***
SoCalGas Line Relocation (this action)	$390,156
Construction Services	***$225,000***
IEUA Construction Services (12%)	$225,000
Construction	***$1,870,000***
Construction Contract (Estimate)	$1,700,000
Contingency (~10%)	$170,000
Total Project Cost:	**$2,837,200**
Total Project Budget*:	**$2,837,200**

* The Total Project Budget increased during the Bi-Annual Budget Process for FY 21/22, which requested to be approved by the Board of Directors in October 2021. Staff will assess the total project budget during the construction contract award.

Contract Milestone	Date
Design Completion	October 2021
Construction Award	January 2022
Relocation of Gas Line	March 2022
Construction Completion	March 2023

Recommendation

- Authorize the General Manager to execute the Collectible Work Agreement with SoCalGas in the amount of $390,156.10, 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.

Attachment 2

SOUTHERN CALIFORNIA GAS COMPANY
COLLECTIBLE WORK AUTHORIZATION

Notification # 2041808125

Date Prepared 2021-09-08 | Design # 70797727 | MCU Order # 000005449691-0005

Estimate Prepared By David Castellanos 57399 | ML SC8362 | Phone # 9093357508

Purchaser Name and Job Address

Name Inland Empire Utilities Agency

Address Hellman Avenue

City Rancho Cucamonga State CA Zip 91730

Phone # (909) 993-1462

Purchaser's SS#

Billing Name and Address, If Different

Name Inland Empire Utilities Agency

Address PO Box 9020

City Chino Hills State CA Zip 91709

Phone # 909-270-0133

Or Federal Tax ID # 95-6004609

Purchaser requests and authorizes The Gas Company to perform the following work:

REPLACE 1,409' OF 2" PEM AND 40' OF STEEL MAIN WITH WITH 1,568' OF NEW 2" PEM ON HELLMAN AVENUE FROM 6TH STREET TO 40' N/N PL OF 7TH STREET AND ON 7TH STREET FROM HELLMAN AVENUE TO 35' E/E PL OF HELLMAN AVENUE DUE TO INLAND EMPIRE UTILITY AGENCY'S NEW SEWER LINE INSTALLATION. INLAND EMPIRE UTILITIES AGENCY PROJECT NO. EN20064

TOTAL COMPANY LABOR	TOTAL MATERIALS	TOTAL THIRD PARTYCHARGES (Including Contractor Labor)	TOTAL PAVING PERMIT, & OTHER	SUBTOTAL	ITCCA	TOTAL ESTIMATES
$ 43,275.17	$ 9,103.43	$ 251,662.65	$ 10,657.46	$ 314,698.71	$ 75,457.39	$ 390,156.10

Purchaser agrees to pay The Gas Company the actual cost - the estimated amount is due and payable in advance and any additional balance within 30 days of invoice.

The estimated cost of the Work is furnished only for the convenience of the Purchaser. It is intended to reflect The Gas Company's general past experience of the cost of similar work under favorable conditions. Because of unforeseen contingencies and other factors, the actual cost may be considerably higher or lower than this estimate. Therefore, the estimate is not a warranty by The Gas Company of the actual cost. The actual cost shall include overhead costs contained in The Gas Company's appropriate billing formula. Purchaser agrees to pay within 30 days of invoice any additional amounts whenever The Gas Company determines the cost of Work completed exceeds any amounts previously paid. When labor costs exceed the estimate, The Gas Company may, but is not obligated to notify Purchaser, and cease all Work until approval for the increased cost is obtained from Purchaser. If the total actual cost is less than the deposit(s), The Gas Company will refund the difference (without interest). Purchaser agrees that if The Gas Company brings any action to enforce the provisions of this Agreement, it shall be entitled to recover its attorney's fees and costs, in addition to any other relief to which it is entitled.

Purchaser agrees that any excavation made by Purchaser that is to be entered by Gas Company employees, agents or subcontractors shall conform to all requirements of the State of California construction safety orders, particularly the provisions of Article 6, Sections 1539 through 1547, which relate to the safe construction of trenches and excavations. Purchaser further agrees to take all reasonable care in protecting The Gas Company's property from damage, including the use of procedures which will not place any undue strain on pipes during excavation and backfill or cause damage to pipe protective coatings.

Purchaser shall indemnify, defend and hold harmless The Gas Company from and against any and all liability of every kind and nature for - (i) injury to or death of persons, including without limitation, employees or agents of The Gas Company or of Purchaser; (ii) damage, destruction or loss, consequential or otherwise, to or of any and all property, real or personal, including without limitation, property of The Gas Company, Purchaser or any other person; (iii) violation of local, state or federal laws or regulations (excluding environmental laws or regulations); and (iv) including attorney's fees incurred in defending against such liability or enforcing this provision - resulting from or in any manner arising out of or in connection with the performance of the Work including the indemnity obligations imposed on The Gas Company by the owner of the Job Address if other than Purchaser, by the local jurisdiction in which the Work is performed or which issues a permit for any part of the Work, excepting only those liabilities arising from the sole negligence or willful misconduct of The Gas Company or its agents compared to any other person.

Purchaser shall indemnify, defend and hold The Gas Company harmless from and against any and all liability (including attorney's fees incurred in defending against such liability or in enforcing this provision) arising out of or in any way connected with the violation of or compliance with any local, state or federal environmental law or regulation as a result of pre-existing conditions at the Job Address, release or spill of any pre-existing hazardous materials or waste, or out of the management and disposal of any pre-existing contaminated soils or groundwater, hazardous or non-hazardous, removed from the ground as a result of the Work ("Pre-Existing Environmental Liability"), including but not limited to liability for the costs, expenses and legal liability for the environmental investigations, monitoring, containment, abatement, removal, repair, cleanup, restoration, remedial work, penalties, and fines arising from the violation of any local, state or federal law or regulation, attorney's fees, disbursements, and other response costs. As between Purchaser and The Gas Company, Purchaser agrees to accept full responsibility for and bear all costs associated with Pre-Existing Environmental Liability. Purchaser agrees that The Gas Company may stop Work, terminate the Work, redesign it to a different location or take other action reasonably necessary to complete the Work without incurring any Pre-Existing Environmentally Liability

AGREED AND ACCEPTED October 20, 2021 (DATE)

PURCHASER INLAND EMPIRE UTILITIES AGENCY (NAME OF COMPANY)

THE GAS COMPANY BY _____ NAME(PRINT)

SHIVAJI DESHMUKH PURCHASER OR AUTHORIZED REPRESENTATIVE(PRINT)

GENERAL MANERAL TITLE

_____ SIGNATURE

_____ SIGNATURE OF PURCHASER OR AUTHORIZED REPRESENTATIVE

AMOUNT RECEIVED

PAYMENT INFORMATION

☐ CASH ☐ CHECK CHECK # _____

DATE PAYMENT TURNED IN: BY(NAME OF EMPLOYEE): PAYMENT TURNED IN AT:

Remittance Advice Instructions

Purpose:

This form should be used when billing a third party customer on a collectible capital project, e.g. relocating mains for Cal-Trans.

Instructions:

1 Complete all the required information to the following tabs:
   a. Form
   b. Plant
   c. Abandon
   d. O&M
   e. Coll_Auth
2 Click on the appropriate business area.
3 Print and provide the remittance form along with the Collectible Authorization Form to the customer for payment remittance.

Southern California Gas Company
A Sempra Energy utility®

BILL TO: Inland Empire Utilities Agency
Hellman Avenue
Rancho Cucamonga CA 91730

Return this form when mailing payment

MAIL TO: Southern California Gas Company
Sundry Billing
P.O. Box 2007
Monterey Park, CA 91754-0957

NOTIFICATION #: 002041808125

BUSINESS AREA: ☒ 2010 Distribution ☐ 2020 Transmission

CONTACT: David Castellanos 57399

DESIGN #: **70797727**

MCU ORDER #: 000005449691-0005

SAP COST CENTER: 2200-0450

COST ELEMENT: 6350710

DATE PREPARED: September 8, 2021

TOTAL AMOUNT DUE **$** **390,156.10**

Make checks payable to Southern California Gas Company and Include internal order number on check

PLEASE MAKE TIMELY PAYMENT TO AVOID DELAYS IN JOB SCHEDULE

ACTION ITEM 2A

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Finance & Administration *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: Headquarters Parking Lot and Driveway Improvements Construction Contract Award

Executive Summary:

The Headquarters Parking Lot and Driveway Improvement Projects were initiated to improve access, circulation, and make needed repairs. The scope includes the removal and replacement of concrete slabs, trees, asphalt, permeable pavement, addition of new speed bumps, traffic signs, striping, and widening the existing driveways.

On August 2, 2021, Inland Empire Utilities Agency (IEUA) issued an invitation for bids from the list of under $2,000,000 prequalified contractors. On September 9, 2021, IEUA received four construction bids. W.A. Rasic Construction was the lowest responsive, responsible bidder with a bid price of $696,288. The Engineer's Estimate is $743,000.

Further, staff is recommending a Total Project Budget and FY 2021/22 Budget amendment in the amount of $150,000, increasing the budget from $440,000 to $590,000 (34% increase) for the Headquarters Parking Lot Project. The amendment request is due to additional scope of work for the removal and relocation of existing storage containers. This additional scope will add six parking stalls for the Headquarters B parking lot, speed bumps, and traffic signs which was not part of the original estimate.

Staff's Recommendation:

1. Award a construction contract for the Headquarters Parking Lot and Driveway Improvements, Project Nos. EN20008 and EN20040, to W.A. Rasic Construction Company, Inc. in the amount of $696,288 ($426,000 for Project No. EN20008 and $270,288 for Project No. EN20040;
2. Amend the Total Project Budget and FY 2021/22 Budget for the Headquarters Parking Lot Project, No. EN20008, in the amount of $150,000, increasing the budget from $440,000 to $590,000 (34% increase) in the General Administrative (GG); and,
3. Authorize the General Manager to execute the construction contract and the budget amendment, subject to non-substantive changes.

Budget Impact *Budgeted (Y/N):* Y *Amendment (Y/N):* Y *Amount for Requested Approval:* $ 150,000

Account/Project Name:

EN20008.00/Headquarters Parking Lot
EN20040.00/Headquarters Driveway Improvements

Fiscal Impact (explain if not budgeted):

If approved the Total Project Budget and FY 2021/22 Budget amendment, in the General Administrative (GG) Fund, for the Headquarters Parking Lot Project, No. EN20008, in the amount of $150,000, will increase the total project budget from $440,000 to $590,000 and the fiscal year budget from $375,000 to $525,000, respectively.

Full account coding (internal AP purposes only): 1000 - 127100 - 10200 - 100000 Project No.: EN2008/EN20040
1000 - 127100 - 10200 - 105000

Prior Board Action:

None.

Environmental Determination:

Categorical Exemption

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

Business Goal:

The Headquarters Parking Lot and Driveway Improvements Project is consistent with IEUA's Business Goal of Work Environment, specifically the Staff Safety objective that IEUA will ensure that Agency facilities are well maintained and upgraded to ensure a safe and healthy work environment, exceeding industry best practices in support of achieving the CalOSHA Star Voluntary Protection Program (CAL/VPP) certification.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Construction Contract

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

HQ Parking Lot & Driveway Improvements
Construction Contract Award
Projects No. EN20008 & EN20040

Matthew Poeske, PE
Senior Engineer
October 2021

Project Location

Driveway Improvements

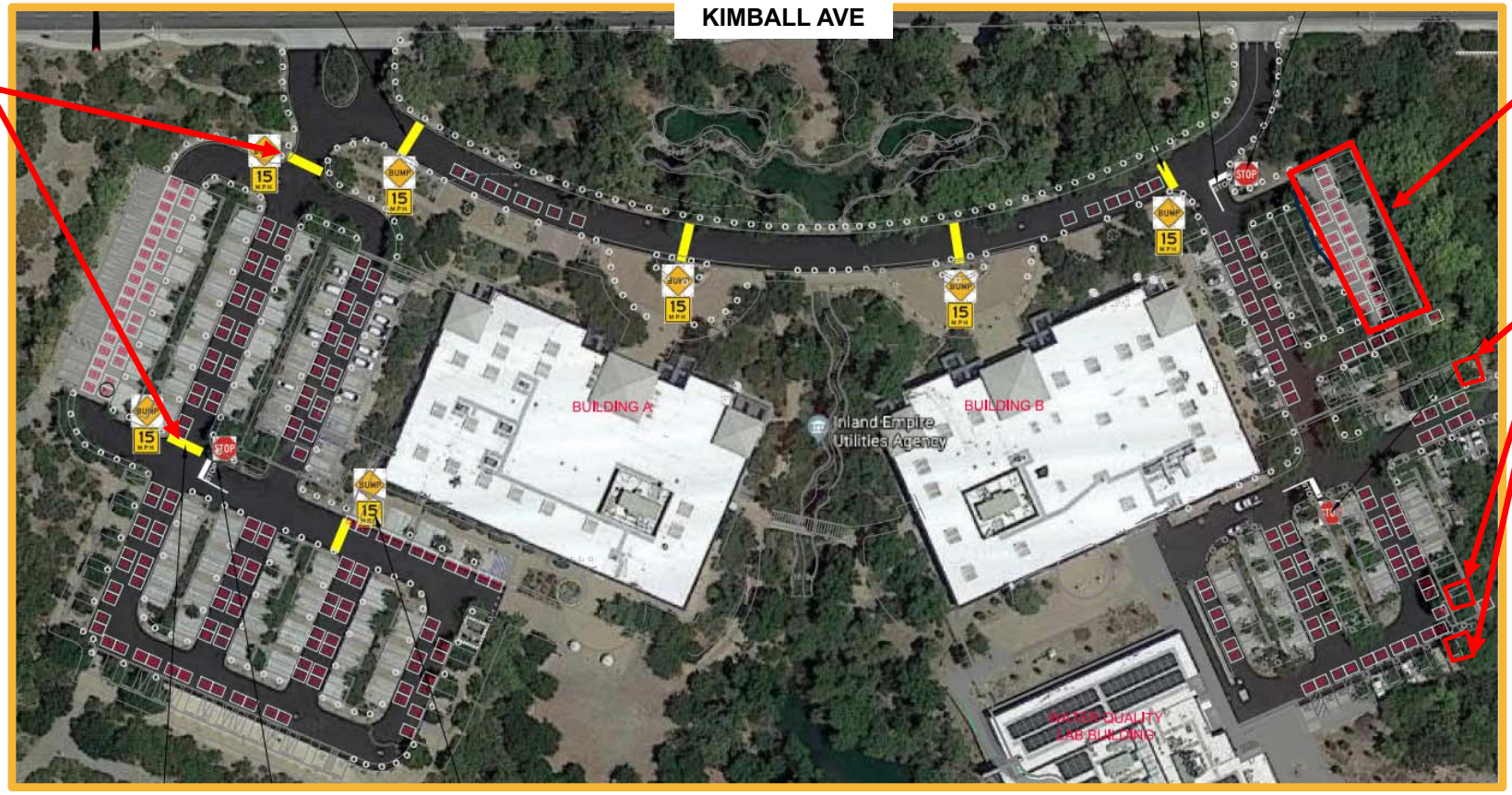
Parking Lot Improvements

Driveway Improvements

Parking Lot Improvements

Additional Parking Lot Project Scope

Seven Proposed Speed Bumps & Signs

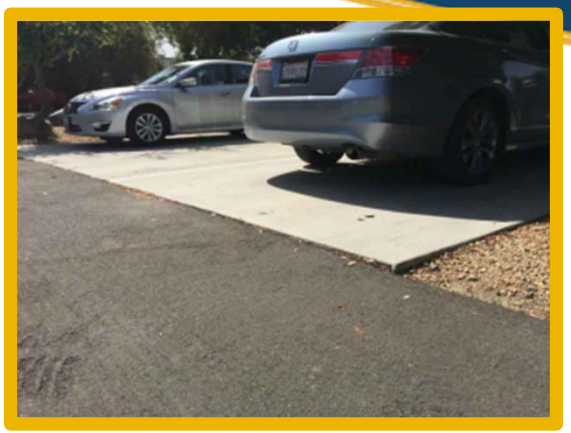


Permeable Concrete to Be Cleaned

Four Containers and Sheds to Be Relocated

The Project

- Agency Headquarters Parking Lots
  - —Deficiency: slab failures causing uplift and cracking from trees
  - —Scope of Work: removals and replacements of asphalt, concrete, trees, new speed bumps, signs, striping, etc.
- Agency Headquarters Driveways
  - —Deficiency: substandard widths
  - —Scope of Work: new driveways, asphalt, curb & gutter, etc.



Slab Uplift

Substandard Driveway Width

Contractor Selection

Four bids were received on September 9, 2021, from pre-qualified contractors:

Bidder's Name	EN20008 (HQ Parking Lot)	EN20040 (HQ Driveways)	Total
W.A. Rasic Construction Company, Inc.	$270,288	$426,000	$696,288
AToM Engineering	$165,000	$561,398	$726,398
Hemet Mfg. Co., Inc. dba Genesis Construction	$350,000	$649,985	$999,985
Kiewit Infrastructure West Co.	$1,122,000	$350,000	$1,472,000
Engineer's Estimate	$374,000	$369,000	$743,000

Project Budget and Schedule

Description	EN20008 Estimated Cost	EN20040 Estimated Cost
Design Services (actual)	**$53,695**	**$125,215**
Construction	**$468,600**	**$297,317**
Construction (this action)	$426,000	$270,288
Contingency (10%)	$42,600	$27,029
Construction Services	**$63,900**	**$40,544**
Construction Services (11%)	$46,860	$29,732
Engineering Services During Construction (14%)	$17,040	$10,812
Total Project Cost:	**$586,195**	**$463,076**
Total Project Budget:	**$440,000**	**$571,213**
Budget Amendment (this action):	**$150,000**	
Revised Total Project Budget:	**$590,000**	

Project Milestone	Date
Construction Contract Award	October 2021
Construction Completion	June 2022

Recommendation

- Award a construction contract for the Headquarters Parking Lot and Driveway Improvements, Project Nos. EN20008 and EN20040, to W.A. Rasic Construction Company, Inc. in the amount of $696,288 ($426,000 for Project No. EN20008 and $270,288 for Project No. EN20040;

- Amend the Total Project Budget and FY 2021/22 Budget for the Headquarters Parking Lot Project, No. EN20008, in the amount of $150,000, increasing the budget from $440,000 to $590,000 (34% increase) in the General Administrative (GG); and,

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

The HQ Parking Lot and Driveway Improvements Project is consistent with ***IEUA's Business Goal of Work Environment***, specifically the Staff Safety objective that IEUA will ensure that Agency facilities are well maintained and upgraded to ensure a safe and healthy work environment, exceeding industry best practices in support of achieving the CalOSHA Star Voluntary Protection Program (CAL/VPP) certification.

Attachment 2

SECTION D - CONTRACT AND RELEVANT DOCUMENTS

1.0 CONTRACT

THIS CONTRACT, made and entered into this 20th day of October, 2021, by and between W.A. Rasic Construction Company, Inc., hereinafter referred to as "CONTRACTOR," and The Inland Empire Utilities Agency, a Municipal Water District, located in San Bernardino County, California, hereinafter referred to as "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 FY 19-20 HQ Parking Lot & Driveway Improvements, 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 the Bidding and Contract Requirements, Section C - Bid Forms and accepted by IEUA, and set forth in this below.

Total Bid Price: $696,288; Six Hundred Ninety-Six Thousand Two Hundred Eighty-Eight Dollars, and Zero 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 Within Ninety (90) calendar days for Driveway Improvements (EN20040) and One-hundred and Ninety (190) calendar days for FY 19-20 HQ Parking Lot (EN20008), after award of the Contract. 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 General Conditions, Section C – Changes to the Contract 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:_____

Shivaji Deshmukh
General Manager

CONTRACTOR

By:_____
23 SEP 2021

Peter Rasic
President
RFP 2021-35

* *A Municipal Water District*

ACTION ITEM 2B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: Glen Meade Trunk Critical Repair Project Construction Contract Award

Executive Summary:

While conducting a condition assessment of the Regional Sewer System (RSS), Inland Empire Utilities Agency's (IEUA) project consultant (CDM Smith) discovered a significant pipe defect. Their inspection revealed a 4-inch diameter hole at the crown of the 10-inch pipe on the RSS Glen Meade Trunk sewer. This finding warranted the need for a timely repair to eliminate the potential of a sanitary sewer overflow. The damaged section is between a residential apartment complex and the Chino Creek Channel near Fairfield Ranch Road in the City of Chino, approximately 8-feet away from a manhole and 10-feet deep. Due to its depth and proximity to a residential area, a separate task order was issued, so the consultant could immediately begin preparing plans and specifications to repair the sewer. The repair will utilize a cured-in-place-pipe lining which is a common trenchless rehabilitation and restoration method widely used in repairing sewer lines.

On August 12, 2021, IEUA issued an invitation for bids from the under $2,000,000 prequalified contractors. On September 9, 2021, IEUA received three construction bids. Tharsos, Inc., was the lowest responsive, responsible bidder with a bid price of $168,540. The engineer's estimate was $200,000.

Staff's Recommendation:

1. Award a construction contract for the Glen Meade Trunk Critical Repair Project, No. EN19024, to Tharsos, Inc., in the amount of $168,540; 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:

EN19024/Collection System Asset Management

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 10800 - 590000 - 127151 Project No.: EN19024

Prior Board Action:

On September 16, 2020, the Board of Directors awarded a contract for the Condition Assessment and Optimization of the Collection System, Project Nos. EN19024 and EN19028, to CDM Smith for a not-to-exceed amount of $2,910,909, and approved a 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.

Environmental Determination:

Statutory Exemption

The project is statutorily exempt based on Section 15269(b) of the State CEQA Guidelines.

Business Goal:

The Glen Meade Trunk Critical Repair Project is consistent with IEUA's Business Goal of Wastewater Management, specifically the Asset Management objective that IEUA will ensure the Collection's System is well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Construction Contract (Click to Download)

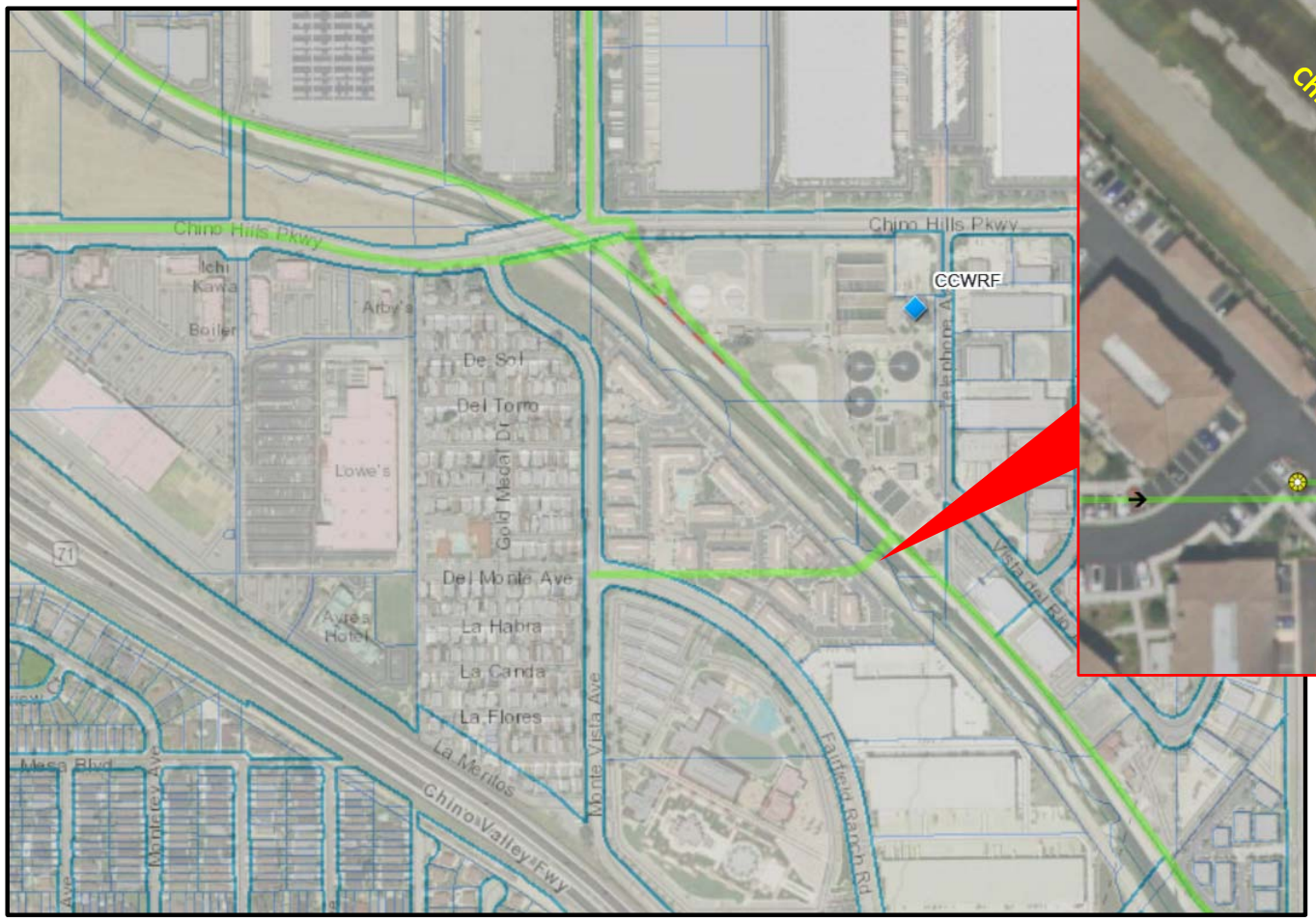
Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Glen Meade Trunk Critical Repair Construction Contract Award

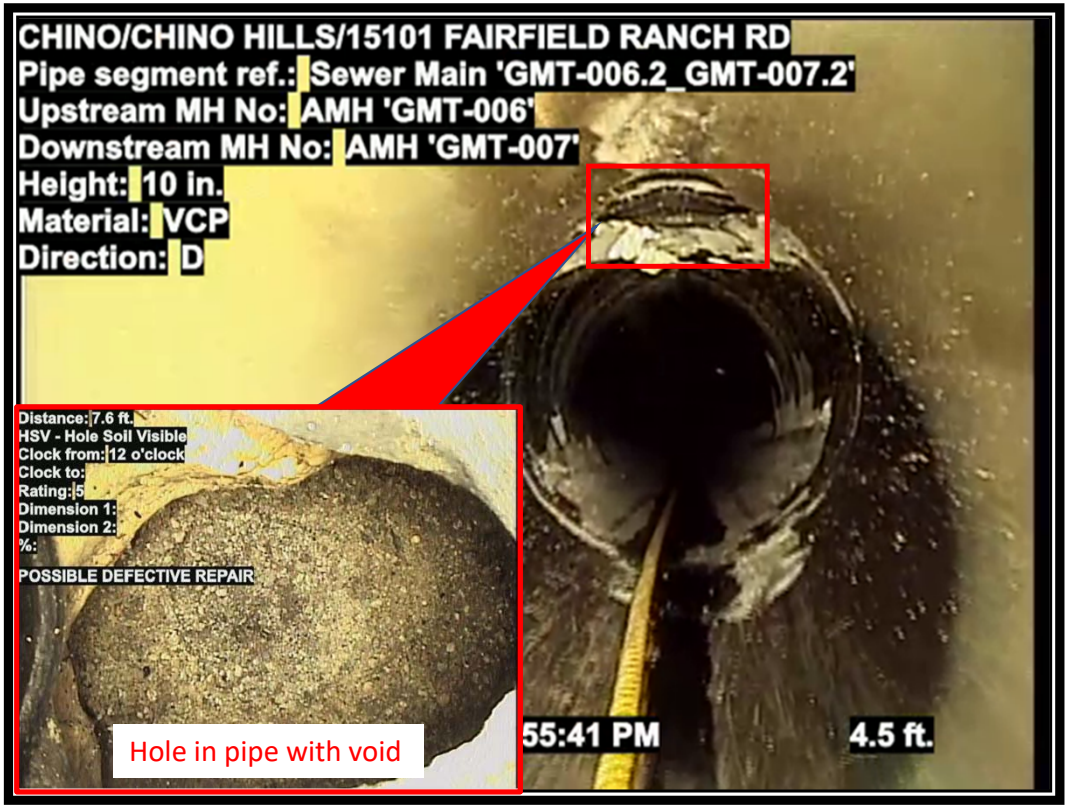
Joel Ignacio, PE
Senior Engineer
October 2021

Project Location



The Project

- 4” Hole in the crown of the 10” pipe
- Flow monitoring installed to assess risk
- Consultant prepared plans to repair
- Scope includes:
  - Video Pre-inspection
  - Cured in Place Pipe Lining
  - Video Post-inspection



Contractor Selection

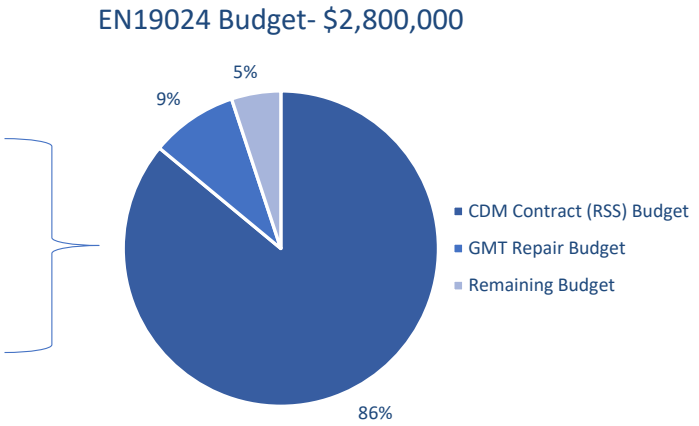
Three bids were received on September 9, 2021, from pre-qualified contractors:

Bidder's Name	Final Bid Amount
Tharsos, Inc.	$168,540
Ferreira Construction Co, Inc.	$232,000
Norstar Plumbing and Engineering, Inc.	$262,000
Engineer's Estimate	$200,000

Project Budget and Schedule

Description	Estimated Cost
Design Services	***$30,300***
CDM Smith Design Services	$30,300
Construction Services	***$34,600***
IEUA Staff (~5%)	$8,400
CDM Smith Engineering Services	$26,200
Construction	***$185,395***
Construction Contract (this action)	$168,540
Contingency (10%)	$16,855
Total Cost for GMT Pipe Repair:	**$250,295**
Total Project Budget (EN19024):	**$2,800,000**
CDM Smiths' Asset Management Contract (RSS):	**$2,407,997**
GMT Repair:	**$250,295**
Remain Budget in EN19024:	**$141,708**

Contract Milestone	Date
Construction Award	Oct. 2021
Construction Completion	Nov. 2021



Recommendation

- Award a construction contract for the Glen Meade Trunk Critical Repair Project, to Tharsos, Inc., in the amount of $168,540; and
- Authorize the General Manager to execute the contract, subject to non-substantive changes.

The Glen Meade Trunk Critical Repair Project is consistent with ***IEUA's Business Goal of Wastewater Management***, specifically the Asset Management objective that IEUA will ensure the Collection's System is well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

ACTION ITEM 2C

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: RP-1 Flare Improvements Project Change Orders

Executive Summary:

On June 17, 2020, Inland Empire Utilities Agency (IEUA) awarded a $5,540,000 construction contract to W.M. Lyles Co. for the Regional Water Recycling Plant No. 1 (RP-1) Flare Improvements Project. During the submittal process, it was discovered that the equipment foundations needed to be enlarged to match the actual equipment dimensions detailed in the submittal. In addition, initial potholing revealed multiple underground utility conflicts that interfered with the new digester gas pipeline alignment to the new system. After multiple solutions were evaluated, the most feasible solution is to install the gas piping aboveground. Due to the corrosive environment and exposure to the sun, the pipeline material was changed from high density polyethylene to 316 stainless steel.

The contractor submitted a cost of $116,060 to enlarge equipment foundations and a cost of $208,917 to construct the gas piping, which staff evaluated and found to be fair and reasonable; therefore, staff recommends approval of these change orders for a total not-to-exceed amount of $324,977, increasing the contract from $5,589,431 to $5,914,408 (approximately 5.8% increase).

Staff's Recommendation:

1. Approve two construction change orders for the RP-1 Flare Improvement Project, No. EN18006, to WM Lyles Co. for the not-to-exceed amount of $324,977, increasing the contract from $5,589,431 to $5,914,408 (approximately 5.8% increase); and

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

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

Account/Project Name:

EN18006/RP-1 Flare Improvements

Fiscal Impact (explain if not budgeted):

None.

Full account coding (internal AP purposes only): 1000 - 127151 - 10900 - 595000 Project No.: EN18006

Prior Board Action:

On June 17, 2020, the Board of Directors awarded a Construction Contract to W.M. Lyles for the RP-1 Flare Improvements Project for $5,540,000, approved a contract amendment to Lee & Ro, Inc. for engineering services during construction for a not-to-exceed amount of $182,500, and approved a total project budget amendment in the amount of $1,968,000 in the Regional Capital (RC) Fund.

Environmental Determination:

Categorical Exemption

CEQA identifies certain categories of projects as exempt from more detailed environmental review because these categories have been deemed to have no potential for significant impact on the environment. This project qualifies for a Categorical Exemption Class 1 and Class 2 as defined in Section 15301 of the State CEQA Guidelines.

Business Goal:

The RP-1 Flare Improvements Project is consistent with IEUA's Business Goal of Wastewater Management, specifically the Asset Management and Water Quality objectives that IEUA will ensure that systems are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use to protect public health, the environment, and meet anticipated regulatory requirements.

Attachments:

Attachment 1 - PowerPoint

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-1 Flare Improvements

Construction Change Orders

Project No. EN18006

Jamal Zughbi, P.E.
Senior Engineer

October 20, 2021

Regional Water Recycling Plant No. 1
Project Location

The Project

New and Existing Flares Side-by-Side

- Replace existing flare with a new three-flare facility to meet new SCAQMD Rule 1118.1 requirements
- Install low pressure gas-holding (LPGH) tank
  - Provides buffer
  - Improves controllability
  - Ensures SCAQMD compliance
- Install new digester gas piping system
- Relocate two existing iron sponges and add a new sponge
  - Reduce/Remove hydrogen sulfide in gas

Challenges

- Equipment Foundation Modifications
  - Equipment footprints larger in submittal than those shown in contract documents: three flares, gas blowers, and iron sponges
  - Equipment (flares and gas blower skid) concrete foundations are too small
  - Contract documents lacked installation details
- Mechanical Gas Pipeline Redesign
  - Conflicts with unforeseen buried utilities
  - Could not be constructed per contract documents
  - New design for installation above ground

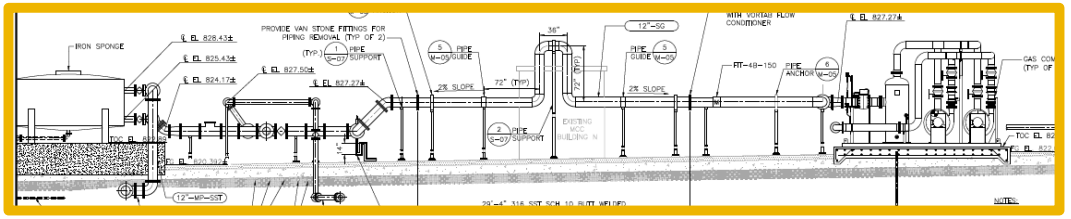
Gas Blower Skid and Foundation

Underground Utilities Conflict

The Opportunity

- Equipment Foundation Modifications
  - Enlarge impacted equipment foundations
  - Redesign for foundations and miscellaneous site improvements (stair landing, curb and gutter, vehicle drive over, etc.)
- Mechanical Gas Pipeline Redesign
  - Redesign and relocate all gas pipeline and supports above ground
  - Change material from high density polyethylene to 316 stainless steel
  - Avoid existing buried utilities
  - Improve accessibility to equipment for maintenance and operation

Iron Sponges Foundation



Redesigned Mechanical Piping Partial View

Project Budget

Description	Estimated Cost
Design Services	***$1,025,439***
Design Services (IEUA and Consultants)	$917,857
Project Development (IEUA) + Bid and Award	$107,582
Construction Services	**$1,165,518**
Engineering Services During Construction (consultants)	$331,633
IEUA Construction Services (*actuals)*	$233,935
Estimated Remaining Construction Services	$600,000
Construction	***$7,008,993***
Current Construction Contract	$5,589,431
Equipment Foundation Change Order (this action)	$116,060
Mechanical Redesign Change Order (this action)	$208,917
Pending Change Orders (PLC TBD, 9,10,11,12)	$425,000
Remaining Project Contingency	$669,585
Total Project Cost:	**$9,200,000**
Current Total Project Budget:	**$9,200,000**

Project Milestone	Date
Construction Contract	
Construction Contract Award	June 2020
Current Construction Completion	December 2021

Recommendation

- Approve two construction change orders for the RP-1 Flare Improvement Project, No. EN18006, to WM Lyles Co. for the not-to-exceed amount of $324,977, increasing the contract from $5,589,431 to $5,914,408 (approximately 5.8% increase); and

- Authorize the General Manager to execute the change orders, subject to non-substantive changes

The RP-1 Flare Improvement Project is consistent with ***IEUA's Business Goal of Wastewater Management and Water Reliability***, that IEUA is committed to providing a reliable and cost-effective water supply, promoting sustainable water use throughout the region, and is committed to meeting regional demands in an environmentally responsible and cost-effective manner.

ACTION ITEM 2D

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Finance & Administration *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: 42-inch Recycled Water Leak Emergency Project Ratification

Executive Summary:

On July 30, 2021, Lane-Security Paving Joint Venture was working on the I-10 freeway expansion when they struck and caused a leak on Inland Empire Utilities Agency's (IEUA) 42-inch recycled water pipeline on the 1158 pressure zone (PZ). The Engineering and Construction Management Department issued a level-one emergency call-out. The first contractor to respond was W.A. Rasic Construction Company, Inc. (WAR).
The original scope of work (SOW) was to excavate and repair the leak on the pipeline; however, the two isolation valves used to isolate the section of the compromised pipeline failed in the closed position and could not be repaired or replaced in kind. The SOW was expanded to remove the northern valve and replace it with a section of 42-inch pipe and construct a buried 24-inch bypass pipeline around the southern isolation valve. The southern valve was four feet from a primary Southern California Edison (SCE) power pole. Excavation was not permitted without SCE support. The entire 4.6-mile 1158 PZ was shutdown to allow WAR to complete the SOW. Service was restored to the 1158 PZ on August 2, 2021. Restoration of the project site was completed on August 6, 2021. Staff is recommending ratification approval of a task order in the amount of $331,053.37 to WAR, which is below the approved not-to-exceed value of $350,000. An Intent to Bill letter has been sent to Lane-Security Paving.

Staff's Recommendation:

1. Ratify the emergency task order for the 42-inch Recycled Water Leak, Project No. EN22017.02, to W.A. Rasic Construction Company, Inc., in the amount of $331,053.37;

2. Amend the Total Project Budget and FY 2021/22 Budget for the WC Emergency Project Number, No. EN22017, in the amount of $350,000, increasing the budget from $150,000 to $500,000 (334% increase) in the Recycled Water (WC); and,

3. Authorize the General Manager to approve the emergency task order and budget amendment, subject to non-substantive changes.

Budget Impact *Budgeted (Y/N):* N *Amendment (Y/N):* Y *Amount for Requested Approval:* $ 350,000

Account/Project Name:

EN22017.02/42-inch Recycled Water Leak

Fiscal Impact (explain if not budgeted):

If approved the Total Project Budget and FY 2021/22 Budget amendment, in the Recycled Water (WC) Fund, for the WC Emergency Project Number, No. EN22017, in the amount of $350,00, will increase the total project budget and fiscal year budget from $150,000 to $500,000, respectively.

Full account coding (internal AP purposes only): 1000 - 127100 - 10600 - 130000 Project No.: EN22017

Prior Board Action:

None.

Environmental Determination:

Statutory Exemption

The emergency project is statutorily exempt based on Section 15269(b) of the State CEQA Guidelines.

Business Goal:

The 42-inch Recycled Water Leak Emergency 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, sustainably managed, and can accommodate changes in regional water use.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - Task Order (Click to Download)

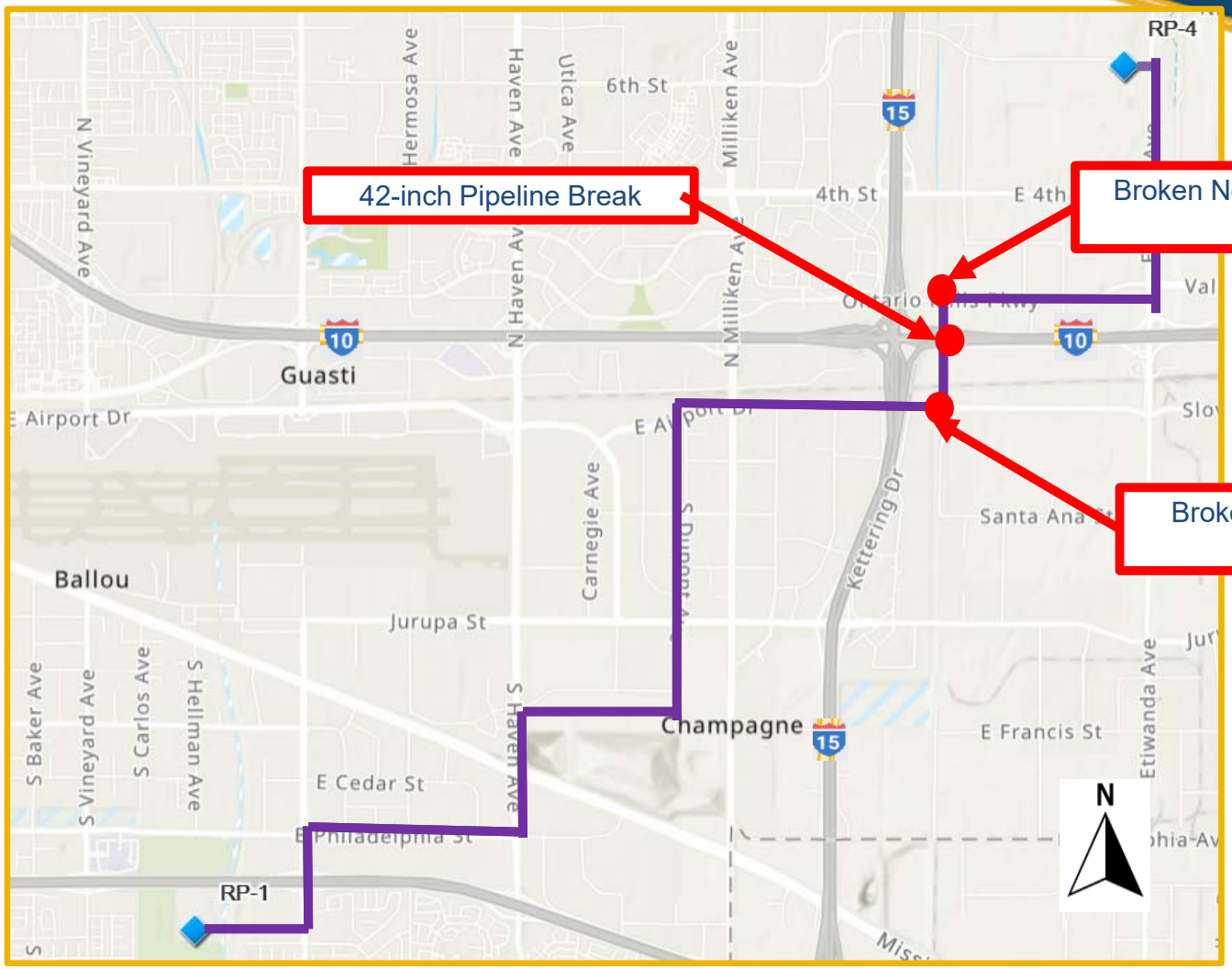
Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

42-inch Recycled Water Leak Task Order Ratification

Christian Gomez, E.I.T.
Associate Engineer
October 2021

Project Location
I-10 Freeway and Day Creek Channel

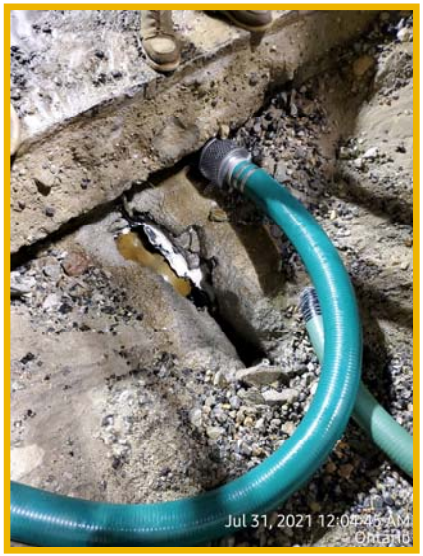


Overview

- **Incident Date/Time:** July 30th, 2021, 11:00 am
- **Location:** North of I-10 FWY / East of Day Creek Channel
- **Issue:** Contractor drove pile into 42-inch Recycled Water Pipeline
- **Level 1 Emergency Contractor:** W.A. Rasic Construction Company, Inc.

Leaking 42-inch Pipeline

Shoring Pile



Punctured Pipeline

Challenges

- Broken 42-inch Isolation Valves
  - —South of break (Airport Drive)
  - —North of break (Ontario Mills Parkway)
  - —No availability of 42-inch replacement valve
- South valve adjacent to Edison Power Pole
- Service interruption of 1158 Pressure Zone
  - —Manual operation of 1158 RW Pump Station
  - —Interruption of RP-4 discharge to RP-1
- Traffic control on busy roadways
- Dewatering the 42-inch Line

Dewatering 42-inch Effluent Pipeline

Excavating the Valve on Ontario Mills Parkway

The Solutions

- Shutdown 1158 Pressure Zone
- Isolation Valves
  - —Ontario Mills Parkway: Removed and replaced with spool
  - —Airport Dr.: Installed bypass around valve
- Pipe Damage
  - —Removed/replaced damaged section
- Continuous Work by Emergency Contractor
  - —Six crews
- Continuous Inspection, PM, and Operations Support
  - —238 hours

North Isolation Valve Removed

North Pipe Spool


South Isolation Valve Bypass

42” Pipeline Leak Repaired

Project Cost & Schedule

Description	Estimated Cost
Contractors Lump Sump Cost (this action)*	$331,053.37
Consultant Inspection Labor Cost	$2,031.51
IEUA Staff Labor Cost	$11,583.91
Total Project Cost:	**$344,667.88**
Current Total Project Budget:	**$150,000**
Budget Amendment (this action):	**$350,000**
Revised Total Project Budget	**$500,000**

*Ratification approval for emergency task order. IEUA is seeking reimbursement from the I-10 Contractor for these project costs.

Project Timeline	Date
Start Date	July 30, 2021
End Date	August 6, 2021*

*1158 PZ restored on 8/2/2021, restoration was completed by 8/6/2021.

Recommendation

- Ratify the emergency task order for the 42-inch Recycled Water Leak, Project No. EN22017.02, to W.A. Rasic Construction Company, Inc., in the amount of $331,053.37;

- Amend the Total Project Budget and FY 2021/22 Budget for the WC Emergency Project Number, No. EN22017, in the amount of $350,000, increasing the budget from $150,000 to $500,000 (334% increase) in the Recycled Water (WC); and,

- Authorize the General Manager to approve the emergency task order and budget amendment, subject to non-substantive changes.

The 42-inch Recycled Water Leak Emergency 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, sustainably managed, and can accommodate changes in regional water use.

Engineering, Operations, and Water Resources Committee

ACTION ITEM 2E

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: Horiba Ammonia Nitrogen Meter Standardization

Executive Summary:

Inland Empire Utilities Agency (IEUA) is moving toward Ammonia Based Aeration Control systems (ABAC), which more efficiently predicts the Dissolved Oxygen (DO) set points based on the levels of ammonia in the aeration basins. ABAC reduces the amount of untreated ammonia, sodium hypochlorite usage and ultimately produces a higher quality effluent. In addition, the Department of Drinking Water will soon require continuous monitoring of ammonia. Currently, the only facility with an ABAC is Regional Water Recycling Plant No. 1 (RP-1). RP-5 will be installing an ABAC during the expansion project, and Horiba Advanced Techno Company (Horiba) meters will be used to monitor the ammonia-nitrogen for the system. The Horiba meters were tested at RP-5. Operations and Maintenance have documented numerous benefits over other manufacturers. They require minimal maintenance, are the only known manufacturer with ultrasonic self-cleaning capabilities, work at lower concentrations, and are easily calibrated. RP-4 is in the design phase of a new ABAC, but an ammonia-nitrogen meter has not been specified. As such, staff is requesting a finding per Public Contract Code 3400(c), which allows public agencies to specify a specific product for use if the awarding authority makes a finding that one or more conditions exist, specifically matching existing products in use on the particular public improvement, and is available from only one source.

Staff's Recommendation:

1) Adopt a finding pursuant to Public Contract Code 3400(c) that the use of Horiba Advanced Techno Company Ammonia Nitrogen Meters, specifically conditions; (2) to match an existing product that will be in use at Regional Plant No.5, after the completion of the expansion project; (3) the ammonia nitrogen meters are only available from Horiba; and

2) Authorize the standardization selection and sole source procurement for future O&M and capital projects.

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

Account/Project Name:

Not Applicable.

Fiscal Impact (explain if not budgeted):

None.

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

Prior Board Action:

None.

Environmental Determination:

Not Applicable

Business Goal:

The use of the Horiba Ammonia Nitrogen Meters is consistent with IEUA's Business Goal of Business Practices, specifically the Efficiency and Effectiveness objective that IEUA will apply best industry practices in all processes to maintain or improve the quality and value of the services we provide to our member agencies and the public.

Attachments:

Attachment 1 - Background
Attachment 2 - PowerPoint

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Background

Subject: Horiba Ammonia Nitrogen Meter Standardization

Ammonia nitrogen meters are beneficial to Inland Empire Utilities Agency (IEUA) as they measure the amount of ammonia-nitrogen in the aeration basins providing valuable information to operations. This data is used to operate the aeration basins by Ammonia Based Aeration Control (ABAC), which more efficiently predicts the Dissolved Oxygen (DO) set points, based on the levels of ammonia-nitrogen in the basins. Currently, the DO set points are fixed, which is inefficient as often this set point is too high resulting in the blowers producing unnecessary air. The following are some of the benefits of using ammonia-nitrogen monitoring and transitioning the process to ABAC:

1. Substantial energy savings resulting from less air produced by the aeration blowers. This savings would not have been possible at RP-4 without the recent Board's approval of the change order to replace the existing blowers with the Neuros turbo blowers. The original blowers at RP-4 did not have a sufficient turn down ratio, so the same amount of air would have still been produced and then simply vented to atmosphere.
2. Minimized ammonia bleed through into the tertiary system which results in significant sodium hypochlorite to treat before final discharge.
3. Improved effluent quality due to less sodium hypochlorite usage.
4. Forthcoming Department of Drinking Water (DDW) requirement of continuous ammonia-nitrogen monitoring for groundwater recharge.

IEUA has spent the last several years researching and testing ammonia nitrogen meters as it was apparent there was both a benefit and need for this technology. Currently, the only facility with ABAC is Regional Water Recycling Plant No. 1(RP-1); however, RP-5 will be installing ABAC during the expansion project, and Horiba Advanced Techno Company (Horiba) meters will be used to monitor the ammonia-nitrogen for the system. The Horiba meters were previously tested at RP-5, and Operations and Maintenance have documented the following benefits over other manufacturers:

1. Require minimal maintenance, which eliminates the need for ongoing service contracts as necessary with other manufactures.
2. The only known manufacturer with ultrasonic self-cleaning capabilities which greatly increases the duration between cleanings.
3. More accurate at lower concentrations of ammonia typically found in IEUA's aeration basins.
4. They are easily calibrated.
5. Provide standardization with RP-5.

Given the benefits of the Horiba Ammonia Nitrogen Meters to IEUA, the following recommendation is made.

Pursuant to the Public Contract Code 3400(c) below, Public Agencies are allowed to make a finding to sole source a product if any one of the findings below are valid. This board action is a request for the Board to make such a finding on two accounts and authorize the sole source of the Horiba Ammonia Nitrogen Meters for future O&M and capital projects.

PUBLIC CONTRACT CODE - PCC

DIVISION 2. GENERAL PROVISIONS [1100 - 22355]

(Division 2 enacted by Stats. 1981, Ch. 306.)

PART 1. ADMINISTRATIVE PROVISIONS [1100 - 9204]

(Heading of Part 1 added by Stats. 1982, Ch. 1120, Sec. 2.)

CHAPTER 3. Formation [3000 - 3505]

(Chapter 3 added by Stats. 1983, Ch. 256, Sec. 81.)

ARTICLE 4. Preference for Materials [3400 - 3410]

(Heading of Article 4 renumbered from Article 5 by Stats. 2017, Ch. 816, Sec. 2.)

3400.

(a) The Legislature finds and declares that it is the intent of this section to encourage contractors and manufacturers to develop and implement new and ingenious materials, products, and services that function as well, in all essential respects, as materials, products, and services that are required by a contract, but at a lower cost to taxpayers.

(b) No agency of the state, nor any political subdivision, municipal corporation, or district, nor any public officer or person charged with the letting of contracts for the construction, alteration, or repair of public works, shall draft or cause to be drafted specifications for bids, in connection with the construction, alteration, or repair of public works, (1) in a manner that limits the bidding, directly or indirectly, to any one specific concern, or (2) calling for a designated material, product, thing, or service by specific brand or trade name unless the specification is followed by the words “or equal” so that bidders may furnish any equal material, product, thing, or service. In applying this section, the specifying agency shall, if aware of an equal product manufactured in this state, name that product in the specification. Specifications shall provide a period of time prior to or after, or prior to and after, the award of the contract for submission of data substantiating a request for a substitution of “an equal” item. If no time period is specified, data may be submitted any time within 35 days after the award of the contract.

(c) Subdivision (b) is not applicable if the awarding authority, or its designee, makes a finding that is described in the invitation for bids or request for proposals that a particular material, product, thing, or service is designated by specific brand or trade name for any of the following purposes:

(1) In order that a field test or experiment may be made to determine the product’s suitability for future use.

(2) In order to match other products in use on a particular public improvement either completed or in the course of completion.

(3) In order to obtain a necessary item that is only available from one source.

(4) (A) In order to respond to an emergency declared by a local agency, but only if the declaration is approved by a four-fifths vote of the governing board of the local agency issuing the invitation for bid or request for proposals.

(B) In order to respond to an emergency declared by the state, a state agency, or political subdivision of the state, but only if the facts setting forth the reasons for the finding of the emergency are contained in the public records of the authority issuing the invitation for bid or request for proposals.

Attachment 2

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

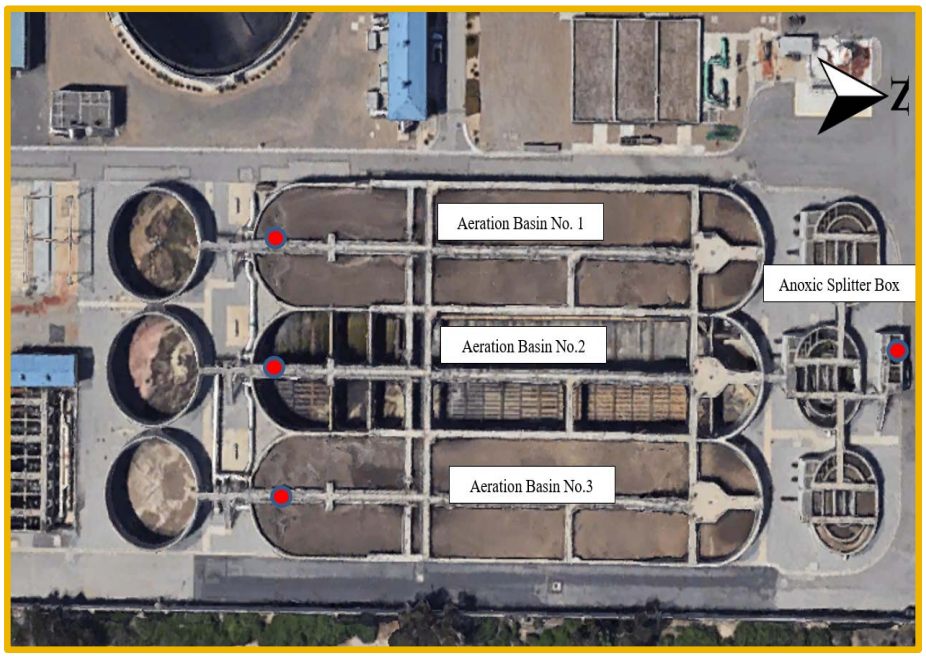
Horiba Ammonia Nitrogen Meter Standardization

James Spears, PE
Senior Engineer
October 2021

Project Location

Background

- Recent drivers to adopt ammonia-based aeration controls (ABAC)
  - —Department of Drinking Water (DDW) requirement for ammonia monitoring
  - —Operational benefits
- ABAC currently in use at RP-1
- ABAC to be installed at RP-5
- Ammonia monitoring equipment trials
  - — RP-1, RP-4, and RP-5



Proposed Locations of New Ammonia Meters (RP-4)

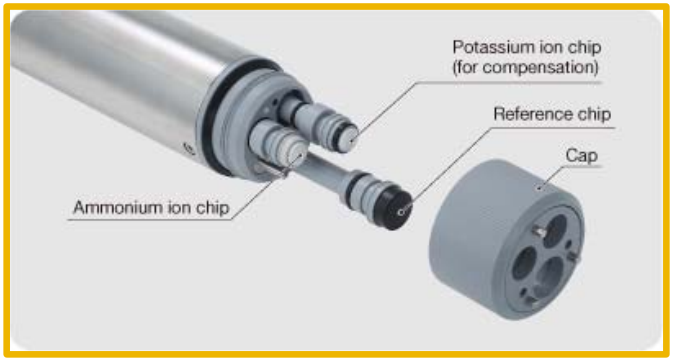
Purpose

- ABAC systems provide optimized Dissolved Oxygen (DO) set points based on ammonia levels
- ABAC operational benefits
  - —Energy savings
  - —Minimized ammonia bleed through
  - —Reduced sodium hypochlorite usage
  - —Higher quality effluent
  - —DDW requirements

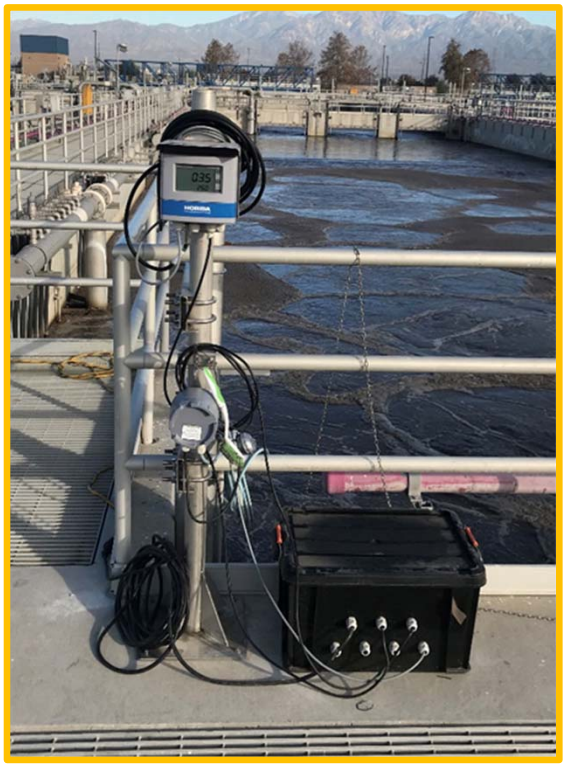
ABAC ammonia equipment at RP-1

Horiba Ammonia Nitrogen Sensors

- Operational Benefits:
  - —Proven unique ultrasonic self cleaning
  - —Easy Calibration
  - —No service contract required
  - —No proprietary Dissolved Oxygen calculations
  - —Maintenance requires minimal effort
  - —Works at lower concentrations
  - —Equipment standardization follows asset management program



Horiba Ammonia Nitrogen Sensor


Horiba Ammonia Meter Trial at RP-5

Recommendation

- Adopt a finding pursuant to Public Contract Code 3400(c) that the use of Horiba Advanced Techno Company Ammonia Nitrogen Meters, specifically conditions; (2) to match an existing product that will be in use at Regional Plant No.5, after the completion of the expansion project; 3) the ammonia nitrogen meters are only available from Horiba; and

- Authorize the standardization selection and sole source procurement for future O&M and capital projects.

The use of the Horiba Ammonia Nitrogen Meters is consistent with ***IEUA's Business Goal of Business Practices***, specifically the Efficiency and Effectiveness objective that IEUA will apply best industry practices in all processes to maintain or improve the quality and value of the services we provide to our member agencies and the public.

Engineering, Operations, and Water Resources Committee

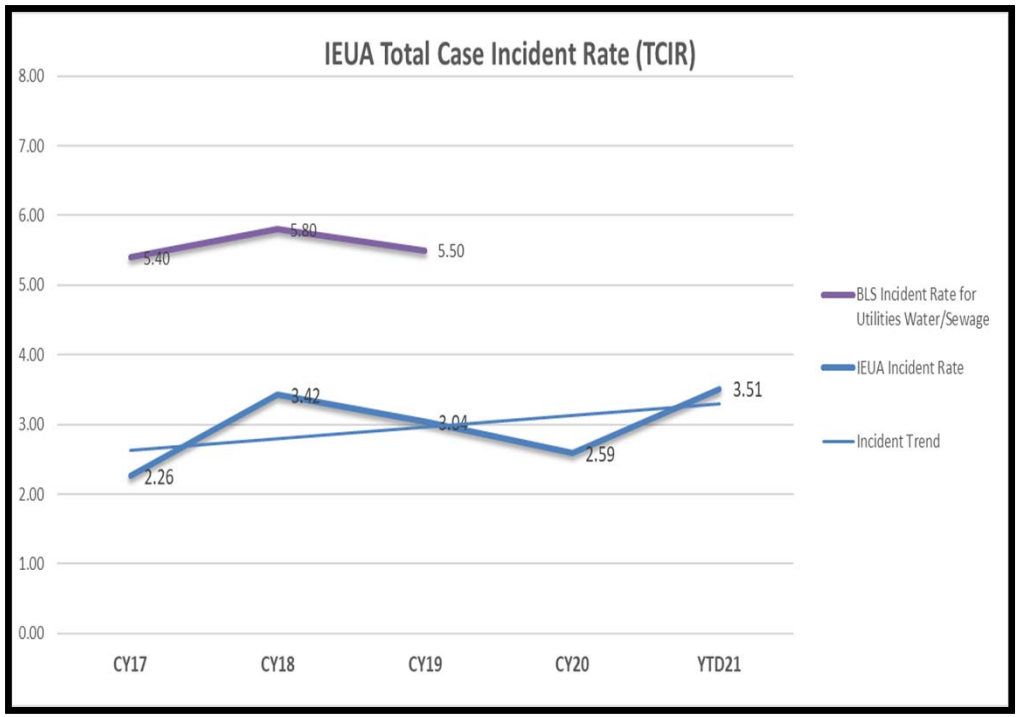
INFORMATION ITEM 3A

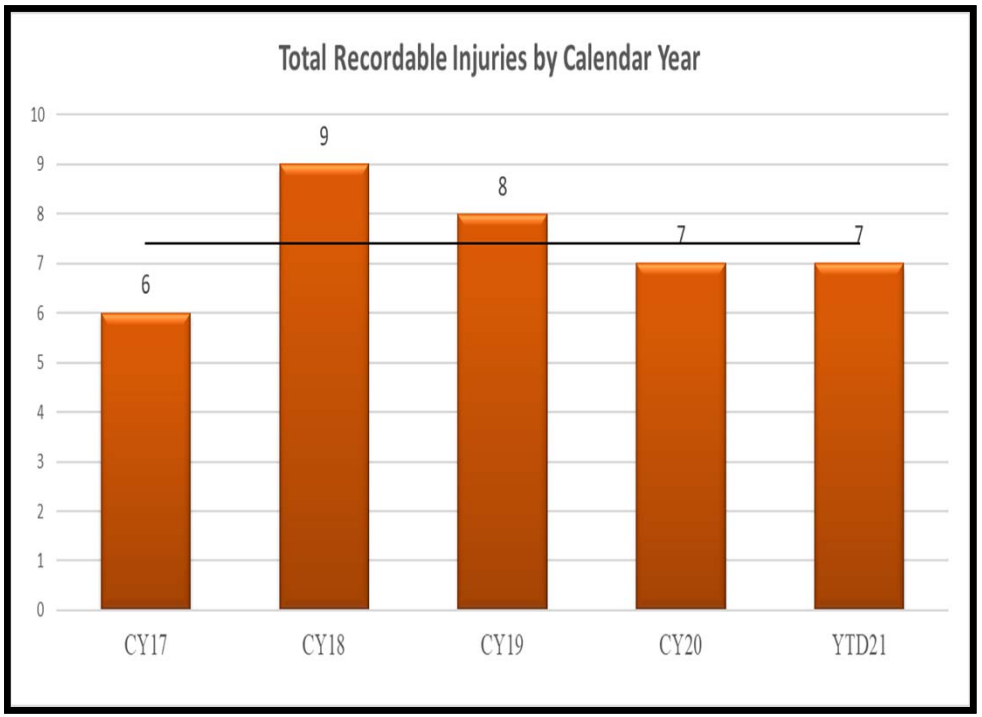
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Operations Division Quarterly Update

Kanes Pantayatiwong
Manager of Business Information Services
October 2021

IEUA Incident Rates vs. Industry & Total Recordable Injuries



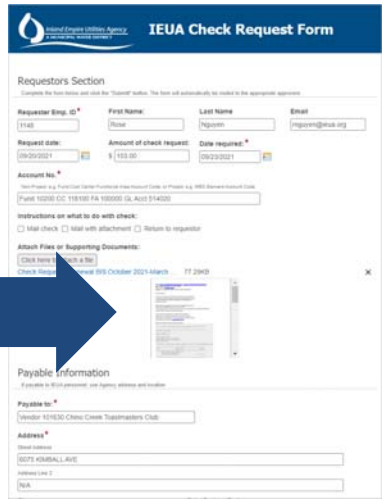


* Estimated incident rate based on past Sept hours worked

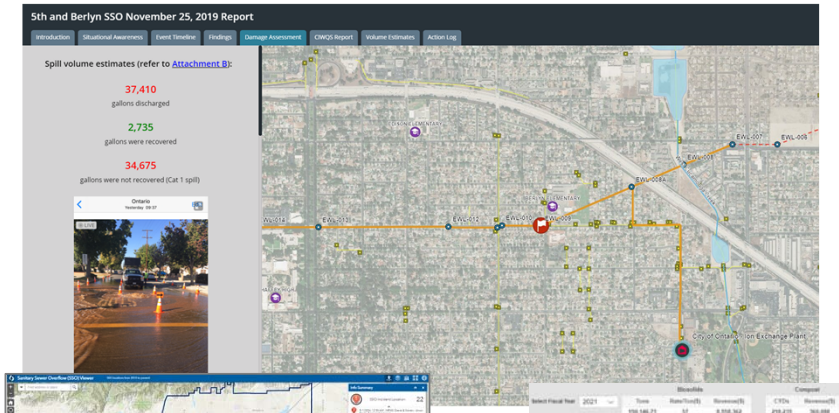
Digitization

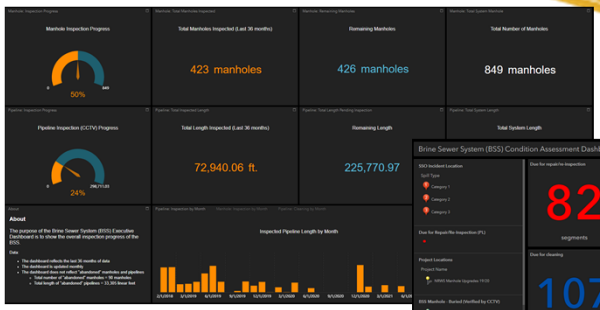
Laserfiche

Process ▲	
AP - Check Request IERCA	Start
AP - Check Request IEUA	Start
BIS - CHaRM	Start
BIS - Transport Request	Start
Budget Fund Transfer Request	Start
FIN - Mileage Reimbursement Request	Start
HR - Badge Request Form	Start
HR - New Employee Notification	Start
HR - PC Loan Form	Start
HR - Safety Shoe Voucher	Start
HR - Wellness Reimbursement	Start
Safety - Incident Report	Start

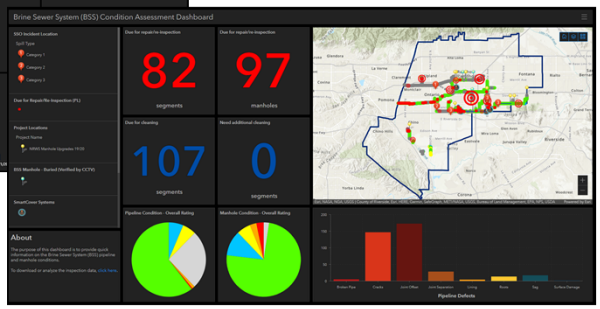


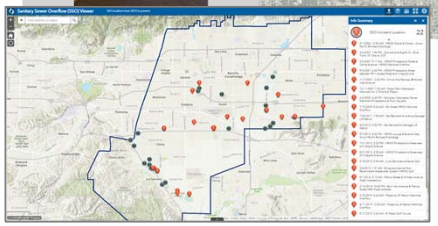
Dashboards and Reports





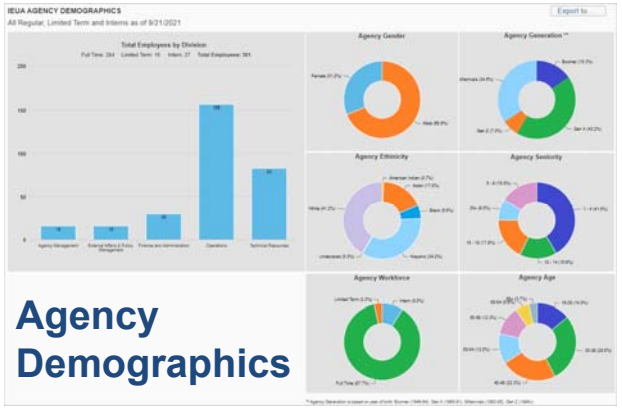
CCTV Inspection





Sewage Spill Overflow

IERCA Production & Energy Use



Agency Demographics

IEUA Collection System Flexibility

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Los Angeles Times

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CALIFORNIA

Damaged Hyperion plant is releasing partially treated sewage into Santa Monica Bay

The Hyperion Water Reclamation Plant caused a 17-million-gallon sewage spill that closed Los Angeles area beaches this month. Now regulators want plant managers to conduct more testing. (Jason Armond/Los Angeles Times)

BY ROBERT J. LOPEZ | STAFF WRITER

JULY 30, 2021 11:27 AM PT

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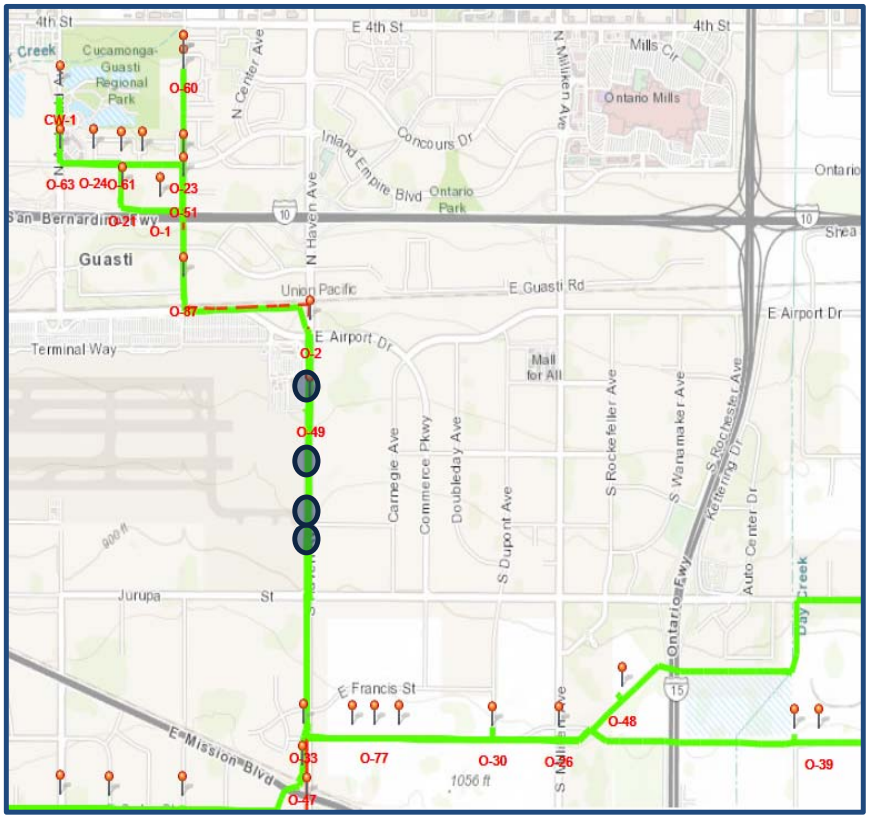
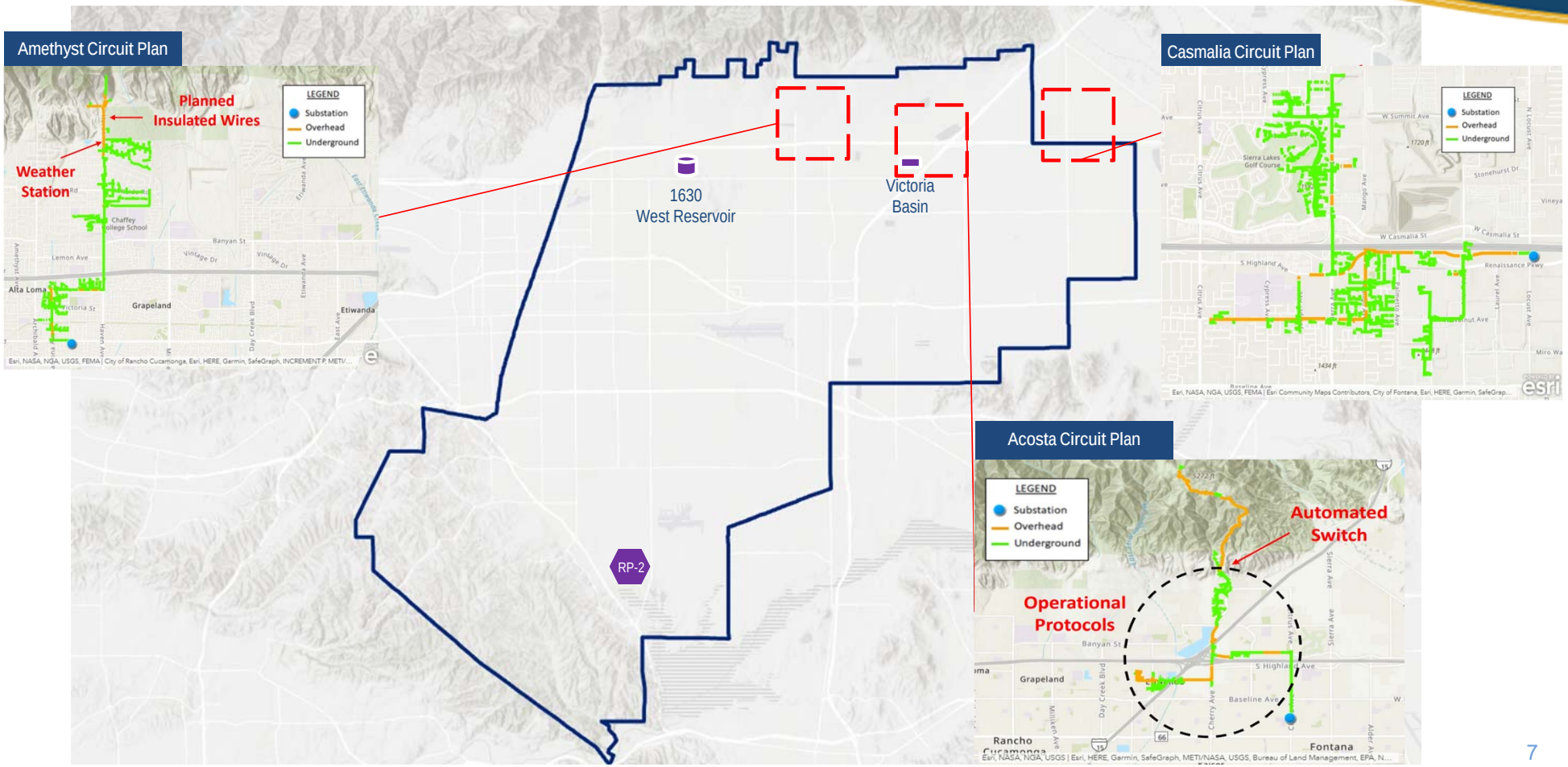


SCE Public Safety Power Shutoff (PSPS)
IEUA Service Area Electrical Grid Hardening



Engineering, Operations, and Water Resources Committee

INFORMATION ITEM 3B

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: Strategic Planning & Resources Annual Report & Annual Energy Report

Executive Summary:

The Inland Empire Utilities Agency (IEUA) monitors and compiles water use data including recycled water use for the Planning Annual 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 2020/21 was 202,776 AF (183,242 AF of potable water + 19,434 AF of recycled water direct use). Potable water use is up approximately 4% compared to FY 19/20. Recycled water direct use increased approximately 14% compared to FY 19/20.

IEUA's energy consumption, renewable generation performance, and energy efficiency projects are reported in the Annual Energy Report. IEUA consumed 80,356 MWh of electricity, an increase of 6.1% from FY 2019/20, 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):* Y *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 Strategic Planning & Resources Annual Report and Annual Energy Report 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:

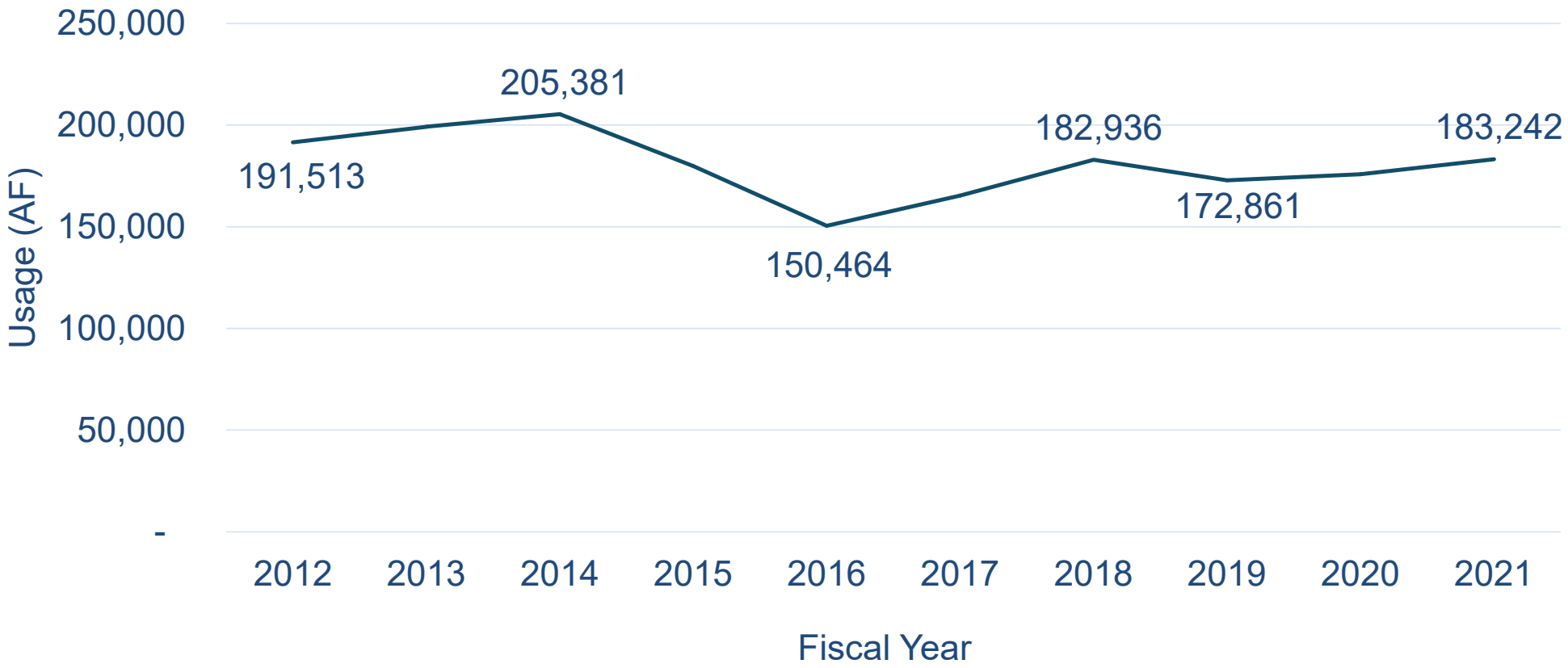
Attachment 1 - SPAR Annual Report
Attachment 2 - Annual Energy Report

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

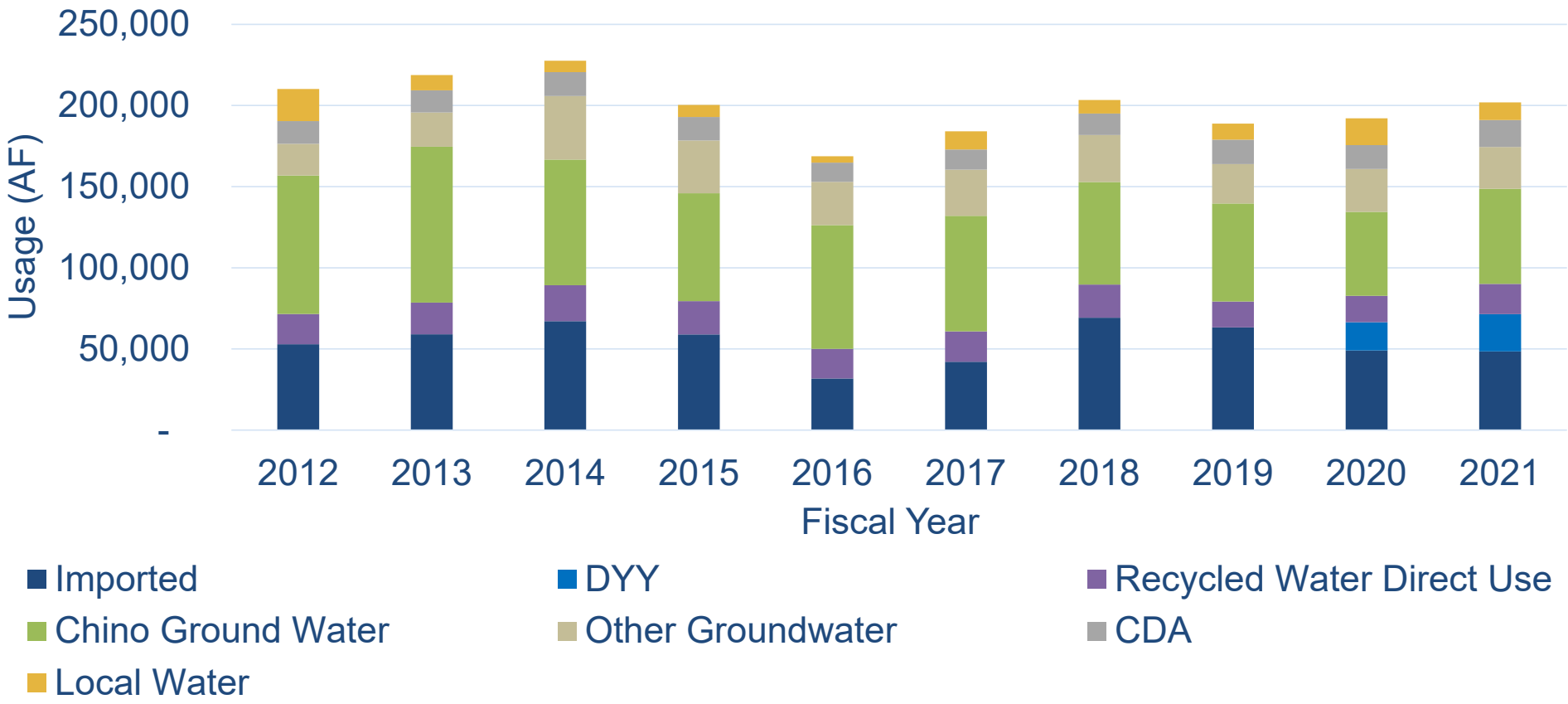
1st Quarter Strategic Planning and Resources Update

Pietro Cambiaso
Deputy Manager of Strategic Planning & Resources
October 2021

Regional Potable Water Use

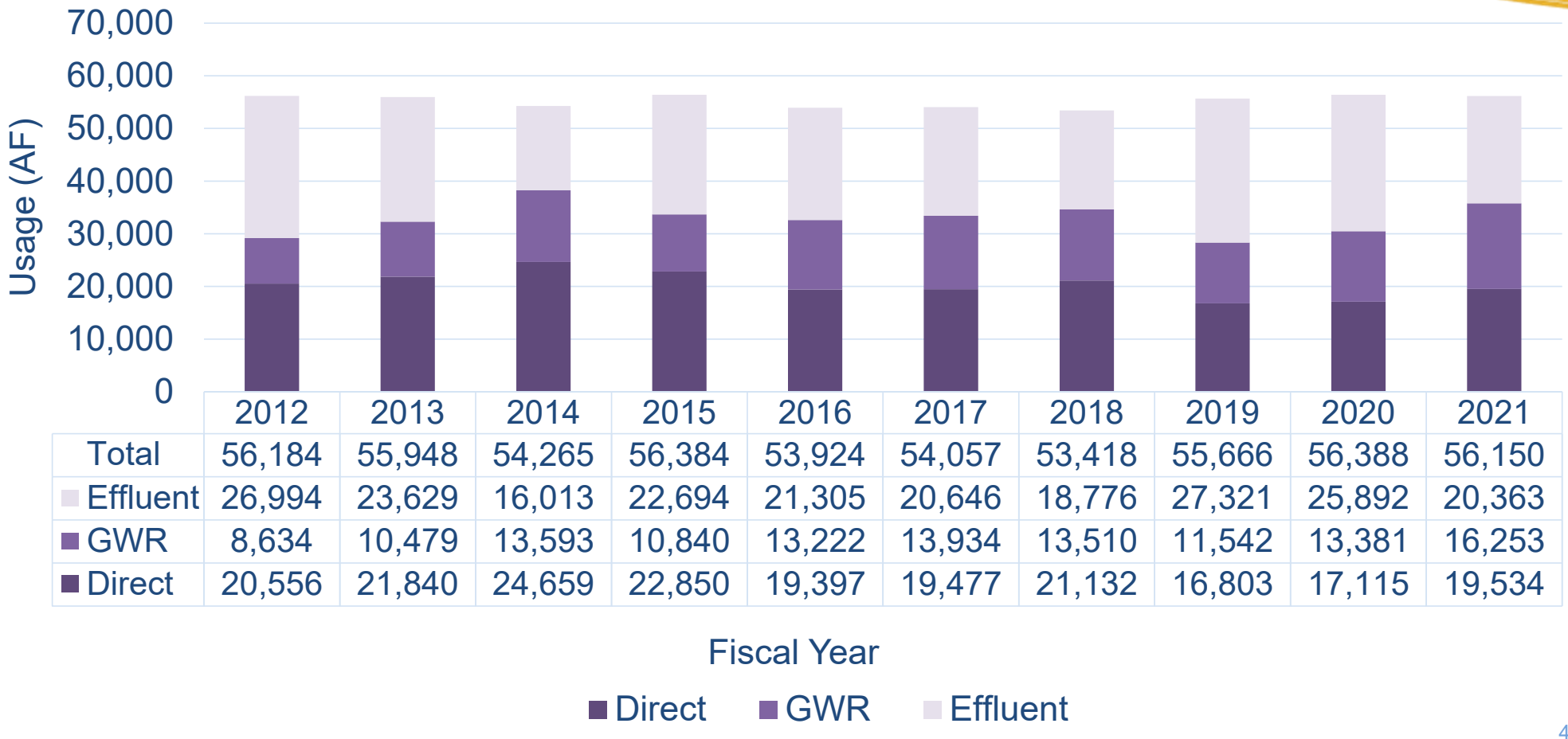


Regional Member Agency Water Use



*Local water includes local surface water, intraregional sales and purchases, as well as purchases and sales from local water companies such as SAWCo and WECWC.
*RW does not include 628 AF for IEUA use and 277 AF for SB County Use in RW Direct Use

Recycled Water Use

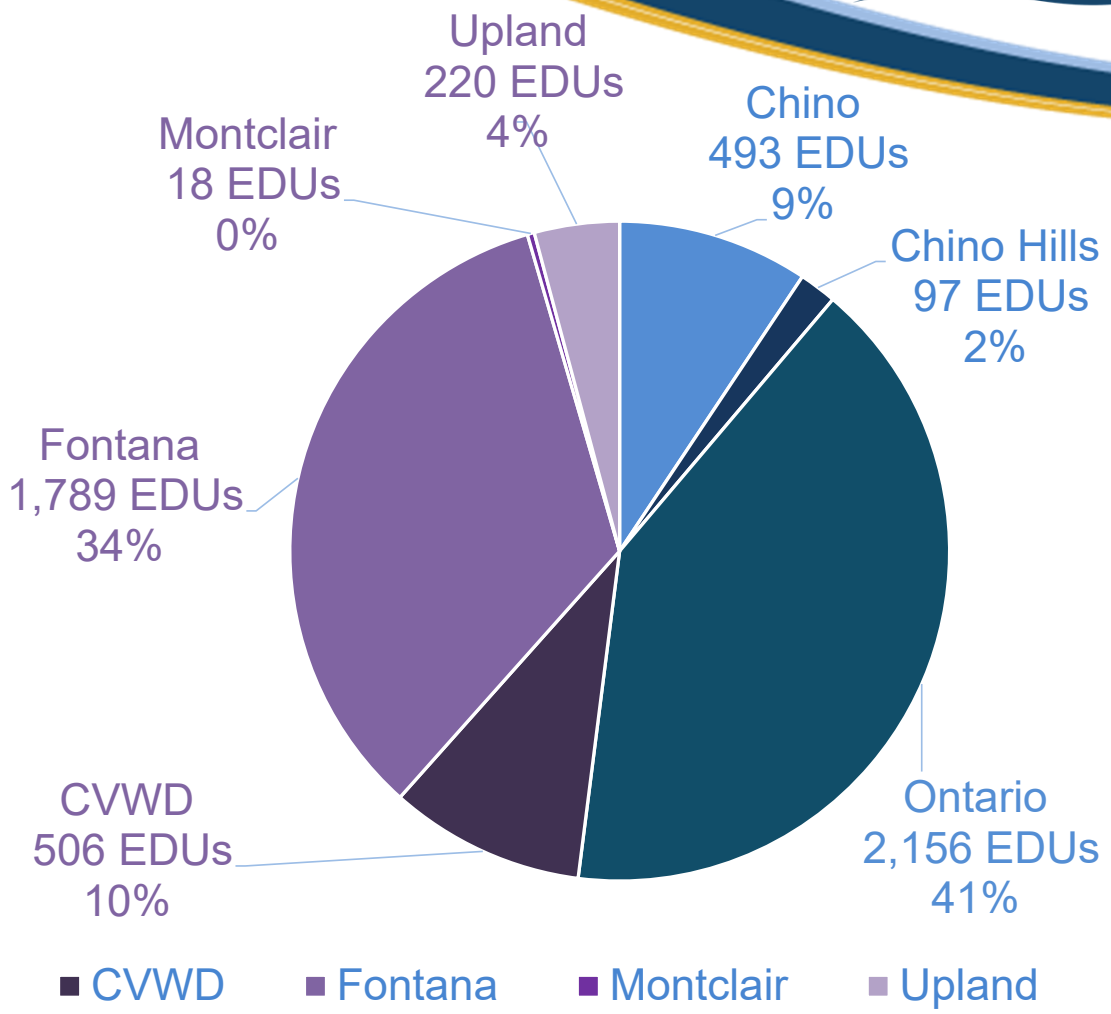


	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	56,184	55,948	54,265	56,384	53,924	54,057	53,418	55,666	56,388	56,150
Effluent	26,994	23,629	16,013	22,694	21,305	20,646	18,776	27,321	25,892	20,363
GWR	8,634	10,479	13,593	10,840	13,222	13,934	13,510	11,542	13,381	16,253
Direct	20,556	21,840	24,659	22,850	19,397	19,477	21,132	16,803	17,115	19,534

*Includes 628 AF IEUA direct usage and 277 AF for County of San Bernardino Direct Usage

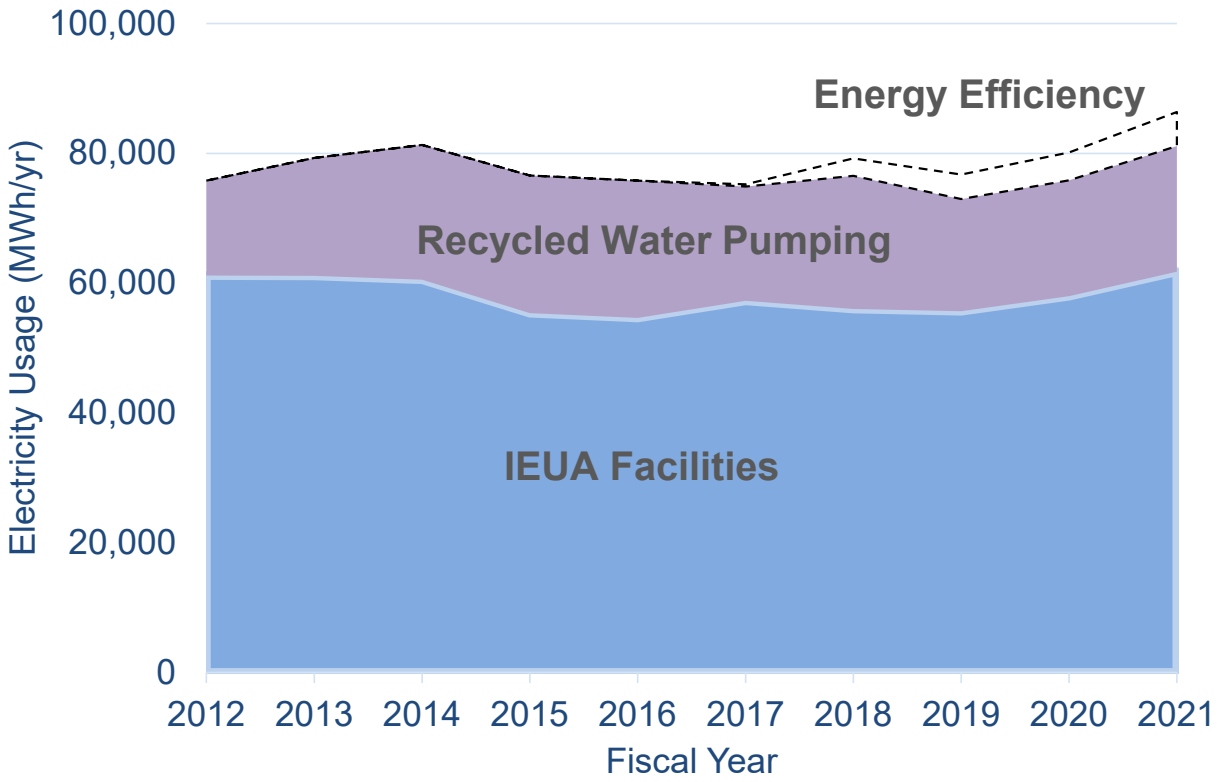
FY20/21 Building Activity

- Total 5,279 Equivalent Dwelling Units (EDUs) in FY 20/21
  - —2,746 EDUs **South** Service Area (52%)
  - —2,533 EDUs **North** Service Area (48%)
- $36.7M funding in FY 20/21



*Partial EDUs rounded to the nearest whole number

Electricity Usage



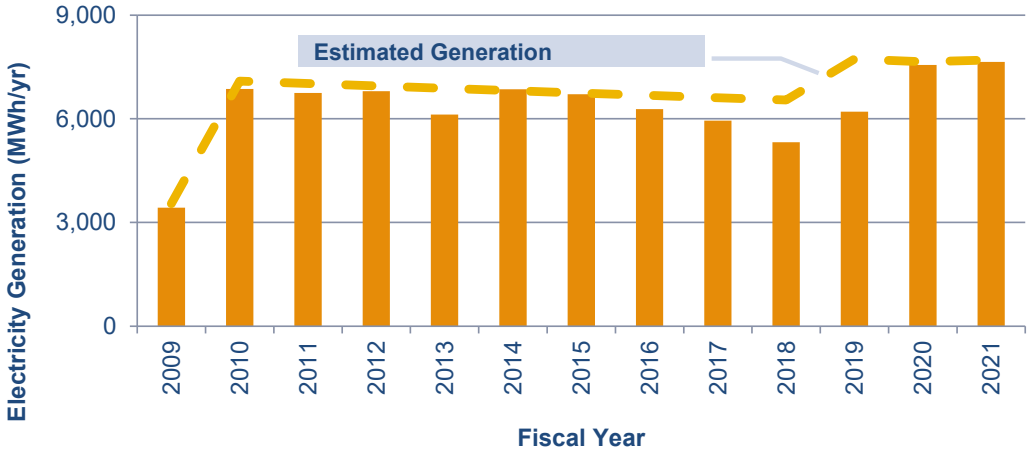
Energy Efficiency Project

RP-1 1158 Recycled Water Pump Station Upgrade

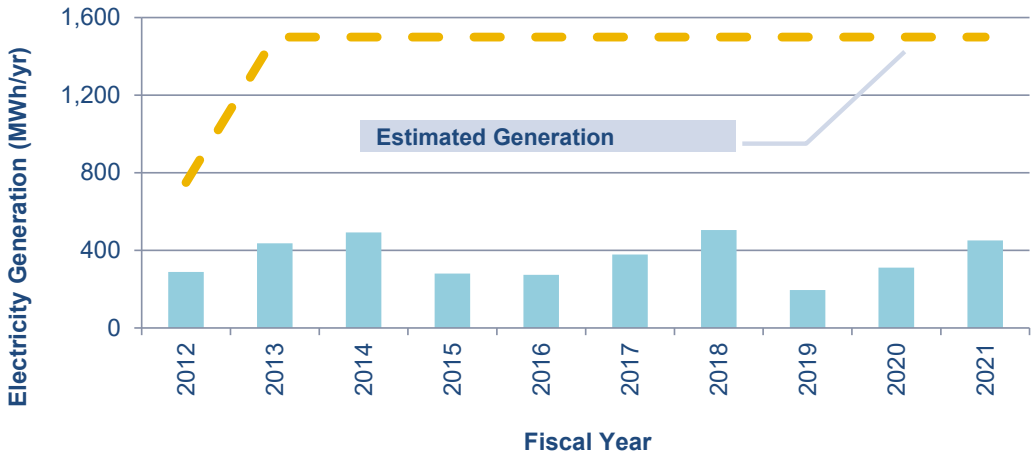
- Completed September 2020
- Avoided power usage 81 kW
- Expected annual savings
  - 927,000 kWh
  - $116,000
- SCE Incentive $86,000

Renewable Energy

Solar



Wind



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Planning Annual Report

Fiscal Year 2020/2021

October 2021

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INTRODUCTION

The Inland Empire Utilities Agency (IEUA) is located in Western San Bernardino County and serves approximately 900,000 residents in a 242-square mile service area. As a regional wastewater treatment agency, IEUA provides wastewater utility services to seven regional contracting agencies (RCAs) under the Chino Basin Regional Sewage Service Contract: cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and Cucamonga Valley Water District (CVWD) in the city of Rancho Cucamonga. In addition to the RCAs, the Agency provides wholesale imported water from the Metropolitan Water District of Southern California (MWD) to seven retail agencies: the cities of Chino, Chino Hills, Ontario, Upland, CVWD in the city of Rancho Cucamonga, Fontana Water Company in the city of Fontana, and the Monte Vista Water District in the city of Montclair.

In addition to providing these key services, IEUA also produces and distributes high quality recycled water, implements the Chino Basin stormwater/groundwater recharge program, and provides regional water resources planning to ensure reliable, cost-effective environmentally responsible water supplies for current and future customers. The purpose of the Strategic Planning Annual Report (SPAR) is to provide annually updated information about the IEUA service area's potable water, recycled water, groundwater, and wastewater. This report also provides a holistic summary of historic trends, usage patterns, current programs, and future forecasts.

SECTION 1: ANNUAL IEUA SERVICE AREA WATER USE

IEUA monitors and compiles water use data from each of its retail agencies to track overall water demands and sources of supply. Annual water use is split between potable water usage and the direct use of recycled water. IEUA's regional water usage in FY 20/21 was 202,776 AF (183,242 AF potable usage and 19,534 AF recycled direct usage). Recycled water used for groundwater recharge is not included in this total but can be found in Section 2 of the SPAR.

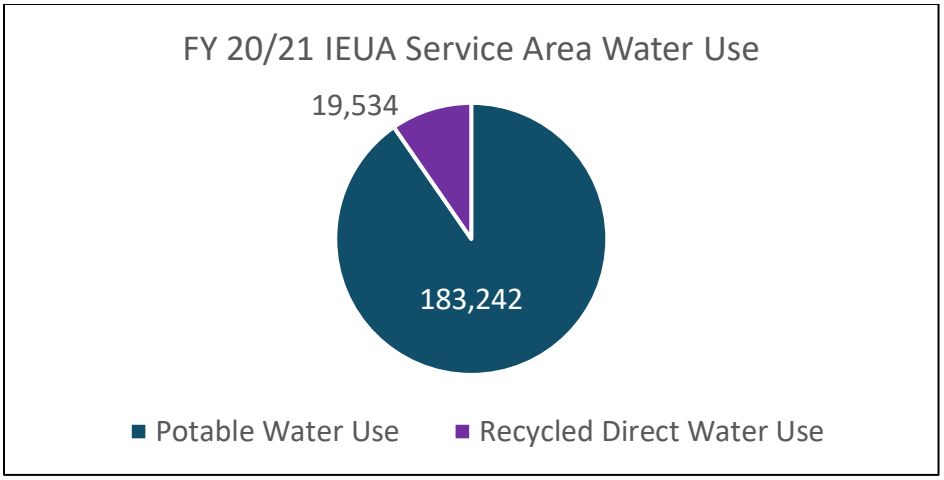


Figure 1 – FY 20/21 IEUA Service Area Water Use

Current Potable Water Use

Total potable water consumption within IEUA's service area for FY 20/21 was 183,242 AF. This is approximately a 4% increase (7,413 AF) from FY 2019/20 potable consumption of 175,829 AF. The region is now using approximately 11% less potable water than before the recent drought in FY 13/14 when potable consumption was at 205,381 AF. MWD Tier 1 imported water use in the region slightly increased from 66,438 AF in FY 19/20 to 71,444 AF in FY 20/21. Both FY 19/20 and FY 20/21 MWD usage includes Dry Year Yield (DYY) water supplies. For more information on DYY, see "Dry Year Yield" in section 2 of the SPAR. A breakdown of the IEUA regional usage can be found in Table 2, while a breakdown of the retail water agencies' FY 20/21 water usage can be found in Appendix B.

Projected Imported Water Use

Demands for MWD Tier 1 imported water brought into the region through IEUA were projected to 2045 as part of the 2020 Urban Water Management Plan (2020 UWMP). The 2020 UWMP imported water demand projections were supplied by the retail agencies to IEUA. IEUA expects imported demand to increase over the next 25 years based on the 2020 UWMP projections.

Table 1 – Projected Imported Water Use Demands by Retail Agency (AF)

Retail Agency	2025	2030	2035	2040	2045
Chino	5,353	5,353	5,353	5,353	5,353
Chino Hills	7,153	7,367	7,711	7,758	7,802
CVWD	28,369	28,369	28,369	28,369	28,369
FWC	15,000	15,000	15,000	15,000	15,000
MVWD	5,000	5,000	5,000	5,000	5,000
Ontario	11,000	13,000	15,000	17,000	17,000
Upland	5,541	5,541	5,541	5,541	5,541
Total	**77,416**	**79,630**	**81,974**	**84,021**	**84,065**

Table 2 – Fiscal Year 2020/2021 Regional Potable Monthly Water Use

		IEUA Service Area Potable Water Use FY20/21 (AF)												
		July	August	September	October	November	December	January	February	March	April	May	June	Total
Purchases from IEUA	Imported MWD	5,020	5,593	5,107	4,141	3,324	2,604	3,177	2,705	3,454	3,497	4,598	5,224	*48,444*
	DYY Take	3,533	3,333	3,333	2,500	1,500	2,000	-	-	-	2,000	2,600	2,200	*23,000*
Subtotal		***8,553***	***8,927***	***8,440***	***6,641***	***4,824***	***4,604***	***3,177***	***2,705***	***3,454***	***5,497***	***7,198***	***7,424***	***71,444***
Production	Chino Groundwater	5,256	5,490	4,736	5,540	4,276	4,390	3,961	3,977	4,284	5,085	5,254	6,437	*58,687*
	Other Groundwater	2,732	3,042	2,682	2,442	2,070	1,724	1,769	1,568	1,608	1,895	2,054	2,070	*25,654*
	Local Surface Water	1,795	1,339	1,099	1,074	1,097	827	973	979	870	805	661	462	*11,981*
Subtotal		***9,784***	***9,871***	***8,517***	***9,056***	***7,443***	***6,941***	***6,703***	***6,524***	***6,762***	***7,785***	***7,968***	***8,970***	***96,322***
Purchases	CDA	1,315	1,333	1,276	1,607	1,450	1,553	1,519	1,166	1,347	1,252	1,324	1,451	*16,593*
	CVWD	-	-	-	-	-	-	-	-	-	-	-	-	-
	MVWD	700	803	798	548	335	177	239	342	311	325	536	508	*5,621*
	SAWCo	1,365	1,142	906	789	755	417	579	489	554	788	885	884	*9,552*
	West End	203	226	190	183	146	205	139	145	127	160	120	183	*2,027*
Subtotal		***3,583***	***3,503***	***3,169***	***3,127***	***2,686***	***2,352***	***2,476***	***2,142***	***2,339***	***2,525***	***2,866***	***3,025***	***33,794***
Sales	Chino Hills	(947)	(1,037)	(1,015)	(833)	(543)	(524)	(317)	(353)	(408)	(634)	(819)	(719)	*(8,150)*
	Ontario	(47)	(46)	(45)	(45)	(44)	(28)	(44)	(41)	(44)	(42)	(34)	(40)	*(500)*
	MVWD	(53)	(52)	(51)	(51)	(104)	(87)	(86)	(46)	(50)	(47)	(38)	(45)	*(709)*
	Upland	(1,318)	(1,149)	(861)	(743)	(657)	(334)	(499)	(449)	(509)	(746)	(851)	(844)	*(8,959)*
Subtotal		**(2,365)**	**(2,283)**	**(1,971)**	**(1,673)**	**(1,347)**	**(973)**	**(946)**	**(889)**	**(1,012)**	**(1,469)**	**(1,742)**	**(1,648)**	***(18,318)***
Total		**19,555**	**20,018**	**18,155**	**17,151**	**13,605**	**12,923**	**11,411**	**10,482**	**11,543**	**14,338**	**16,291**	**17,771**	**183,242**

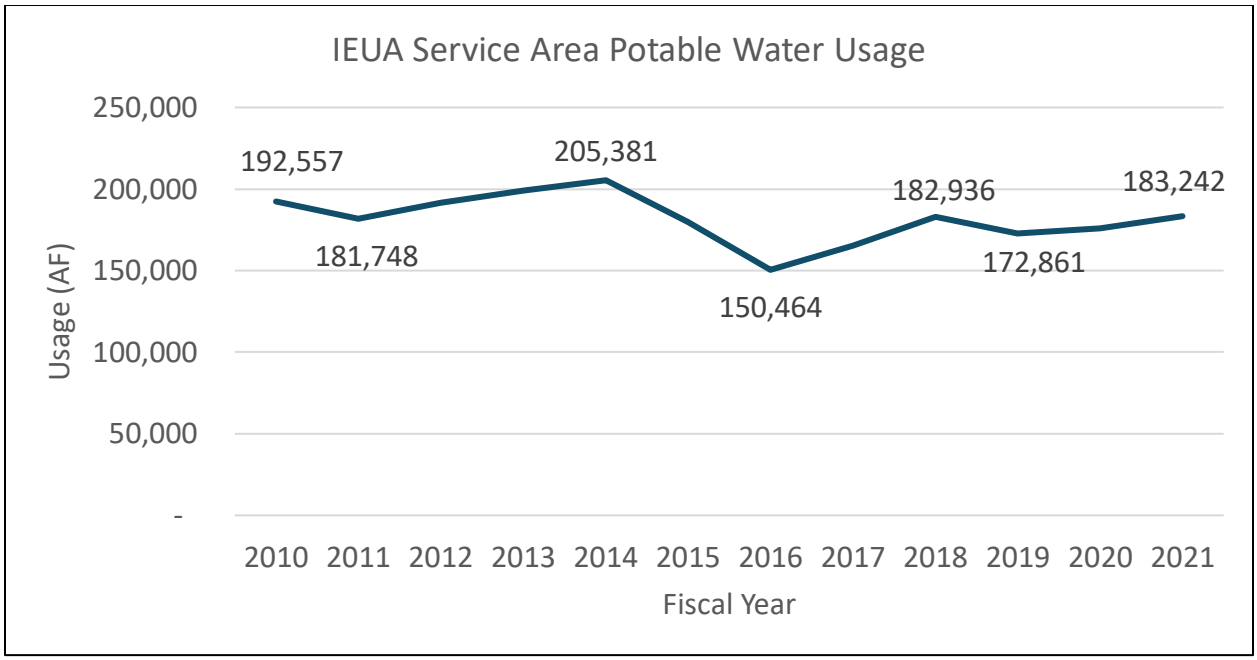


Figure 2 – IEUA Service Area Potable Water Use

Current Recycled Water Use

IEUA is the wholesale recycled water provider to the RCAs which work as or with retail agencies to directly serve their customers. IEUA contracting/retail water agencies which served recycled water in 2020/21 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
- 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 regional contracting agencies. FWC and MVWD retail recycled water obtained from their overlying cities, which are IEUA regional contracting agencies. San Bernardino County is currently a direct use customer of IEUA based on long standing historical contracts. Total recycled water direct use within the region was 19,534 AF in FY 20/21.

Table 3 – Recycled Water Demand by Agency for FY 20/21

Retail Agency	Direct Use (AF)	Percent of Direct Demand
Chino	5,643	29%
Chino Hills	1,668	9%
CVWD	1,222	6%
Fontana/FWC	425	2%
Montclair/MVWD	343	2%
Ontario	8,556	44%
Upland	772	4%
IEUA	628	3%
San Bernardino County	277	1%
Total	**19,534**	**100%**

Projected Recycled Water Use

Direct recycled water use in the IEUA service area has been projected out to 2040 in both the 2020 UWMP and as part of the Recycled Water Demand Forecast Technical Memorandum (Demand Forecast). The 2020 UWMP recycled water projections were supplied by the retail agencies to IEUA as part of the 2020 UWMP. The Demand Forecast recycled water projections utilized land use-based demand modeling completed by IEUA in conjunction with the retail agencies in 2015 and were subsequently updated in 2021.

Table 4 – Projected Recycled Water Direct Use Demand by Retail Agency (AF)

Retail Agency	Projection Source	2025	2030	2035	2040
Chino	2020 UWMP	4,500	4,500	4,000	3,800
	Demand Forecast	5,498	5,780	5,961	6,178
Chino Hills	2020 UWMP	1,609	1,609	1,609	1,609
	Demand Forecast	1,858	2,047	2,047	2,626
CVWD	2020 UWMP	1,800	2,000	2,000	2,000
	Demand Forecast	2,032	2,288	2,513	2,674
FWC	2020 UWMP	1,000	1,500	2,000	2,500
	Demand Forecast	994	1,392	1,911	2,000
MVWD	2020 UWMP	1,100	1,100	1,100	1,100
	Demand Forecast	359	363	396	398
Ontario	2020 UWMP	12,168	13,465	14,330	16,059
	Demand Forecast	9,188	10,383	10,814	12,820
Upland	2020 UWMP	703	703	703	703
	Demand Forecast	940	1,022	1,062	1,158
Total	**2020 UWMP**	**22,880**	**24,877**	**25,742**	**27,771**
	Demand Forecast	**20,869**	**23,275**	**24,704**	**27,854**

Projected Regional Water Use

Projected water use was calculated as part of the development of the 2020 UWMP. IEUA collected each retail agencies' projected water use from their respective UWMP and totaled the use to obtain a regional water use projection. Regional water use projections include both potable and recycled water direct use.

Table 5 – 2020 UWMP Projected Water Demand by Retail Agency (AF)

Retail Agency	2025	20302	2035	2040	2045
Chino	20,843	22,310	23,087	23,963	25,108
Chino Hills	17,120	17,334	17,678	17,725	17,769
CVWD	53,369	58,092	59,650	60,949	60,949
FWC	45,593	46,909	47,665	50,442	51,943
MVWD	14,232	14,564	15,175	15,437	15,706
Ontario	52,550	58,513	63,406	73,668	73,668
Upland	25,328	25,328	25,328	25,328	25,328
Total	**229,035**	**243,050**	**251,989**	**267,512**	**270,471**

Projected water use was also calculated as part of the 2015 Integrated Resources Plan (2015 IRP), which developed a range of demand possibilities to accommodate for future uncertainty caused by the various demand factors including climate change. This analysis came from demand modeling conducted as part of the 2015 IRP and 2015 Urban Water Management Plan (2015 UWMP), which found 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.

Table 6 – 2015 IRP Demand Forecast (AF)

Urban M&I Forecast	2015	2020	2040
High Forecast	225,000	230,000	267,000
Medium Forecast	225,000	220,100	238,600
Low Forecast	225,000	212,000	217,400

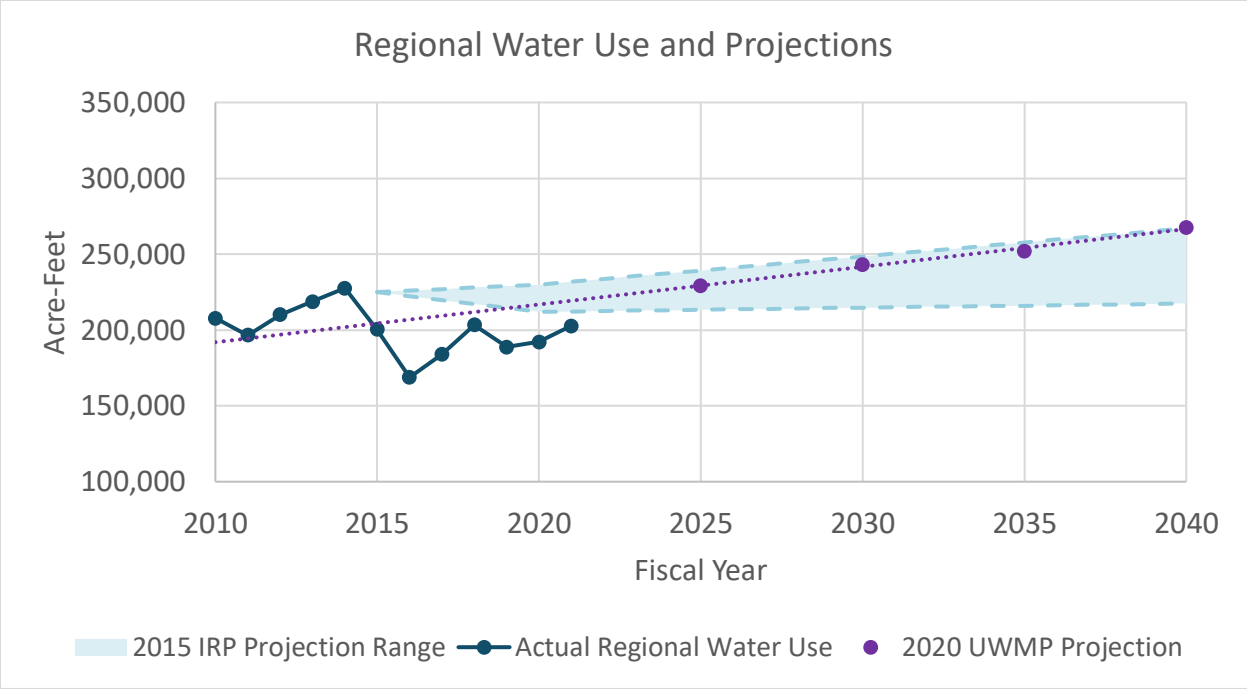


Figure 3 – IEUA Regional Water Use and Projections

The 2020 UWMP and 2015 IRP both reach approximately 267,000 AF in the year 2040. However, IEUA's actual FY 20/21 regional water use of 202,776 AF (183,242 AF potable use and 19,534 AF recycled direct use) is below the 2020 low demand forecast of 212,000 AF outlined in IEUA's 2015 IRP. A continuous focus on water use efficiency and per capita reductions, as required in SB X7-7, AB 1668, and SB 606 is anticipated to reduce per capita water use and demands. IEUA anticipates a slight increase in FY21/22 water use 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 reached during FY 13/14.

In addition to the increase in projected water use, an increase to the number of Meter Equivalent Units (MEUs) in the region is also anticipated. For FY 21/22 it is projected that the region will contain 413,826 MEUs, an increase of 4,937 MEUs from FY 20/21's actual MEUs count of 408,889.

Table 7 – Projected MEUs

Retail Agency	FY 20/21 Actual MEUs	FY 21/22 Projected MEUs
Chino	39,264	40,238
Chino Hills	39,499	38,924
CVWD	105,805	106,006
FWC	90,162	91,413
MVWD	21,901	21,979
Ontario	76,459	78,166
Upland	32,779	33,966
WVWD*	3,020	3,134
Total	**408,889**	**413,826**

**IEUA and WVWD have a shared service area for emergency supply*

SECTION 2: GROUNDWATER RECHARGE DELIVERIES

Historical Groundwater Recharge Deliveries

The Chino Basin is one of the largest groundwater basins in Southern California containing approximately 5,000,000 AF of water with an un-used storage capacity of approximately 1,000,000 AF. Groundwater from the Chino Basin accounts for approximately 29% of FY 20/21, regional water supplies. The Chino Basin is an adjudicated basin and has been overseen by the Chino Basin Watermaster (CBWM) since 1978. The basin is dependent on rainfall and supplemental sources for recharge.

IEUA, in coordination with CBWM, the Chino Basin Water Conservation District (CBWCD), San Bernardino County Flood Control District (SBCFCD), the Chino Desalter Authority (CDA), and local agencies capture water for replenishment. Sources include recycled water from IEUA's regional water recycling plants, stormwater and dry weather flow capture, and imported water recharge.

Recharged imported water is either purchased by a local agency, requested by the Chino Basin Watermaster to maintain safe operating yield of the basin, used to blend down recharged recycled water TDS levels, or as part of the Chino Basin Dry-Year Yield (DYY) Program. Total groundwater recharge delivered to the Chino Basin in FY 20/21 was 23,430 AF. Groundwater recharge deliveries is water delivered to recharge facilities and does not take into consideration evaporative or other losses that may occur prior to recharge.

Table 8 – FY 20/21 Groundwater Recharge Purchases

Groundwater Recharge Source	Recharge (AF)
Recycled Water	16,253
Stormwater & Dry Weather Flow	4,911
Imported Water	2,266
IEUA (MWD)	*0*
*DYY Puts**	*0*
*TVMWD (MWD)***	*2,266*
Total	**23,430**

**DYY Puts Exclude aquifer storage and recovery*

*** Three Valleys Municipal Water District (TVMWD) purchases water directly from MWD.*

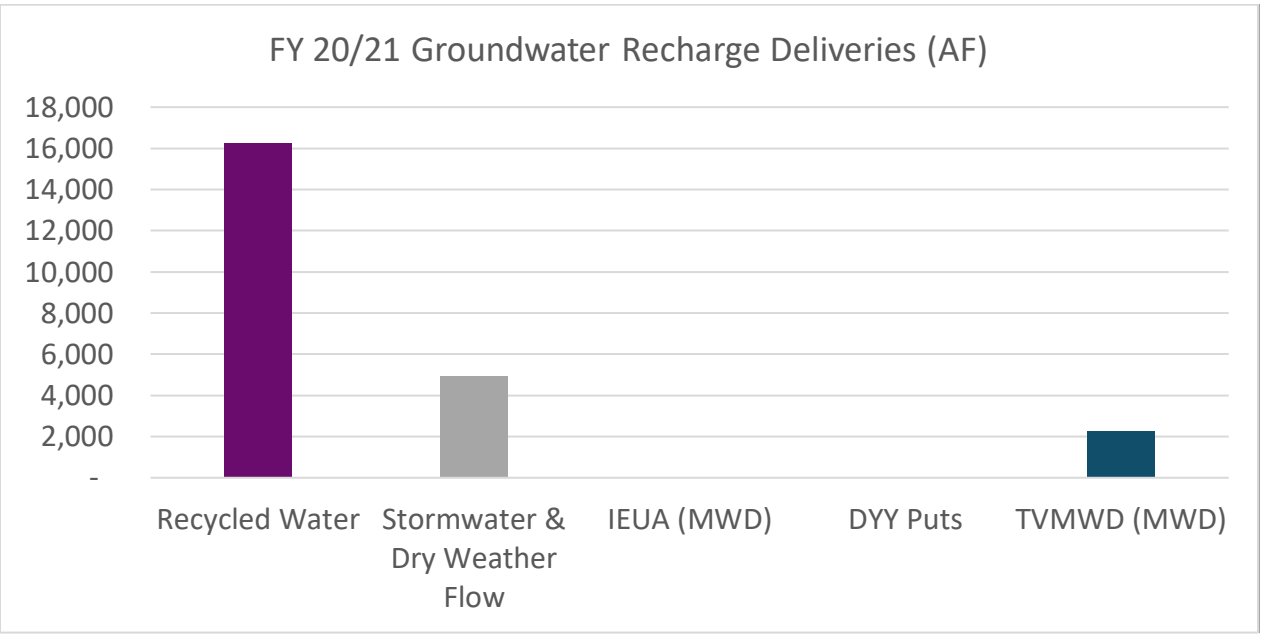


Figure 4 – FY 20/21 Groundwater Recharge Deliveries

Recycled water groundwater recharge use was 16,253 AFY in FY 20/21, up 21% from FY 19/20's recycled water ground water recharge of 13,381 AF. Recycled water is recharged by IEUA on behalf of its RCAs and retail water agencies.

Table 9 – FY 20/21 Recycled Groundwater Recharge Deliveries by Agency

Retail Agency	Recharge (AF)
Chino	-
Chino Hills	1,463
CVWD	9,336
Fontana/FWC	3,185
Montclair/MVWD	737
Ontario	-
Upland	1,531
Subtotal	**16,253**

FY 20/21 was a 5 year low for groundwater recharge totals but was also the highest recycled water recharge recorded to date at over 16,000 AF. The overall decrease to recharged is due in part to low precipitation rates reducing stormwater availability and MWD not requesting the storage of any water for the DYY program in FY 20/21.

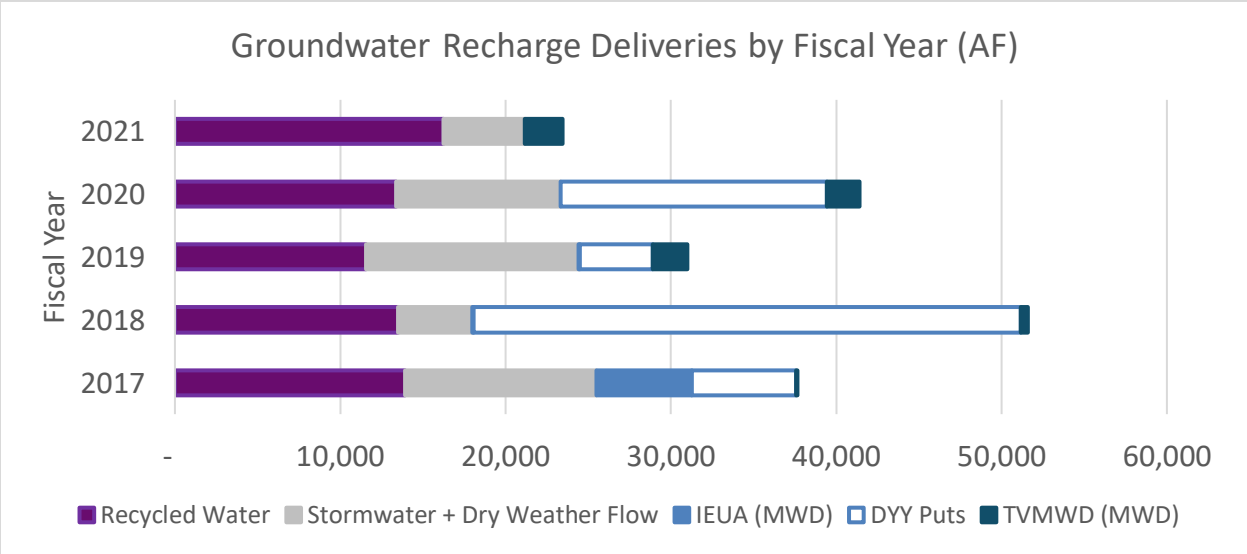


Figure 5 – Historical Groundwater Recharge Deliveries

Projected Groundwater Recharge Deliveries

It is projected that future groundwater recharge delivery projections will remain at an estimated 16,420 AFY of recycled water as outlined in the 2018 Recharge Master Plan Update. Due to the unpredictability of storm events and variability of imported water for groundwater recharge in the IEUA region, the five-year average was taken to determine the projected recharge of stormwater and dry weather flows and imported water. It is estimated that future groundwater

recharge will contain 8,761 AF of stormwater and dry weather flows and 2,549 AF of imported water. Imported groundwater projections do not include DYY values as continued storage of DYY water is not expected to continue past FY 20/21.

Table 10 – Projected Groundwater Recharge Deliveries by Source

Groundwater Recharge Source	Projected Groundwater Recharge (AFY)
Recycled Water	16,420
Stormwater & Dry Weather Flow	8,761
Imported Water (No DYY)	2,549
Total	**27,730**

Dry Year Yield

The DYY program provides for the storage of up to 100,000 AF of water in a MWD Storage Account in the Chino Basin pursuant to the Groundwater Storage Program Funding Agreement dated June 2003 and as subsequently amended. Signatories to the Phase I Agreement are:

- Metropolitan Water District of Southern California,
- Inland Empire Utilities Agency
- Three Valleys Municipal Water District
- Chino Basin Watermaster

The DYY Agreement provides for storage of up to 25,000 AF per year unless Chino Basin Watermaster allows for more, and extraction, at MWD's call during dry years, of up to 33,000 AF per year not to exceed the amount of water in the Metropolitan Storage Account (DYY Account). In February 2019, the signatories expanded the extraction provisions so that water could be voluntarily extracted from the DYY Account outside of call years, with approval from the signatories.

From June 2017 through June 2021 a total of 64,830 AF were stored in the DYY Account; 59,894 AF by groundwater recharge and 4,936 AF by Aquifer Storage and Recovery (ASR) injected water. From July 2019 through June 2021 Cucamonga Valley Water District and Fontana Water Company have voluntarily extracted 40,395 AF, leaving the account with a balance of 24,435 AF.

Table 11 – DYY Account Balance

DYY Account Balance (June 2017-June 2021)	
"PUTS"	
Recharged Water	59,894
ASR Injection	4,936
"TAKES"	
CVWD	37,895
FWC	2,500
Total	**24,435**

The voluntary production projection for FY 21/22 is shown in Table 11. Signatories have agreed for Cucamonga Valley Water District and Fontana Water Company to extract the remaining DYY Account balance by June 2022.

Table 12 – DYY Voluntary Production Projections

Agency	Baseline	July-December 2021 Production	Jan-June 2022 Production	Total DYY Voluntary Production
CVWD	5,536	13,000	5,000	18,000
FWC	863	4,000	1,000	5,000

SECTION 3: SANTA ANA REGIONAL BASEFLOW OBLIGATION

Santa Ana River Regional Baseflow Obligation

The Santa Ana River has a regional baseflow obligation established by past judgment. The baseflow obligation is a joint obligation between IEUA and Western Municipal Water District to ensure an average of 42,000 AF at Prado Dam. The minimum baseflow obligation was reduced to 34,000 AF after 1986 as long as no cumulative baseflow debt exists. In Water Year 2019/2020, baseflow at Prado Dam was 74,465 AF. More information about the Santa Ana River baseflow obligation can be found in the Santa Ana River Watermaster Annual Report (https://www.wmwd.com/292/Santa-Ana-Watermaster-Reports).

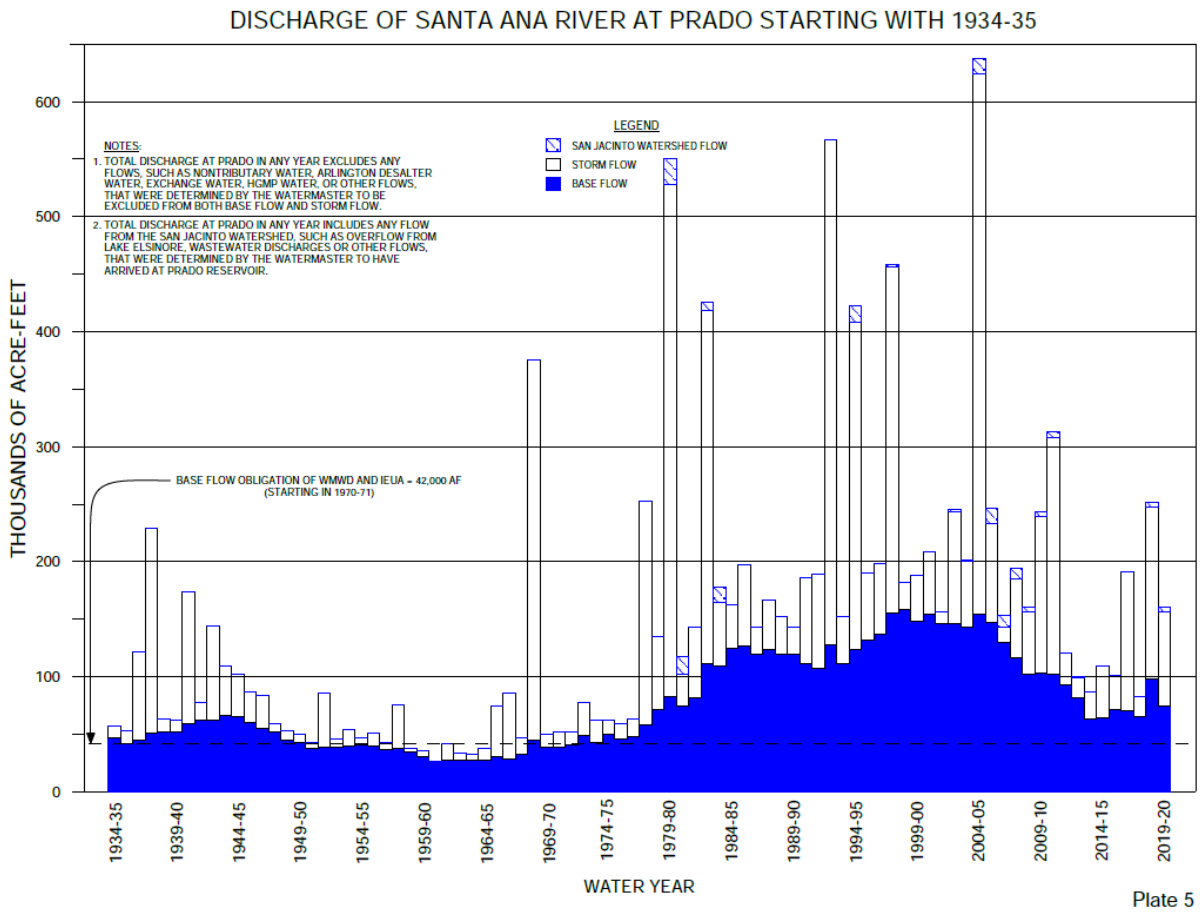


Figure 6 – Discharge of Santa Ana River at Prado
Source: Santa Ana River Watermaster Annual Report 2019-2020

SECTION 4: WASTEWATER

Wastewater Actuals

Over the past decade the IEUA service area has experienced an increase in indoor water use efficiency as a direct result of drought, shifting public policy, more efficient building and plumbing codes, and effective conservation program campaigns. This increased efficiency has decreased the volume of wastewater flows received by IEUA treatment plants by approximately 10% since 2010. While the flows have continued to decrease, the regional population has continued to grow. The combination of an increased population but reduced wastewater flow has resulted in an increase in the strength of the wastewater coming into IEUA's treatment facilities. This trend of increased wastewater strength is expected to continue as both the population and regional water efficiency continue to increase. Current and future wastewater treatment plant expansions are driven by the increased strength of wastewater flows to the facilities, rather than the volume of flows to the facilities.

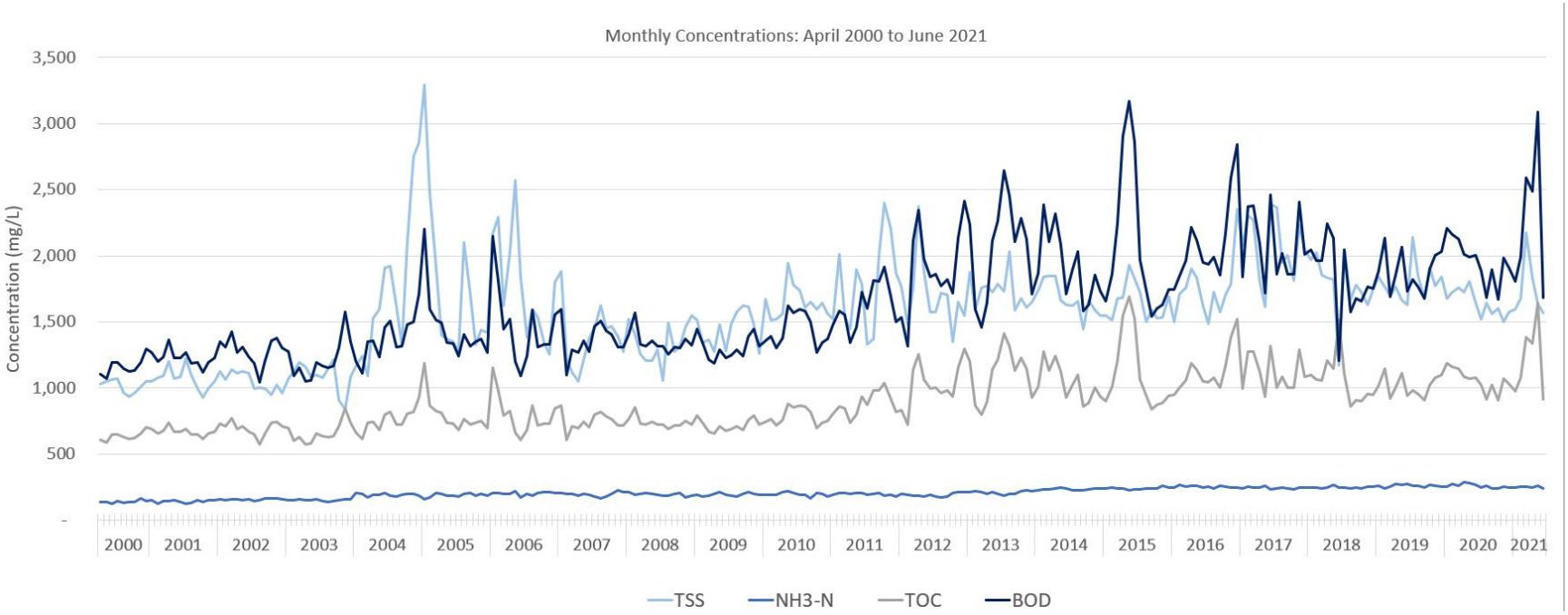


Figure 7 – Monthly Concentrations: April 2000 – June 2021

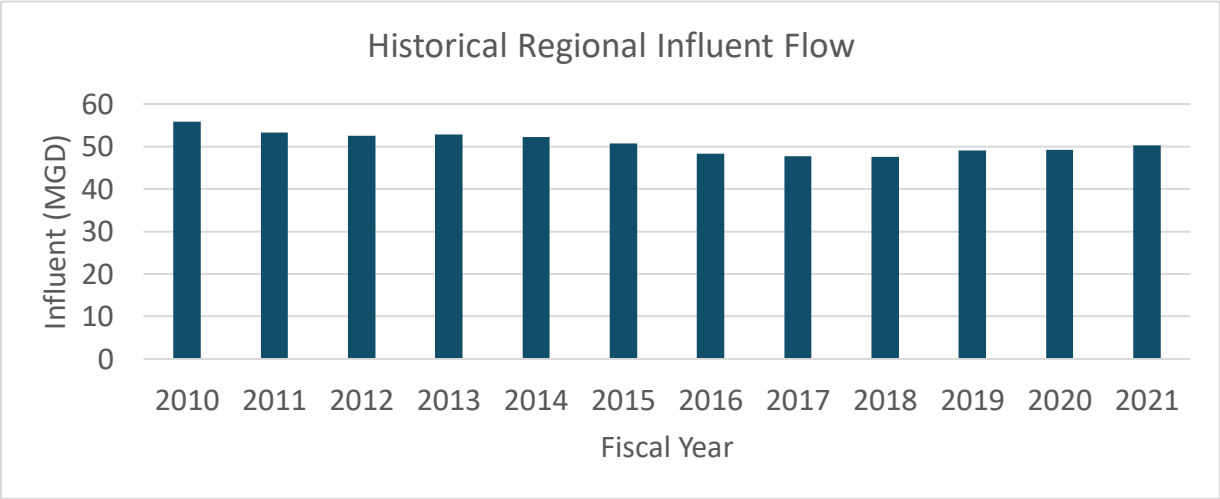


Figure 8 – Historical Regional Influent Flows

While wastewater flows have decreased from FY 09/10, recycled water use has increased. This increase in recycled water utilization can be attributed to the San Bernardino Avenue Lift Station and the Montclair Lift Station. The Montclair Lift Station pumps wastewater from portions of Montclair, Upland, and Chino to IEUA's RP-1 and CCWRF treatment plants. The San Bernardino Ave Pump Station pumps a portion of the flow from the City of Fontana to IEUA's RP-4 treatment plant. Together, these lift stations help shift flows that would naturally flow from one portion of the service area to a different treatment plant to balance flows and keep water in the northern portion of the service area. This shift in flows allows IEUA to maximize the potential for recycled water use. These lift stations also increase regional system flexibility and allow the treatment plants to operate as an interconnected system.

Equivalent Dwelling Unit (EDU) activity has increased from FY 19/20 to FY 20/21 with the addition of 5,281 EDUs to the region compared to the addition of only 3,435 EDUs the previous fiscal year. The additional EDUs added in FY 20/21 are 3,732 EDUs lower than the RCAs projections of 9,013 EDUs and 1,281 EDUs more than the IEUA Budgeted Projections of 4,000 EDUs. Two sets of projections exist to allow for conservative estimates on both the flow and financial aspects of EDUs. The RCAs projections are required under the Regional Sewage Service Contract and serve as a planning tool for plant treatment capacity. Under the Regional Sewage Service Contract, RCAs who report EDU projections that are lower than what the regional experiences may have building moratoriums imposed. For this reason, the RCAs may make projections conservatively high. Budgeted projections on the other hand are used by IEUA to project future needs. To ensure fund availability, budgeted projections are conservatively low. The result of both sets of projections is the assumption that projections are conservative, ensuring IEUA treatment plants can handle the added load while also ensuring the agency does not over project fund availability.

Table 13 – Historical EDU Activity

Building Activity for Last Five Fiscal Years (FY 15/16 through FY 19/20)			
Year	**Building Activity (EDUs)**	**Budgeted Projections (EDUs)**	**RCAs Projections (EDUs)**
FY 15/16	4,787	4,330	5,849
FY 16/17	5,189	3,000	5,277
FY17/18	5,223	4,000	5,442
FY 18/19	3,459	4,000	6,149
FY 19/20	3,435	4,000	6,390
FY 20/21	5,281	4,000	9,013

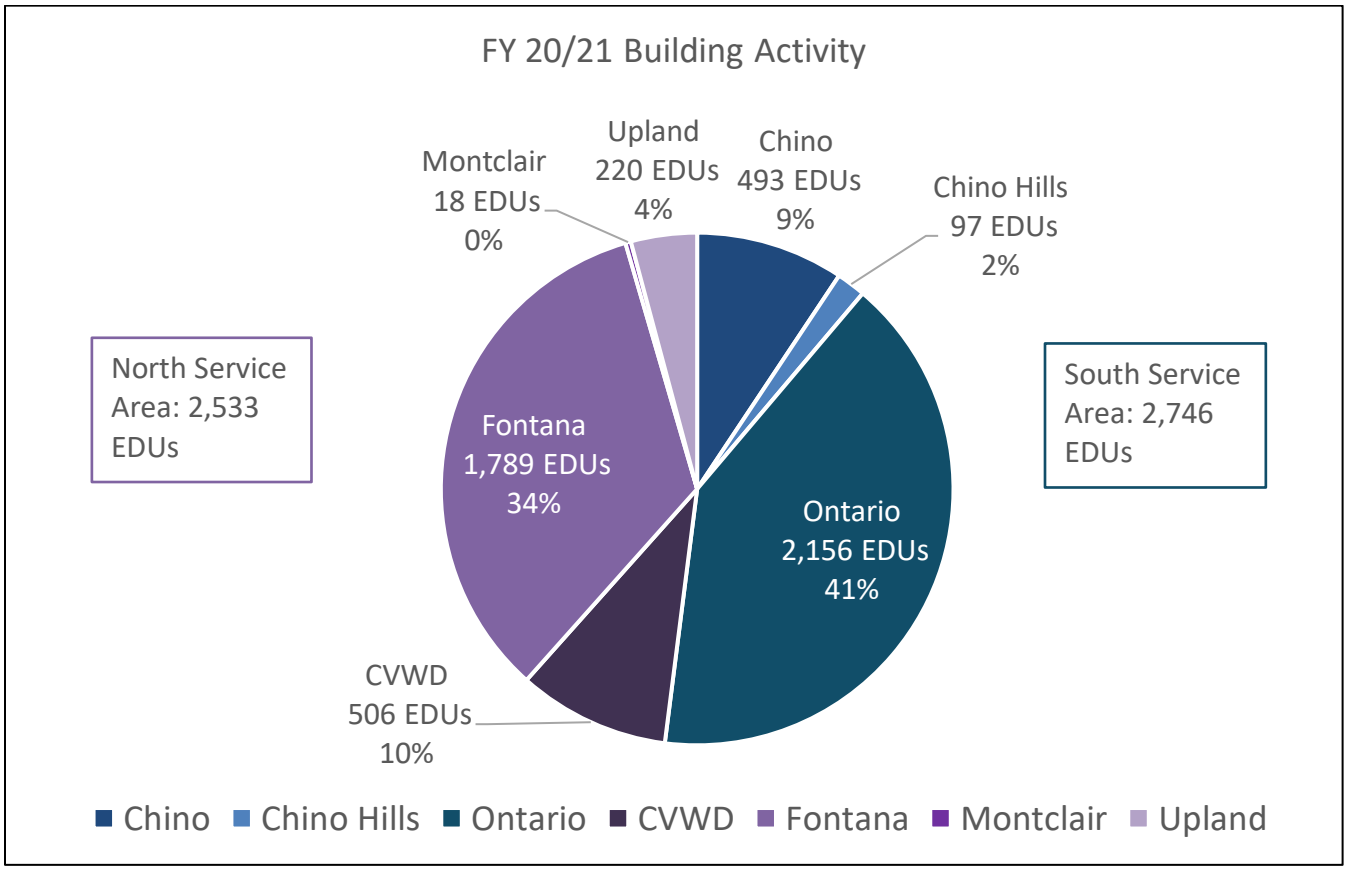


Figure 9 – FY 20/21 Building Activity

Wastewater Projections

Wastewater flow forecasts are conducted annually and are based on four main components: (1) historical wastewater flow trends; (2) per dwelling unit wastewater generation factors, based on the 2015 Wastewater Facilities Master Plan Update (WWFMPU) projections; (3) actual influent flows measured at the treatment plants; and (4) expected future growth numbers provided by the RCAs. These projections are used to determine future demands on the Agency's facilities and help anticipate the need for modifications to treatment plants and solids handling facilities.

The WWFMPU identified the projected flows to the treatment plants in 2035 through 2060. The WWFMPU estimates that there will be a regional flow of 73.5 MGD by 2035 and an ultimate/build-out flow of 80 MGD by 2060. The increase in flows implies that there will be facility expansions over the next 20 years.

In 2021, the RCAs completed a survey of their 10-year capacity demand forecast. The results of the 10-year capacity demand forecast survey are summarized in Table 12. For FY 2021/22, the forecasted activity was 13,538 EDUs. Over the next ten years, activity was projected to total 100,857 EDUs region wide. Approximately 77% of this projected activity is a result of new development in the service areas of Ontario and Fontana. Over the next ten years, building activity is projected to be approximately 80% residential and 20% commercial/industrial.

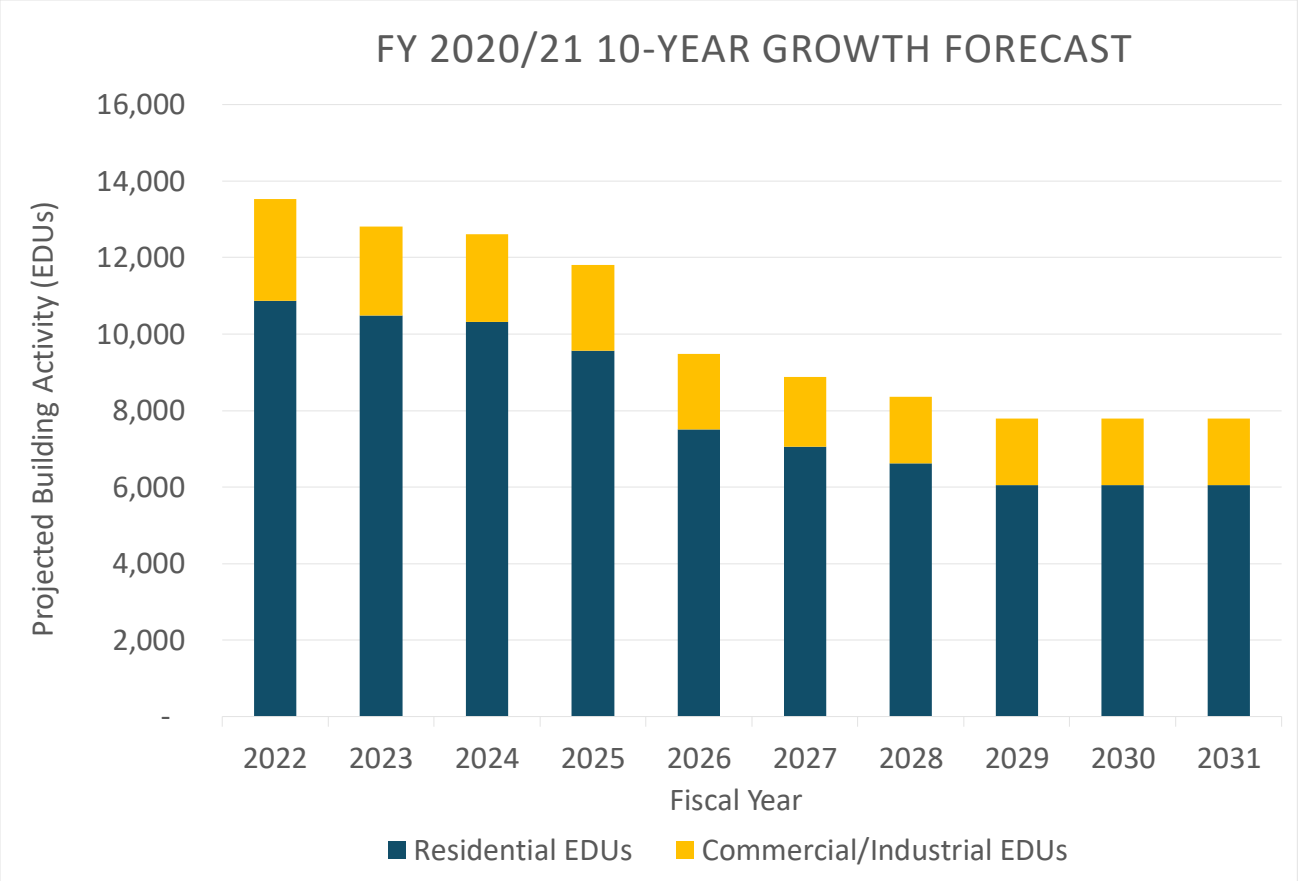


Figure 10 – FY 20/21 10-Year Growth Forecast

Table 14 – 10 Year Projected EDU Activity

Fiscal Year	Chino* EDUs	Chino Hills EDUs	CVWD EDUs	Fontana EDUs	Montclair* EDUs	Ontario EDUs	Upland EDUs	Total EDUs
FY 21/22	434	276	2,050	1,792	474	7,560	952	13,538
FY 22/23	396	744	2,050	1,863	106	6,763	912	12,812
FY 23/24	396	1,140	1,650	1,935	26	6,763	702	12,612
FY 24/25	396	782	1,250	2,011	26	6,763	572	11,800
FY 25/26	396	400	890	2,089	26	5,320	352	9,473
FY 26/27	395	552	490	2,171	26	5,040	200	8,875
FY 27/28	285	462	490	2,171	26	4,820	110	8,364
FY 28/29	285	2	490	2,171	26	4,820	0	7,794
FY 29/30	235	2	490	2,171	26	4,820	0	7,794
FY 30/31	235	2	490	2,171	26	4,820	0	7,794
TOTAL	**3,554**	**4,340**	**10,340**	**20,545**	**788**	**57,490**	**3,800**	**100,857**

**The City of Chino's and the City of Montclair's forecasts have been extended from last Fiscal Year as a completed 2021 10-year capacity demand forecast was not completed.*

APPENDIX A: ACRONYMS

AF: Acre Feet

AFY: Acre Feet per Year

ASR: Aquifer Storage and Recovery

CBWCD: Chino Basin Water Conservation District

CBWM: Chino Basin Water Master

CDA: California Desalter Authority

CVWD: Cucamonga Valley Water District

DYY: Dry Year Yield Program

EDU: Equivalent Dwelling Unit

FWC: Fontana Water Company

IEUA: Inland Empire Utilities Agency

IRP: 2015 Integrated Resource Plan

MEUs: Meter Equivalent Units

MGD: Million Gallons per Day

MVWD: Monte Vista Water District

MWD: Metropolitan Water District of Southern California

SPAR: Strategic Planning Annual Report

RCAs: Regional Contracting Agencies

SAR: Santa Ana River

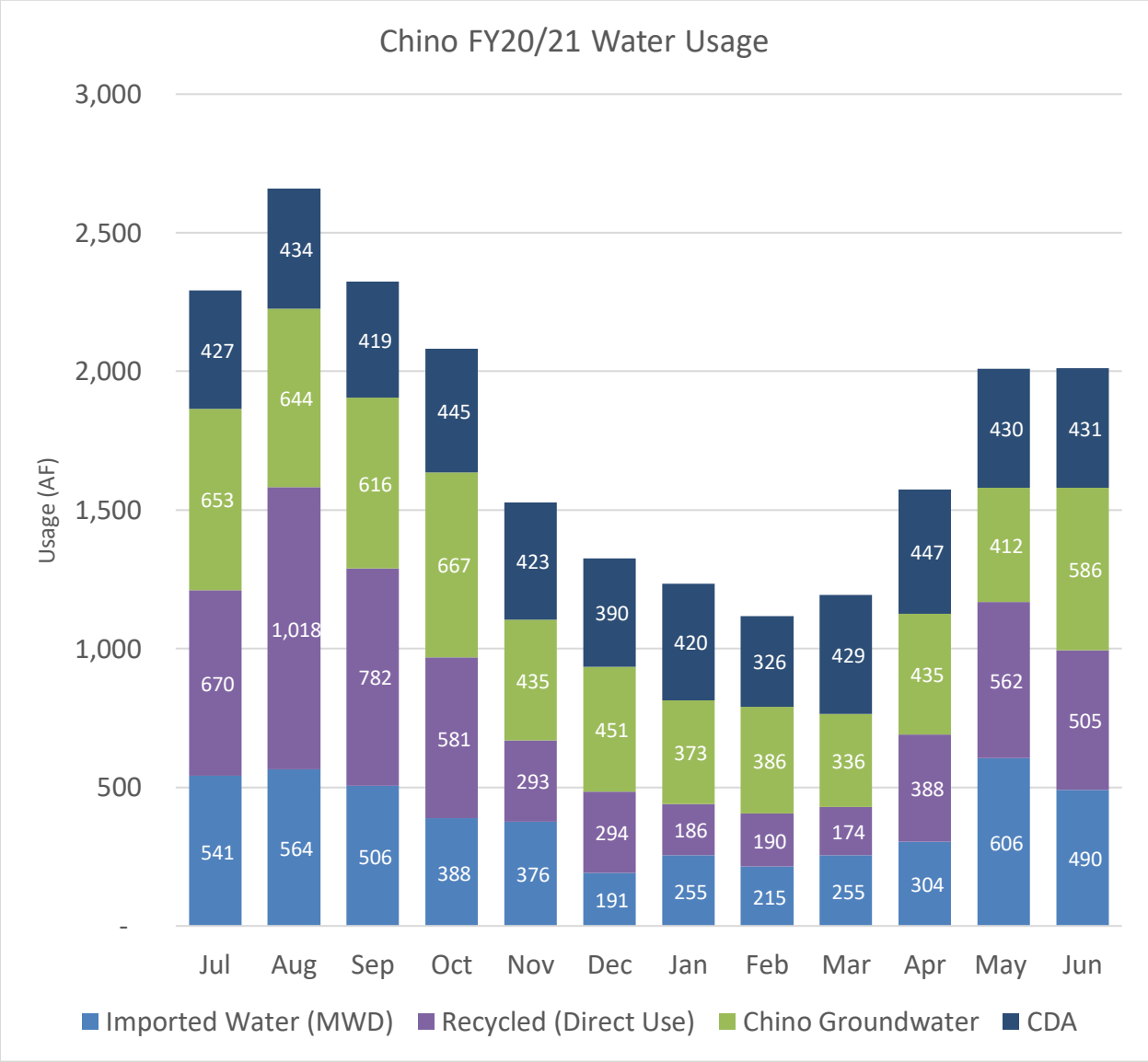
SBCFCD: San Bernardino County Flood Control District

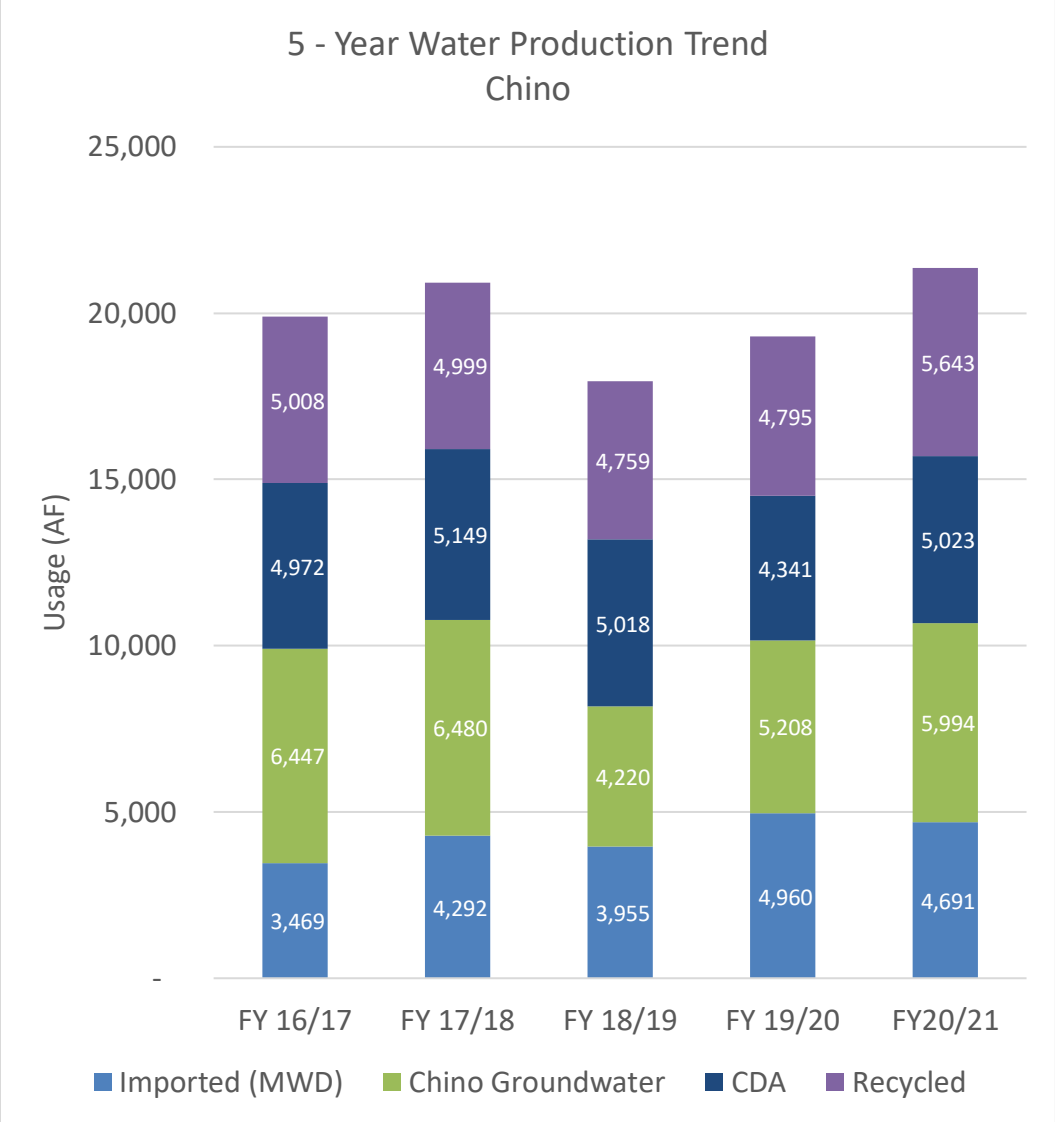
UWMP: Urban Water Management Plan

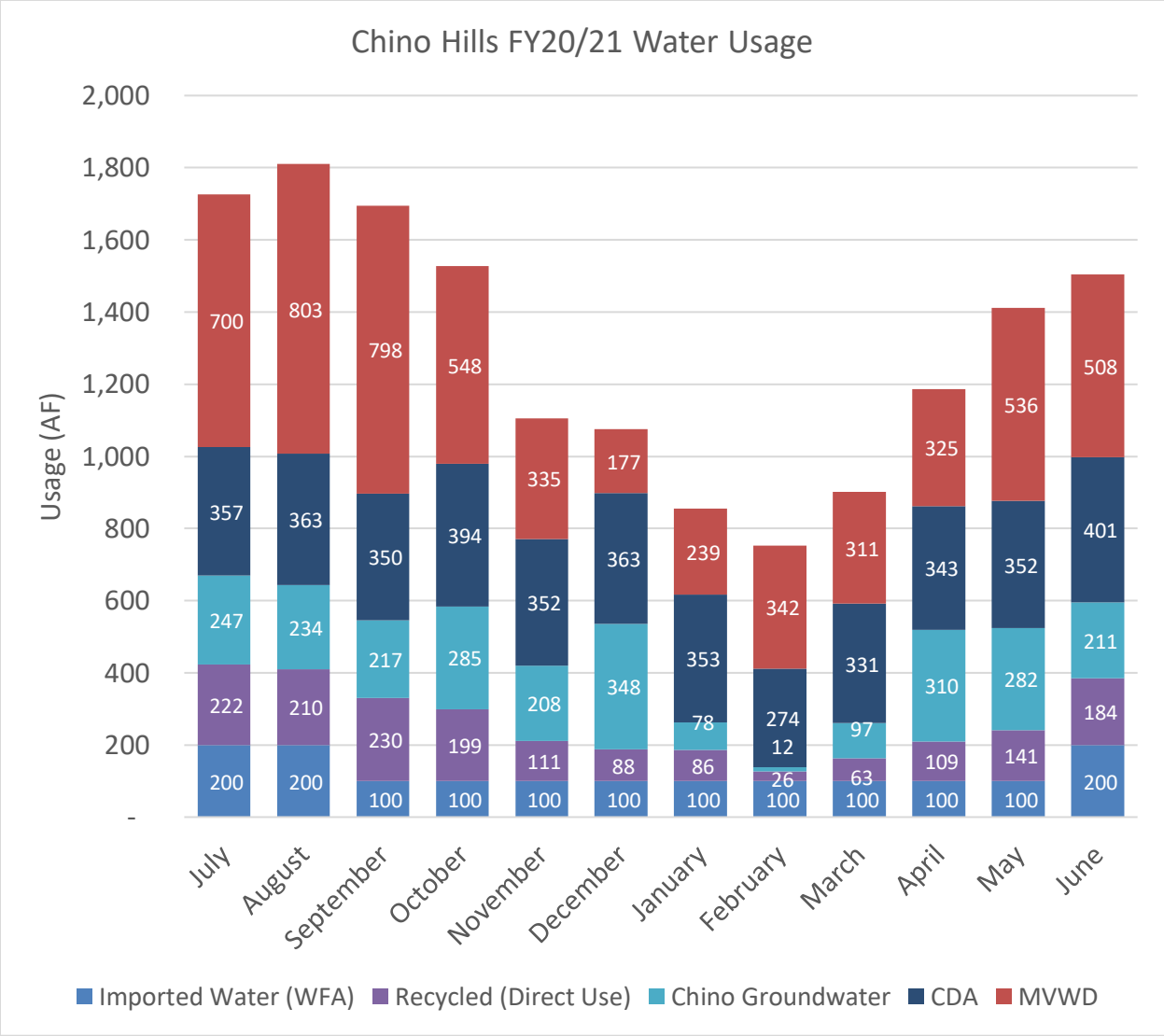
WVMWD: West Valley Municipal Water District

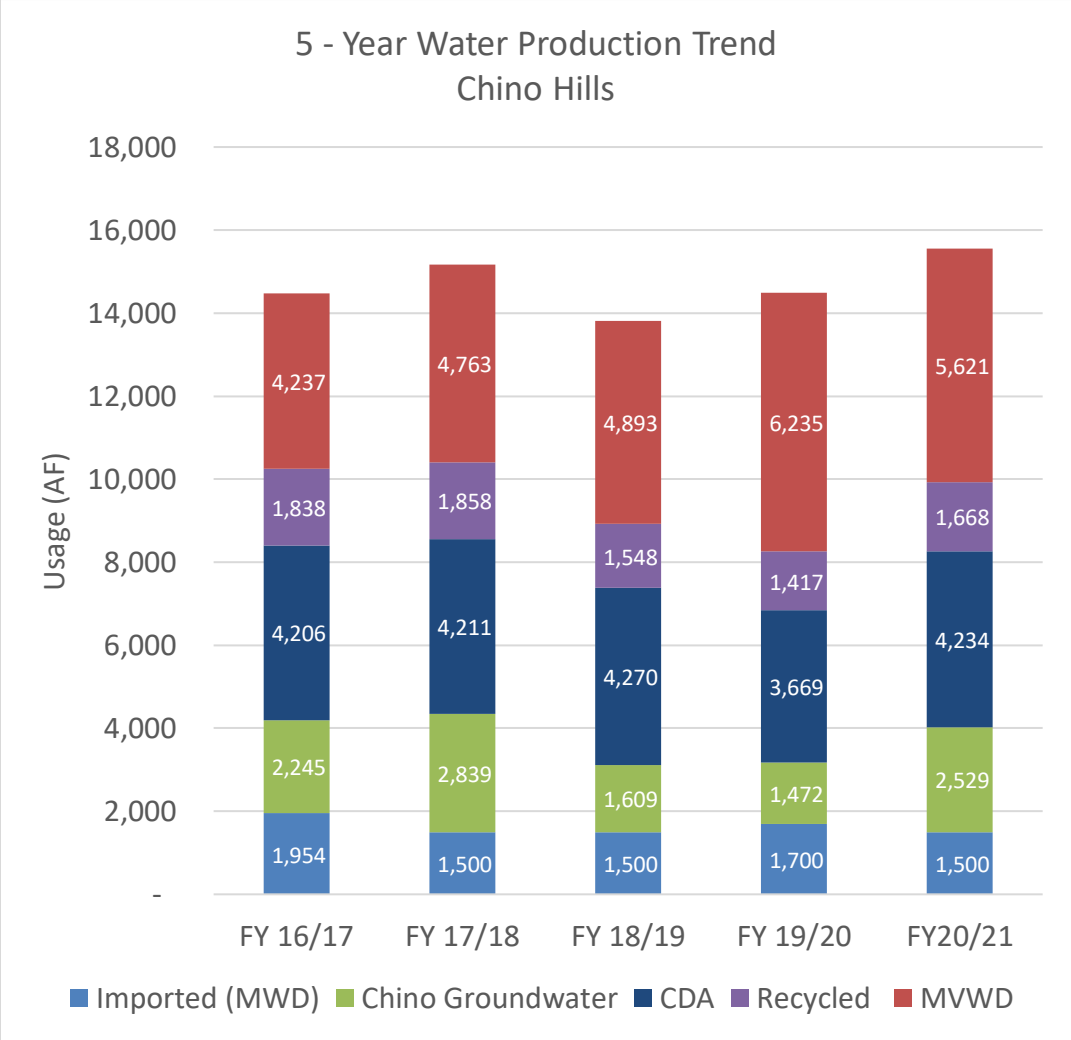
WWFMPU: 2015 Wastewater Facilities Master Plan Update

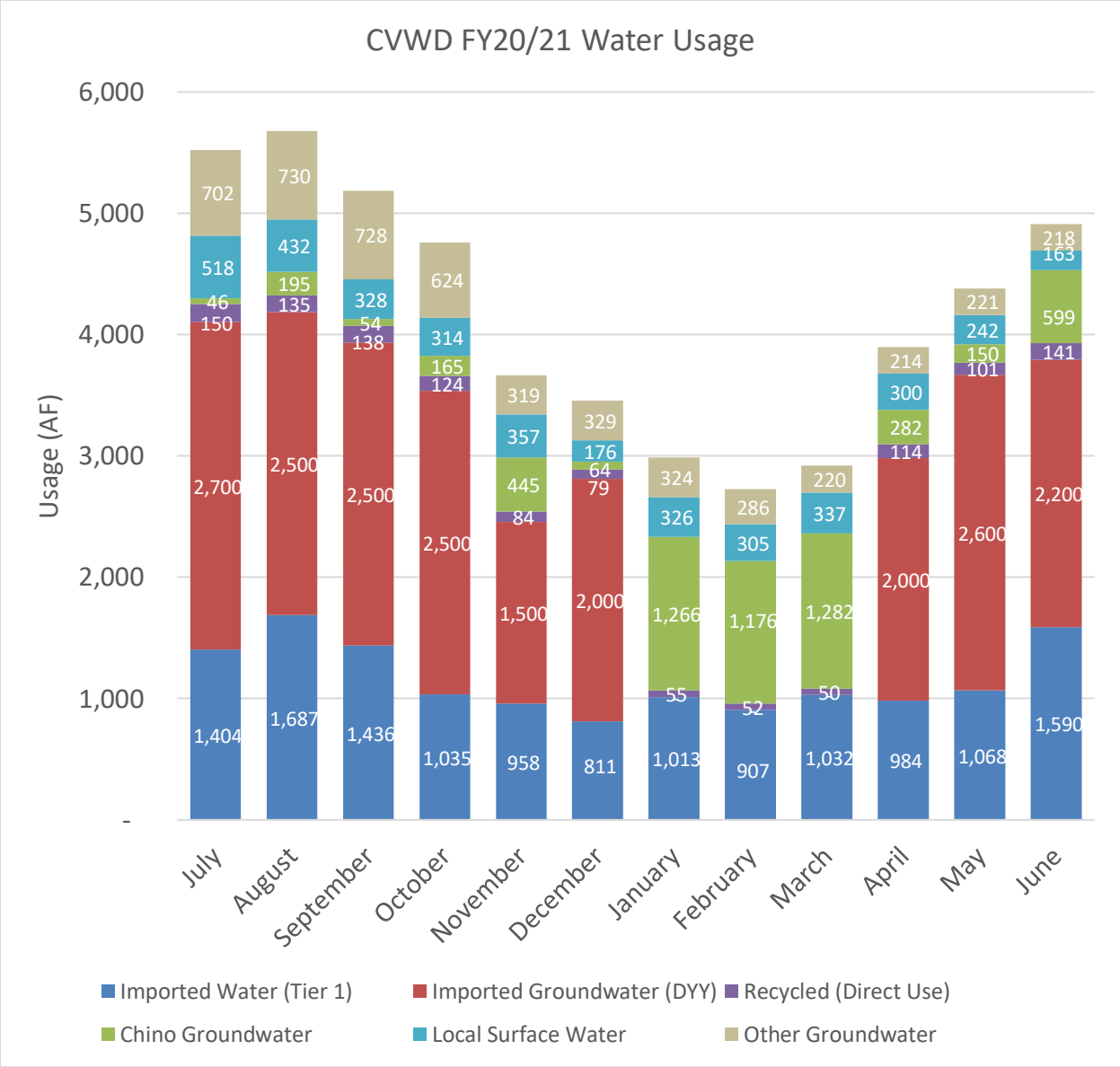
APPENDIX B: RETAIL AGENCY WATER USE CHARTS

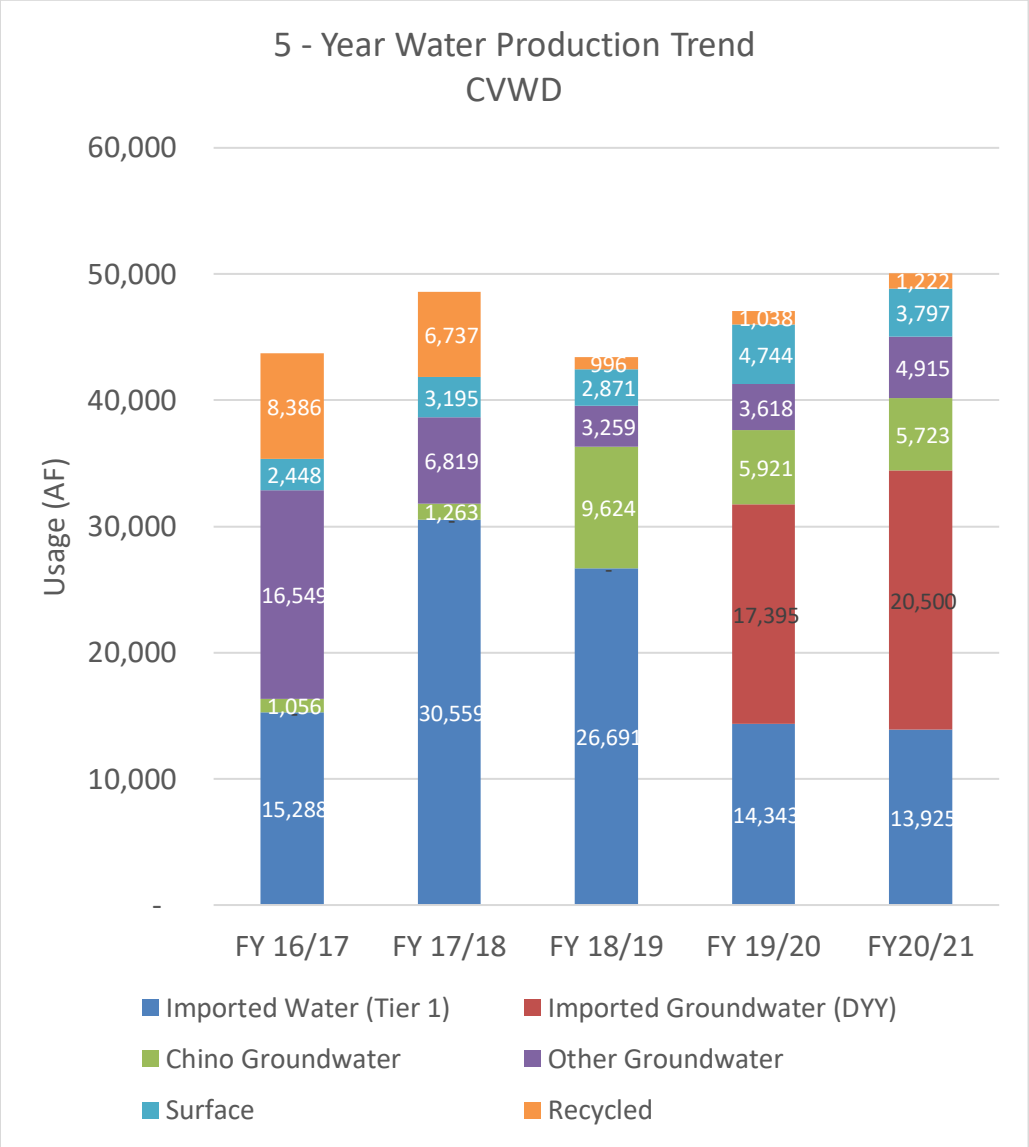

Chino FY20/21 Water Usage
Usage (AF)
3,000
2,500
2,000
1,500
1,000
500
-
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
541
670
653
427
564
1,018
644
434
506
782
616
419
388
581
667
445
376
293
435
423
191
294
451
390
255
186
373
420
215
190
386
326
255
174
336
429
304
388
435
447
606
562
412
430
490
505
586
431
Imported Water (MWD)
Recycled (Direct Use)
Chino Groundwater
CDA

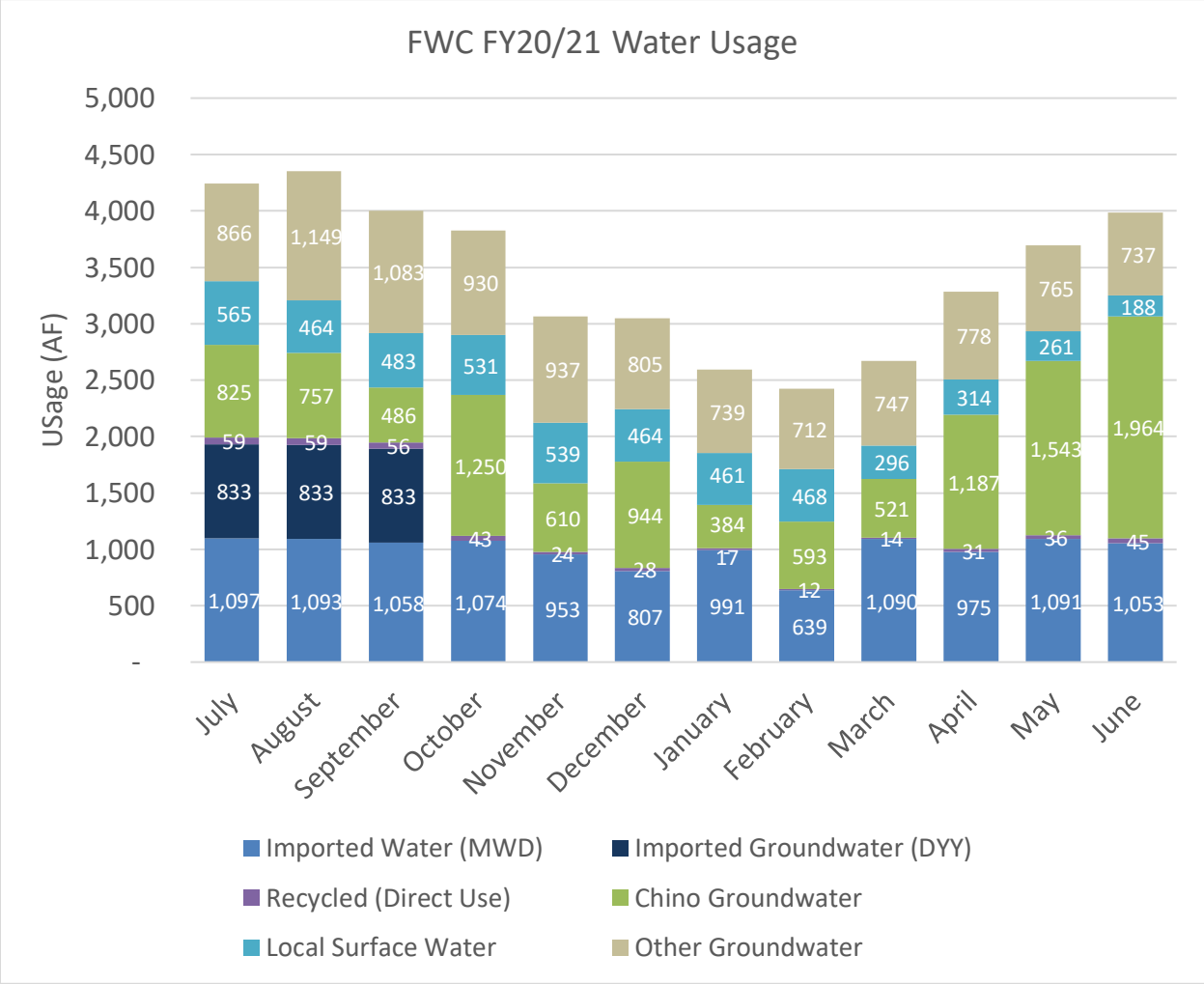

5 - Year Water Production Trend
Chino
25,000
20,000
15,000
10,000
5,000
-
Usage (AF)
5,008
4,999
4,759
4,795
5,643
4,972
5,149
5,018
4,341
5,023
6,447
6,480
4,220
5,208
5,994
3,469
4,292
3,955
4,960
4,691
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
Imported (MWD)
Chino Groundwater
CDA
Recycled

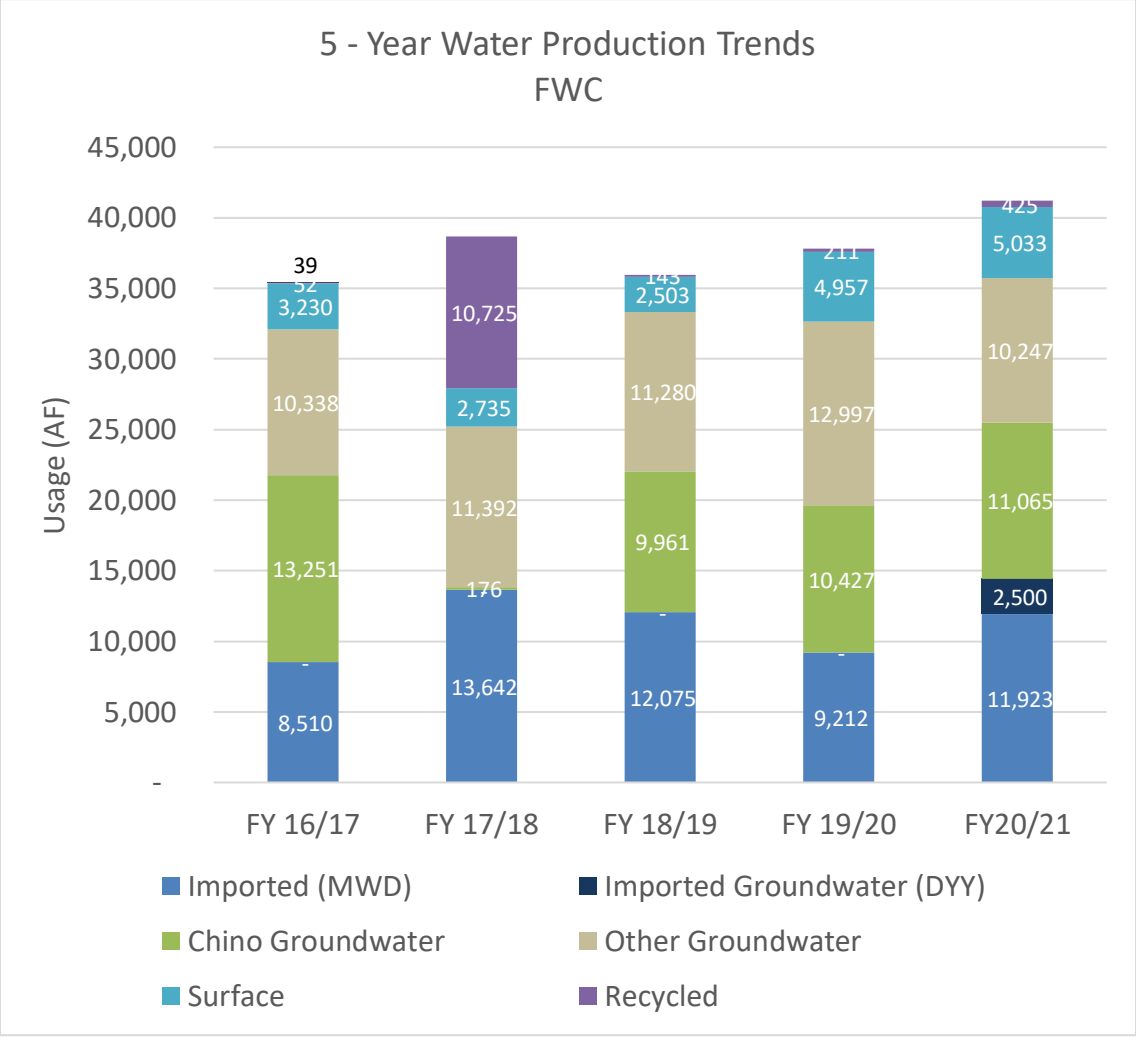

Chino Hills FY20/21 Water Usage
Usage (AF)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
-
July
August
September
October
November
December
January
February
March
April
May
June
700
803
798
548
335
177
239
342
311
325
536
508
357
363
350
394
352
363
353
274
331
343
352
401
247
234
217
285
208
348
78
12
97
310
282
211
222
210
230
199
111
88
86
26
63
109
141
184
200
200
100
100
100
100
100
100
100
100
100
200
Imported Water (WFA)
Recycled (Direct Use)
Chino Groundwater
CDA
MVWD

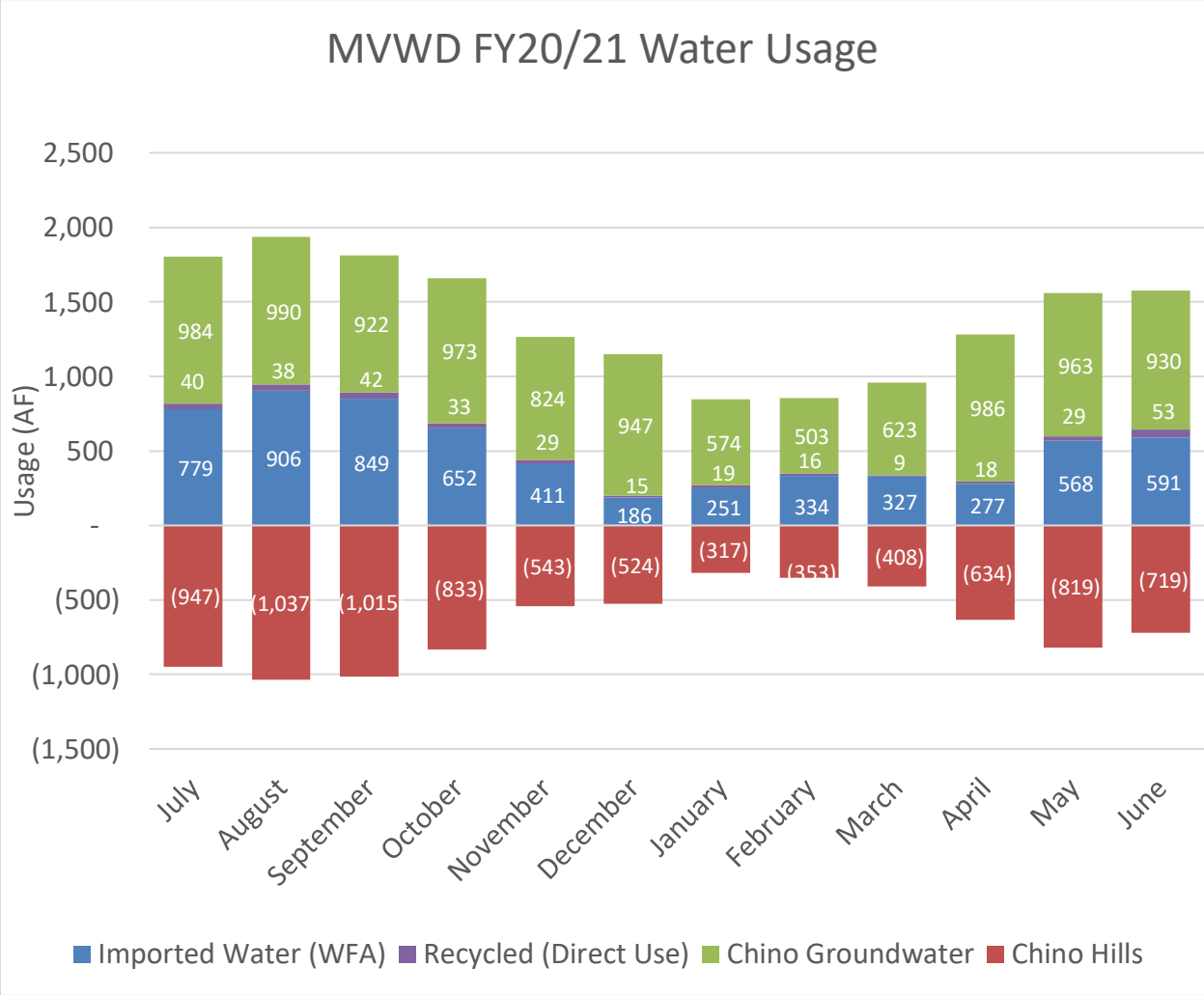

5 - Year Water Production Trend
Chino Hills
Usage (AF)
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
4,237
1,838
4,206
2,245
1,954
4,763
1,858
4,211
2,839
1,500
4,893
1,548
4,270
1,609
1,500
6,235
1,417
3,669
1,472
1,700
5,621
1,668
4,234
2,529
1,500
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
Imported (MWD)
Chino Groundwater
CDA
Recycled
MVWD

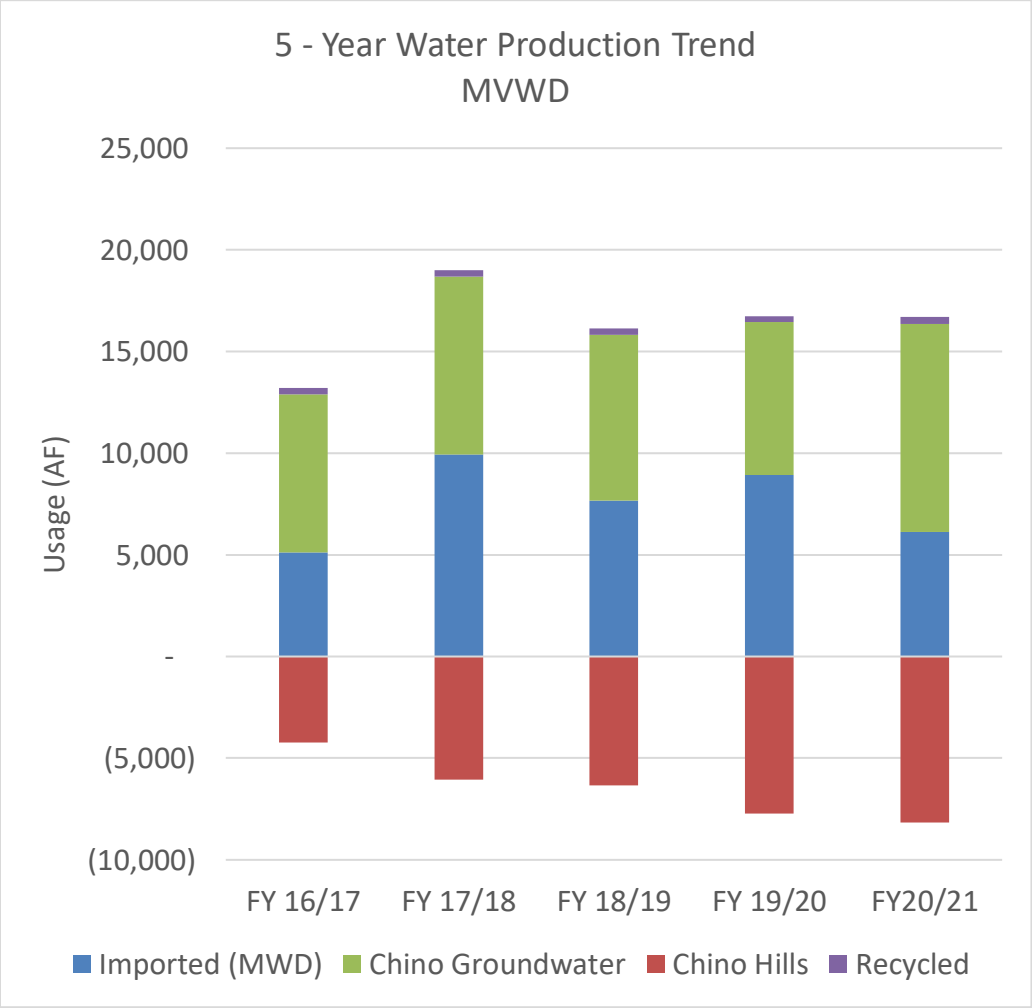

CVWD FY20/21 Water Usage
Usage (AF)
6,000
5,000
4,000
3,000
2,000
1,000
-
July
August
September
October
November
December
January
February
March
April
May
June
1,404
2,700
150
46
518
702
1,687
2,500
135
195
432
730
1,436
2,500
138
54
328
728
1,035
2,500
124
165
314
624
958
1,500
84
445
357
319
811
2,000
79
64
176
329
1,013
1,266
55
326
324
907
1,176
52
305
286
1,032
1,282
50
337
220
984
2,000
114
282
300
214
1,068
2,600
101
150
242
221
1,590
2,200
141
599
163
218
Imported Water (Tier 1)
Imported Groundwater (DYY)
Recycled (Direct Use)
Chino Groundwater
Local Surface Water
Other Groundwater

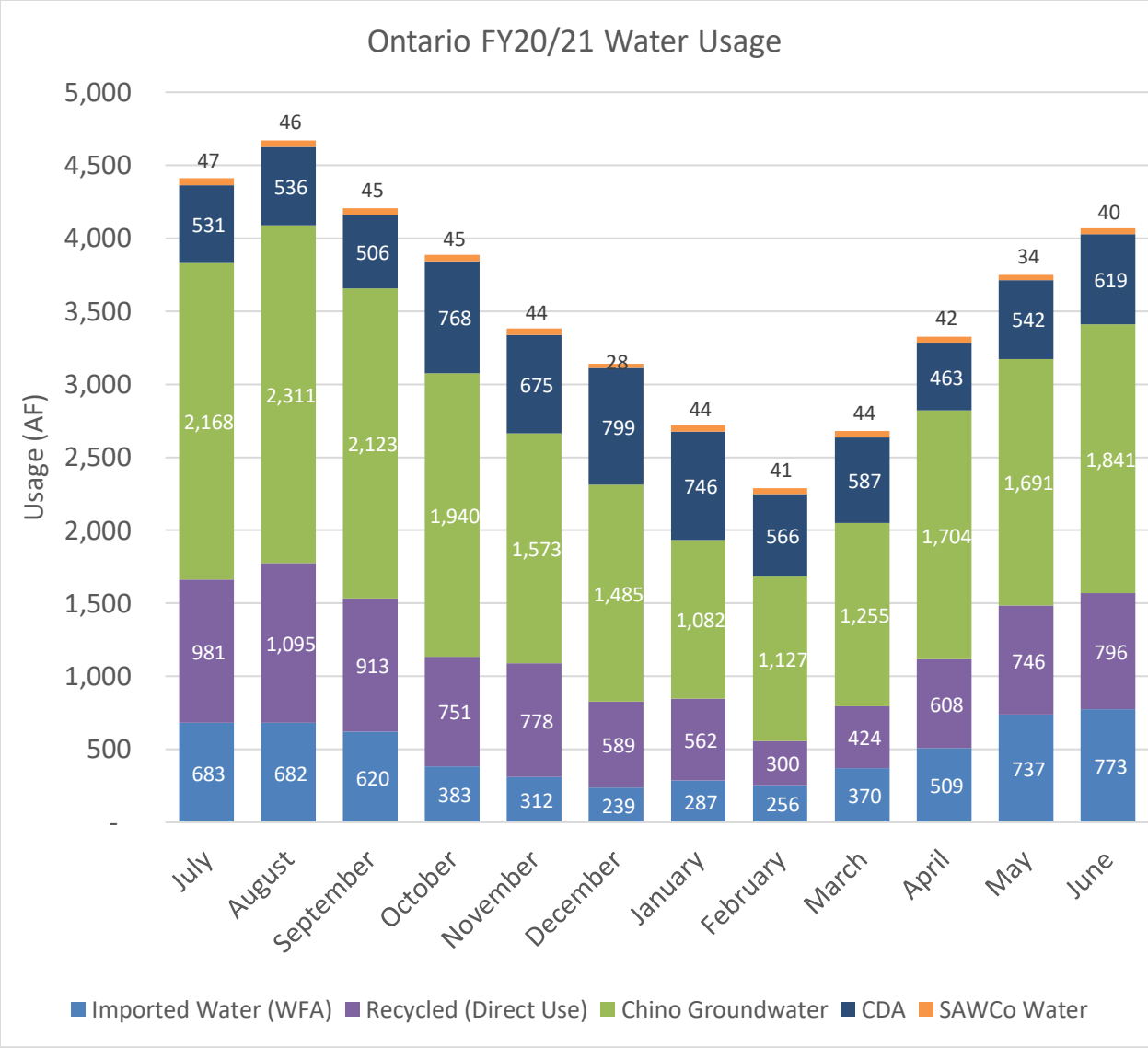

5 - Year Water Production Trend
CVWD
Usage (AF)
60,000
50,000
40,000
30,000
20,000
10,000
-
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
8,386
2,448
16,549
1,056
15,288
6,737
3,195
6,819
1,263
30,559
996
2,871
3,259
9,624
26,691
1,038
4,744
3,618
5,921
17,395
14,343
1,222
3,797
4,915
5,723
20,500
13,925
Imported Water (Tier 1)
Imported Groundwater (DYY)
Chino Groundwater
Other Groundwater
Surface
Recycled

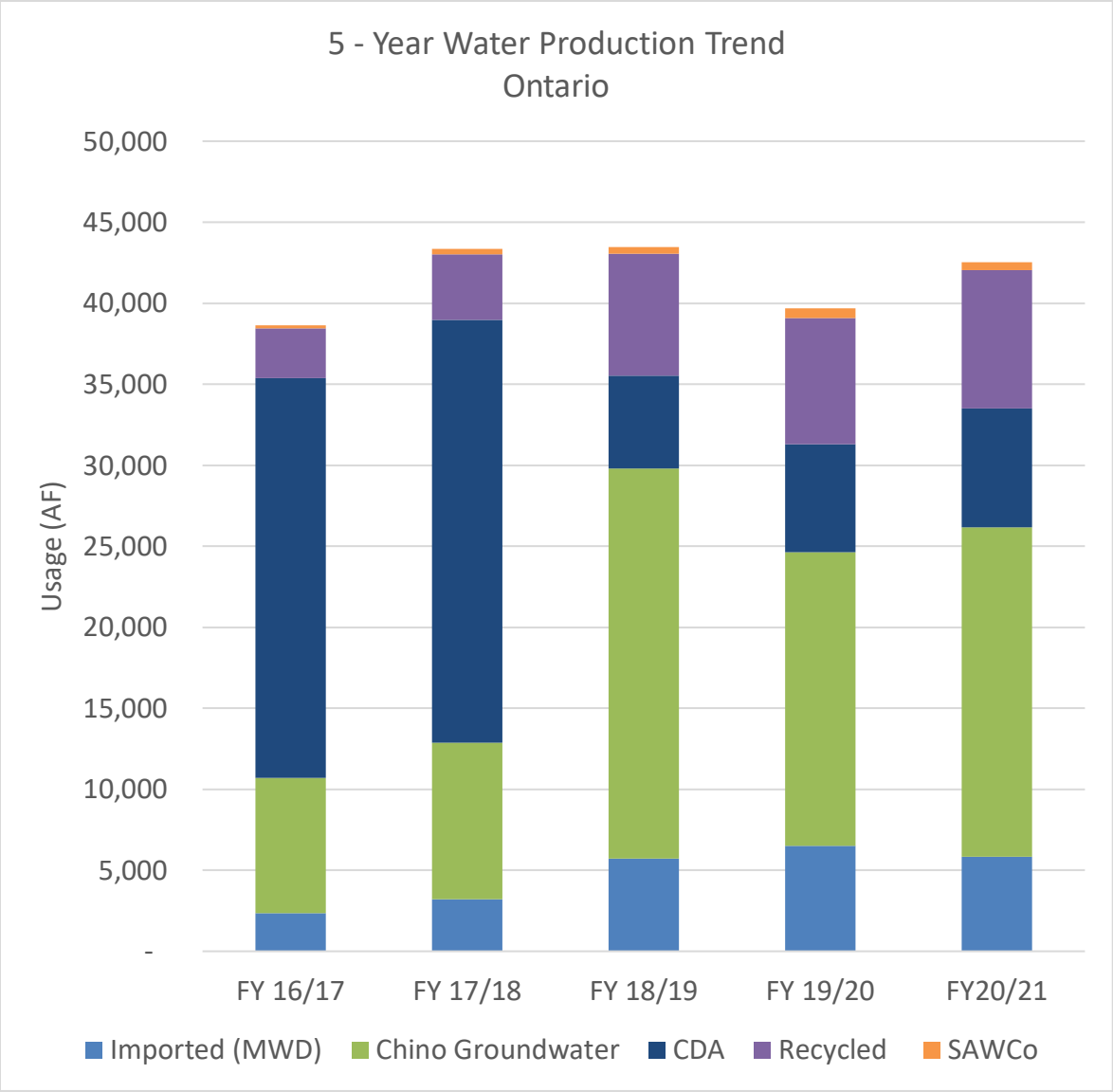

FWC FY20/21 Water Usage
USage (AF)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
-
July
August
September
October
November
December
January
February
March
April
May
June
866
565
825
59
833
1,097
1,149
464
757
59
833
1,093
1,083
483
486
56
833
1,058
930
531
1,250
43
1,074
937
539
610
24
953
805
464
944
28
807
739
461
384
17
991
712
468
593
12
639
747
296
521
14
1,090
778
314
1,187
31
975
765
261
1,543
36
1,091
737
188
1,964
45
1,053
Imported Water (MWD)
Imported Groundwater (DYY)
Recycled (Direct Use)
Chino Groundwater
Local Surface Water
Other Groundwater

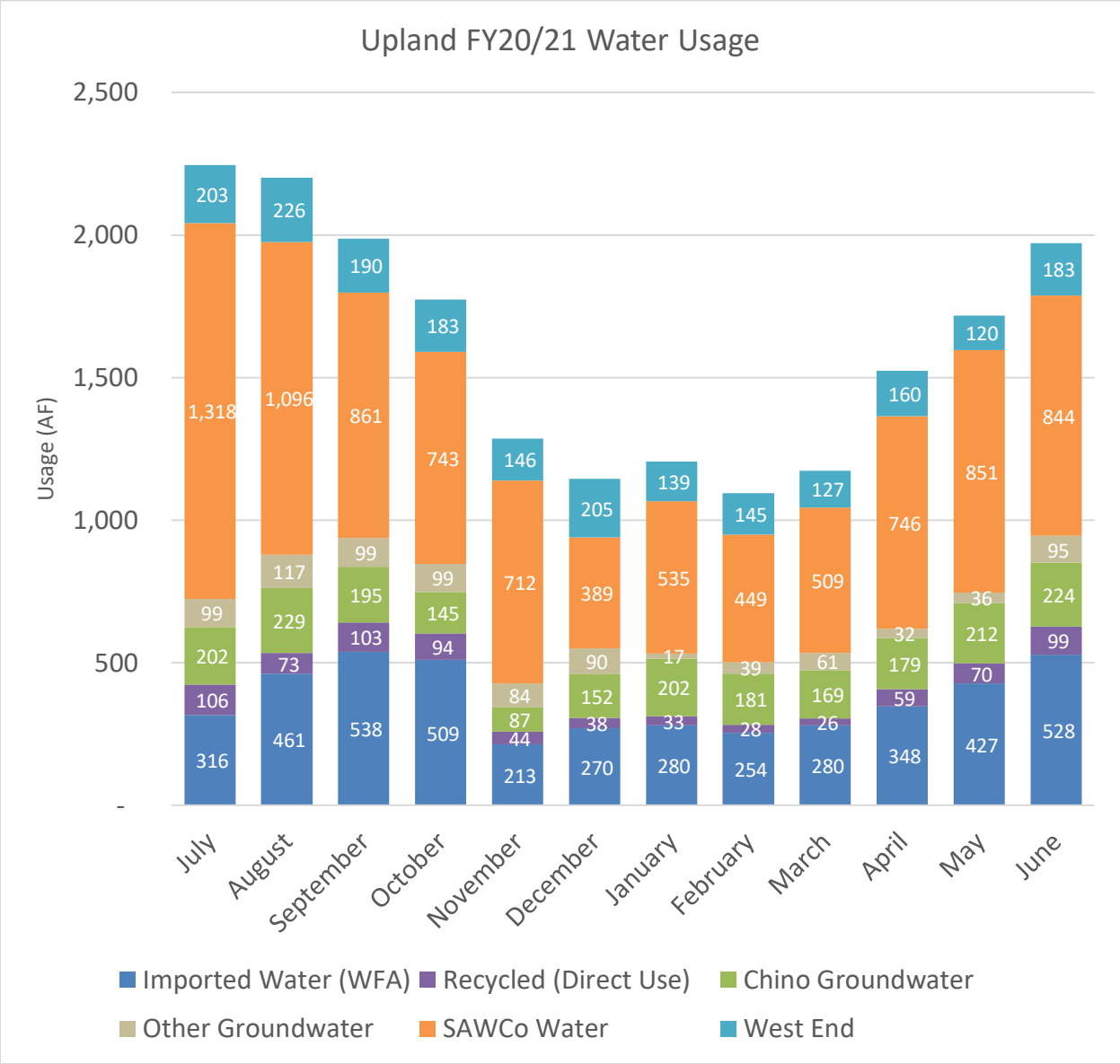

5 - Year Water Production Trends
FWC
Usage (AF)
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
39
3,230
10,338
13,251
8,510
10,725
2,735
11,392
176
13,642
2,503
11,280
9,961
12,075
4,957
12,997
10,427
9,212
5,033
10,247
11,065
2,500
11,923
Imported (MWD)
Imported Groundwater (DYY)
Chino Groundwater
Other Groundwater
Surface
Recycled

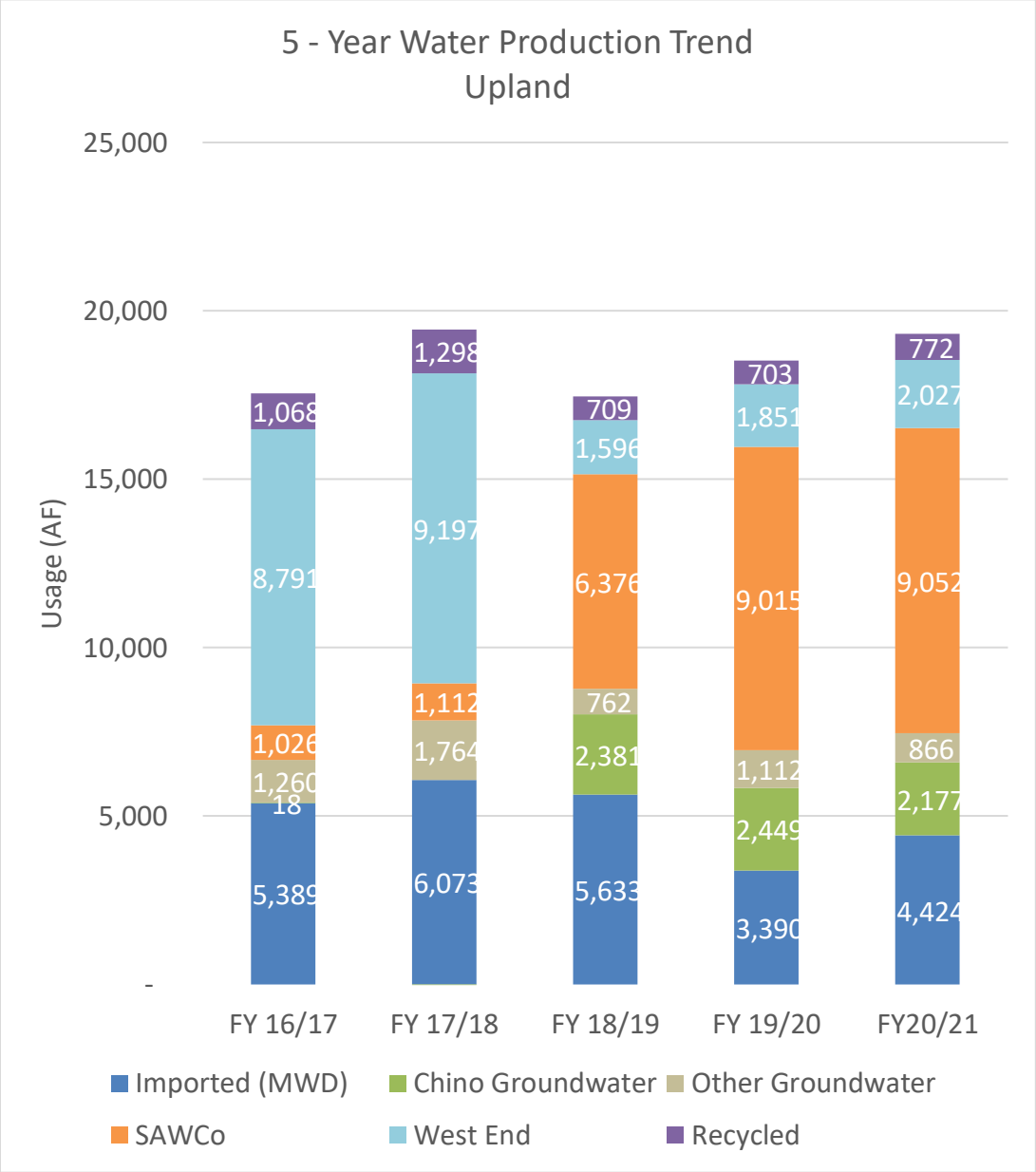

MVWD FY20/21 Water Usage
Usage (AF)
2,500
2,000
1,500
1,000
500
-
(500)
(1,000)
(1,500)
July
August
September
October
November
December
January
February
March
April
May
June
984
40
779
(947)
990
38
906
(1,037)
922
42
849
(1,015)
973
33
652
(833)
824
29
411
(543)
947
15
186
(524)
574
19
251
(317)
503
16
334
(353)
623
9
327
(408)
986
18
277
(634)
963
29
568
(819)
930
53
591
(719)
Imported Water (WFA)
Recycled (Direct Use)
Chino Groundwater
Chino Hills


5 - Year Water Production Trend
MVWD
25,000
20,000
15,000
10,000
5,000
-
(5,000)
(10,000)
Usage (AF)
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
Imported (MWD)
Chino Groundwater
Chino Hills
Recycled


Ontario FY20/21 Water Usage
Usage (AF)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
-
July
August
September
October
November
December
January
February
March
April
May
June
47
46
45
45
44
28
44
41
44
42
34
40
531
536
506
768
675
799
746
566
587
463
542
619
2,168
2,311
2,123
1,940
1,573
1,485
1,082
1,127
1,255
1,704
1,691
1,841
981
1,095
913
751
778
589
562
300
424
608
746
796
683
682
620
383
312
239
287
256
370
509
737
773
Imported Water (WFA)
Recycled (Direct Use)
Chino Groundwater
CDA
SAWCo Water


5 - Year Water Production Trend
Ontario
Usage (AF)
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
Imported (MWD)
Chino Groundwater
CDA
Recycled
SAWCo


Upland FY20/21 Water Usage
Usage (AF)
2,500
2,000
1,500
1,000
500
-
July
August
September
October
November
December
January
February
March
April
May
June
203
1,318
99
202
106
316
226
1,096
117
229
73
461
190
861
99
195
103
538
183
743
99
145
94
509
146
712
84
87
44
213
205
389
90
152
38
270
139
535
17
202
33
280
145
449
39
181
28
254
127
509
61
169
26
280
160
746
32
179
59
348
120
851
36
212
70
427
183
844
95
224
99
528
Imported Water (WFA)
Recycled (Direct Use)
Chino Groundwater
Other Groundwater
SAWCo Water
West End


5 - Year Water Production Trend
Upland
25,000
20,000
15,000
10,000
5,000
-
Usage (AF)
1,068
8,791
1,026
1,260
18
5,389
1,298
9,197
1,112
1,764
6,073
709
1,596
6,376
762
2,381
5,633
703
1,851
9,015
1,112
2,449
3,390
772
2,027
9,052
866
2,177
4,424
FY 16/17
FY 17/18
FY 18/19
FY 19/20
FY20/21
Imported (MWD)
Chino Groundwater
Other Groundwater
SAWCo
West End
Recycled

IEUA
Energy Report

FISCAL YEAR 2020/21

Strategic Planning and Resources

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

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IEUA Energy Portfolio

Executive Summary

The 2020/21 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.

IEUA's energy portfolio included:

- Imported Electricity
- Solar Energy
- Wind Power
- Battery Storage
- Biogas
- Natural gas

2020/21 IEUA's energy use

- Total Electricity consumption: 81,119 MWh of electricity
- Renewable Energy: 8,096 MWh (10% of total electricity)
- Annual energy expenses: $9.7 million [imported electricity, renewable energy, natural gas, and energy management services]
- Renewable energy savings since 2008: $1,143,000.

Did you know?

*In 2019 a typical U.S. household used 11,880 kWh**

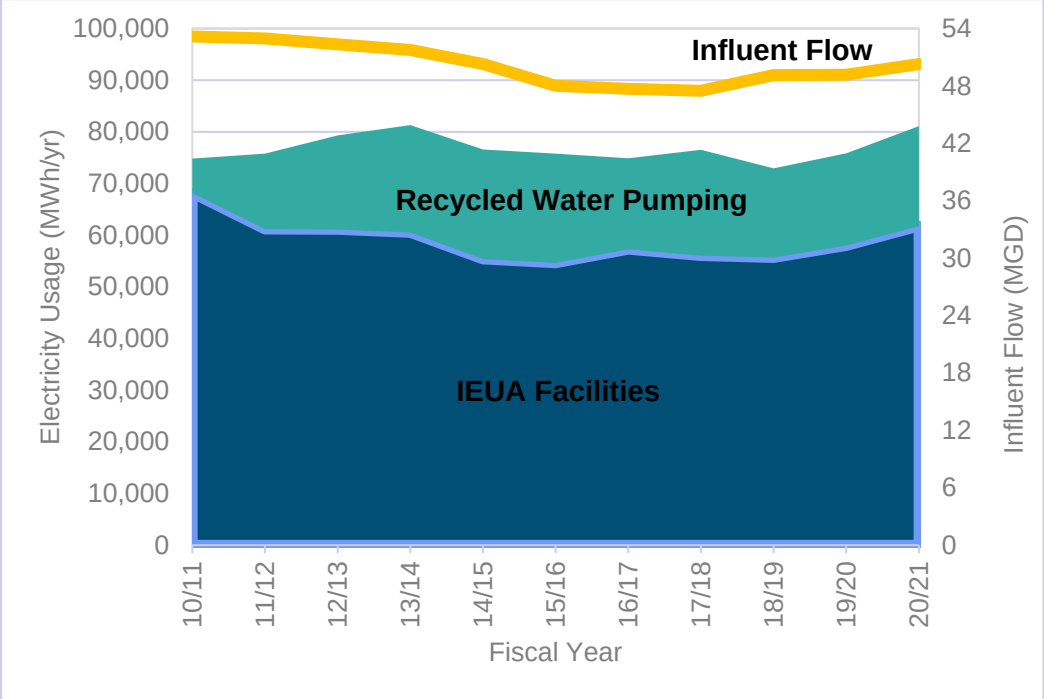
The renewable energy generated by IEUA would be able to provide electricity to at least 682 homes.

Source: U.S. Energy Information Administration

Flow and Energy Consumption

- In 2020/21, the annual average influent flow to the regional water recycling plants was 50.3 MGD which was an increase of 2.3% as compared to the previous fiscal year of 49.2 MGD (Figure 1).
- In 2020/21, IEUA facilities, which include the regional water recycling plants, composting facility, and recycled water pumping, used approximately 81,119 MWh of electricity (Figure 1). The electricity consumption for 2020/21 increased by 7.2% as compared to the previous fiscal year of 75,703 MWh. This was due to the increased recycled water pumping and groundwater recharge activity.

Figure 1: IEUA Electricity Use and Regional Influent Flows



Expenditure

- The cost of electricity remains the highest non-labor operations and maintenance (O&M) expenditure for IEUA. In 2020/21, the annual cost for energy related utilities and energy management was $9.7 million compared to the previous fiscal year of $7.6 million due to more power consumption, Southern California Edison (SCE) rates increase, and rising energy costs in California. 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, that continues to provide rate stabilization and cost effectiveness.

Renewable Energy Production and Storage

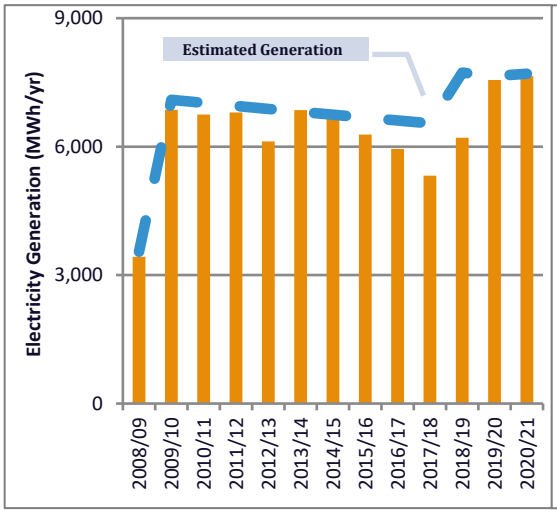
- IEUA's diverse renewable portfolio consists of 5.0 MW solar, 1.0 MW of wind, 3.0 MW of engines, and 4.0 MW battery (Figure 2). The battery storage optimizes energy management by charging from the grid during off-peak periods and discharging during on-peak periods, therefore it is not considered as 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 Renewable Energy Efficiency Project (REEP) engines operating as part of the RP-5 Expansion project.

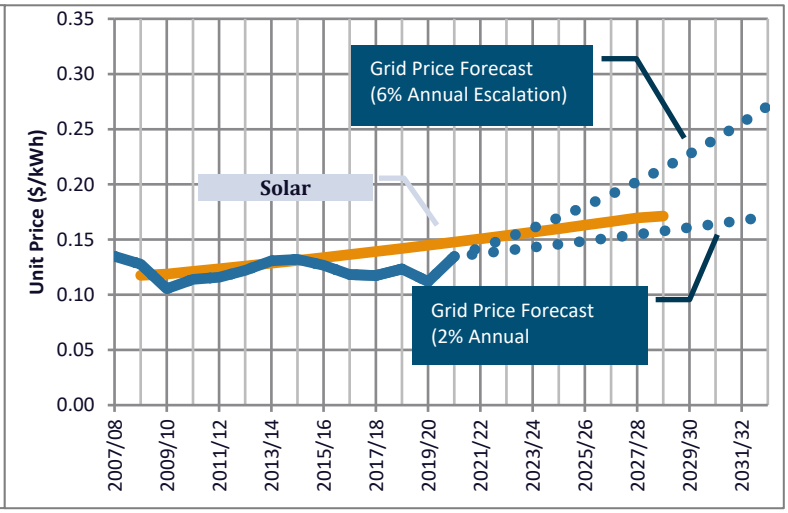
Figure 2: IEUA's Diverse Renewable Portfolio

- In 2020/21, 8,096 MWh of electricity was generated onsite, 2.9% more than 2019/20. The increase is due to the 70 kw of rooftop solar on the RP-5 lab operating for a full year and increase in the wind turbine energy production.
- IEUA's renewable portfolio generated 10% of the electricity used in 2020/21. Of the electricity consumed by IEUA;
    - 7,645 MWh was produced by the solar across IEUA facilities; and
    - 451 MWh was produced by the wind turbine at RP-4.

- Despite PPA average rates being typically higher than the average grid price in 2020/21, renewable energy projects provided overall $99,000 in savings, as a result of lower standby charges compared to the facility demand charge rate.
- 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.
- The REEP engine has been offline since August 2017, operation is expected to restart the engine 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, and the RP-4 and IERCF battery storage and solar system began commercial operation in March 2019. All facilities have completed their second year of operation. As of April 2020, the battery systems are now being operated and maintained by Enel X.

Solar across IEUA facilities generated 7,645 MWh of renewable energy, **1.2% more than 2019/20.** The slight increase in output was due to the IEUA-owned 70 kw of rooftop solar on the RP-5 lab operating for a full year.





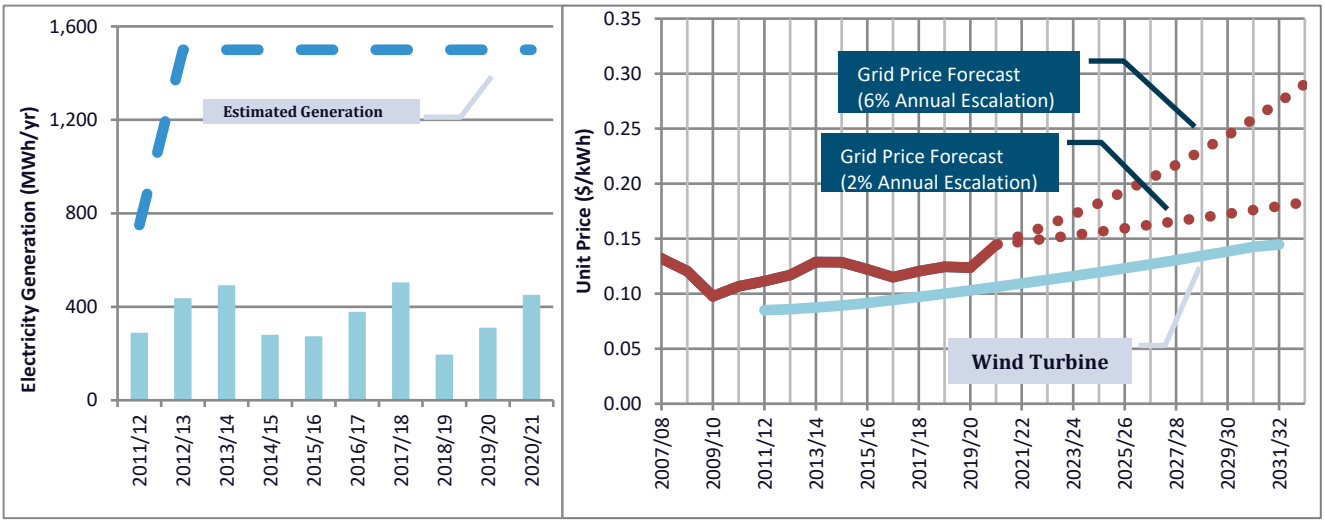
For 2020/21, the SunPower PPA rate or the solar was higher than the average grid price. However, the solar projects provided approximately $82,000 in savings, as a result of lower standby charges compared to the facility demand charge rate. The current SunPower PPA will expire in 2029. Staff will negotiate with the provider to extend the contract or purchase the solar, if cost-effective for the Agency.

Solar generated an overall savings of $332,000 from 2008/09 to 2020/21

Table 1: Savings from Solar Power PPA

Savings FY 08/09 – FY 20/21	$332,000
Range of Savings PPA Term (FY 08/09 – FY 28/29)	$721,000 (2% Esc) $1,815,000 (6% Esc)

Wind turbine at RP-4 generated 451 MWh of renewable energy, **45% higher than 2019/20** due to the system being online during the entire fiscal year. For 2020/21, the PPA rate for the wind turbine was 20% lower than the average grid price. The wind turbine provided approximately $17,000 in savings.

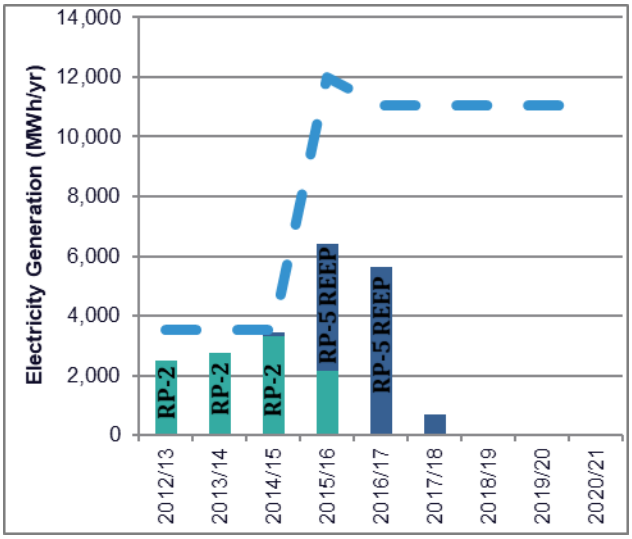


Wind generated $101,000 in savings from 2011/12 to 2020/21.

Table 2: Savings from Wind Power

Savings FY 11/12 – FY 20/21	$101,000
Range of Savings PPA Term (FY 11/12 – FY 31/32)	$243,000 (2% Esc) $422,000 (6% Esc)

Renewable energy was not generated by the REEP engines since the RP-5 Solids Handling Facility was not operational 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.



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 second year of commercial operation, **RP-1, RP-5, and CCWRF experienced a combined average demand reduction of 509 kW** during on-peak hours with a total bill savings of $99,000. While the system at **IERCF and RP-4 achieved an average demand reduction of 483 kW during on-peak hours and solar generation of 2,165 MWh** with a total bill savings of $255,000 in the second term year. Since the minimum guaranteed savings per the contracts were not met, the battery system owners reconciled the remainder of the expected savings to the Agency.

The battery storage systems incurred an $354,000 in savings during year 2 of operation.

Energy Efficiency Projects

- IEUA continues to work with Southern California Edison 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 20/21, the following process optimization project was completed:
  - RP-1 1158 Recycled Water Pump Station Upgrade
    - Completed: September 2020
    - Expected annual savings: 927,000 kWh and $116,000
    - Incentive: $86,000
      Avoided power usage: 81 kW
- Since the start of the partnership in 2015, the Agency's implementation of energy efficiency projects has accumulated:
    - Expected annual savings: 5,236,000 kWh and $615,000
    - Incentive: $491,000
    - Avoided power usage: 474 kW

Other Projects

RP-1 SCE Primary Metering Cabinet Replacement

- In April 2021, SCE with the support of IEUA staff replaced the primary metering cabinet at RP-1 to improve safety and reliability.

RP-5 Solids Handling Facility (SHF) Feasibility Study

- IEUA conducted a business case study to evaluate future uses of the RP-5 SHF, developing the following project alternatives:
    - Status quo – Idle assets and land
    - Lease for organics processing
    - Sell for organics processing
    - Lease as logistics hub
    - Sell as logistics hub
- The study concluded that the preferred alternative at this time is the Status Quo because of the benefits of using the facility as a construction staging site and contractor parking area for the RP-5 Expansion Project, and the costs associated with moving the RP-5 expansion contractor elsewhere.

Upcoming Projects

Aeration Blower Replacement

- These projects will replace the existing aeration blowers with energy efficient blowers at RP-4 and CCWRF, which are expected to be completed in February 2022 and November 2023, respectively. In total, both projects are expected to save the Agency an estimated 1,900 MWh/year or $232,000/year.

CCWRF Odor Control Equipment Replacement

- The CCWRF Improvements project will replace the existing odor control system with biotrickling filters by November 2023. In addition to continuing to address plant odor, the measure will also provide energy savings of about 247 MWh/year or $31,000/year.

Process Optimization

- Automated ammonia controls will be installed at RP-4 and CCWRF by June 2022 and November 2023, respectively. The ammonia controls will optimize operation and reduce power consumption of the aeration blowers. These projects would result in an estimated savings of 570 MWh/year or $71,000/year.

SCE Charge Ready 2 Program

- Through the Charge Ready 2 program, SCE will design, construct, and install electric vehicle (EV) charging infrastructure. The customer is only required to purchase and install the EV chargers. IEUA has submitted applications for charging infrastructure across 4 facilities.

Beneficial Use of Biogas

- IEUA evaluated opportunities to beneficially use the biogas generated at RP-1 in addition to onsite use for digesters heating. Staff plans on updating the study to consider new technologies, and incorporate recent changes in funding, capital and energy costs.

Other Energy Related Activities

Isle Energy Management & Optimization Partnership

- IEUA has partnered with Isle Utilities along with several agencies nationwide to discuss the challenges and successes of implementing energy optimization projects. Isle will invite vendors who will propose successful technologies and practices to reduce and optimize energy usage and onsite renewable generation.

Statewide Grid Emergency

- In August and September 2020, the State of California experienced extreme heat waves resulting in investor-owned utilities requesting their customers to reduce their load during peak hours to avoid rotating power outages. IEUA responded by shifting 2 MW of load and the battery storage discharged 1 MW to lessen the strain on the grid. Due to the likelihood of future extreme heat events occurring, the California Public Utilities Commission (CPUC) created the Enhanced Statewide Emergency Load Reduction Program, which is a demand response program that compensates customers for reducing loads during these events. IEUA explored the viability of participating in the program. Since IEUA is currently enrolled in other demand response programs with the battery storage systems, the Agency is not eligible for dual participation.

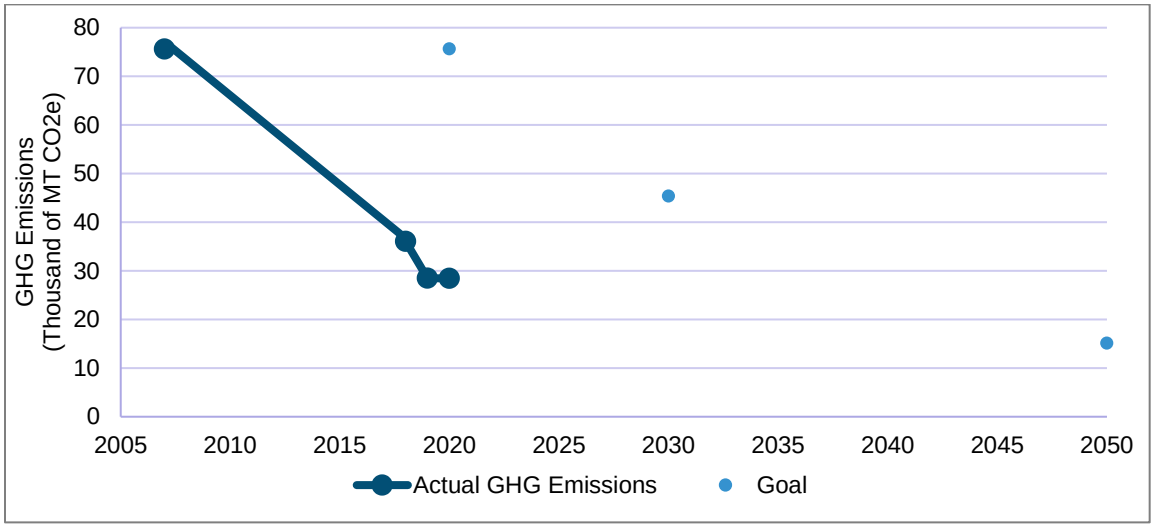
SCE Rate Increases

- During the FY 2020/21, SCE increased their rates by an estimated 20% based on facility billing. In mid-August 2021, the California Public Utilities Commission approved an additional 8% increase in rates that is expected to be implanted in Fall 2021. Staff is working with SCE to validate the billing accuracy and will continue to collaborate with the utility to enroll in the most cost-effective available rate.

Climate Change Action Plan

- In 2018, IEUA staff developed a Climate Change Action Plan that described the vision and direction needed to bolster IEUA's water management system and minimize its carbon footprint. IEUA is following AB 32 standards using the oldest emission baseline data available to reduce GHG levels to 2007 levels by 2020, 40 percent below 2007 levels by 2030, and 80 percent below 2007 levels by 2050. 2020 greenhouse gas emissions (GHG) were similar to 2019, which is 62% below the 2007 baseline levels.

Figure 3: Greenhouse Gas Emissions Actuals and Goals



- IEUA is planning to implement capital projects and will continue to optimize operations and maintenance activities to allow the Agency to continue to prepare its system for the effects of climate change by focusing on increasing the use of zero-carbon energy sources and reducing energy consumption. The majority of the projects being explored fall into four categories, solar, hydropower, biogas (renewable methane), and energy efficiency. The current list of projects being explored by IEUA, are in varying degrees of planning and review with some being feasible for pre-design as soon as 2022 while others are 10 or more years out.

- Potential projects
    - Solar: favorable outlook for the carport solar because of the forecasted SCE rate increase and higher facility load.
    - Hydropower: a feasibility study conducted in FY 19/20 at two proposed locations deemed the project to be not feasible. Staff will re-evaluate in the future.
    - Biogas: staff will update the RP-1 Beneficial Use of Biogas Feasibility Study to evaluate cost effective alternative consistent with the Agency's Business Goals.
    - Energy efficiency: multiple ongoing expected to be completed by 2023, RP-4 blowers and ammonia controls expected to be online in 2022.

INFORMATION ITEM 3C

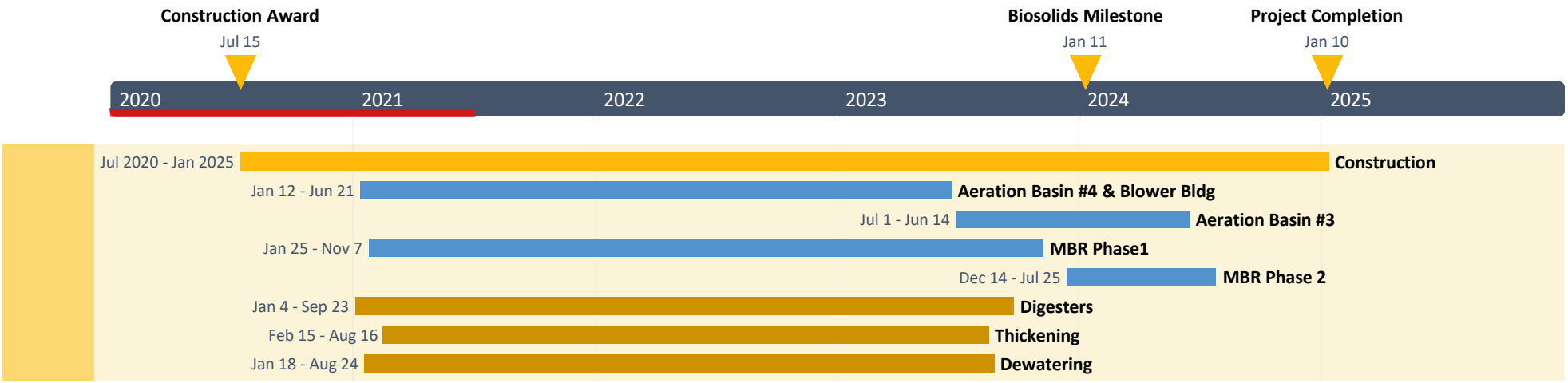
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

RP-5 Expansion Project Update:
October 2021
Project Nos. EN19001 and EN19006

Brian Wilson, P.E.
Senior Engineer
October 2021

RP-5: Project Status

Day 442 of 1640 = 27%



Role	Firm	Contract	This Month's Payment	Total Paid	% Complete
Contractor	WM Lyles	$ 331,753,496	$5,036,266	$79,719,884	24%
Designer	Parsons	$ 33,670,711	$300,235	$27,579,705	82%
Construction Management	Arcadis	$ 21,125,523	$433,506	$4,195,961	20%

Data date: 9/31/2021

RP-5: Project Status Changes

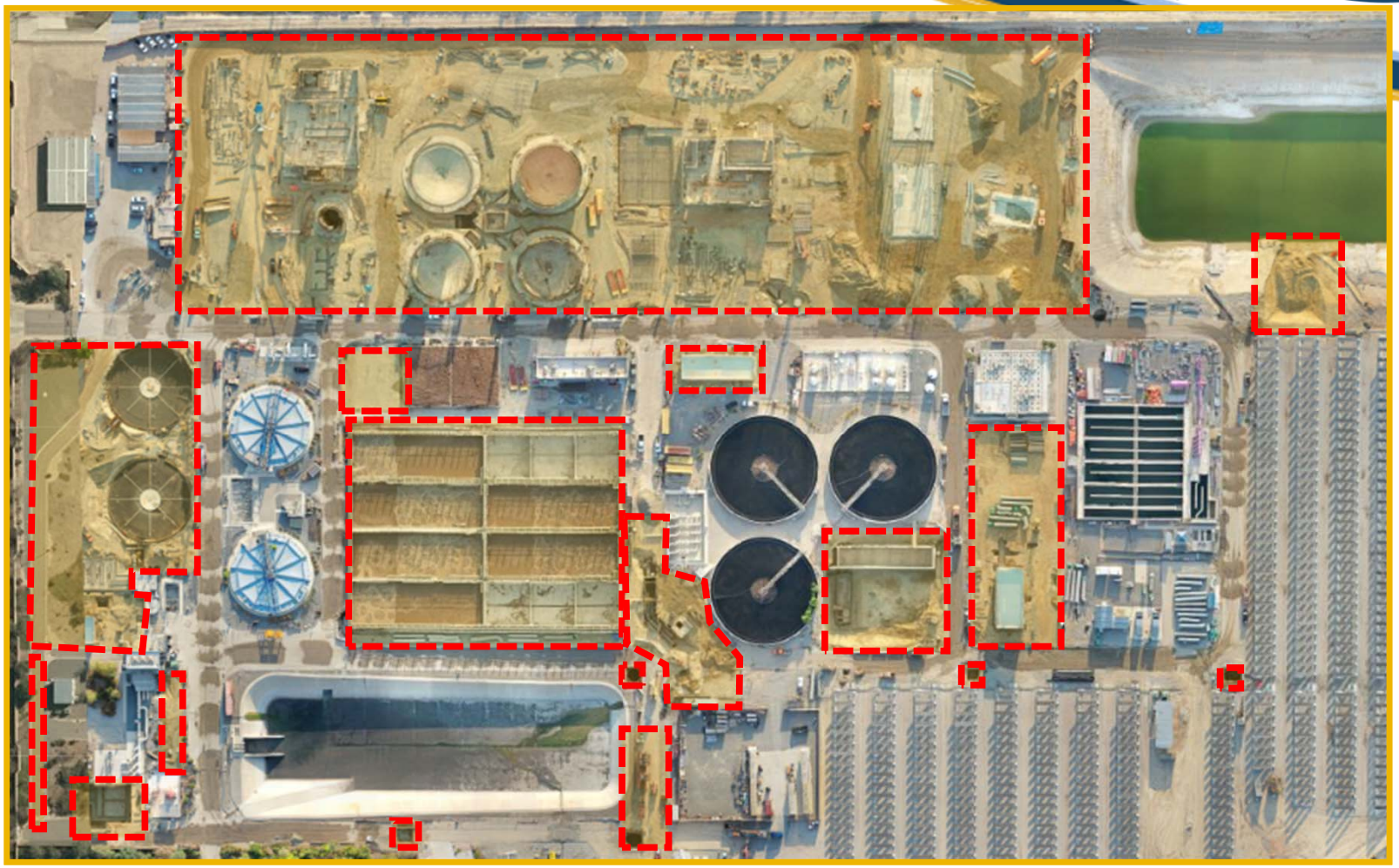
	Amount	Quantity
Original Contact	$329,982,900	
CO	$ 1,770,596	56
RFD	$ 2,847,141	124
Changes Total (CO+RFD)	**$4,617,707**	**180**
% Change of Contract	1.3%	
% of Contingency	13.9%	

RP-5: Major Activity Areas

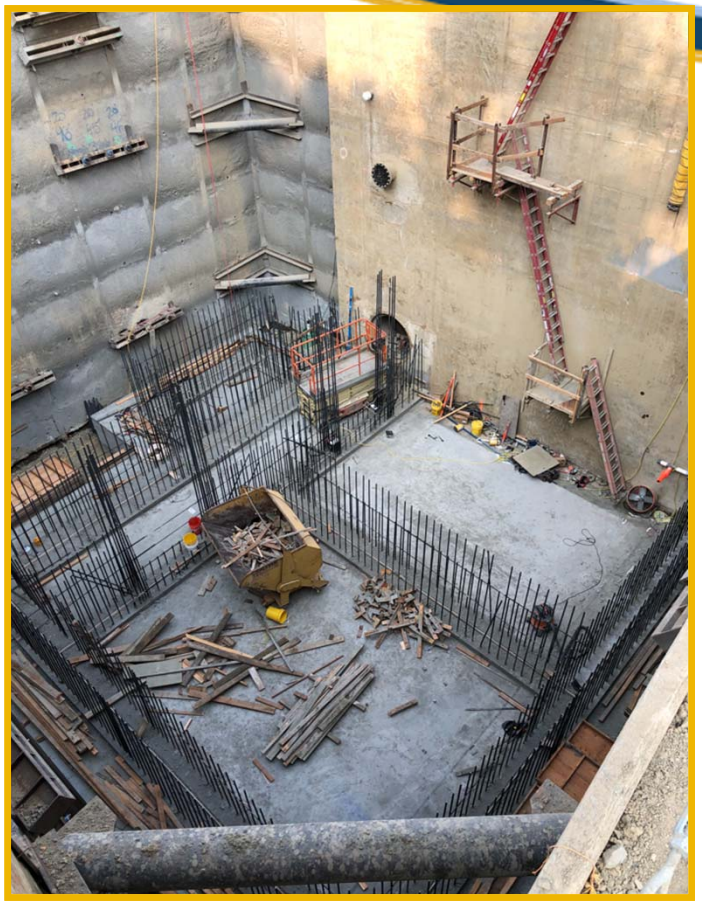
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Construction Staff

- **WML Craft: 156**
- **WML Project: 31**
- **IEUA & CM: 15**
- **Total: 202**



RP-5: Major Activities



Influent Pump Station

RP-5: Major Activities

Primary Clarifiers

RP-5: Major Activities

Aeration Basins

RP-5: Major Activities

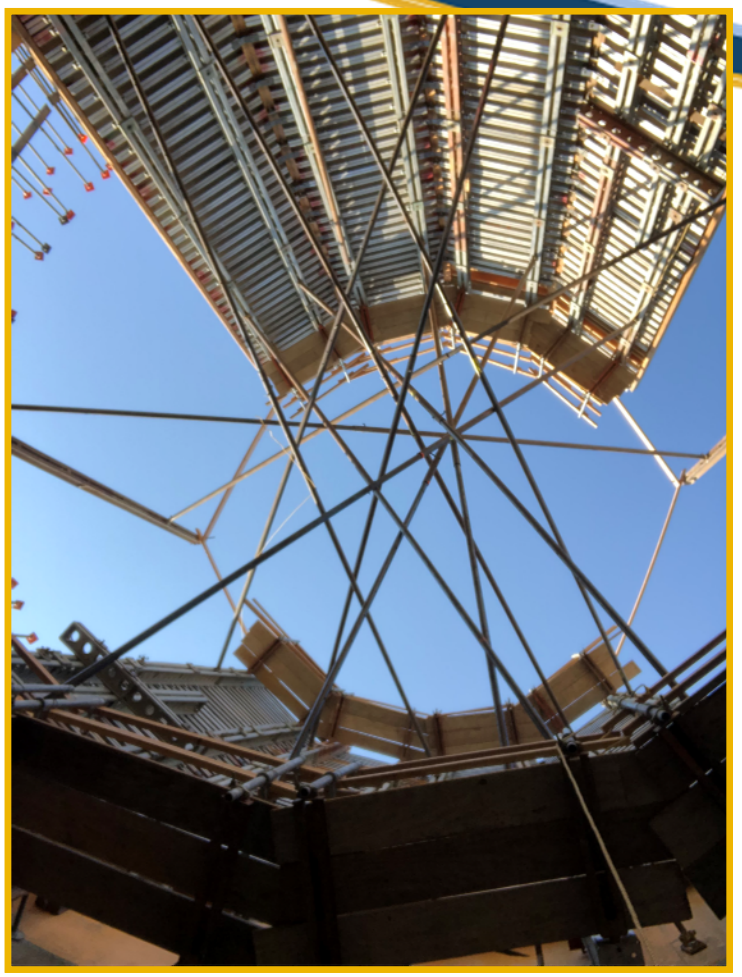
Piping From AB to MBR

MBR Phase 1

RP-5: Major Activities

Acid Phase Digester Thickening Building Gas Phase Digesters

RP-5: Major Activities



Acid Phase Digester – 2nd Lift of Walls

RP-5: Major Activities

Acid Phase Digester

Thickening Building

RP-5: Major Activities

Gas Phase Digesters

RP-5: Major Activities

Dewatering Building Warehouses Blower Building 2

RP-5: Major Activities

Dewatering Building

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Questions?

INFORMATION ITEM 3D

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Date: October 20, 2021

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

Committee: Engineering, Operations & Water Resources *10/13/21*

Executive Contact: Christiana Daisy, Deputy General Manager

Subject: COVID-19 Pandemic Impact on Capital Improvement Projects

Executive Summary:

During the April 21, 2021, Board of Directors meeting, Director Hofer requested information regarding the impact that the COVID-19 pandemic has had on the execution of the Inland Empire Utility Agency (IEUA's) Capital Improvement Program. Engineering and Construction Management staff assessed the schedule and total cost for each active project during the pandemic.

A total of fourteen projects experienced delays due to the pandemic. While the delays were non-compensable to the design consultants and the construction contractors, IEUA incurred extended overhead costs due to increased labor costs to manage the projects along with increased operational and maintenance costs due to the delays in receiving the project deliverables.

It is important to note that some of the bids received during the last five months were higher than the Engineer's estimate. This is due to the increased cost of material, delays in procurements, manufacturing, and labor shortage.

Staff's Recommendation:

None.

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

Account/Project Name:

Not Applicable.

Fiscal Impact (explain if not budgeted):

None.

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

Prior Board Action:

None.

Environmental Determination:

Not Applicable

Business Goal:

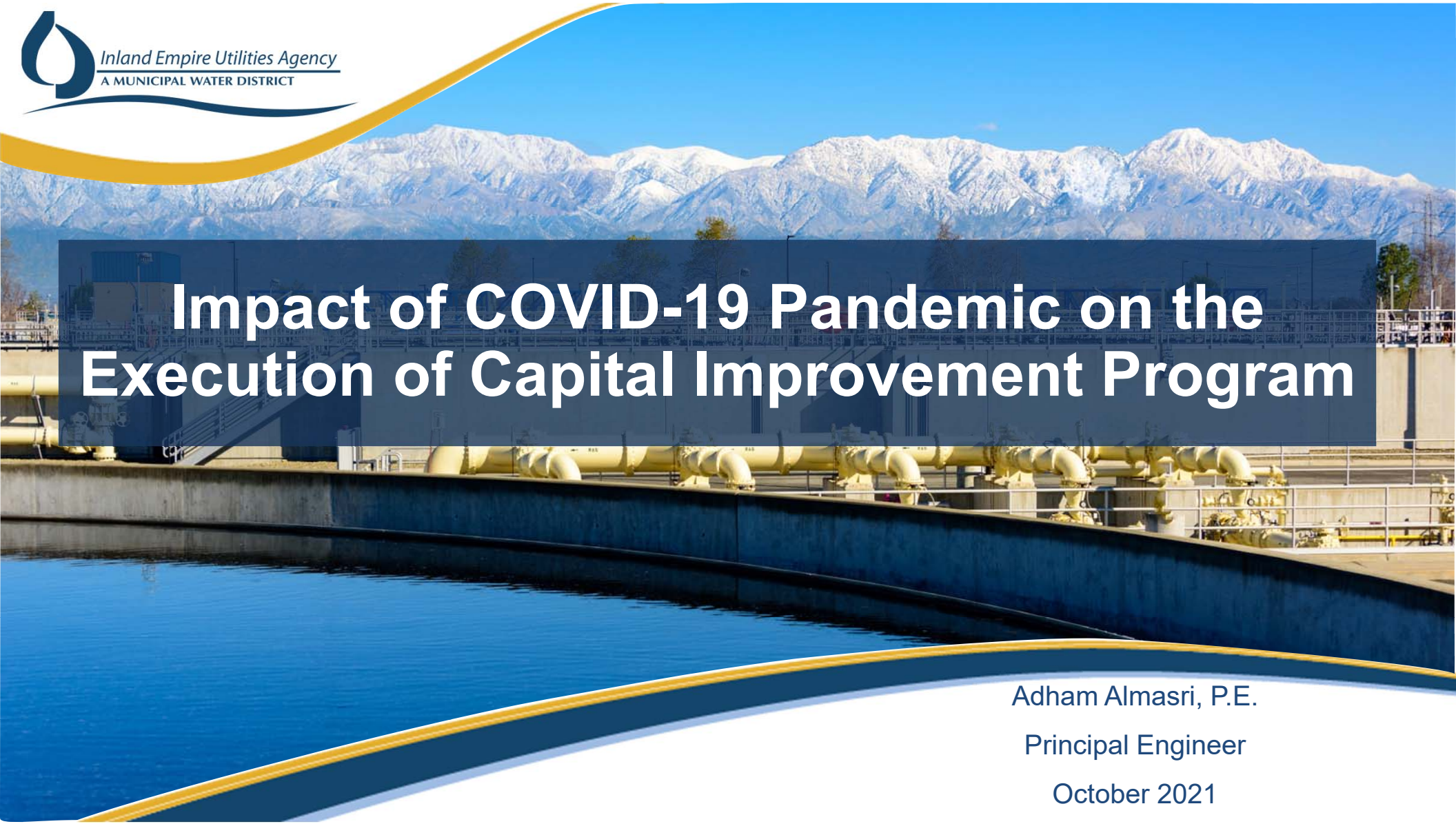
The Covid-19 Impact Update is consistent with IEUA's Business Goal of planning for multi-year budgets and rate requirements in support of maintaining fiscal stability for IEUA and the member agencies in addition to maintain fund reserves, which can withstand significant changes to the economy and funding sources.

Attachments:

Attachment 1 - PowerPoint
Attachment 2 - COVID-19 Impact Tracker

Attachment 1

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT



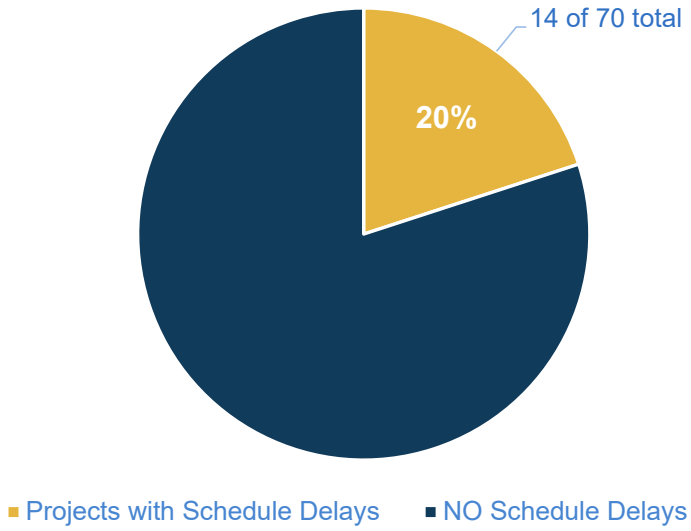
Impact of COVID-19 Pandemic on the Execution of Capital Improvement Program

Adham Almasri, P.E.
Principal Engineer
October 2021

Delays to Projects

Projects with Schedule Delays	Active Projects
14	70

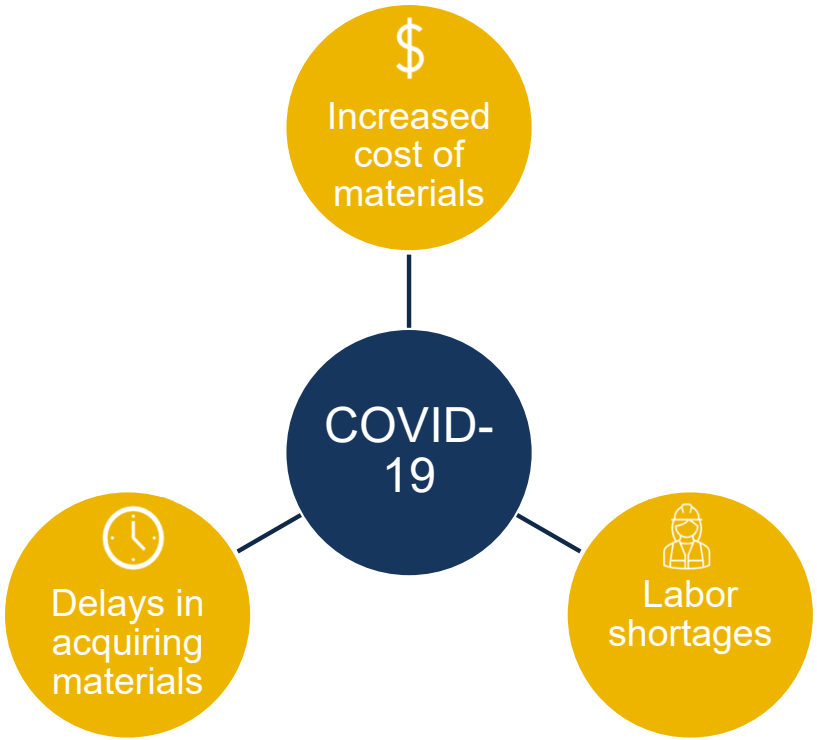
Average Number of Days Delayed per Project	Average Cost of Delay per Project
66.64	$67,436



Impacts Include:

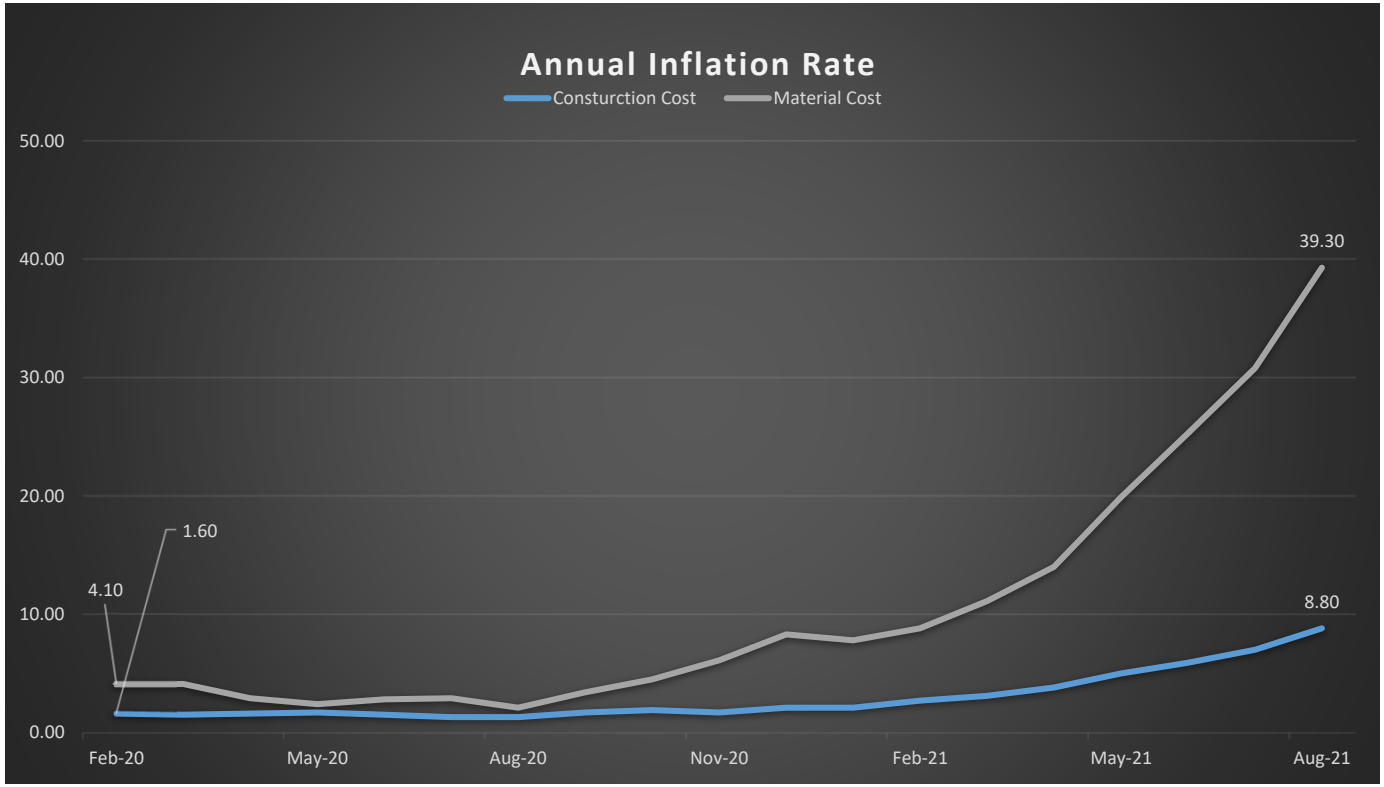
- Increased Labor Cost
- Increased Operational and Maintenance Cost

Impact of COVID-19 on Bid Prices



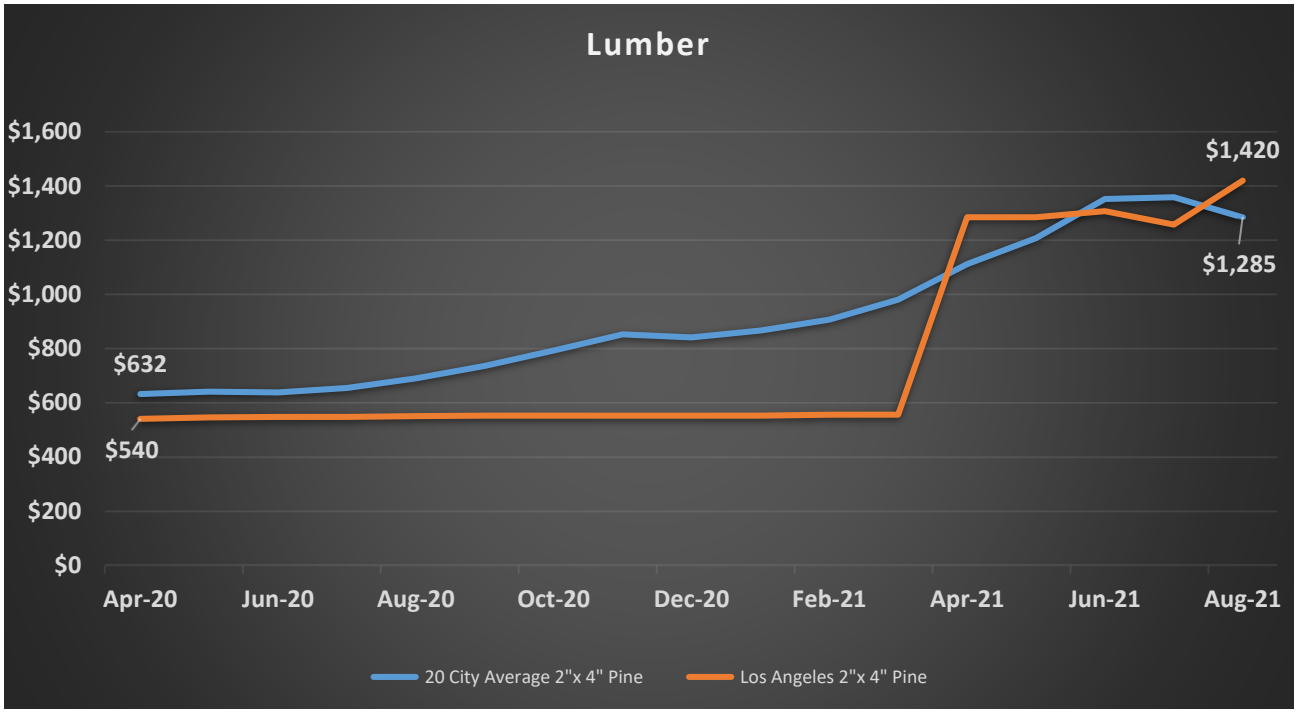
Example: Ductile iron fittings for Regional Forcemain Improvements
Delayed **150 days**

Annual Inflation



Source: ENR Engineer News-Record

Lumber Price

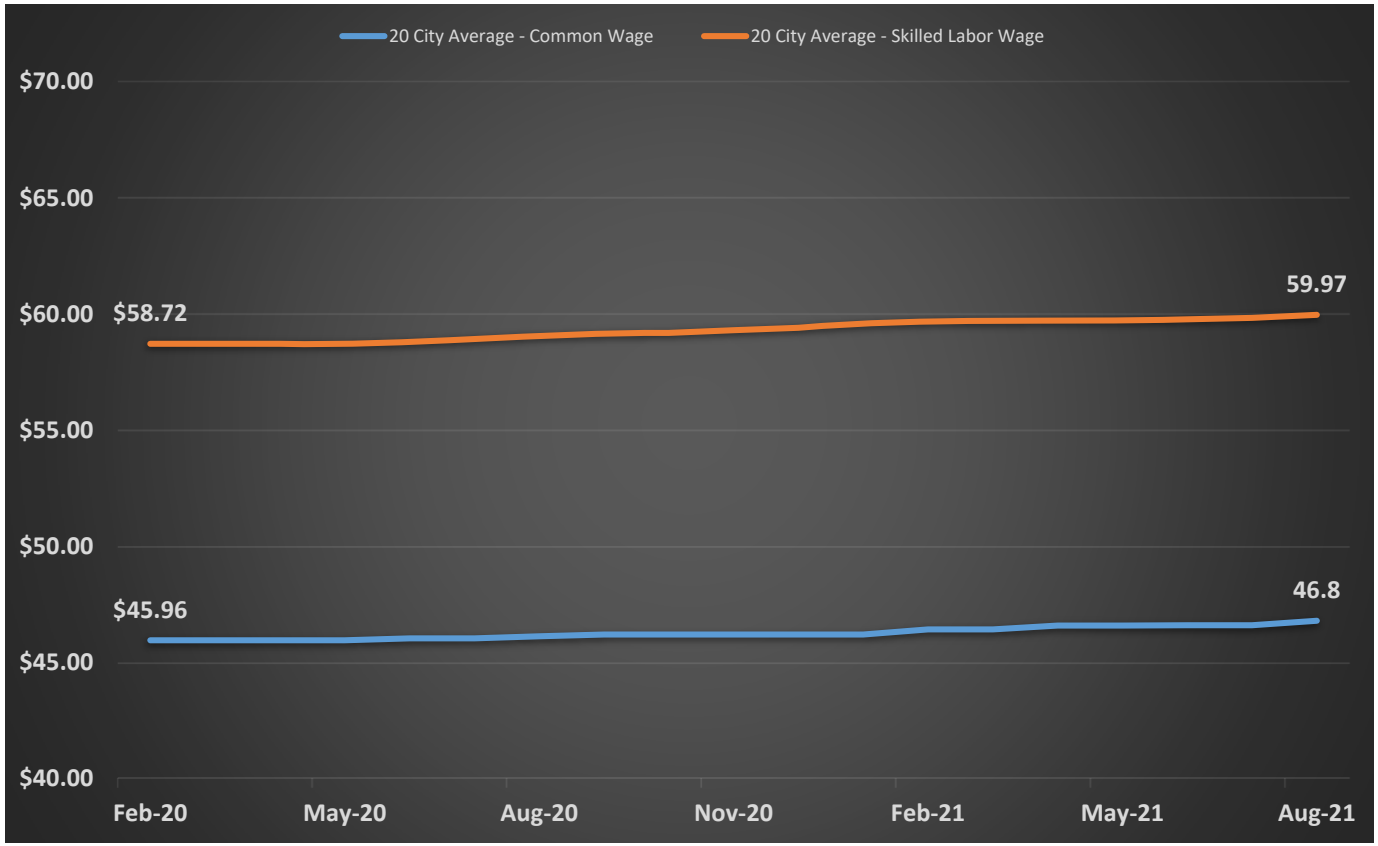


Los Angeles Increase From 4/20 = 162.96%

20 City Avg Increase From 2/20 = 103.32%

Source: ENR Engineer News-Record

Wages



Skilled Labor Increase From 2/20 = 2.12%

Common Worker Increase From 2/20 = 1.82%

Source: ENR Engineer News-Record

Attachment 2

#	Project	Covid Delay	PM	Day Delay	Cost Delay/ Covid Cost
1	EN19001/EN19006 RP-5 Expansion Project	Bidding: Covid shutdown in Mach 2020 delayed the bid from March 26th to May 21st, 2020, 56-day delay; CM team time and IEUA staff $300K a month. COVID: Job has only experienced one 1/2-day shutdown when General Contractor had all staff on a Friday afternoon get tested for COVID. Two instances of carpenters crews of five where positive each had about a seven day delay in the work that is consumed by float, no schedule impact. Other costs: Delay in bidding has extended the duration of the temporary power to the trailers by four months at $1060 a month, $4240. Construction Management trailer cleaning service for COVID $750/month since September 2020 till September 2021, and ongoing. Covid cleaning supplies, masks, sanitizer, and other related items approx. $500 as of March 2021. Contractor has not reported any delivery or supply issues related to COVID as of Mach 2021.	Brian Wilson	57-days	$ 620,000
2	EN16021 (Archibald Plume Project):	CDM Constructors staff was infected with the COVID virus, which resulted in delays due to stopping construction and activities to isolate contractors and prevent further spread. Delays were also seen in shipping construction materials and equipment. Added three more months to the plume project.	Joel Ignacio	91-days	$ 18,000
3	RW15004 (Lower Day Improvements):	The contractor had a delay due to cement availabilities. Secondly, Southern California Edison (SCE) is also delayed in providing new electrical service. SCE has been delayed due to working remotely. Added six months to the project.	Joel Ignacio	180-days	$ 36,000
4	RW15003.05 (RP-3 Recharge Basin Improvements)	Engineering was delayed in releasing the project to bid due to limited staffing and transitioning to working remotely.	Joel Ignacio	45-days	$ 9,000
5	EN19024/EN19028 (Regional and NRW Systems Asset Management)	The process of working remotely has a slight impact on delivery.	Joel Ignacio	30-days	$ 6,000
6	EN13001 (San Sevaine Basin Improvements)	While the project is completed, Engineering is still supporting the project by addressing the pump warranty request. Due to COVID, manufacturing has been delayed in assessing the pump failures. Engineering worked with the manufacturer to finalize the warranty terms.	Joel Ignacio	60-days	$ 4,000
7	EN22002 (East end Flow Meter Replacement)	The flow meter delivery has been delayed due to Covid-19 by 60-days. The manufacturer is having trouble getting materials to build the flow meter. As of right now, it is only a time delay and no financial impact yet.	Josh Biesiada	60-days	$ 12,000
8	EN19025 (Regional Force Main Improvements)	The ductile iron fittings were delayed by 150 days.	Josh Biesiada	160-days	$ 30,000
9	RA17007.01 (IERCF Wash Pad cover)	Delay in concrete delivery: (23-days delay) 9/1: The contractor was made aware from Robertson's that they are not taking any orders until late October. 9/24: The contractor was able to get an order in with Holliday Rock and have it delivered on 10/9. Delay in steel: (29-day delay) Original Delivery date was Aug 26, 2020. 9/24: The contractor was made aware some of the steel was on back order. Structure was delayed 3-weeks due to production delays. Total COVID-19 Delays: 52 Days	Matt Poeske	29-days	$ 5,800
10	FM21005 (Phase II Agency-wide Roofing)	Due to COVID-19, Exbon had reported they were experiencing internal difficulties, with the Project Manager/Supervisor and staff having had COVID-19. This caused a delay to the construction phase of the project. Exbon requested a non-compensable time extension of seventy (70 calendar days). Our manufacturer, PAC-CLAD, had their labor force impacted by COVID-19 which resulted in our coping material being delivered three weeks behind schedule. As a result, Exbon requested a non-compensable Act of God Extension of seventeen calendar days. Exbon was to install polycarbonate panels at the OPS Building. Staff discovered the manufacturer that was making these panels had been closed since March 2020. IEUA attempted to reach out to other manufacturers, but due to time and many stating COVID-19 delays IEUA decided to pick this work up in the next phase of roofing. An acceptable credit of $2,288.62 was given back to IEUA. Total COVID-19 Delays: 87-Days	Matt Poeske	87-days	$ 17,400
11	EN17110.03 (RP-4 Aeration Basin Wall Repair)	The shipment of the SSI diffusers has been delayed due to COVID. There has been no cost on this delay; however, indirectly IEUA is incurring change order cost for the cleaning of the basins since IEUA staff is not available to do the cleaning as originally promised. Assuming Genesis cleans all three basins, the cost would be $150,000; in addition to Consultant Inspection Support and internal labor.	James Spears	70-days	$ 176,500
12	EN19010 (RP-4 Influent Screen Replacement)	Lost seven days due to Stanek crew member getting COVID.	James Spears	7-days	$ 3,041

#	Project	Covid Delay	PM	Day Delay	Cost Delay/ Covid Cost
13	EN20058 (RP-1 TP-1 Waste Wash Water Basin Pumps Replacement)	Delayed 21-days due to COVID related delays at the ports to offload the pumps and Schuler crew member tested positive for COVID. No additional costs.	James Spears	21-days	$ 8,262
14	EN17082 (RP-1 Mechanical Restorations twice)	Delayed 10-days near Thanksgiving. An employee tested positive and there was close contact within the contractor's crews, impacting the entire workforce. Luckily, this was caught prior to a holiday weekend, minimizing the delay on the job. Procurement of the RAS and WAS pumps from KSB (manufacturer) was delayed due to constraints on materials and labor resources as a direct result of the COVID-19 pandemic. This COVID-19 delay began on June 1, 2020, and ended on July 6, 2020, for a total duration of 36-Calendar Days.	Justin Tao	36-days	$ 8,100

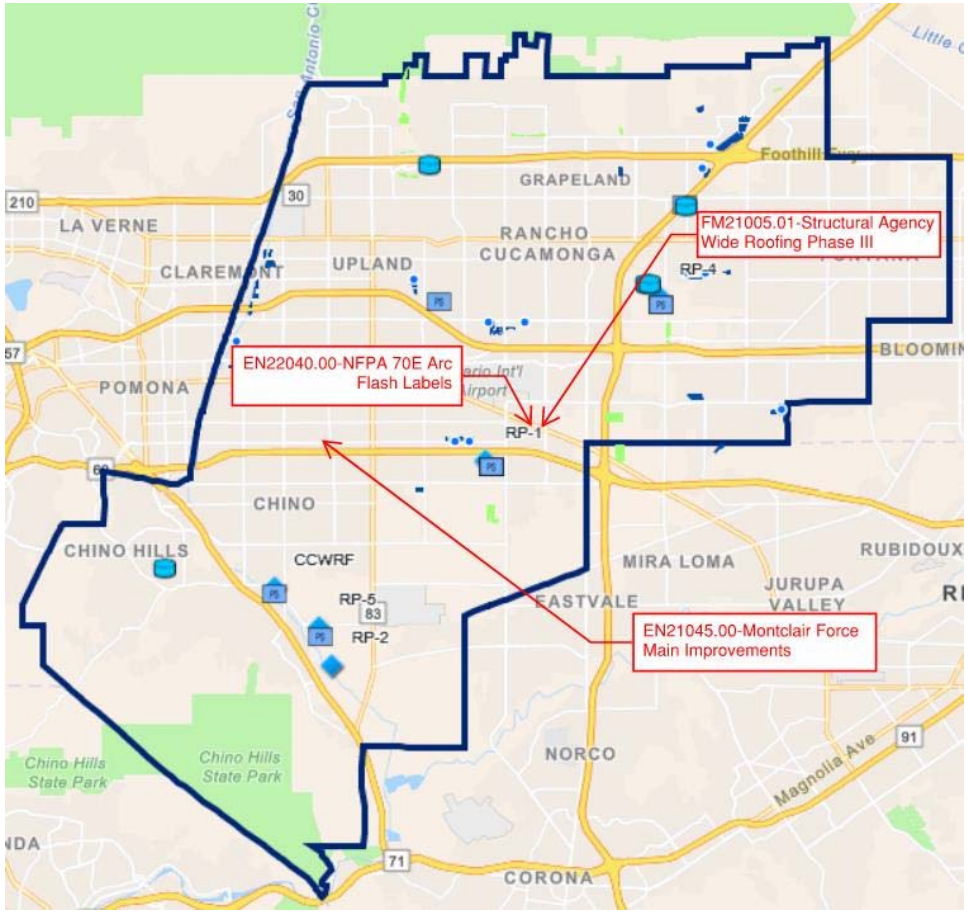
Engineering, Operations, and Water Resources Committee

INFORMATION ITEM 3E

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Engineering and Construction Management Project Updates

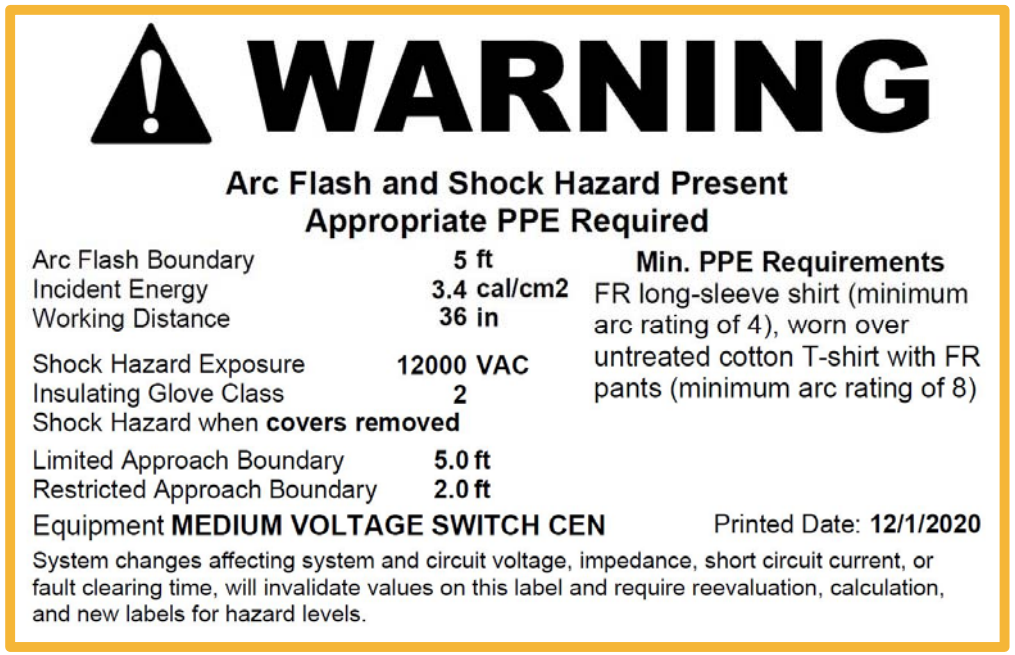
Jerry Burke, P.E.
Manager of Engineering
October 2021



Project Location Map

NFPA 70E Arc Flash Labels

Project Goal: Improve Safety



Sample Arc Flash Label

Total Project Budget: $210 K
Project Completion: June 2023
Construction Percent Complete: 5%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design	N/A	$0	0%
Construction (Current)	Power Engineering Services	$122 K	0%

Project Management Team	
Project Manager:	Simpson, James
Assistant/Associate Engineer:	Asprer, Kevin
Administrative Assistant:	GK & Assoc
Inspector:	TBD

Agency-Wide Roofing Phase III

Project Goal: Rehabilitate/Repair Existing Assets

Total Project Budget: $2.4 M
Project Completion: December 2022
Design Percent Complete: 95%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design (Current)	GPa	$86 K	0%
Construction	TBD	$0	0%

Project Management Team	
Project Manager:	Poeske, Matthew
Project Engineer:	GPa
Administrative Assistant:	Guthrie, Rosalind
Inspector:	TBD

Phase I

- Roofing Replacement
  - —Headquarter Buildings
  - —RP-1 MCC Building
  - —RP-1 PR (Power Reliability) Building


New Headquarters Roof


New PRB Roof


Old MCC Building Roof


New MCC Building Roof

Phase I Building Roof Replacement

Montclair Force Main Improvements

Project Goal: Enhance Reliability, Improve Asset Management

New Force Main Connection Location to Existing Discharge Header

Total Project Budget: $6.8 M
Project Completion: Est. June 2023
Design Percent Complete (PDR): 30%

Phase	Consultant/ Contractor	Current Contract	Amendments/ Change Orders
Design (Current)	GHD	$172 K	0%
Construction	TBD	$0	0%

Project Management Team	
Project Manager:	Zughbi, Jamal
Assistant/Associate Engineer:	Ferrer, Karen
Administrative Assistant:	Wood Environment
Inspector:	TBD