



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

**WEDNESDAY, FEBRUARY 10, 2021  
9:45 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 THE PROVISIONS OF EXECUTIVE ORDER N-25-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 12, 2020, AND EXECUTIVE ORDER N-29-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 17, 2020 AND IN AN EFFORT TO PROTECT PUBLIC HEALTH AND PREVENT THE SPREAD OF COVID-19, THERE WILL BE NO PUBLIC LOCATION FOR ATTENDING IN PERSON.

The public may participate and provide public comment during the meeting by dialing into the number provided above. Alternatively, public comments may be emailed to the Board Secretary/Office Manager Denise Garzaro at [dgarzaro@ieua.org](mailto:dgarzaro@ieua.org) no later than 24 hours prior to the scheduled meeting time. Comments will be read into the record during the meeting.

**CALL TO ORDER**

**PUBLIC COMMENT**

Members of the public may address the Board on any item that is within the jurisdiction of the Board; however, no action may be taken on any item not appearing on the agenda unless the action is otherwise authorized by Subdivision (b) of Section 54954.2 of the Government Code. Those persons wishing to address the Board on any matter, whether or not it appears on the agenda, are requested to email the Board Secretary/Office Manager no later than 24 hours prior to the scheduled meeting time or address the Board during the public comments section of the meeting. Comments will be limited to three minutes per speaker. Thank you.

**ADDITIONS TO THE AGENDA**

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

**1. CONSENT ITEM**

**A. MINUTES**

Approve Minutes of the January 13, 2020 Engineering, Operations, and Water Resources Committee meeting.

**2. ACTION ITEM**

**A. ORCHARD RECYCLED WATER TURNOUT IMPROVEMENTS CONSTRUCTION CONTRACT AWARD**

Staff recommends that the Committee/Board:

1. Award a consultant contract for the Orchard Recycled Water Turnout Improvements, Project No. EN17041, to Cedro Construction, Inc., in the amount of \$128,297; and
2. Authorize the General Manager to execute the contract, subject to non-substantive changes.

**3. INFORMATION ITEMS**

**A. REGIONAL WATER USE EFFICIENCY ANNUAL REPORT – FY 2019/20 (WRITTEN/POWERPOINT)**

**B. LABORATORY SEMI-ANNUAL UPDATE (POWERPOINT)**

**C. RP-5 EXPANSION PROJECT UPDATE: FEBRUARY 2021 (POWERPOINT)**

**RECEIVE AND FILE INFORMATION ITEM**

**D. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES (POWERPOINT)**

**4. GENERAL MANAGER'S COMMENTS**

**5. COMMITTEE MEMBER COMMENTS**

**6. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS**

**ADJOURN**

\*A Municipal Water District

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

**DECLARATION OF POSTING**

I, Denise Garzaro, Board Secretary/Office Manager of the Inland Empire Utilities Agency, A Municipal Water District, hereby certify that a copy of this agenda has been posted by 5:30 p.m. to the IEUA Website at [www.ieua.org](http://www.ieua.org) and outside the Agency's main office, 6075 Kimball Avenue, Building A, Chino on Thursday, February 4, 2021.



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Denise Garzaro, CMC

CONSENT  
ITEM  
**1A**





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

**WEDNESDAY, JANUARY 13, 2021  
9:45 A.M.**

**COMMITTEE MEMBERS PRESENT via Video/Teleconference**

Michael Camacho, Chair  
Marco Tule

**STAFF PRESENT**

Shivaji Deshmukh, General Manager  
Christina Valencia, Executive Manager of Finance & Administration/AGM  
Denise Garzaro, Board Secretary/Office Manager  
Daniel Solorzano, Technology Specialist I

**STAFF PRESENT via Video/Teleconference**

Jasmin A. Hall, President  
Christiana Daisy, Deputy General Manager  
Kathy Besser, Executive Manager of External & Government Affairs/AGM  
Randy Lee, Executive Manager of Operations/AGM  
Josh Biesiada, Project Manager II  
Jerry Burke, Manager of Engineering  
Pietro Cambiaso, Deputy Manager of Strategic Planning & Resources  
Javier Chagoyen-Lazaro, Manager of Finance & Accounting  
Robert Delgado, Manager of Operations & Maintenance  
Don Hamlett, Acting Deputy Manager of Integrated Systems Services  
Jennifer Hy-Luk, Administrative Assistant II  
Nolan King, Network Administrator  
Sylvie Lee, Manager of Strategic Planning & Resources  
Jason Marseilles, Deputy Manager of Engineering  
Lisa Morgan-Perales, Senior Water Resources Analyst  
Scott Oakden, Manager of Operations & Maintenance  
Joshua Oelrich, Deputy Manager of Maintenance  
Craig Proctor, Deputy Manager of Strategic Planning & Resources  
Sushmitha Reddy, Manager of Laboratories  
Jeanina Romero, Executive Assistant  
Travis Sprague, Principal Engineer  
Yvonne Taylor, Administrative Assistant II  
Wilson To, Technology Specialist II  
Teresa Velarde, Manager of Internal Audit  
Brian Wilson, Senior Engineer  
Jamal Zughbi, Senior Engineer/Project Manager

**CALL TO ORDER**

Committee Chair Michael Camacho called the meeting to order at 9:53 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 – 1F. CONSENT ITEMS**

The Committee:

- ◆ Approved Minutes of the December 9, 2020 Engineering, Operations, and Water Resources Committee meeting.
- ◆ The Committee recommended that the Board:
  1. Award a consultant contract for the Five PDF Projects Fiscal Year 20/21, which includes the RP-4 Contact Basin Cover/Wet Well Passive Overflow, Montclair Force Main Improvements, 8<sup>th</sup> St. RW Turnout Connection to 1630 W. Pipeline, Ely Monitoring Well, and RP-1 Old Effluent Structure Replacement, Project Nos. EN21041, EN21045, EN21050, EN21051, and EN21053, to GHD Inc., for the not-to-exceed amount of \$478,973; and
  2. Authorize the General Manager to execute the consultant contract, subject to non-substantive changes;
- ◆ and
  1. Approve a contract amendment with Conserv Construction, Inc. for the Small Site Controller Upgrade Program for a not-to-exceed amount of \$462,000, increasing the contract from \$600,000 to \$1,062,000 (44% increase); and
  2. Authorize the General Manager to execute the contract amendment, subject to non-substantive changes;
- ◆ and
  1. Approve a material procurement, as a sole source, for the Agency-Wide Aeration, Project No. PA17006, through Parkson Corporation, for a not-to-exceed amount of \$433,732; and
  2. Authorize the General Manager to execute the procurement, subject to non-substantive changes;
- ◆ and
  1. Award a construction contract for the BSS Manhole Upgrades FY20/21 and RSS Manhole Upgrades FY20/21, Project Nos. EN21014 and EN21015, to Norstar Plumbing and Engineering, Inc., in the amount of \$283,995; and
  2. Authorize the General Manager to execute the contract, subject to non-substantive changes;
- ◆ and
  1. Approve a construction change order for the 1158 East & West Reservoir Rehabilitation, Project Nos. EN21004 & EN22004, to Spiess Construction

Company, for the not-to-exceed amount of \$146,548.50, increasing the contract from \$2,985,479 to \$3,132,027, 4.9% increase; and

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

as Consent Calendar Items on the January 20, 2021 Board meeting agenda.

### **2A – 2E. INFORMATION ITEMS**

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

- ◆ Overview of Proposed Regional Wastewater Ordinance No. 109
- ◆ RP-5 Expansion Project Update
- ◆ 2<sup>nd</sup> Quarter Planning & Environmental Resources Updates
- ◆ Operations Division Quarterly Update
- ◆ Engineering and Construction Management Project Updates

### **3. GENERAL MANAGER'S COMMENTS**

There were no General Manager comments.

### **4. COMMITTEE MEMBER COMMENTS**

There were no Committee member comments.

### **5. COMMITTEE MEMBER REQUESTED FUTURE AGENDA ITEMS**

There were no Committee member requests for future agenda items.

### **ADJOURNMENT**

With no further business, Committee Chair Camacho adjourned the meeting at 10:57 a.m.

Respectfully submitted,

Denise Garzaro  
Board Secretary/Office Manager

\*A Municipal Water District

**APPROVED: FEBRUARY 10, 2021**

ACTION  
ITEM  
**2A**

**Date:** February 17, 2021

*SD*

**To:** The Honorable Board of Directors

**From:** Shivaji Deshmukh, General Manager

**Committee:** Engineering, Operations & Water Resources

02/10/21

**Executive Contact:** Christiana Daisy, Deputy General Manager

**Subject:** Orchard Recycled Water Turnout Improvements Construction Contract Award

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**Executive Summary:**

Inland Empire Utilities Agency (IEUA) operates and maintains a 24-inch recycled water pipeline that discharges into the San Antonio Flood Control Channel, owned and operated by the United States Army Corps of Engineers, which conveys recycled water to Brooks Basin for groundwater recharge. The existing turnout discharge is approximately 7.5 feet above the channel invert. The grout around the existing wall penetrations has deteriorated resulting in water penetrating the soil behind the concrete channel wall.

This project includes excavating and removing the existing 24" recycled water pipeline, patching the concrete wall, and installing a new 24" recycled water pipeline entering the channel south of the existing turnout closer to the channel invert to minimize noise. IEUA has applied for and received an encroachment permit from the United States Army Corps of Engineers.

On December 10, 2020, IEUA received 15 construction bids. Cedro Construction, Inc. was deemed the lowest responsive bidder with a bid price of \$128,297, which was under the engineer's estimate of \$195,000.

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**Staff's Recommendation:**

1. Award a construction contract for the Orchard Recycled Water Turnout Improvements, Project No. EN17041, to Cedro Construction, Inc., in the amount of \$128,297; and
2. Authorize the General Manager to execute the contract, subject to non-substantive changes.

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

*Account/Project Name:*

EN17041/Orchard Recycled Water Turnout Improvements

*Fiscal Impact (explain if not budgeted):*

None.

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**Prior Board Action:**

None.

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**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 of the State CEQA Guidelines.

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**Business Goal:**

The Orchard Recycled Water Turnout Improvements Project is consistent with IEUA's Business Goal of Water Reliability, specifically the Water Supplies objective that IEUA will support the region with the development of reliable, resilient, and sustainable water supplies from diverse sources.

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**Attachments:**

Attachment 1 - PowerPoint

Attachment 2 - Contract

# **Attachment 1**

# Orchard Recycled Water Turnout Improvements Construction Contract Award

Project No. EN17041



Josh Biesiada, CCM,  
Sr. Project Manager  
February 2021



# Project Location



# Project Background/Scope

## Background

- 24" Discharge to San Antonio Flood Control Channel
- [Noise complaints](#)
- Grouted surface deteriorated
- US Army Corps of Engineers Channel

## Scope

- Construct new pipeline outlet
- Re-grout and repair channel wall



# Contractor Selection

On December 10, 2020, fifteen (15) bids were received:

| Bidder's Name                           | Total     |
|-----------------------------------------|-----------|
| Cedro Construction                      | \$128,297 |
| Ferreira Construction Co.               | \$141,200 |
| TK Construction                         | \$144,500 |
| TE Roberts, Inc.                        | \$148,490 |
| Atom Engineering Construction, Inc.     | \$162,398 |
| M-Rae Engineering, Inc.                 | \$167,000 |
| GDM Inc.                                | \$175,887 |
| Genesis Construction                    | \$189,444 |
| Norstar Plumbing & Engineering          | \$191,013 |
| Trinity Construction, Inc.              | \$193,872 |
| Innovative Construction Solutions       | \$197,500 |
| Gwinco Construction & Engineering, Inc. | \$199,400 |
| GRFCO, Inc.                             | \$210,000 |
| SCW Contracting Corp.                   | \$222,000 |
| W.A. Rasic Construction Company, Inc.   | \$238,200 |
| Engineer's Estimate                     | \$195,000 |

# Project Budget and Schedule

| Description                             | Estimated Cost   |
|-----------------------------------------|------------------|
| <b>Design Services</b>                  | <b>\$194,825</b> |
| Consultant Design Contract              | \$60,015         |
| IEUA Design Services (actuals)          | \$52,570         |
| Environmental/Permits (actuals)         | \$82,240         |
| <b>Construction Services</b>            | <b>\$43,956</b>  |
| Design Consultant Construction Services | \$20,863         |
| IEUA Construction Services (15%)        | \$23,093         |
| <b>Construction</b>                     | <b>\$153,956</b> |
| Construction Contract (this action)     | \$128,297        |
| Contingency (20%)                       | \$25,659         |
| <b>Total Project Cost:</b>              | <b>\$392,737</b> |
| <b>Total Project Budget:</b>            | <b>\$477,000</b> |

| Project Milestone           | Date          |
|-----------------------------|---------------|
| Construction Contract Award | February 2021 |
| Construction Start          | April 2021    |
| Construction Completion     | June 2021     |



# Recommendation

- Award a construction contract for the Orchard Recycled Water Turnout Improvements, Project No. EN17041, to Cedro Construction, Inc., in the amount of \$128,297; and
- Authorize the General Manager to execute the contract, subject to non-substantive changes.

The Orchard Recycled Water Turnout Improvement Project is consistent with **IEUA's Business Goal of Water Reliability**, specifically the Water Supplies objective that IEUA will support the region with the development of reliable, resilient, and sustainable water supplies from diverse sources.

# **Attachment 2**

## SECTION D - CONTRACT AND RELEVANT DOCUMENTS

### 1.0 CONTRACT

THIS CONTRACT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between Cedro Construction, 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 Orchard Recycled Water Turnout Improvements, EN17041, 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 \$ One hundred twenty-eight thousand two hundred and ninety-seven 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 sixty ( 60 ) calendar days after the Notice to Proceed. All Work shall be completed before final payment is made.
- G. Time is of the essence on this Contract.
- H. CONTRACTOR agrees that in case the Work is not completed before or upon the expiration of the Contract Time, damage will be sustained by IEUA, and that it is and will be impracticable to determine the actual damage which IEUA will sustain in the event and by reason of such delay, and it is therefore agreed that the CONTRACTOR shall pay to IEUA the amounts as set forth in 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, Engineer, 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 fullest extent permitted by law.

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

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

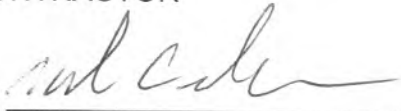
- M. The CONTRACTOR, by signing the contract does swear under penalty of perjury that no more than one final unappeasable finding of contempt of court by a Federal court has been issued against the CONTRACTOR within the immediately preceding two year period because of the CONTRACTOR's failure to comply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

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

By \_\_\_\_\_  
General Manager  
Shivaji Deshmukh

\* A Municipal Water District

CONTRACTOR

By   
\_\_\_\_\_  
President  
\_\_\_\_\_  
Title

Andy Cedro, President

INFORMATION  
ITEM  
**3A**

**Date:** February 17, 2021

*ADD*

**To:** The Honorable Board of Directors

**From:** Shivaji Deshmukh, General Manager

**Committee:** Engineering, Operations & Water Resources

02/10/21

**Executive Contact:** Christiana Daisy, Deputy General Manager

**Subject:** Regional Water Use Efficiency Programs Annual Report - FY 2019/20

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### Executive Summary:

Annually, the Inland Empire Utilities Agency (IEUA) prepares a comprehensive regional Water Use Efficiency (WUE) programs report that captures all activities that occurred over the previous fiscal year. This report tracks program activity in FY 2019/20 and the progress that has been made toward goals and objectives outlined in IEUA's 2015-2020 Regional WUE Business Plan. Member agencies receive a regional WUE summary perspective, as well as service-area-specific data and activity that provides the foundation for regulatory compliance with State WUE statutes. Moreover, the report serves as a benchmark for assessing and evaluating overall program performances for planning existing and future programs. The Agency currently offers a suite of regional WUE programs to its member agencies that are designed to positively impact long-term behavior regarding the efficient use of water.

Over the last fiscal year, there were approximately 7,452 water saving technologies/services deployed throughout the service area representing an estimated annual water savings of 408 acre-feet and a lifetime savings of 3,292 acre-feet.

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### Staff's Recommendation:

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

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

*Account/Project Name:*

N/A

*Fiscal Impact (explain if not budgeted):*

N/A

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**Prior Board Action:**

None

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**Environmental Determination:**

Not Applicable

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**Business Goal:**

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

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**Attachments:**

Attachment 1 - PowerPoint

Attachment 2 - IEUA Regional Water Use Efficiency Programs Annual Report - FY 2019/20

# Regional Water Use Efficiency Programs FY 2019 - 20 Report



# IEUA WUE Programs and Supports Services

Multiple K-12  
education programs.

Eight core Water Use Efficiency  
(WUE) programs with verified  
water savings.



Community outreach, events,  
and informational materials.

Landscape transformation  
support services including  
design services and workshops.

# Key Accomplishments FY 19/20

Increased activity year-over-year, despite COVID-19 pandemic.



Annual savings of 408 acre-feet, lifetime savings of 3,292 acre-feet.



Cost-effective IEUA investment: 3-year payback at \$310 per acre-foot cost.



Leveraged \$1.6 million in outside funding.



Expanded budget and re-engineered the Sprinkler Tune-up Program to be the foundational program.

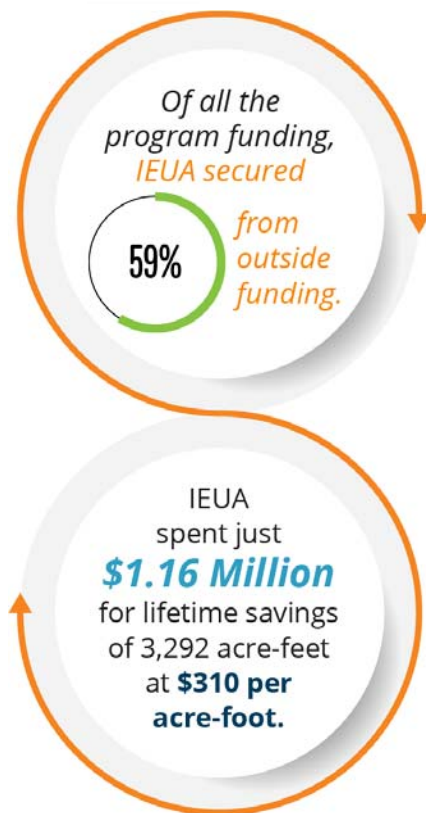


Launched innovative Leak Detection Program pilot.





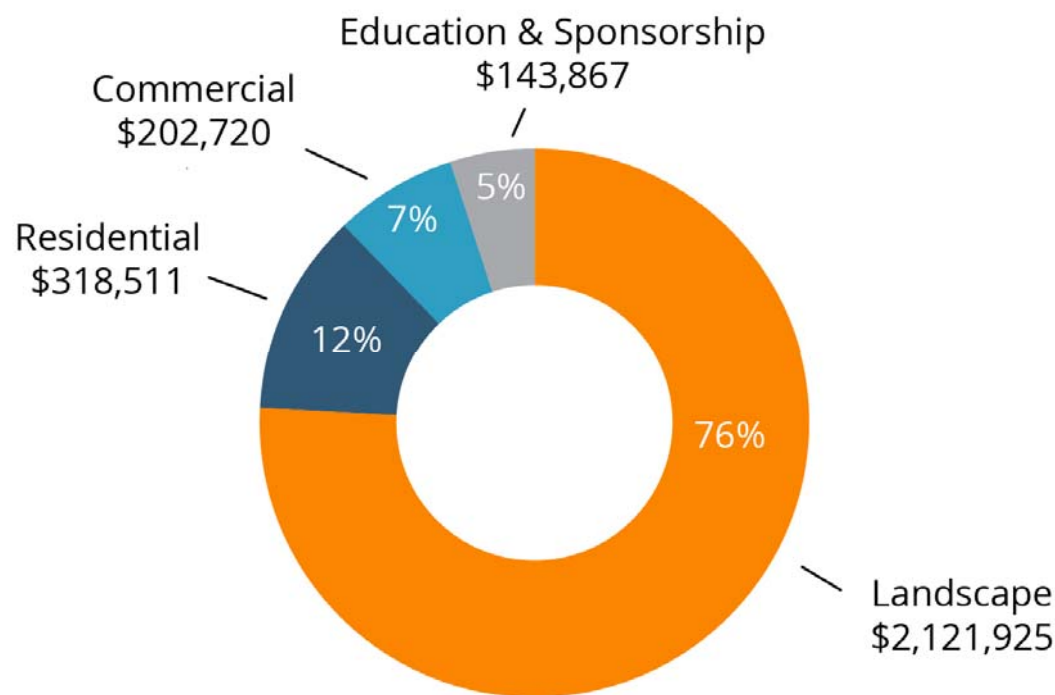
# WUE Program Water Savings FY 19/20



| Program                       | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------------------------|---------------------|-----------------------|
| SoCal WaterSmart Rebates      | 151                 | 1,773                 |
| Sprinkler Tune-Ups            | 104                 | 209                   |
| Turf Replacement              | 66                  | 664                   |
| Landscape Audit & Evaluations | 43                  | 213                   |
| Smart Controller Upgrades     | 20                  | 196                   |
| Large Landscape Retrofits     | 12                  | 109                   |
| Leak Detection Incentives     | 8                   | 83                    |
| Pressure Regulation           | 4                   | 45                    |
| <b>Total</b>                  | <b>408</b>          | <b>3,292</b>          |

# WUE Program Funding FY 19/20

## Program Funding by Category



## Performance Against 5 Year Plan



IEUA delivered

**105%**

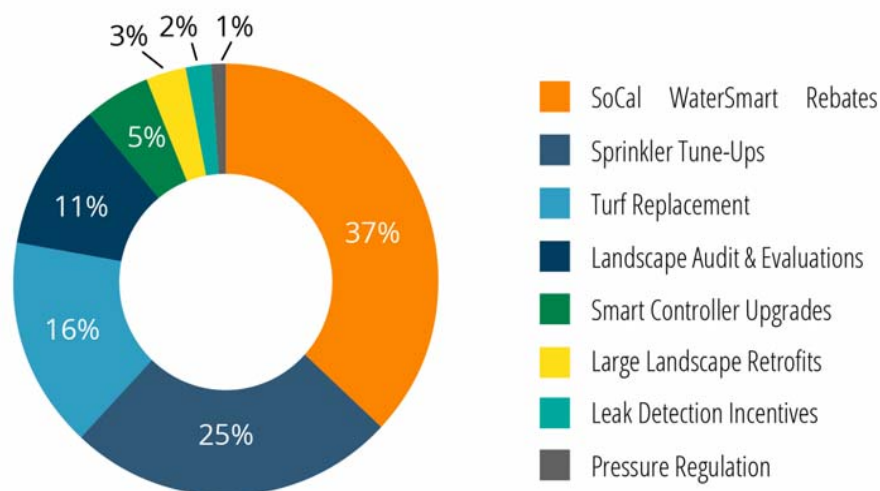
of the water savings  
goal **at 65% of the  
projected costs;**

*in other  
words, more  
water saved  
for fewer  
dollars spent.*

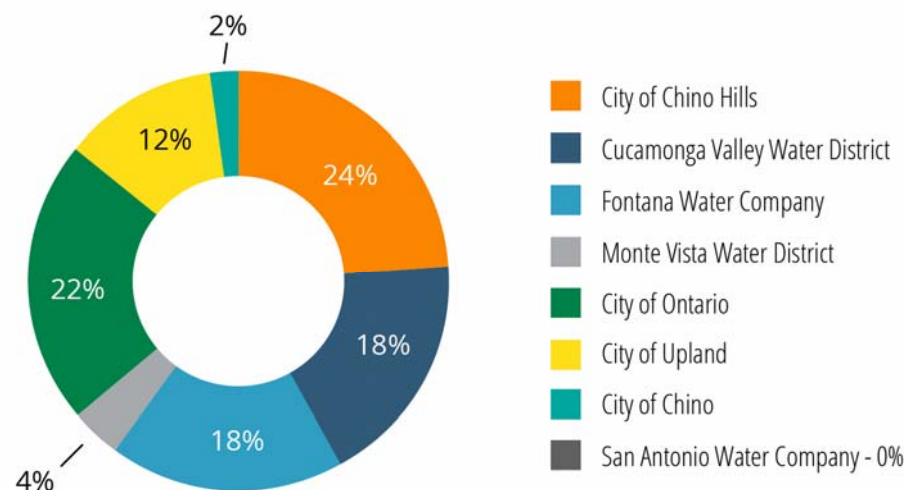
# Annual Water Savings FY 19/20

## by Program and Member Agency

### Water Savings by Program



### Water Savings by Member Agency

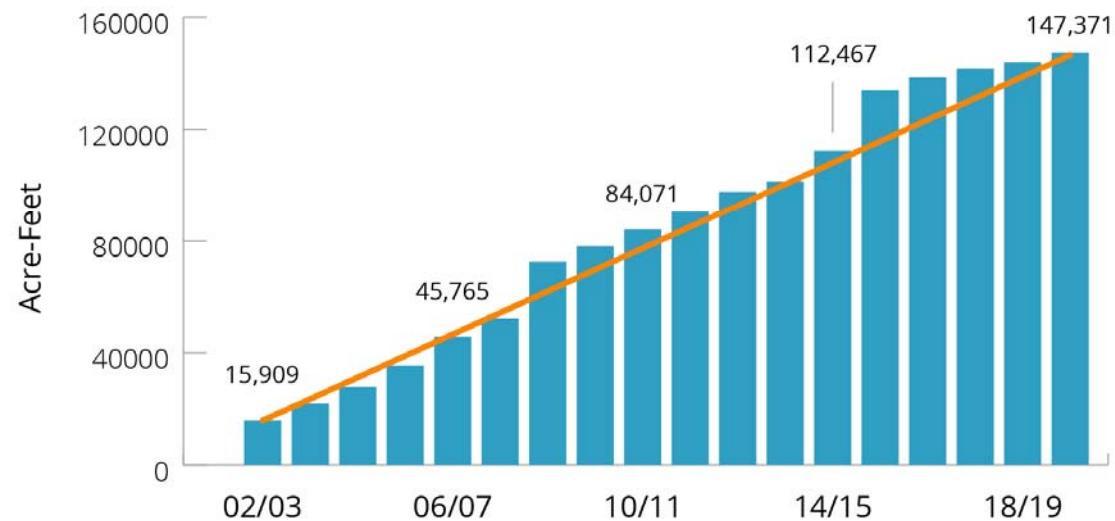


# Annual WUE Programs Summary

## FY 19/20

- **7,452** Technologies & Services
- **408 AF** Annual Water Savings
- **3,292 AF** Lifetime Water Savings
  - Water saved over the life of the technology

Lifetime Water Savings of Regional Programs



**147,371 AF** of water has been conserved since 1992

# FY 20/21 WUE Objectives



- Offer a Range of WUE Programs with Multiple Benefits
- Focus on Maximizing Water Savings & Program Response
- Leverage Outside Funding
- Update FY 2015-2020 WUE Business Plan
- Support Retailers in Calculating State Framework Compliance
- Provide Valuable Marketing, Data and Support Resources
- Work Collaboratively with Member Agencies to determine Priorities and develop Programs



# *Questions?*

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





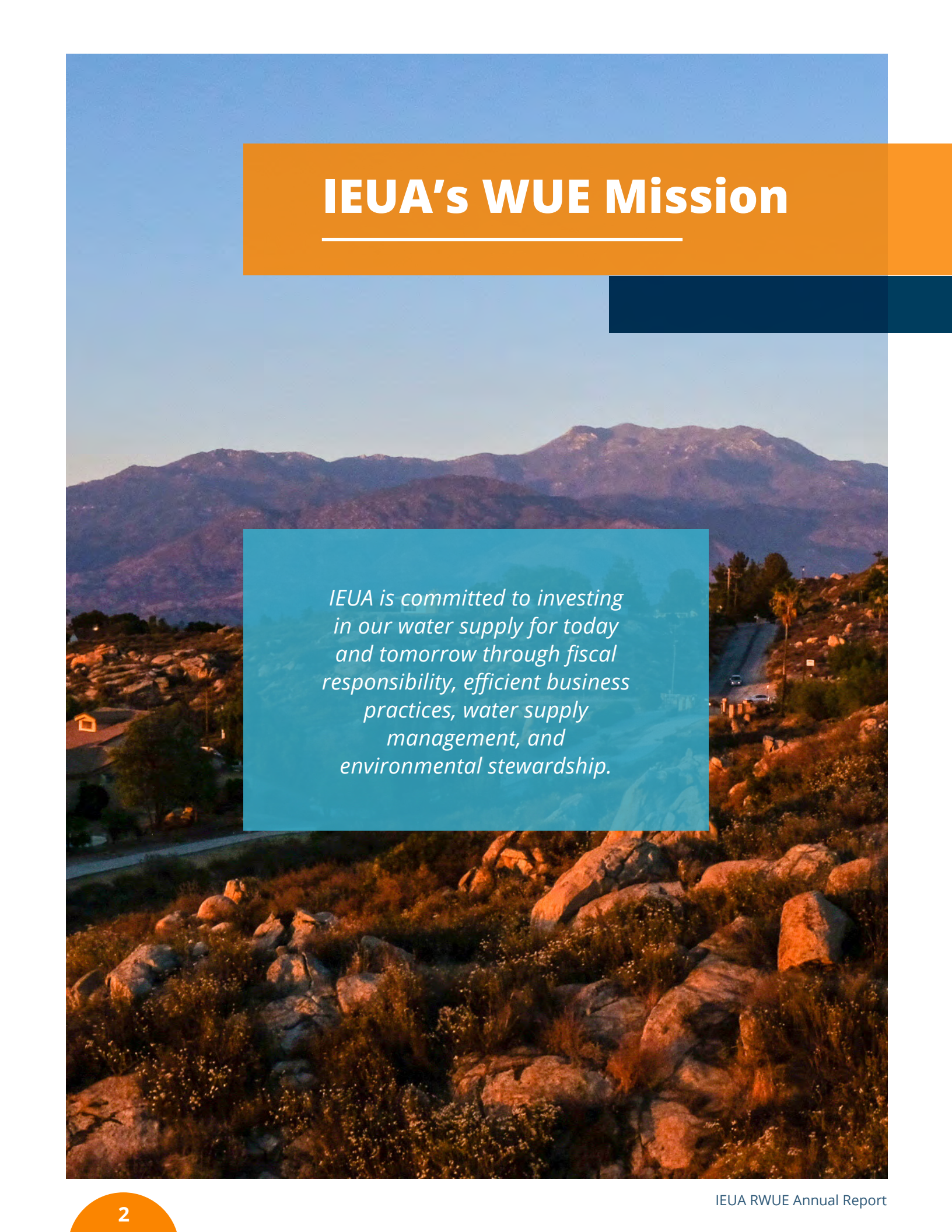
# Regional Water Use Efficiency Programs Report

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*Fiscal Year 2019–2020*





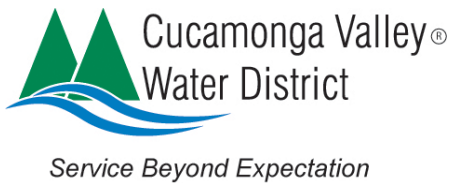


# IEUA's WUE Mission

*IEUA is committed to investing in our water supply for today and tomorrow through fiscal responsibility, efficient business practices, water supply management, and environmental stewardship.*

# Member Agencies

of Inland Empire  
Utilities Agency





## Letter from Shivaji Deshmukh, General Manager

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*As this year comes to a close, we recognize that 2020 was marked by significant and unforeseen challenges. We never could have predicted that the year would introduce a global COVID-19 health pandemic, devastating families and shuttering the doors of so many valued businesses.*

*This year has taught us that changes can happen suddenly and without warning. Yet for every glass half empty, there is a glass half full. Despite the trials this year has brought, there has been achievement.*

First, IEUA and partner member agencies exceeded the volume of water savings projected in our 2015 WUE Business Plan. This herculean accomplishment came about because of the sound design and, more importantly, the superior day-to-day management by IEUA and member agency staff, as well as our program vendors.

Secondly, these savings were achieved through the delivery of highly cost-effective programs. IEUA spent just \$1.15 million for programs that delivered lifetime savings of 3,292 acre-feet, at a low IEUA cost of \$310 per acre-foot with a total cost of \$849 to all parties.

This Regional Water Use Efficiency Programs Report highlights these achievements. The results stand as testimony to the excellent performance delivered against the many obstacles put in the pathway.

While celebrating 2020 accomplishments, we must also recognize the heightened challenges ahead for us. It is essential that we continue to meet SBx7-7 20x2020 requirements while we prepare for the future California's State Framework Legislation, SB606 and AB1668. The new water use objectives will require adaptation, collaboration, and innovation by IEUA and its partner member agencies. IEUA and the regional partners have decades of experience working collaboratively and we possess all the skills necessary to meet these new standards.

Sustained reduction in water use will be met implementation of innovative WUE programs that help grow markets for water-efficient products, services, and practices. Securing outside funding for this work will remain a focus for IEUA.

IEUA is committed to continued success, working alongside our member agencies to overcome the challenges that lie ahead.

*Shivaji Deshmukh, P.E.*



**Shivaji Deshmukh, P.E.**  
General Manager

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*Together in FY2020,  
we deployed more  
than **7,400**  
water-saving  
technologies and  
services in our  
service area,  
resulting in annual  
water savings of  
**408** acre-feet  
(AF).*

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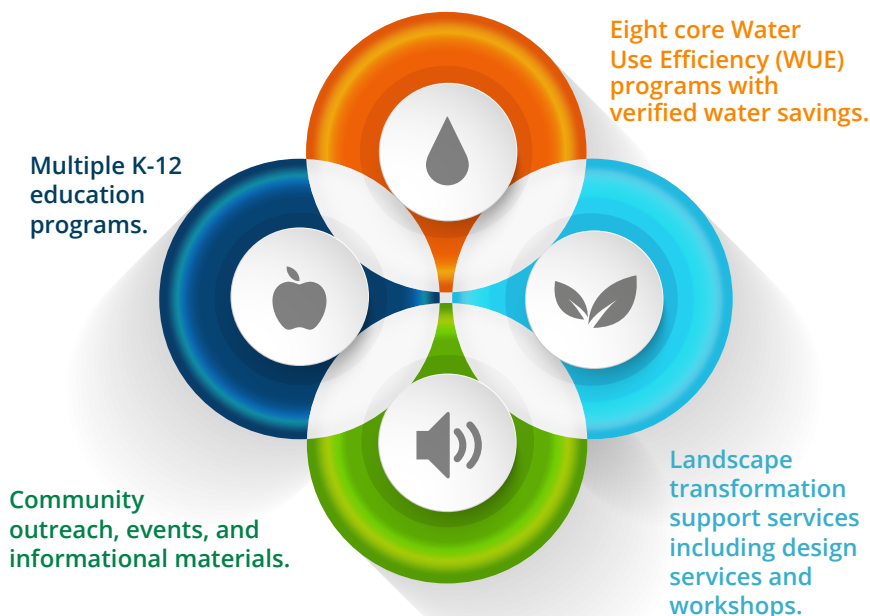


# Highlights of the Year

## July 1, 2019 to June 30, 2020

Fiscal year 2020 began with high expectations for the region's conservation efforts. As summer got into full swing, activity in all of IEUA's water use efficiency programs increased. The Sprinkler Tune-up Program launched with strong demand and it felt as though we would be on track to significantly increase customer participation from the low activity of post-drought years.

But as cases of COVID-19 multiplied in California, health precautions and economic uncertainty changed the upward trajectory of participation in these programs. Staff at the member agencies and IEUA had to rethink delivery of each program in order to keep customers, staff and contractors safe. Out of the disruption of those early days of the pandemic came the relaunch of programs with an emphasis on contactless and virtual delivery whenever possible. It is a testament to the resiliency and creativity of IEUA's member agencies and contractors that the programs were up and running again with minimal downtime. On behalf of and alongside its member agencies and despite the challenges posed by the global health pandemic, IEUA continued to implement a range of programs as well as educational and support services in FY 2020, including:



IEUA WUE staff provides a range of services to support regional WUE activities, including:

Program planning, performance tracking and evaluation.

Cost efficient centralized administration.

Procurement economies of scale for devices and vendor services.

Grant writing and procurement.

Vendor solicitation and contract management.

Budget management.

Legislative and regulatory compliance / support.

# Key Accomplishments

Increased activity year-over-year, despite COVID-19 pandemic.



Annual savings of 408 acre-feet, lifetime savings of 3,292 acre-feet.



Cost-effective IEUA investment: 3-year payback at \$310 per acre-foot cost.



Leveraged \$1.6 million in outside funding.



Expanded budget and re-engineered the Sprinkler Tune-up Program to be the foundational program.



Launched innovative Leak Detection Program pilot.



## *A Special Consideration for COVID-19*

COVID-19 has impacted everyone. In light of concern over basic needs such as public health and the economy, it's not a surprise that environmental issues including water conservation would take a back seat. Water conservation program activity throughout California has seen a steep decrease in participation.



The future remains uncertain, but most agree that the impacts of COVID-19 will be felt for some time. As IEUA and the member agencies look toward implementation of WUE programs in this new environment, we remain committed to ensuring the health and safety of our personnel, our contractors and our customers.

While conservation program participation is down, it's important to note that home improvement and eCommerce sales have increased. WUE programs need to leverage this new paradigm. A fresh look at the ways we have traditionally implemented our outreach, programs, and services will be required in this post-COVID-19 world. Among the accommodations and new practices, we foresee a continued shift to virtual or video-based workshops and services, a greater emphasis of bill savings in promotional materials, and evaluation of alternative program formats such as online stores and direct delivery of free and discounted products.





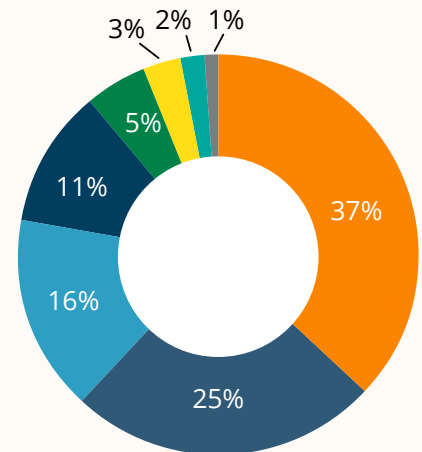
# FY 2020 WUE Program Water Savings

There are eight IEUA WUE programs with verifiable water savings. **These core programs saved 408 acre-feet annually and 3,292 acre-feet over the life of the measures.**

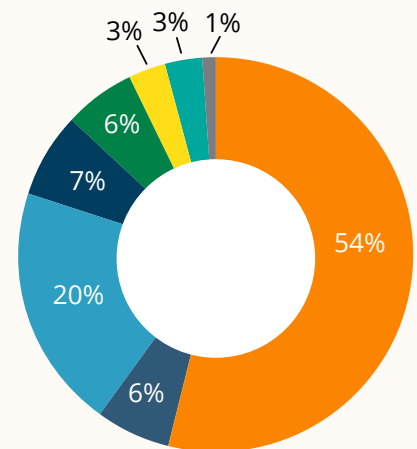
With the most savings, SoCal WaterSmart rebates represented 37% of the annual savings and 54% of the lifetime savings. Below are the annual and lifetime water savings for each program.

| Program                       | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------------------------|---------------------|-----------------------|
| SoCal WaterSmart Rebates      | 151                 | 1,773                 |
| Sprinkler Tune-Ups            | 104                 | 209                   |
| Turf Replacement              | 66                  | 664                   |
| Landscape Audit & Evaluations | 43                  | 213                   |
| Smart Controller Upgrades     | 20                  | 196                   |
| Large Landscape Retrofits     | 12                  | 109                   |
| Leak Detection Incentives     | 8                   | 83                    |
| Pressure Regulation           | 4                   | 45                    |
| <b>Total</b>                  | <b>408</b>          | <b>3,292</b>          |

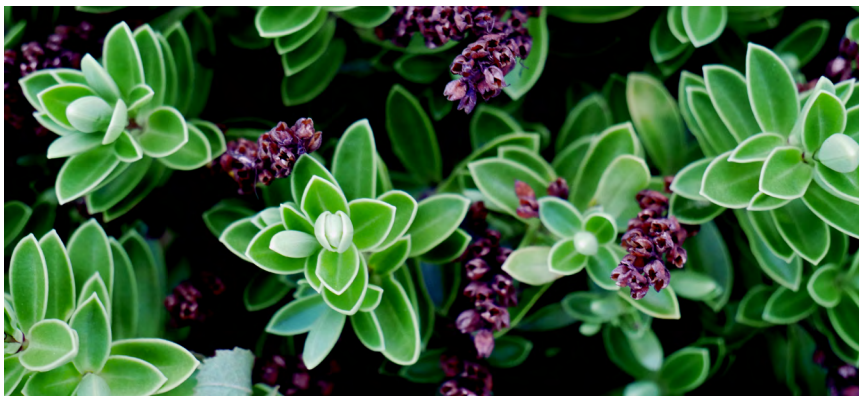
**Percent Annual Water Savings by Program**



**Percent Lifetime Water Savings by Program**



- SoCal WaterSmart Rebates
- Sprinkler Tune-Ups
- Turf Replacement
- Landscape Audit & Evaluations
- Smart Controller Upgrades
- Large Landscape Retrofits
- Leak Detection Incentives
- Pressure Regulation



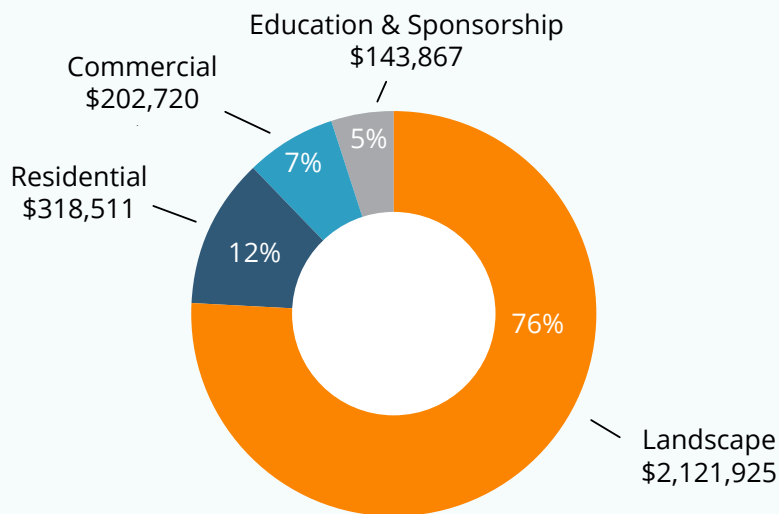


# FY 2020 WUE Program Cost and Cost Effectiveness

The total cost for FY 2020 WUE programs was \$2.8 Million.

76%, or \$2.1 Million, of the funds went to landscape and irrigation programs and services. \$318,511 was spent on residential programs, \$202,720 on commercial programs and \$143,867 on education and support services.

## Program Funding by Sector



As shown in the chart below, IEUA continues to deliver highly cost-effective programs. IEUA spent just \$1.15 million for programs that delivered lifetime savings of 3,292 acre-feet, at a low cost of \$310 per acre-foot. Another way to view this is for every \$1.00 IEUA spent, IEUA and the member agencies received \$1.40 in benefits.



Of all the program funding, IEUA secured 59% from outside funding.

IEUA spent just **\$1.16 Million** for lifetime savings of 3,292 acre-feet at **\$310 per acre-foot.**

Below is a comparison of each core WUE program by funding source, total cost, IEUA payback and IEUA cost per acre-foot.

| Program                       | Outside Funding  | IEUA Funding       | MWD Funding        | Total              | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-------------------------------|------------------|--------------------|--------------------|--------------------|----------------------|-------------------------|
| SoCal WaterSmart Rebates      | \$1,580          | \$231,570          | \$195,460          | \$428,610          | 1.86                 | \$130                   |
| Landscape Audit & Evaluations | \$15,937         | \$9,697            | \$9,810            | \$35,444           | 0.3                  | \$226                   |
| Leak Detection Incentives     | \$0              | \$19,017           | \$0                | \$19,017           | 2.75                 | \$228                   |
| Turf Replacement              | \$108,089        | \$309,638          | \$972,200          | \$1,389,927        | 5.62                 | \$466                   |
| Sprinkler Tune-Ups            | \$0.00           | \$94,602           | \$69,786           | \$164,389          | 1.15                 | \$476                   |
| Large Landscape Retrofits     | \$2,976          | \$71,143           | \$72,210           | \$146,329          | 7.37                 | \$650                   |
| Smart Controller Upgrades     | \$0              | \$186,171          | \$96,096           | \$282,267          | 11.43                | \$949                   |
| Pressure Regulation           | \$0              | \$99,932           | \$77,242           | \$177,174          | 27.01                | \$2,242                 |
| <b>Total</b>                  | <b>\$128,582</b> | <b>\$1,021,770</b> | <b>\$1,492,804</b> | <b>\$2,643,157</b> | <b>3.02</b>          | <b>\$310</b>            |

Topping the list for cost-effectiveness is SoCal WaterSmart Rebates (not including Turf Replacement), which costs just \$130 per acre-foot and has a payback of 1.86 years. The second most cost-effective program is the Landscape Audit and Evaluation Program (LEAP), administered by Chino Basin Water Conservation District (CBWCD), which costs \$226 per acre-foot and earns a payback in just over three months. The Leak Detection Incentive Program is the third most cost-effective, at \$228 per acre-foot with a payback of 2.75 years. In FY 2020, IEUA funded the Leak Detection Incentive pilot entirely out of its own budget. Going forward Metropolitan will provide funding thus increasing the cost-effectiveness of leak detection programs.

The Pressure Regulation Program is the highest cost at \$2,242 per acre-foot, however the program is considered a highly valued customer service program. The program is now provided on a case-by-case for customer experiencing issues with indoor waste pressure. Regardless of the high cost per acre-foot for the Pressure Regulation Program, the combined cost per acre-foot total for all programs, is a very low dollar amount of \$310 per acre-foot.





In addition to the core efficiency programs with active water savings, IEUA funds educational and local agency support programs. These programs and services provide an educational foundation for all WUE efforts. To the right is a list of the programs and their associated funding for FY 2020.

| Service                                            | Outside Funding | IEUA Funding     | MWD Funding     | Total            |
|----------------------------------------------------|-----------------|------------------|-----------------|------------------|
| <b>Landscape Transformation Customer Education</b> |                 |                  |                 |                  |
| Landscape Design                                   | \$4,080         | \$240            | \$1,920         | \$6,240          |
| Landscape Classes                                  | --              | \$725            | \$700           | \$1,425          |
| <b>School Education</b>                            |                 |                  |                 |                  |
| National Theatre for Children                      | --              | \$49,920         | --              | \$49,920         |
| Garden in Every School                             | --              | \$1,951          | --              | \$1,951          |
| Shows That Teach                                   | --              | \$11,450         | --              | \$11,450         |
| <b>Member Agency Local Support &amp; Funding</b>   |                 |                  |                 |                  |
| WUE Support Tools                                  | --              | \$19,065         | --              | \$19,065         |
| BMP Support                                        | --              | \$10,000         | --              | \$10,000         |
| WUE Business Plan                                  | --              | \$1,330          | --              | \$1,330          |
| CIMIS Station                                      | --              | \$3,960          | --              | \$3,960          |
| CALWEP/ AWE Dues                                   | --              | \$15,418         | \$15,418        | \$30,836         |
| Plumbing Handbooks                                 | --              | \$2,801          | --              | \$2,801          |
| Pressure Gauges                                    | --              | \$3,389          | --              | \$3,389          |
| Water Festival                                     | --              | \$1,500          | --              | \$1,500          |
| <b>Total</b>                                       | <b>\$4,080</b>  | <b>\$121,749</b> | <b>\$18,038</b> | <b>\$143,867</b> |

## FY 2020 Member Agency Program Activity

The chart below shows the program activity and water savings for each member agency. Although there are a range of devices that can be installed, the chart provides an illustrative comparison of performance for each overarching program.

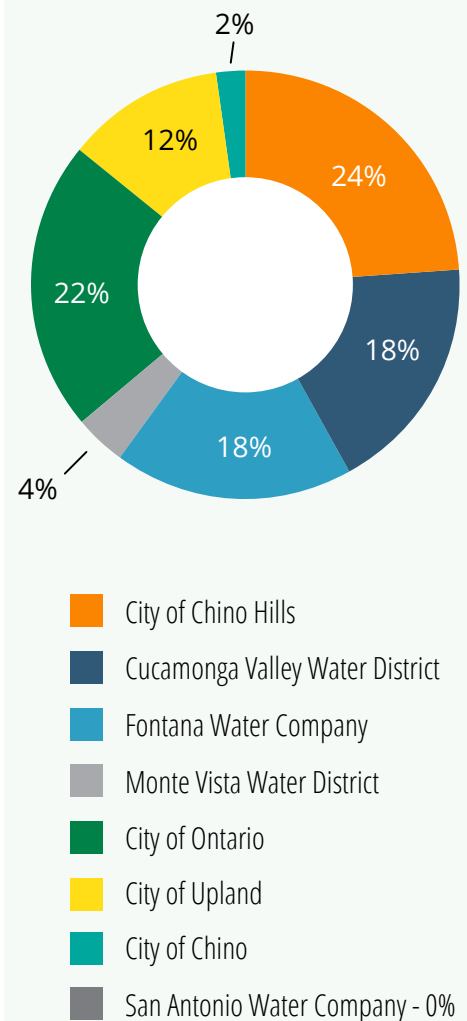
Interestingly Chino Hills, one of the smaller utilities, had the highest volume of annual water savings. This is due to their high customer participation in the Sprinkler Tune-Up Program. Ontario and Fontana achieved the largest lifetime savings due to installation of laminar flow restrictors at medical facilities and toilets in multi-family facilities.

Details on all program activity for each member agency can be found at <http://bit.ly/IEUAMAFY2020Data>.

### FY 2020 Member Agency Program Activity and Water Savings

| Member Agency                   | Number of Devices | Gallons Saved per Year | AF Saved per Year | Lifetime AF Saved |
|---------------------------------|-------------------|------------------------|-------------------|-------------------|
| Chino, City of                  | 175               | 2,190,587              | 7                 | 67                |
| Chino Hills, City of            | 788               | 28,741,926             | 88                | 483               |
| Cucamonga Valley Water District | 852               | 20,701,040             | 64                | 554               |
| Fontana Water Company           | 2,211             | 21,413,895             | 66                | 679               |
| Monte Vista Water District      | 172               | 5,260,859              | 16                | 122               |
| Ontario, City of                | 2,613             | 26,510,242             | 81                | 790               |
| Upland, City of                 | 640               | 13,876,653             | 43                | 383               |
| San Antonio Water Company       | 8                 | 92,490                 | 0                 | 4                 |

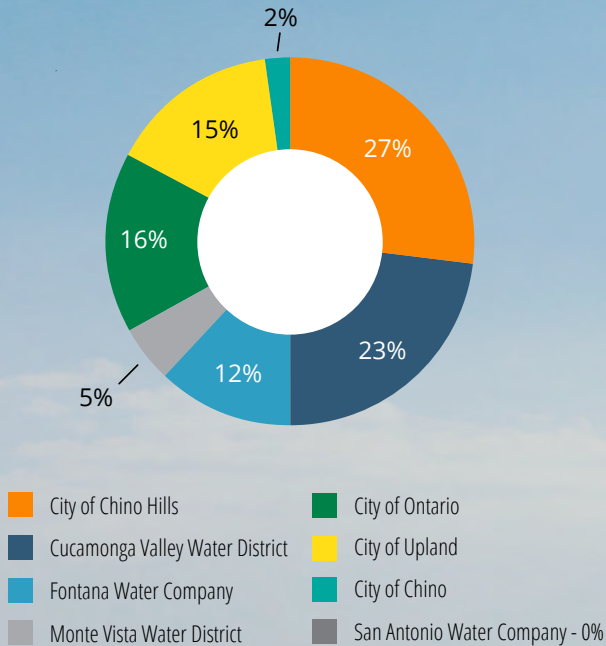
Percent Annual Water Savings by Member Agency





The chart below illustrates the program funding for the eight core water savings programs before each member agency.

IEUA Funding per Member Agency



Chino Hills and CVWD leveraged the most IEUA funding at \$277,262 and \$230,685 respectively. This is because Chino Hills actively promoted the Sprinkler Tune-up Program as well as the Leak Detection Program. IEUA funds these two programs at a higher level than programs such as SoCal WaterSmart, which is funded at a higher level by Metropolitan.

CVWD had the largest total funding at \$701,745 (\$421,033 from Metropolitan) because of their higher customer participation in the SoCal WaterSmart Program.

Details on program funding, activity and water savings for each member agency can be found at [/bit.ly/IEUAMAFY2020Data](https://bit.ly/IEUAMAFY2020Data).



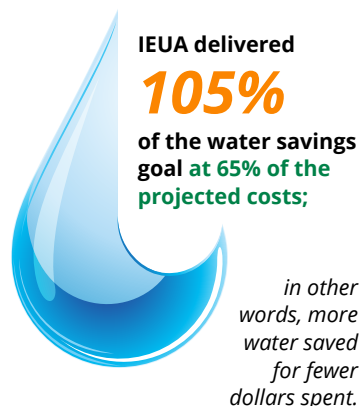
## FY 2020 Funding Benefits per Member Agency

| Member Agency                   | Outside Funding | IEUA Funding | MWD Funding | Total     |
|---------------------------------|-----------------|--------------|-------------|-----------|
| Chino, City of                  | \$0             | \$18,185     | \$25,492    | \$43,677  |
| Chino Hills, City of            | \$10,808        | \$277,262    | \$304,082   | \$592,153 |
| Cucamonga Valley Water District | \$50,048        | \$230,665    | \$421,033   | \$701,745 |
| Fontana Water Company           | \$2,000         | \$119,920    | \$200,381   | \$322,300 |
| Monte Vista Water District      | \$11,725        | \$53,716     | \$77,446    | \$142,887 |
| Ontario, City of                | \$16,722        | \$163,134    | \$204,216   | \$384,073 |
| Upland, City of                 | \$21,341        | \$148,600    | \$249,774   | \$419,715 |
| San Antonio Water Company       | \$0             | \$590        | \$570       | \$1,160   |

## FY 2020 Performance to WUE Business Plan Goals

Every five years, IEUA and its member agencies develop a Regional Water Use Efficiency Business Plan. The Business Plan documents regional water use efficiency targets, goals and methodologies to achieve water savings, meet current statutes, and comply with evolving State Standards.

To the right is a snapshot of the FY 2020 projected costs and savings from the 2015 WUE Business Plan compared against the actual costs and savings. As shown in the chart, IEUA delivered 105% of the water savings goal at 65% of the projected costs; in other words, more water saved for fewer dollars spent. It should be noted that it was projected that two water agencies would implement budget-based water rates. This did in fact, occur with both Chino and Chino Hills implementing budget-based rates. The actual water savings from the new rate structure will be evaluated in the future.



### FY 2020 Performance Against 2015 WUE Business Plan

|                                                                  |                    |
|------------------------------------------------------------------|--------------------|
| IEUA Projected Costs                                             | \$1,094,335        |
| "IEUA Actual Costs (Active Programs Only)"                       | \$790,773          |
| "Difference in Spending Project vs Actual Costs"                 | <b>(\$303,563)</b> |
| "Projected Annual Water Savings without Budget Based Rates (AF)" | 3,127              |
| "Actual Annual Water Savings without Budget Based Rates (AF)"    | 3,292              |
| Percent Achievement                                              | 105%               |

# Looking Forward

The member agencies and IEUA have been effectively implementing water use efficiency strategies and programs over the last decade.

There are a number of challenges ahead. The most important will be to meet the imminent legislative mandates for tightened water usage standards. These looming regulations will require water agencies at the retail and wholesale level to work together in new and innovative ways and at a faster pace of adaptation and coordination.

As a result, IEUA will support the regional efforts that will help the member agencies achieve compliance.

*Specifically, IEUA is committed to the following objectives for the upcoming year:*

**Generate a WUE Business Plan** that provides the blueprint for the methodologies and strategies to be utilized to achieve water savings, meet current statutes, and comply with evolving State Standards.

**Offer a range of water use efficiency programs, ideally providing integrated, multi-resource benefits** including community and economic development.

**Provide meaningful programs with high value for customers** to motivate customers to participate.

**Continue to focus on maximizing water savings and related programs** within the constraints of the COVID-19 pandemic.

**Support retailers in calculating compliance with California's new Framework legislation** and meeting expected standards and requirements imposed by the Framework.

**Continue to leverage outside funding** and allocate IEUA WUE funding for local and regional programs to offset member agency financial burden.

**Provide valuable marketing, data, and support resources** to strengthen and augment programs and processes.



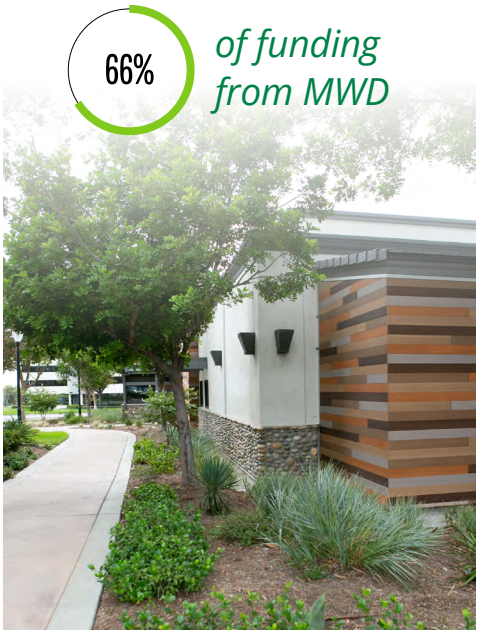
# SoCal Water\$mart Turf Replacement

The Turf Replacement Program encourages customers to remove high water-consuming turf and replace it with low water-using, regionally appropriate plants and surfaces that allow for ground water infiltration and elimination of runoff. Qualifying applicants are eligible to receive \$3 per square foot of turf grass removed.

## Turf Replacement Program Savings FY 2020

|             | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------|---------------------|-----------------------|
| Residential | 24                  | 243                   |
| Commercial  | 42                  | 421                   |
| Total       | 66                  | 664                   |

## Long-term market transformation program



## Why IEUA Implements the Turf Replacement Program

Hundreds of thousands of square feet of irrigated turf in the IEUA territory represent a significant opportunity for water savings.

Replacing turf with regionally appropriate plants also aids in transforming the irrigation and landscaping market.



Removing turf provides long-term savings that persist over 10 years.

## Turf Replacement Program FY 2020 Accomplishments

Increased activity over FY 2019 despite COVID-19 pandemic.



## Turf Replacement Program Activity

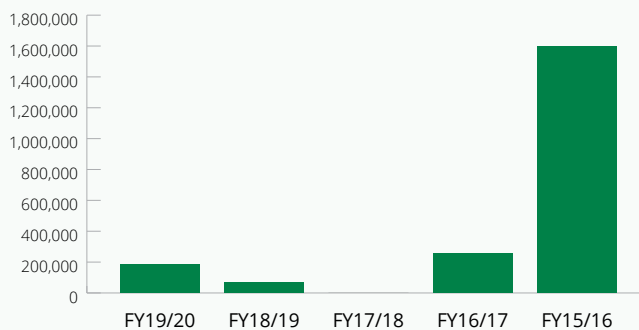
Turf removal reached peak popularity during FY 2016 when severe drought limited outdoor irrigation and rebates for turf removal were at their highest. As drought conditions ended, turf removal activity declined steeply, dropping 82% from the peak. In FY 2018, Metropolitan suspended the program due to lack of budget.

Turf Removal began to rebound in FY 2020 with a 61% increase in residential and 94% increase in commercial square footage replaced. However, the COVID-19 pandemic has slowed activity. Program activity over the past five years in the IEUA service area has mirrored that in Metropolitan's service area and the entire region. Below is a chart displaying residential and commercial activity in the Turf Replacement Program over the last five years.

|         | Residential SF Replaced | Commercial SF Replaced | Total SF Replaced |
|---------|-------------------------|------------------------|-------------------|
| FY 2020 | 184,286                 | 318,778                | 503,064           |
| FY 2019 | 71,257                  | 19,801                 | 91,058            |
| FY 2018 | 0                       | 0                      | 0                 |
| FY 2017 | 255,091                 | 637,916                | 893,007           |
| FY 2016 | 1,596,789               | 3,337,120              | 4,933,909         |



Annual Activity | Residential SQ FT



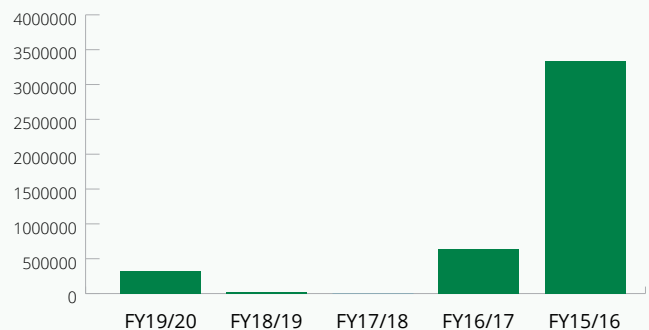
% Change  
Year over Year

61%

% Change from 5  
Years Ago

-766%

Annual Activity | Commercial SQ FT



% Change  
Year over Year

94%

% Change from 5  
Years Ago

-947%

## Turf Replacement Program FY 2020 Water Savings

|              | Annual Savings<br>(GPY) | Annual Savings<br>(AF) | Lifetime Savings<br>(AF) |
|--------------|-------------------------|------------------------|--------------------------|
| Residential  | 7,924,298               | 24                     | 243                      |
| Commercial   | 13,707,454              | 42                     | 421                      |
| <b>Total</b> | <b>21,631,752</b>       | <b>66</b>              | <b>664</b>               |

## Turf Replacement Program FY 2020 Cost and Cost Effectiveness

This program is cost effective at \$466 per acre-foot.

| Outside<br>Funding | IEUA<br>Funding | MWD<br>Funding | Total       | IEUA<br>Payback<br>(Years) | IEUA Cost<br>per Acre-<br>foot |
|--------------------|-----------------|----------------|-------------|----------------------------|--------------------------------|
| \$108,089          | \$309,638       | \$972,200      | \$1,389,927 | 5.62                       | \$466                          |

## Turf Replacement Potential Program Enhancements

During non-drought years, participation in the Turf Replacement Program significantly decreases. Among the barriers to customer acceptance are cost, aesthetic concerns, and lack of ability to execute projects. Recommendations for addressing these barriers include:



Targeting of customers likely to replace their turf, consistent and appealing outreach, and education to address customer reluctance for change.



Linking customers to support services to help them make the change successfully. This may include connections to plant suppliers and contractors, design services, and customer consultations.



Building and promoting an easy-to-use and content-rich microsite that serves as a centralized hub bringing together the latest information, guidance, and examples on climate appropriate landscaping, including how-to videos, inspirational design ideas and homeowner stories, plant databases, and links to resources such as nurseries and qualified contractors.





# SoCal Water\$mart Rebates

SoCal WaterSmart is Metropolitan's regional rebate program offering incentives for a menu of indoor and outdoor water saving measures for both residential and commercial customers.

The program is administered by Metropolitan's regional vendor, EGIA. Metropolitan pays for the base incentive as well the administration.

## SCWS Program Savings FY 2020

|             | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------|---------------------|-----------------------|
| Residential | 57                  | 731                   |
| Commercial  | 93                  | 1,043                 |
| Total       | 151                 | 1,773                 |

*Highest  
water savings  
program*

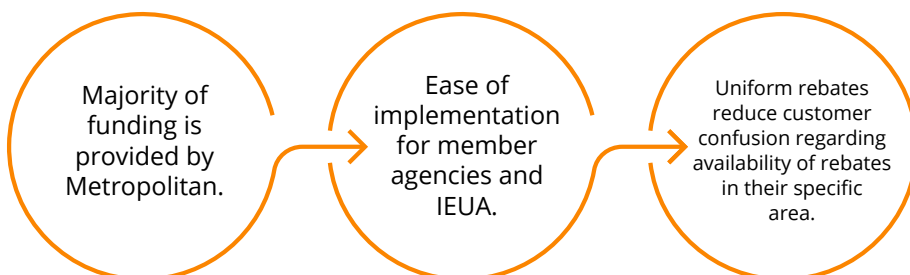
*Lowest per  
acre-foot  
costs*



IEUA adds supplemental funding for each device as shown in the chart below.

| Residential Measures                                         | Base Incentive | IEUA Added Incentive | Total Incentive |
|--------------------------------------------------------------|----------------|----------------------|-----------------|
| High Efficiency Clothes Washer                               | \$85           | \$75                 | \$160           |
| Premium High Efficiency Toilet                               | \$40           | \$60                 | \$100           |
| Landscape Measures                                           |                |                      |                 |
| High Efficiency Sprinkler Nozzles                            | \$2            | \$3                  | \$5             |
| Smart Controllers (Less than one irrigated acre)             | \$80           | \$80                 | \$160           |
| Smart Controllers Per Station (One irrigated acre or larger) | \$35           | \$10                 | \$45            |
| Commercial Measures                                          |                |                      |                 |
| Plumbing Flow Control Valve                                  | \$5            | \$5                  | \$10            |
| Laminar Flow Restrictor                                      | \$10           | \$10                 | \$20            |
| Commercial Premium High Efficiency Toilet                    | \$40           | \$60                 | \$100           |
| Ultra-Low Water Urinal                                       | \$200          | \$200                | \$400           |
| Large Rotary Nozzles (Per Set)                               | \$13           | \$5                  | \$18            |
| In-Stream Flow Regulator                                     | \$1            | \$3                  | \$4             |
| pH- Cooling Tower Controller                                 | \$1,750        | \$1,000              | \$2,750         |
| Cooling Tower Conductivity                                   | \$625          | \$375                | \$1,000         |
| Dry Vacuum Pump (Per 0.5 HP)                                 | \$125          | \$200                | \$325           |
| Connectionless Food Steamers (Per Compartment)               | \$485          | \$315                | \$800           |
| Ice-Making Machines                                          | \$1,000        | \$1,000              | \$2,000         |

### Why IEUA Implements the SoCal WaterSmart Program



### SoCal WaterSmart Program FY 2020 Accomplishments

**7,051** devices rebated.

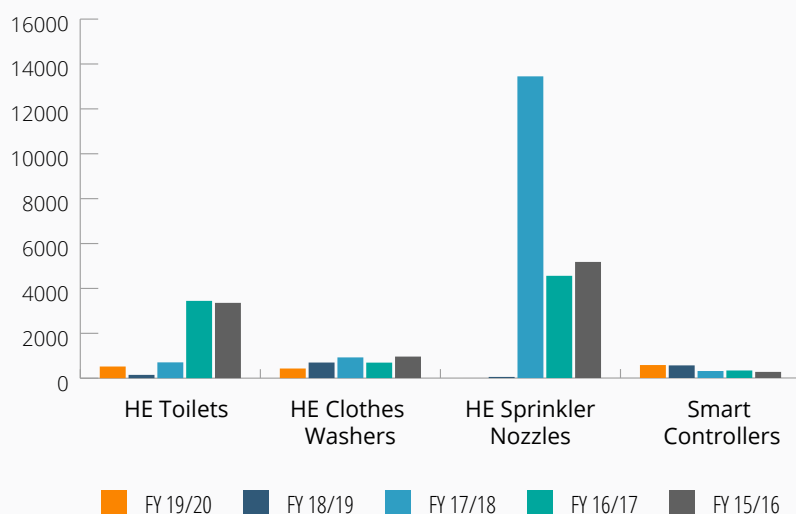
Over  
**1,500** customers  
participated in the  
program.

## SoCal WaterSmart Program Activity

### Residential Device Activity

Activity has gone from a high in FY 2018 of 15,381 devices to a low of 1,456 devices in FY 2019 and now up 52% in FY 2020 with 2,803 devices rebated. High efficiency sprinkler nozzles represent the highest volume of devices rebated. High efficiency toilets represent the second highest volume.

Residential Annual Activity by Device - 5 Year Comparison



### Residential Annual Activity by Device

| Device               | FY 2020      | FY 2019      | FY 2018       | FY 2017      | FY 2016      |
|----------------------|--------------|--------------|---------------|--------------|--------------|
| HE Toilets           | 521          | 148          | 705           | 3,444        | 3,355        |
| HE Clothes Washers   | 429          | 695          | 923           | 690          | 959          |
| HE Sprinkler Nozzles | 1,275        | 51           | 13,442        | 4,555        | 5,173        |
| Smart Controllers    | 578          | 562          | 311           | 334          | 271          |
| <b>Total</b>         | <b>2,803</b> | <b>1,456</b> | <b>15,381</b> | <b>9,023</b> | <b>9,758</b> |

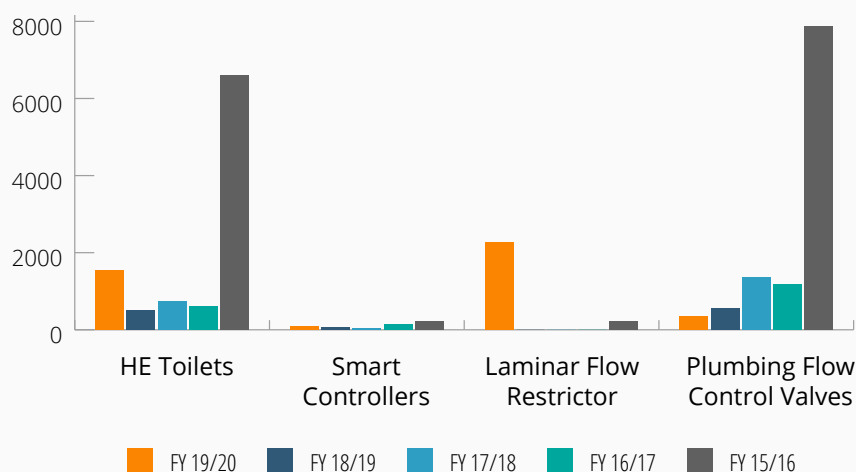
## Commercial Device Activity

Activity has gone from a high of 34,426 devices in FY 2016 to a low of 1,120 devices in FY 2019, increasing 122% to 4,248 devices in FY 2020. Laminar flow restrictors represent the largest number of rebated devices. Toilets represent the second largest volume.

In FY 2020, there was zero activity for urinals, cooling tower controllers, high efficiency sprinkler nozzles, and air-cooled ice machines.



Commercial Annual Activity by Device - 5 Year Comparison



|                              | % Change Year Over Year | % Change from 5 Years Ago |
|------------------------------|-------------------------|---------------------------|
| High Efficiency Toilets      | 132.88%                 | -328.72%                  |
| Smart Controllers            | 167.05%                 | -140.91%                  |
| HE Sprinkler Nozzles         | 0.00%                   | 0.00%                     |
| Laminar Flow Restrictors     | 100.00%                 | 90.71%                    |
| Plumbing Flow Control Valves | 251.94%                 | -2087.22%                 |
| Commercial                   | 93                      | 1,043                     |

## Commercial Annual Activity by Device

| Device                       | FY 2020      | FY 2019      | FY 2018       | FY 2017      | FY 2016       |
|------------------------------|--------------|--------------|---------------|--------------|---------------|
| High Efficiency Toilets      | 1,539        | 506          | 747           | 611          | 6,598         |
| Smart Controllers            | 88           | 59           | 47            | 139          | 212           |
| Laminar Flow Restrictor      | 2,261        | 0            | 0             | 0            | 210           |
| Plumbing Flow Control Valves | 360          | 547          | 1,363         | 1,191        | 7,874         |
| <b>Total</b>                 | <b>4,248</b> | <b>1,120</b> | <b>17,028</b> | <b>7,141</b> | <b>34,426</b> |

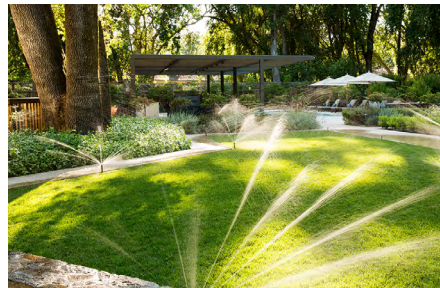


## SoCal WaterSmart Program FY 2020 Water Savings

### Residential Device Savings

The majority of annual residential device savings came from smart controllers at 24 acre-feet per year. However, high efficiency toilets represent the largest lifetime savings at 256 acre-feet due to their long life.

|                                   | Annual Savings (GPY) | Annual Savings (AF) | Lifetime Savings (AF) |
|-----------------------------------|----------------------|---------------------|-----------------------|
| High Efficiency Toilets           | 4,176,930            | 13                  | 256                   |
| High Efficiency Clothes Washers   | 4,823,483            | 15                  | 207                   |
| High Efficiency Sprinkler Nozzles | 1,828,299            | 6                   | 28                    |
| Smart Controllers                 | 7,798,526            | 24                  | 15                    |
| Rain Barrels                      | 5,573                | 0                   | 0                     |
| <b>Total</b>                      | <b>26,557,109</b>    | <b>57</b>           | <b>731</b>            |



### Commercial Device Savings

The majority of annual savings for commercial devices came from laminar flow restrictors at 52 acre-feet, followed by high efficiency toilets at 38 acre-feet. Due to its 20-year product life, toilets provide the largest lifetime savings at 757 acre-feet or 71% of total savings. Although toilets provide the longest lifetime savings, the multi-family market is saturated with few higher flow toilets available in the market.

|                         | Annual Savings (GPY) | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------------------|----------------------|---------------------|-----------------------|
| High Efficiency Toilets | 12,338,378           | 38                  | 757                   |
| Smart Controllers       | 369,962              | 1                   | 11                    |
| Laminar Flow Restrictor | 16,947,778           | 52                  | 260                   |
| Plumbing Flow Control   | 492,761              | 2                   | 15                    |
| <b>Total</b>            | <b>30,148,879</b>    | <b>93</b>           | <b>1,043</b>          |



## SoCal WaterSmart Program FY 2020 Cost and Cost Effectiveness

Both the residential and commercial SoCal WaterSmart programs are the most cost-effective programs for IEUA. The commercial program comes in at \$89 per acre-foot and the residential is at \$155 per acre-foot with a combined cost of \$130 per acre-foot, well below IEUA's avoided costs.

### Residential Device Cost and Cost Effectiveness

|                                   | Outside Funding | IEUA Funding     | MWD Funding      | Total            | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-----------------------------------|-----------------|------------------|------------------|------------------|----------------------|-------------------------|
| High Efficiency Toilets           | \$0             | \$31,260         | \$20,840         | \$52,100         | 2.94                 | \$122                   |
| High Efficiency Clothes Washers   | \$1,580         | \$32,175         | \$36,465         | \$70,220         | 2.62                 | \$155                   |
| High Efficiency Sprinkler Nozzles | \$0             | \$3,825          | \$2,550          | \$6,375          | 0.82                 | \$136                   |
| Smart Controllers                 | \$0             | \$46,240         | \$46,240         | \$92,480         | 2.33                 | \$193                   |
| Rain Barrels                      | \$0             | \$0              | \$315            | \$315            | 0.00                 | \$0                     |
| <b>Total</b>                      | <b>\$1,580</b>  | <b>\$113,500</b> | <b>\$106,410</b> | <b>\$221,490</b> | <b>2.39</b>          | <b>\$155</b>            |

### Commercial Device Cost and Cost Effectiveness

|                          | Outside Funding | IEUA Funding    | MWD Funding     | Total           | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|--------------------------|-----------------|-----------------|-----------------|-----------------|----------------------|-------------------------|
| High Efficiency Toilets  | \$0             | \$92,340        | \$61,560        | \$153,900       | 2.94                 | \$122                   |
| Smart Controllers        | \$0             | \$1,320         | \$3,080         | \$4,400         | 1.40                 | \$116                   |
| Laminar Flow Restrictors | \$0             | \$22,610        | \$22,610        | \$45,220        | 0.52                 | \$87                    |
| Plumbing Flow Controls   | \$0             | \$1,800         | \$1,800         | \$3,600         | 1.43                 | \$119                   |
| <b>Total</b>             | <b>\$0</b>      | <b>\$24,410</b> | <b>\$24,410</b> | <b>\$48,820</b> | <b>0.55</b>          | <b>\$89</b>             |



## SoCal WaterSmart Potential Program Enhancements

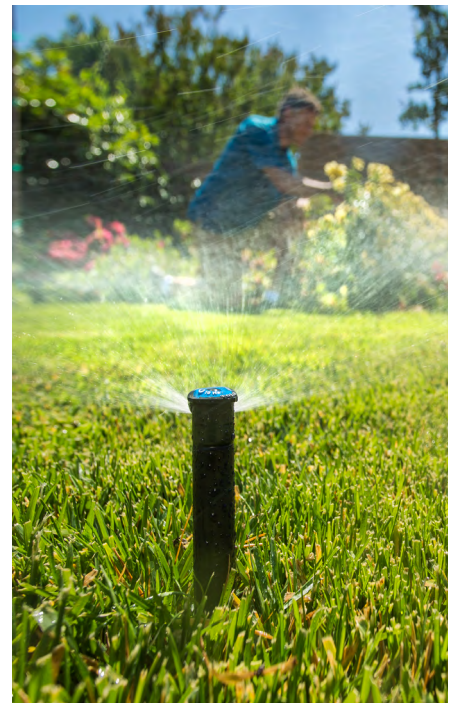
Ease of participation, knowledge about rebates and motivation to install new projects all pose barriers to program implementation. Recommendations for addressing these barriers include:

- 

Continue to add funding to priority measures, specifically irrigation measures including smart controllers and high efficiency sprinkler nozzles.
- 

Conduct more aggressive outreach and marketing, specifically targeting large landscape properties and top users. Utilize the communication avenue most appropriate for targeted populations.
- 

Address the barriers to participation in standard rebate programs. The two main barriers to participation are complex rebate paperwork and the requirement to pay for the purchase up front before receiving the rebate.





# Sprinkler Tune-up Program

The Sprinkler Tune-Up Program provides customers with a free landscape irrigation tune-up that includes:

- General landscape and irrigation audit.
- Recommendations for repairs and upgrades.
- Replacing and adjusting sprinkler heads and nozzles.
- Repairing valves and bad wiring.
- Controller programming and scheduling.
- Minor lateral irrigation line repairs.

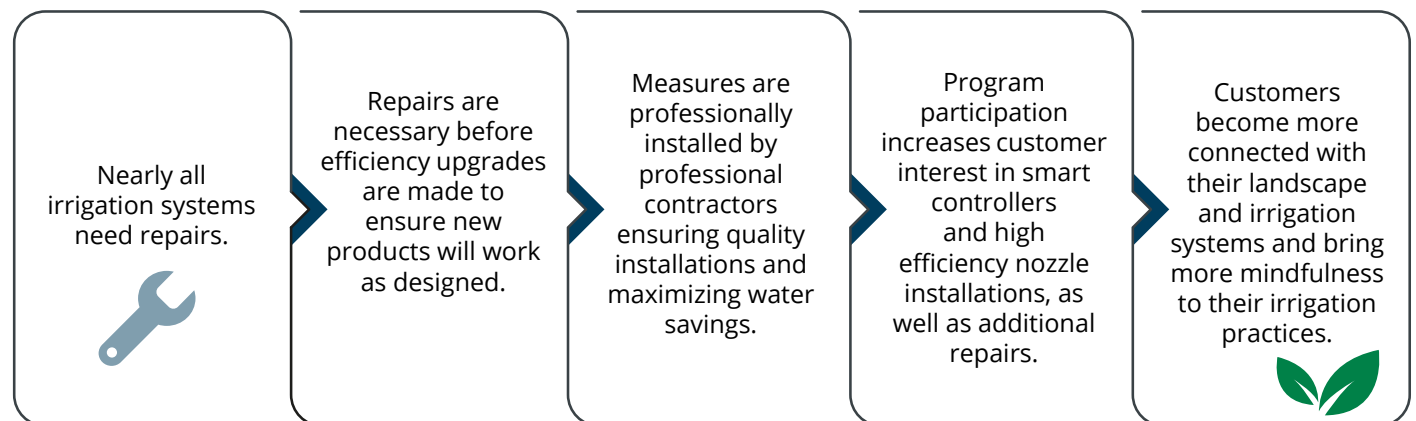
Begun as a pilot in FY 2019, the Sprinkler Tune-up Program was operated by Conserv Inc, IEUA's existing vendor for the smart controller installation programs. Customers responded to the program so well that funding was exhausted within a few weeks. In FY 2020, IEUA and its member agencies expanded the program to meet higher demand and following a competitive bidding process, Conserv was awarded the new contract.



## Tune-up Program Savings FY 2020

| Annual Savings (AF) | Lifetime Savings (AF) |
|---------------------|-----------------------|
| 104                 | 209                   |

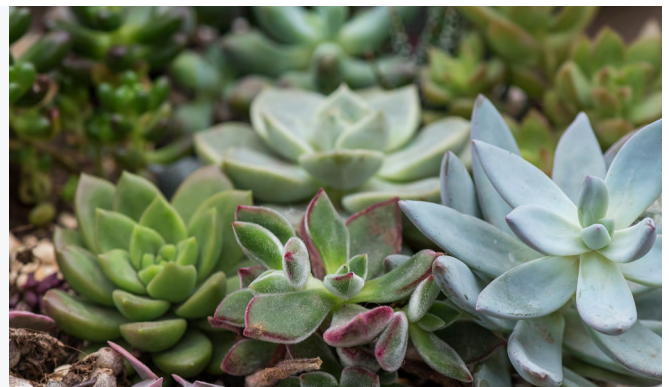
## Why IEUA implements the Sprinkler Tune-up Program



## Sprinkler Tune-up Program FY 2020 Accomplishments

Increase activity  
**275%**  
year-over-year

**Unprecedented  
customer  
demand**





## Sprinkler Tune-up Program Activity

Extremely high demand for the Sprinkler Tune-up Program has resulted in an increase in activity year-over-year. In fact, participation in this program is limited only by budget. If the budget were to increase, participation would increase.

|         | Tune-up Services | Sprinkler Tune-up Program FY 2020 Water Savings |                     |                       |
|---------|------------------|-------------------------------------------------|---------------------|-----------------------|
|         |                  | Annual Savings (GPY)                            | Annual Savings (AF) | Lifetime Savings (AF) |
| FY 2020 | 450              |                                                 |                     |                       |
| FY 2019 | 163              | 34,023,960                                      | 104                 | 209                   |

## Sprinkler Tune-up Program FY 2020 Cost and Cost Effectiveness

| Outside Funding | IEUA Funding | MWD Funding | Total     | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-----------------|--------------|-------------|-----------|----------------------|-------------------------|
| \$0.00          | \$94,602.90  | \$69,786    | \$164,389 | 1.15                 | \$475                   |

## Sprinkler Tune-up Program Potential Enhancements

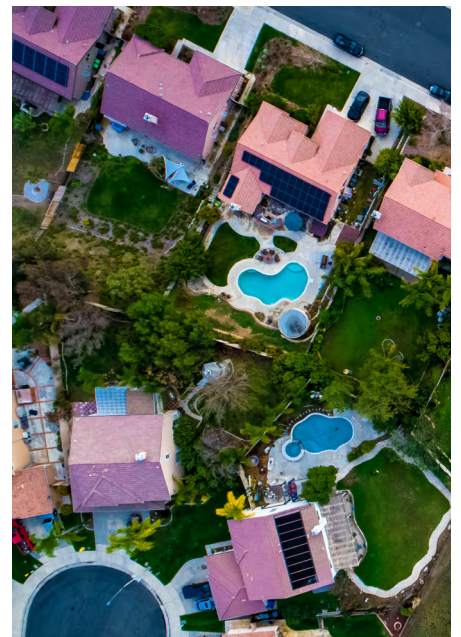
Landscape irrigation systems are often neglected by consumers until they have a problem. By encouraging preventative maintenance, the Sprinkler Tune-up Program fills a void with expert help and often empowers customers to pay more attention to their systems. Recommendations to improve this program are:



Consider targeting out-of-budget customers to improve cost effectiveness.



Continue to participate in the Metropolitan-sponsored study to analyze the savings per repair and duration of those savings and modify program services based upon findings.



# Small Controller Upgrade Program

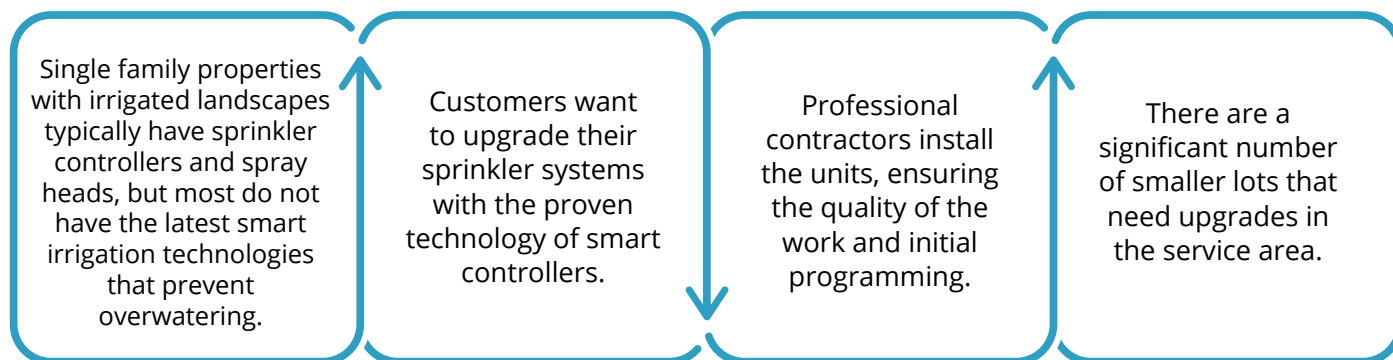
The Small Controller Upgrade Program offers customers the free installation of smart controllers that use real-time weather data to adjust the frequency of watering. To participate, customers must attend an educational workshop prior to the installation to ensure they can program and maintain the controller.

## Small Controller Program Savings FY 2020

| Annual Savings (AF) | Lifetime Savings (AF) |
|---------------------|-----------------------|
| 20                  | 196                   |



## Why IEUA Implements the Small Controller Upgrade Program



## Small Controller Upgrade Program FY 2020 Accomplishments

Almost  
**100%** increase  
in activity year-over-year

**Synergy**  
with Tune-up Program  
allowed for increasing  
savings per site.

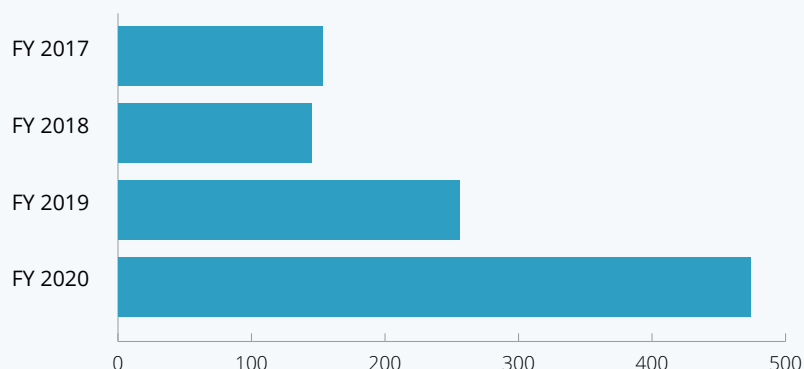
Shifted the educational  
workshop to an online video  
and transitioned the Program  
to contactless operation due to  
the COVID-19 pandemic.

**Conserv**  
Program vendor Conserv  
generated the video for free.

## Small Controller Upgrade Program Activity

Despite the impacts of the COVID-19 health pandemic, activity in this program has continued to rise over the last year. This is due to how this program and Sprinkler Tune-up Program frequently work in concert to drive participation and water savings, as smart controllers were installed nearly 100% of the time an irrigation tune-up was done.

## Smart Controller Installations 5 Year Comparison



## Small Controller Upgrade Program FY 2020 Water Savings

| Annual Savings (GPY) | Annual Savings (AF) | Lifetime Savings (AF) |
|----------------------|---------------------|-----------------------|
| 6,395,331            | 20                  | 196                   |

## Small Controller Upgrade Program FY 2020 Cost and Cost Effectiveness

The Small Controller Upgrade Program is one of IEUA's more expensive programs. The per unit water savings for controllers at smaller properties is much lower than larger landscapes, thus driving the cost effectiveness down.

| Outside Funding | IEUA Funding | MWD Funding | Total     | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-----------------|--------------|-------------|-----------|----------------------|-------------------------|
| \$0.00          | \$186,171    | \$96,096    | \$282,267 | 11.43                | \$949                   |



## Small Controller Upgrade Potential Program Enhancements

The Small Controller Upgrade Program draws customers who are motivated to save water through technology and upgrade their irrigation systems. However, the program for smaller properties is not as cost effective as other programs. Following are some recommendations for consideration:



Consider adding a co-payment to increase overall program cost effectiveness. However, cost-sharing may drive down participation, especially in times of economic uncertainty.



Pair the program with the Sprinkler Tune-up program for increased convenience to the customer and improved savings.



Target customers who exceed their water budgets for participation in this program. This is one way to increase cost effectiveness, rather than reaching out to the service area more broadly.



# Large Landscape Retrofit Program

With its goal of reducing outdoor water use among top water users and properties with extensive landscapes, the Large Landscape Program provides the free installation of smart irrigation devices such as smart controllers and high efficiency sprinkler nozzles to eligible customers. The program targets customers who have one acre or more of irrigated area or water usage of over 450,000 gallons per year per household.

## Large Landscape Program Savings FY 2020

| Annual Savings (AF) | Lifetime Savings (AF) |
|---------------------|-----------------------|
| 12                  | 109                   |

## Why IEUA Implements the Large Landscape Retrofit Program

Properties with large irrigated areas typically have sprinkler controllers and spray heads, but most do not have the latest smart irrigation technologies.

Effective installations and programming are assured by professional installation by contractors.



Large landscape properties with very high outdoor water use present the best opportunities for greatest water savings due to their expansive acreage of irrigated lawns and gardens. In addition, upgrades to sites over one acre are eligible for additional Metropolitan funding. This allows IEUA to leverage additional outside funding which increases overall program cost effectiveness.

The smart cloud-based irrigation controller appeals to customers.

## Large Landscape Retrofit Program FY 2020 Accomplishments

Activity increased  
**100%** year-over-year

*Synergy*  
with Tune-up Program  
allowed for increasing  
savings per site.



*Program closed and then re-opened successfully with contactless operations amid the COVID-19 pandemic.*



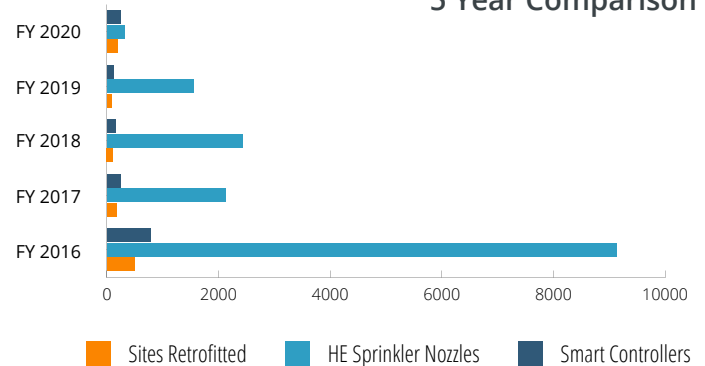
## Large Landscape Retrofit Program Activity

Activity has decreased over the last five years and crept up a bit in FY 2020. This is probably due to the lack of extremely large properties in the IEUA service area as well as the general decline in all efficiency programs post drought.

The number of nozzles installed per site has gone down significantly over the last five years. The first iterations of the program allowed for replacement of nozzles with standard, non-high efficiency nozzles. This new requirement has likely lowered the number of nozzles replaced.



Large Landscape Retrofits  
5 Year Comparison



|         | Smart Controllers | HE Sprinkler Nozzles | Sites Retrofitted |
|---------|-------------------|----------------------|-------------------|
| FY 2020 | 248               | 309                  | 183               |
| FY 2019 | 125               | 1,544                | 89                |
| FY 2018 | 159               | 2,421                | 108               |
| FY 2017 | 239               | 2,124                | 163               |
| FY 2016 | 778               | 9,135                | 501               |

## Large Landscape Retrofit Program FY 2020 Water Savings

| Annual Savings (GPY) | Annual Savings (AF) | Lifetime Savings (AF) |
|----------------------|---------------------|-----------------------|
| 3,789,174            | 12                  | 109                   |

## Large Landscape Retrofit Program FY 2020 Cost and Cost Effectiveness

The Large Landscape Program has a higher per acre-foot price than many other IEUA programs, however it is still below IEUA's avoided cost.

| Outside Funding | IEUA Funding | MWD Funding | Total     | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-----------------|--------------|-------------|-----------|----------------------|-------------------------|
| \$2,976         | \$71,143     | \$72,210    | \$146,329 | 7.37                 | \$650                   |

### Large Landscape Retrofit Potential Program Enhancements

While the Large Landscape Program continues to be a cost effective and worthwhile program, it does present some opportunities for improvement. Some suggestions for future changes are:



Offset the program's higher cost with a customer co-pay. This will boost the overall cost effectiveness of the program while increasing customer commitment to water savings.



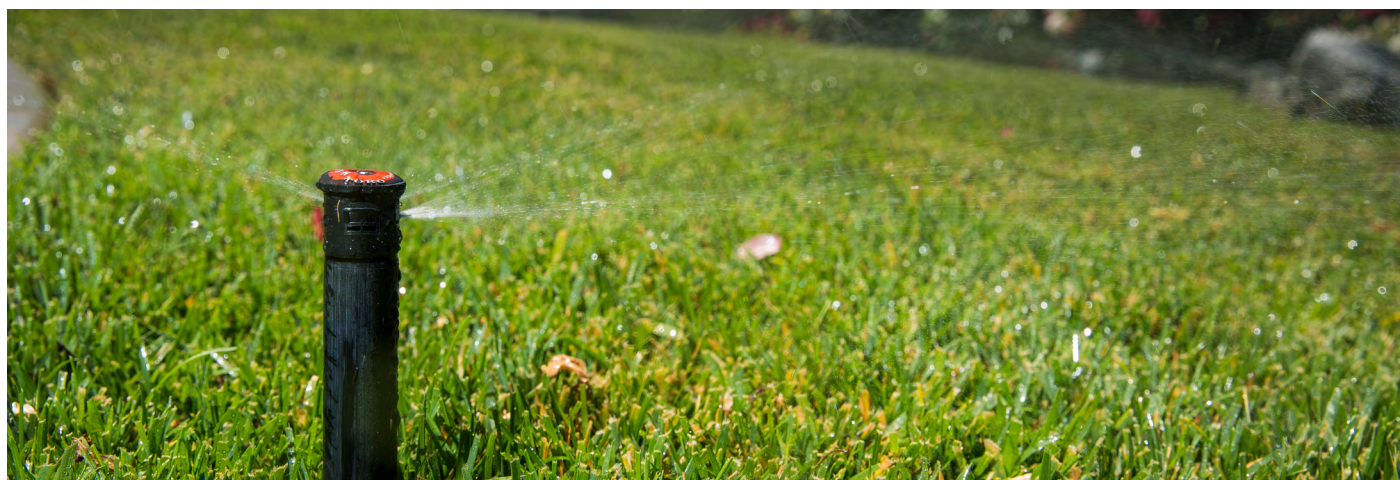
Offer virtual checkups to review programming of controllers and overall performance of the irrigation system to ensure the savings are sustained over time.



Merge the Large Landscape and Sprinkler Tune-up programs to reduce costs and improve savings. Customers can receive all the necessary repairs and upgrades during one visit instead of two. In addition, the IEUA vendor provides a discount when both visits are done together.



Market program as a Smart Timer Program to capitalize on customer interest in cloud-based controllers.





# Pressure Regulating Valve Program

Launched as a pilot in June 2016, this program addresses problems caused by excessive water pressure on the customer side of the meter.

Pressure Regulating Valves (PRV) are installed at the meter, house, and/or at the point-of-connection for the irrigation system. These valves automatically reduce the high incoming water pressure from water mains to provide a lower, more functional pressure distribution. PRVs ensure that end-use plumbing fixtures and appliances operate at the intended flow rate and reduce the incidence of leaks.

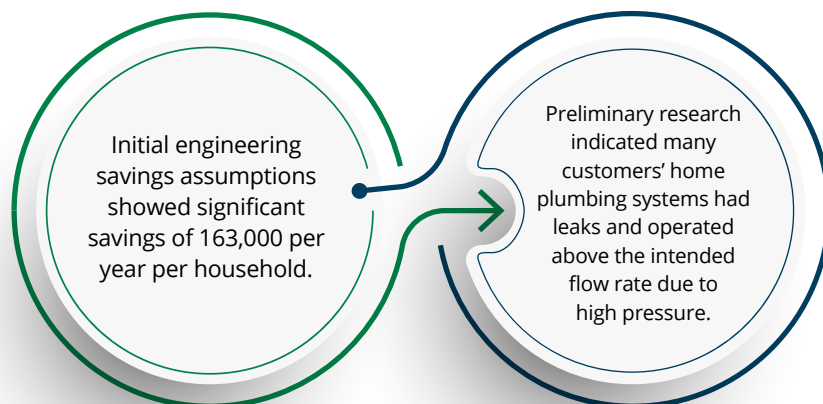


IEUA's program vendor, EcoTech Services, measures the property's water pressure and installs a PRV or adjusts the pressure if it exceeds a baseline of 75 pounds per square inch.

## Pressure Regulation Program Savings FY 2020

| Annual Savings (AF) | Lifetime Savings (AF) |
|---------------------|-----------------------|
| 4                   | 45                    |

## Why IEUA Implements the Pressure Regulating Valve Program



## NO-COST PROGRAM WATER PRESSURE REGULATION

- FREE SITE VISIT
- FREE WATER PRESSURE TESTING
- FREE REPLACEMENT OF FAILED PRVS
- SAFEGUARD YOUR HOME APPLIANCES
- PROTECT & PRESERVE YOUR EXISTING PIPES
- THIS IS NOT AN EMERGENCY REPLACEMENT PROGRAM.
- THIS IS A REGIONAL PROGRAM PROVIDED THROUGH CITY OF CHINO TO ITS RESIDENTS.



### WHAT IS A PRESSURE REGULATING VALVE?

A Pressure Regulating Valve (PRV) is a plumbing device installed on your water line between the street and your home. It is used to moderate high water pressure for optimal home appliance, pipe, and fixture performance while significantly reducing the likelihood of leaks.

## SIGN UP TODAY!

Contact the City of Chino  
(909) 334-3472

## Pressure Regulating Valve Program FY 2020 Accomplishments

In FY 2020, Metropolitan completed a study of the water savings following the installation of PRVs at properties within the IEUA service area. This analysis of 484 installations found that 48% of properties saw an annual increase in water use or no change after household pressure was reduced. Below are data from this study. Based on the study findings, Metropolitan reduced its payment per PRV to \$25 from an average of \$240.

|              | # of Applicable Records | Avg Pre-Install Water Use (Units/yr.) | Avg Post-Install Water Use (Units/yr.) | Savings (%) | Avg Pressure Reduction (psi) | Avg Water Savings per Avg Pressure Reduction (Units/psi) |
|--------------|-------------------------|---------------------------------------|----------------------------------------|-------------|------------------------------|----------------------------------------------------------|
| <b>Total</b> | 484                     | 238                                   | 232                                    | 2.50%       | 45                           | 0.14                                                     |

The savings found were unexpectedly low; however, the member agencies have elected to continue with the program because of its highly valued customer service. The program is now provided on a case-by-case basis for customer experiencing issues with pressure.

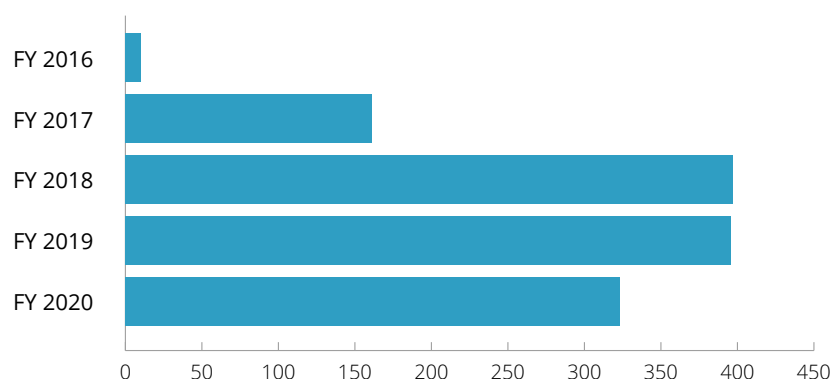


## Pressure Regulating Valve Program Activity

Activity for the program remained stable through FY 2020. Due to limited outreach and the COVID-19 pandemic, activity will be significantly lower in FY 2021.

|         | Pressure Regulators installed |
|---------|-------------------------------|
| FY 2020 | 323                           |
| FY 2019 | 396                           |
| FY 2018 | 397                           |
| FY 2017 | 161                           |
| FY 2016 | 10                            |

## Pressure Regulating Valve Annual Activity 5 Year Comparison





## Pressure Regulating Valve Program FY 2020 Water Savings

| Annual Savings<br>(GPY) | Annual Savings<br>(AF) | Lifetime<br>Savings (AF) |
|-------------------------|------------------------|--------------------------|
| 1,452,667               | 4                      | 45                       |



## Pressure Regulating Valve Program FY 2020 Cost and Cost Effectiveness

At cost of \$2,242 per acre-foot and a payback of 27.01, the Pressure Regulation Program is not cost effective.

| Outside Funding | IEUA<br>Funding | MWD Funding | Total     | IEUA Payback<br>(Years) | IEUA Cost<br>per Acre-foot |
|-----------------|-----------------|-------------|-----------|-------------------------|----------------------------|
| \$0             | \$99,932        | \$77,242    | \$177,174 | 27.01                   | \$2,242                    |

## Pressure Regulating Valve Potential Program Enhancements

While a study has shown the Pressure Regulation Program to be less cost-effective than other WUE programs, it still serves a useful customer service purpose for member agencies. Recommendations for the program are as follows:

- Continue to employ the program with the acknowledgement that its key value is as a customer service and educational opportunity.
- Leverage customer complaints about high water pressure leading to high water bills as a means for promoting other conservation measures.
- Target customers in those service areas known to be prone to high water pressure.





# Leak Detection Incentive Program

Smart leak detection devices can now monitor use, detect anomalies and alert homeowners of potential leaks. Some devices can even shut off water when abnormal use is detected, preventing or minimizing water damage in properties. A key benefit to water agencies is the water savings that accrues from these proactive programs. Recent studies of leak detection device programs by numerous water agencies show a reduction in water use of 9% to 18%. In those studies, approximately 70% of customers find leaks.

IEUA's program provides a point of purchase discount for the Flume Smart Water System. Customers install the Flume device themselves with set up taking less than 15 minutes. The technology works through a sensor that straps around the existing water meter and reads the magnetic signal coming from the meter's mechanical register. The system translates this signal to a flow rate in real-time and provides that data to customers via the Flume app on their smartphone.

| Leak Detection Incentive Program Savings FY 2020 |                       |
|--------------------------------------------------|-----------------------|
| Annual Savings (AF)                              | Lifetime Savings (AF) |
| 8                                                | 83                    |

The Flume app provides real time alerts notifying customers of excessively high volume or long duration water usage. In addition, it allows customers to understand and manage their water usage through user-friendly visuals. Customers can track daily water usage and manage their use against a budget. A new version separates indoor and outdoor water usage, which could be extremely valuable in complying with the State Framework Legislation.

To purchase a Flume device, customers login into their respective member agency's branded portal, order the device and it is sent directly to their home. Customers receive an instant discount and pay the amount due directly to Flume. Currently, IEUA pays \$160 and the customer pays \$40 plus shipping and tax. The total retail cost is \$200.

## Why IEUA Implements the Leak Detection Incentive Program

The U.S. Environmental Protection Agency states that the average household's leaks can account for nearly 10,000 gallons of water wasted every year and that 10% of homes have leaks that waste 90 gallons or more per day.



Most leaks go undetected and customers are not aware they are wasting water for months until they receive an unexpectedly high water bill. Often, even the higher water bill goes unnoticed.

## Leak Detection Incentive Program FY 2020 Accomplishments

Customer demand for this pilot program beginning in FY 2020 has been unprecedented and the program will be expanded in FY 2021. During the pilot program, Chino Hills expended their full allocation the same day their program went live. Currently three participating member agencies (Chino Hills, Monte Vista Water District, and Fontana Water company) offer devices on a first come first serve basis.

### Leak Detection Incentive Program Activity

|         | Leak Detection<br>Devices |
|---------|---------------------------|
| FY 2020 | 111                       |

### Leak Detection Incentive Program FY 2020 Water Savings

| Annual Savings<br>(GPY) | Annual Savings<br>(AF) | Lifetime<br>Savings (AF) |
|-------------------------|------------------------|--------------------------|
| 2,713,118               | 8                      | 83                       |

## Leak Detection Incentive Program FY 2020 Cost and Cost Effectiveness

The Leak Detection Program is highly cost effective at \$228 per acre-foot.

| Outside<br>Funding | IEUA<br>Funding | MWD Funding | Total    | IEUA Payback<br>(Years) | IEUA Cost<br>per Acre-foot |
|--------------------|-----------------|-------------|----------|-------------------------|----------------------------|
| \$0                | \$19,017        | \$0         | \$19,017 | 2.75                    | \$228                      |

## Leak Detection Incentive Potential Program Enhancements

With more attention being paid to leak detection by water agencies and customers, the Leak Detection Incentive Program offers a smart solution for member agencies seeking to achieve water savings and comply with new state regulations. Recommendations for this program are:

- Engage additional agencies to implement the program as a means to comply with new State Framework legislation.
- Educate agencies and meter departments on the safety and ease of installation/removal if Flume devices.
- Discuss with agencies how Flume can complement their current AMI systems providing additional customer benefits.
- Market utilizing vendor proven email format.
- Recommend the program for high bill complaints and target large users.





# Landscape Evaluation and Audit Program

Administered by the Chino Basin Water Conservation District, the Landscape Evaluation and Audit Program offers customers a free evaluation of their landscape and irrigation system. The program is offered to residential, commercial, institutional, and industrial customers.

### LEAP Program Savings FY 2020

|             | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------|---------------------|-----------------------|
| Residential | 9                   | 47                    |
| Commercial  | 33                  | 166                   |
| Total       | 43                  | 213                   |

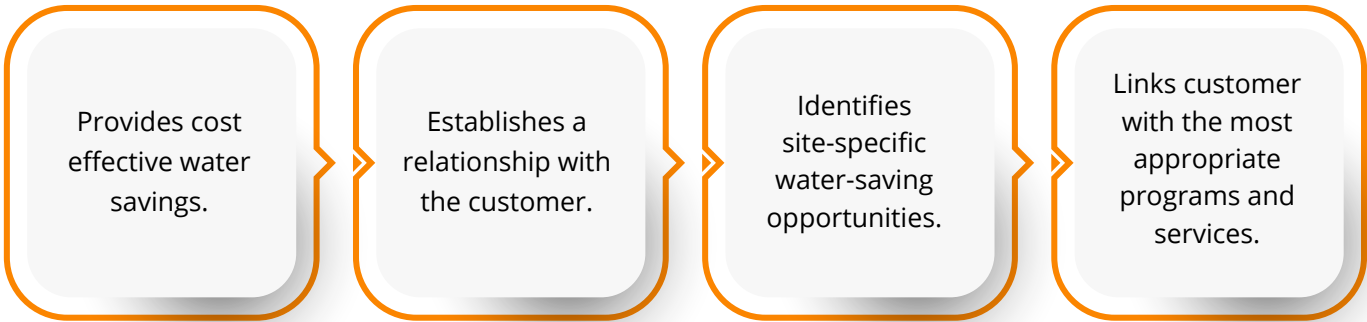
The audit includes:

- A complete evaluation of the customer’s irrigation system.
- Determination of the landscape’s water needs.
- Generation of a water budget based on the local evapotranspiration and irrigated landscape area.

Customers also receive:

- Water-saving tips.
- Recommendations on how to improve overall efficiency of their irrigation system.
- Information on rebate opportunities.

### Why IEUA Implements LEAP



### LEAP Accomplishments

- Despite a program hiatus from March to June due to health precautions related to the COVID-19 pandemic, the program saw increased activity in FY 2020.
- During the hiatus, CBWCD shifted LEAP’s focus to CII customers to increase program cost effectiveness.





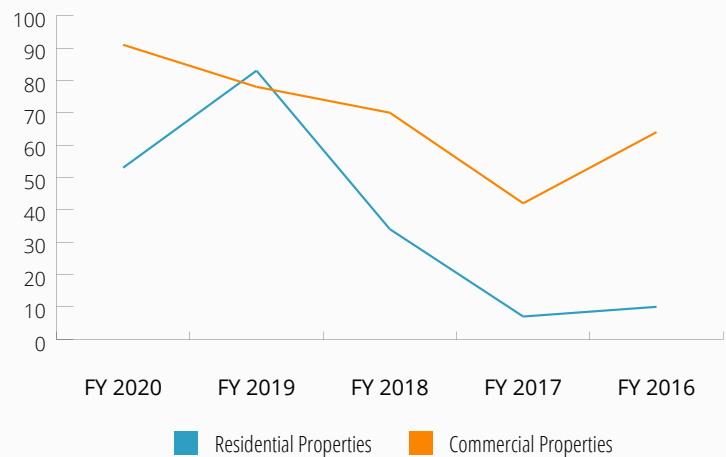
## LEAP Activity

|         | Residential |         | Commercial |         |
|---------|-------------|---------|------------|---------|
|         | Properties  | Acreage | Properties | Acreage |
| FY 2020 | 91          | 9.31    | 53         | 33.23   |

## 5 Year Comparison

|         | Residential Properties | Commercial Properties |
|---------|------------------------|-----------------------|
| FY 2020 | 91                     | 53                    |
| FY 2019 | 78                     | 83                    |
| FY 2018 | 70                     | 34                    |
| FY 2017 | 42                     | 7                     |
| FY 2016 | 64                     | 10                    |

## LEAP Residential & Commercial Annual Activity 5 Year Comparison



## LEAP FY 2020 Water Savings

|             | Annual Savings (GPY) | Annual Savings (AF) | Lifetime Savings (AF) |
|-------------|----------------------|---------------------|-----------------------|
| Residential | 3,033,673            | 9.31                | 18.62                 |
| Commercial  | 10,828,029           | 33.23               | 66.46                 |



## LEAP FY 2020 Cost and Cost Effectiveness

CBWCD administers the LEAP program at a minimal cost to IEUA. This is because CBWCD receives independent funding through a property tax collected from customers in its service area or “sphere of influence.” Because CBWCD’s service area overlaps with IEUA’s, CBWCD provides LEAP without cost to program participants in the CBWCD service area. CBWCD only bills IEUA for customers who fall outside the CBWCD service area.



| Outside Funding | IEUA Funding | MWD Funding | Total    | IEUA Payback (Years) | IEUA Cost per Acre-foot |
|-----------------|--------------|-------------|----------|----------------------|-------------------------|
| \$15,937        | \$9,697      | \$9,810     | \$35,444 | 0.30                 | \$226                   |

## LEAP Potential Program Enhancements

LEAP provides valuable information and expertise to homeowners, property managers, homeowner associations, institutional managers and others about ways they can use water more efficiently. Recommendations for this program include:

- Conduct personalized follow-up to verify recommendations have been implemented and to assist customers in making upgrades and receiving incentives will help ensure water savings.
- Continue focus on CII and HOA customers to improve cost effectiveness and increased savings.
- Work with retail member agencies to identify target list of top users.
- Offer single-family evaluations to high bill and large landscape out-of-budget customers.
- Provide comprehensive concierge-type customer service for CII and HOA customers to improve project completion rates. Examples include helping customers present projects to HOA Boards, receive bids, apply for incentives, etc.
- Consider new DIY online irrigation resources for homeowners.



# Landscape Design Assistance Program

Through a collaboration between CBWCD, IEUA and its member agencies, customers can receive landscape design services free of charge. This service has a market value of approximately \$500.

Participants are required to attend a two-hour “What You Need to Know Before Your Landscape Transformation” class before they become eligible to register for the Landscape Design Assistance Program. The class provides an overview of information people need to be successful with a turf replacement project, whether they are doing the work themselves or hiring a contractor.

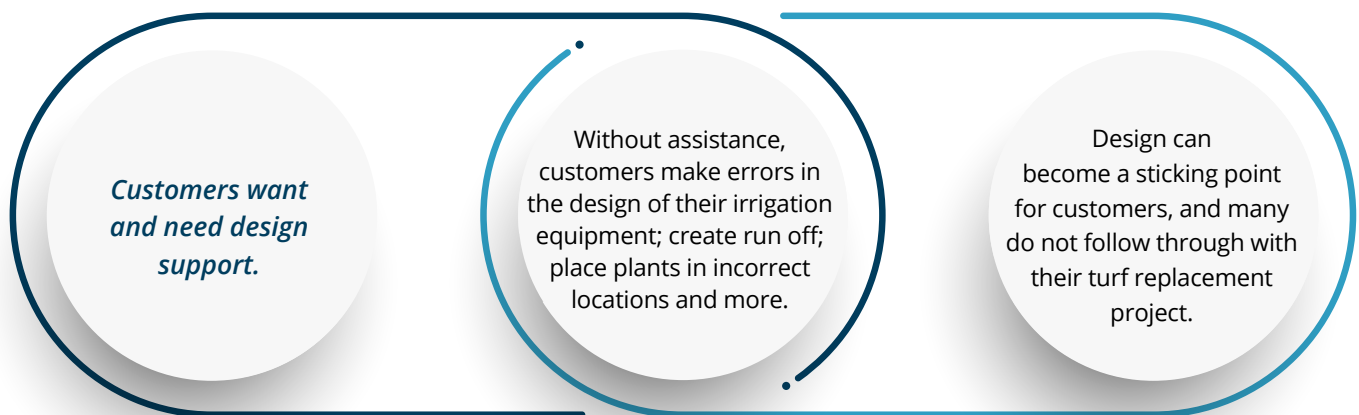
After attending the class, a CBWCD staff member provides one-on-one consultations with participants. Customers discuss goals for their landscape area and then work with staff to create a computer-generated design for the landscape project.

Following the consultation, CBWCD staff complete the design and create a custom plant list with the names and information about each plant selected for the designed landscape. Customers also receive a list of resources including sources for plants and other landscape materials.

|                                     |     |
|-------------------------------------|-----|
| Completed Designs                   | 32  |
| In Progress Projects                | 19  |
| Completed Turf Replacement Projects | 8   |
| Percent Complete                    | 25% |



## Why IEUA Implements the Landscape Design Assistance Program



## Landscape Design Assistance Program Accomplishments



Turf replacement project completion rates increased to 25% in FY 2020. Two changes led to this success. First, commitment increased when customers were asked to provide a \$100 refundable deposit for participation instead of \$50. Second, CBWCD now requires attendance at one of its monthly Landscape Transformation Basics class. Not only did completion rates increase, but the program also drew 127 customers who had never participated in WUE programs before.



## Landscape Design Assistance Program Activity and Costs

Like LEAP, CBWCD administers the Landscape Design Assistance Program at a minimal cost to IEUA. CBWCD receives independent funding for those customers in its service area. CBWCD only bills IEUA for customers who fall within the IEUA service area but outside the CBWCD service area.



| Member Agency                   | Sites     | Square Feet   | Cost           |
|---------------------------------|-----------|---------------|----------------|
| City of Chino                   | 4         | 7,535         | \$0            |
| City of Chino Hills             | 6         | 7,115         | \$960          |
| Cucamonga Valley Water District | 4         | 7,818         | \$960          |
| Fontana Water Company           | 1         | 2,307         | \$240          |
| Monte Vista Water District      | 1         | 1,093         | \$0            |
| City of Ontario                 | 7         | 9,141         | \$0            |
| San Antonio Water Company       | 0         | 0             | \$0            |
| City of Upland                  | 3         | 11,829        | \$0            |
| <b>Total</b>                    | <b>26</b> | <b>46,838</b> | <b>\$2,160</b> |

## Landscape Design Assistance Potential Program Enhancements

This popular program takes time and expertise to implement. Suggestions for streamlining it include:



Create a template-based design system that allows participants to look at multiple design options online. Staff could then adapt the selected template to the customer's property dimensions and site conditions. Using a template base will dramatically increase efficiency in creating site-specific designs. This will allow expansion without hiring additional design staff.

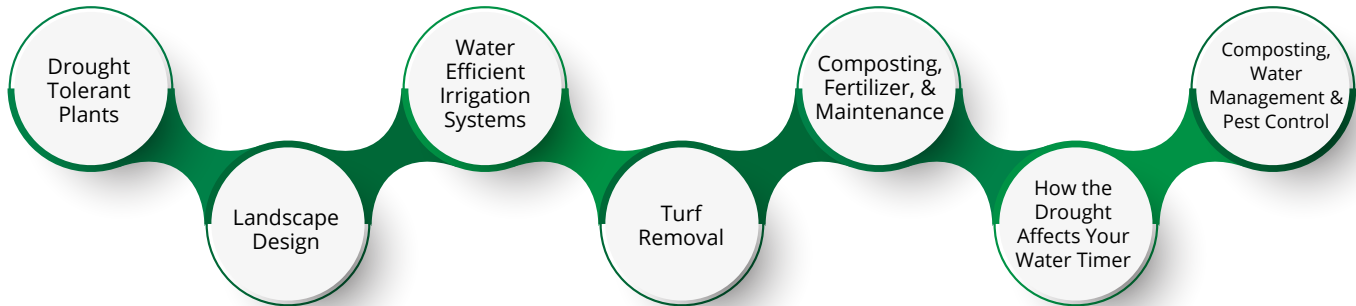


Develop a do-it-yourself option based on online resources that anyone can access at no costs. This resource would reach more customers and also reduce the number who need a customized design.



# Landscape Workshops

In this series of courses residential landscapers learn the latest ways to reduce their property's landscape water usage. The courses cover information on the basics of efficient irrigation systems, the benefits of properly watering and fertilizing landscaping, landscape design techniques and plant selections. Workshop topics include:



## Landscape Workshop Results

Only four in-person workshops were held in FY 2020. This was due in part to the health precautions related to the COVID-19 pandemic, but also because of decline in customer demand.

| Member Agency                   | Class Description                        | # of Classes |
|---------------------------------|------------------------------------------|--------------|
| Cucamonga Valley Water District | Turf Removal and Plant Selection         | 2            |
| City of Upland                  | Soil & Compost Native and Edible Gardens | 2            |
|                                 | Total                                    | 4            |

## Landscape Workshop Potential Enhancements

Free workshops bring value to customers and create opportunities to introduce people to a wide-range of water efficiencies they may not have considered before. Recommendations for improving these workshops include:



Work with CBWCD to create a full range of remote learning webinars.



Conduct personalized follow up with participants to understand customer needs and assist customers in making upgrades.



More actively promote workshops among customers throughout the service area.

# Locally Funded Programs

In addition to regionally administered programs, IEUA provides funding for local programs, activities and support tools. These programs include:

## IEUA's Member Agency Administered Program

Initially launched in FY 2018, the Member Agency Administered Program provides funding for locally implemented WUE projects that can demonstrate water savings. Member agencies submit proposals that include a project scope of work, estimated water savings, and cost. Proposed projects may not be duplicative of existing regional programs. Over fiscal year 2020, there were no proposed projects to report.



## IEUA's Best Management Support Grant

Each year IEUA allocates funding to financially support member agency specific WUE activities. Each member is eligible to receive a \$2,000 grant that supports a variety of activities and items such as special events, customer surveying, purchasing of outreach materials, conservation devices, and vehicle magnets. Over the last fiscal year, IEUA awarded four grants to member retail agencies representing a total of \$8,000. Below is a list of the four member agency grants.



| Retail Agency                   | Funding Description    | Amount     |
|---------------------------------|------------------------|------------|
| City of Chino                   | Reusable Water Bottles | \$2,000.00 |
| City of Chino Hills             | iPad Pro Tablet        | \$2,000.00 |
| Cucamonga Valley Water District | Earth Day Event        | \$2,000.00 |
| City of Ontario                 | WUE Bill Insert        | \$2,000.00 |
| Total                           |                        | \$8,000.00 |

## School and Education Programs

IEUA also provides regional educational and outreach programs. Current regional education and outreach programs include the following:



### National Theatre for Children

National Theatre for Children (NTC) delivers a behavior-driven, multiplatform, in-school water education curriculum for students and teachers in grade levels K-6. Through live theatre, a student curriculum and teacher guides, the custom-designed program teaches students about the uses of water, importance of water, ways to conserve, and ways water gets polluted. Over fiscal year 2020, NTC visited 40 elementary schools throughout the IEUA service area and conducted 74 shows reaching 17,705 students.

### Shows that Teach

Educational service provider Shows That Teach offers two fun, theatrical-style productions aimed at teaching K-6 students about water science, the value of water, and the importance of conservation. The productions called "H2O, Where Did You Go?" and "Waterology" use skits, songs, visual aids, and audience participation to engage students and maximize retention. Over the last year, "Shows That Teach" conducted 23 performances, reaching 6,635 students at elementary schools throughout the service area and within the cities of Chino, Rancho Cucamonga, Fontana and Ontario.

Below is the number of schools that participated in the NTC and Shows that Teach in FY19/20:

| Program                       | # Schools | # Students | Funding  |
|-------------------------------|-----------|------------|----------|
| National Theatre for Children | 40        | 17,705     | \$49,920 |
| Shows That Teach              | 12        | 6,635      | \$11,450 |

*Moving forward, the member agencies would like to focus efforts on only one school education program. They have chosen National Theatre for Children and eliminated Shows that Teach.*



## Garden in Every School® Program

Each year, the Garden in Every School Program awards either a \$4,500 grant per school for up to four schools for the establishment of a new water-wise garden or a \$1,000 mini-grant to participating schools to support the sustainability of existing gardens. Due to the COVID-19 pandemic, the program was put on hold through FY 2021. Activity will resume in FY 2022.

IEUA External Affairs is working with one of the schools that had their projects put on hold. They will be working with the school in FY 2021 to finish their project. They may also award mini-grants to school gardens later in FY 2021.



## Water Discovery Field Trip Program

Prior to the COVID-19 pandemic, IEUA provided free educational field trips to schools at the Chino Creek Wetlands and Educational Park to promote public understanding of the value of natural treatment wetlands, the creation of habitat for endangered/sensitive species and environmental stewardship. During FY 2020, 1,734 Girl Scouts, Boy Scouts, elementary and high school students took part in the water discovery field trip prior to March when field trips were put on hold due to the pandemic.

Health precautions following the onset of the pandemic required that IEUA shift all education programs from in-person to virtual. In April 2020, IEUA launched Owl's Virtual Adventures. The new program features Wally's Water Conservation Camp, virtual tours, a series of At-Home Activities from the Water Discovery Field Trip Program, how-to videos on YouTube, and more.

The new virtual programs, developed in-house by IEUA's External Affairs Department staff, demonstrate commitment to the goal of educating children about the importance of water and water conservation despite evolving conditions.





## IEUA's Regional "Water is Life" Student Art/Poster Contest

Each year IEUA hosts its annual "Water is Life" student art/poster contest for grades K-12. The theme "Water is Life" has been used to help students express their creativity while focusing on the importance of water. In FY 2020, IEUA received over 600 entries. The top five winners from each category (K-5; 6-8; 9-12) were entered in Metropolitan's regional contest. Six winners were chosen from IEUA's service area: Cathy Zhang (1st grade-Allegiance STEAM Academy—Chino), Luca Flores (4th grade-Our Lady of Lourdes—Montclair), Saima Bhuiyan (5th grade-Ruth Musser Middle School—Rancho Cucamonga), Hannah Guthrie (7th grade—Montclair), Amy Esparza (10th grade-Chino Hills High School—Chino Hills), Armando Mora (11th grade-Chino Hills High School—Chino Hills), Samantha Fregoso (10th grade-Don A. Lugo High School—Chino), and Sarah Reveredo (8th grade-Etiwanda Intermediate School—Rancho Cucamonga). The winners were recognized at Metropolitan's awards ceremony in December 2020 and their artwork will be featured in the 2021 "Water is Life" calendar.



## The Solar Cup Competition

Originally slated for May 2020 at Metropolitan's Lake Skinner reservoir in Temecula Valley, this year's Solar Cup™ competition had to transition to a virtual platform to meet health precautions related to the COVID-19 pandemic. The retooled Solar Cup™ 2.0 consisted of 12 virtual challenges designed to be completed as teams or individually.

Typically, the program lasts seven months and provides high school students with the opportunity to build, design and race solar-powered boats. The competition includes writing technical reports, creating social media campaigns and developing and implementing a strategy to build a boat powered by solar panels, traditionally concluding with a boat racing competition at Lake Skinner.



Solar Cup 2.0 challenges focused on virtual design and development, report writing, webinars, video scripting and development, and more. Teams also produced videos with uplifting messages for the public service message portion of the challenge.

The Chino Hills High School team co-sponsored by IEUA and the city of Chino Hills finished first with an overall score of 1332 out of 1300 by completing extra credit questions on some challenges.

IEUA co-sponsored three other teams: Chino High School, co-sponsored with the city of Chino; Los Osos High School located in Rancho Cucamonga, co-sponsored with the Cucamonga Valley Water District; and Upland High School, co-sponsored with the city of Upland.

## Community Outreach

IEUA participated in the following community outreach activities in coordination with member agencies:

- San Bernardino County Water Conference
- Landscape and Water Conservation Festival
- Chino Hills State of the Community Fair
- Smart Irrigation Month Hose Nozzle Giveaway



### San Bernardino County Water Conference

The annual San Bernardino County Water Conference was held on August 9, 2019, at the Ontario DoubleTree Hotel, where government officials, water experts, business leaders and the community discussed opportunities to overcome California's water challenges. The event was hosted by the Southern California Building Industry Association.

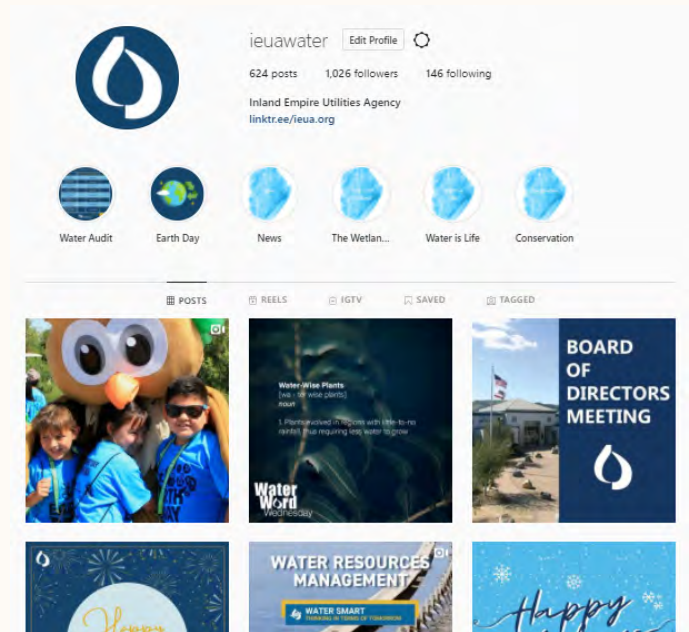
### Landscape and Water Conservation Festival

The annual Landscape and Water Conservation Festival hosted by Chino Basin Water Conservation District was held on October 12, 2019 at the Waterwise Community Center in Montclair. The festival educates the public through free, hands-on activities, shows and workshops about the importance of using water wisely. They learn about where our water comes from and how it is used in everything including growing and cooking food, the making of clothes and automobiles.



## IEUA's Social Media Outreach

Because communicating with our customers and community means meeting them where they are, IEUA continues to offer updates via Facebook, YouTube, Twitter, Instagram, and two educational blogs. IEUA has created an Instagram page for the agency at @ieuawater, as well as one for the Chino Creek Wetlands and Educational Park (CCWEP) at @chinocreekwetlands. The social media platforms allow IEUA to provide up-to-the-minute information on events, news, education programs, drought updates, water-wise tips, park updates and wildlife facts. Blog content is promoted via IEUA's Facebook page and website.



## Water Education - Water Awareness Committee

The Water Education - Water Awareness Committee (WEWAC) promotes the importance of water conservation in Southern California through coordination and participation in community outreach projects and providing grant funded opportunities for local educators. Projects include hosting booths at local resource and educational fairs, conducting water education workshops at local primary and secondary schools, offering grant and scholarship opportunities for educators and students, sponsoring an annual water conservation video contest, and sponsoring a broadcast media and digital art contest.

## IEUA Water Softener Rebate Program

IEUA Water Softener Rebate Program aims to remove residential self-regenerating water softeners within the service area of IEUA. Customers are incentivized through a rebate. For FY 2020, 17 water softeners have been removed and customers have received \$7,325.10 in incentives. Over the course of the program, 901 water softeners have been removed and \$523,249.95 in incentives has been paid to program participants. The removal of these devices will save approximately 17.12 acre-feet of water per year in addition to the removal of more than 208.13 tons of salt.





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909-993-1600 | [www.ieua.org](http://www.ieua.org)





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# Laboratory

## Semi-Annual Update



Sushmitha Reddy  
Manager of Laboratories  
February 2021

# Priorities

- Environmental Laboratory Accreditation Program (ELAP)
  - New regulations effective January 1, 2021
- State Water Resources Control Board Approved New Fee Structure
  - Increased annual costs
  - Laboratory audits every two years (previously performed by State staff)
- Staffing
  - 7-day a week operation
  - Maximize Cross training
  - Prepare for additional regulatory workload while supporting operations

# Laboratory Certification

## Environmental Laboratory Accreditation Program (ELAP) - State Initiatives

### – Regulations

- Approved by Office of Administrative Law (OAL) – November 17, 2020
- Effective Date – January 1, 2021
  - Three Year Implementation Period

#### **Impact - Additional Resources**

New regulations = Administrative Burden  
“RECORDS RECORDS RECORDS”

### – Fee Restructure

- New Fee Structure - Approved July 21, 2020
- Effective Date – January 1, 2021
- Biggest Change: transfer of responsibility for onsite assessment (audit)

#### **Impact – Certification Costs**

Additional \$10,000 - \$20,000 in Third Party Assessors (TPAs)



# Laboratory Certification

## IEUA Laboratory Certification (ELAP # 1808) - Status

### – State Certificate: 2-year Cycle

- Current Certificate Validity: November 1, 2020 - October 31, 2022
- Renewal Due: July 2022

### – On-Site-Assessments (Audits)

- Every 2-years
- Completed by July 2022 using TPA
  - TPA : July-August 2021

# Laboratory Staffing

- Challenges
  - 7 day operation
  - 365 day onsite presence
  - COVID limitations
- Retirement
  - Biologist (Dec 31<sup>st</sup>, 2020)

# Laboratory Activities

## FY 2020 Samples and Analyses

- Total # Samples: 9,390
  - Compliance: 3,514
  - Process Control: 5,876
- Total # Analyses: 27,871
  - Compliance: 12,489
  - Process Control: 15,382

## Special Projects:

- Toxicity Accelerated Monitoring
  - 001A (Prado)
  - 003 (RP5)
  - 002 (RP1/RP4)
- Archibald Plume
  - Same Day TAT for NO<sub>3</sub>, 123 TCP and TCE/PCE



# Key Performance Indicators (KPIs)

FY 2020: July - December

| Performance Indicator                       |                 | Goal    | Actual |
|---------------------------------------------|-----------------|---------|--------|
| Sample Turnaround Time                      | Compliance      | 18 days | 14     |
|                                             | Process Control | 1 day   | 1      |
| Meet sample holding times                   |                 | 99%     | >99%   |
| Quality Control Failures                    |                 | <1%     | <1%    |
| ELAP Performance Evaluation sample repeats* |                 | 0       | NA     |
| Lost time accidents                         |                 | 0       | 2      |

- Due to IEUA Lab unacceptable result.
- NA – Not analyzed



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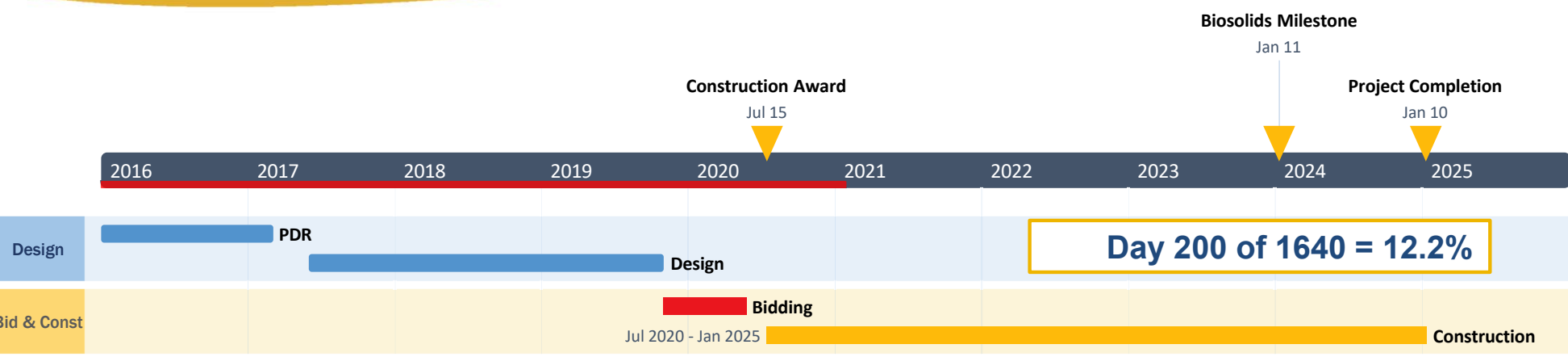
# RP-5 Expansion

## Project Update: February 2021

Project Nos. EN19001 and EN19006



# RP5: Project Status



| Role                    | Firm     | Contract       | This Month's Payment | Total Paid   | % Complete |
|-------------------------|----------|----------------|----------------------|--------------|------------|
| Contractor              | WM Lyles | \$ 329,982,900 | \$2,910,911          | \$9,347,881  | 2.83%      |
| Designer                | Parsons  | \$ 31,685,239  | \$297,399            | \$22,966,288 | 72.5%      |
| Construction Management | Arcadis  | \$ 21,125,523  | \$230,908            | \$2,489,293  | 12%        |

# RP-5: Major Activities – Project Control Schedule (PCS)

- **Baseline (BPCS)**
  - Approved 1/20/21
  - 6 submittals
  - Activities: 8,085

| Project Control Schedule |                 |                                   | PBPCS |       |       |       |       | BPCS   |        |          |          |        |        |
|--------------------------|-----------------|-----------------------------------|-------|-------|-------|-------|-------|--------|--------|----------|----------|--------|--------|
| Submission No.           | Submission date | Turnaround Duration Calendar Days | 12.0  | 12.1  | 12.2  | 12.3  | 12.4  | 0108.0 | 0108.1 | 0108.1.1 | 0108.1.2 | 0108.2 | 0108.3 |
| 12.0                     | 27-Jul-20       | 2                                 | 11    | 6     | 4     | 4     | 4     | 4      | 0      | 0        | 0        | 0      | 0      |
| 12.1                     | 4-Sep-20        | 11                                |       | 48    | 46    | 27    | 24    | 6      | 2      | 2        | 1        | 0      | 0      |
| 12.2                     | 25-Sep-20       | 12                                |       |       | 9     | 6     | 6     | 6      | 1      | 1        | 1        | 0      | 0      |
| 12.3                     | 9-Oct-20        | 5                                 |       |       |       | 6     | 0     | 0      | 0      | 0        | 0        | 0      | 0      |
| 12.4                     | 14-Oct-20       | 3                                 |       |       |       |       | 1     | 0      | 0      | 0        | 0        | 0      | 0      |
| 0108.0                   | 31-Oct-20       | 19                                |       |       |       |       |       | 68     | 21     | 8        | 4        | 0      | 0      |
| 0108.1                   | 5-Dec-20        | 16                                |       |       |       |       |       |        | 92     | 43       | 8        | 0      | 0      |
| 0108.1.1                 | 31-Dec-20       | 4                                 |       |       |       |       |       |        |        | 5        | 4        | 0      | 0      |
| 0108.1.2                 | 8-Jan-21        | 3                                 |       |       |       |       |       |        |        |          | 2        | 0      | 0      |
| 0108.2                   | 14-Jan-21       | 5                                 |       |       |       |       |       |        |        |          |          | 1      | 0      |
| 0108.3                   | 19-Jan-21       | 0                                 |       |       |       |       |       |        |        |          |          |        | 0      |
| Total Comments           |                 |                                   | 11    | 54    | 59    | 43    | 35    | 84     | 116    | 59       | 20       | 1      | 0      |
| Activity Count           |                 |                                   | 314   | 6,174 | 6,687 | 6,686 | 6,686 | 7,129  | 7,866  | 8,087    | 8,121    | 8,089  | 8,085  |



# RP-5: Major Activities This Month

- **Solids:**
  - Solids Area: Mass Excavation
  - Power Center 9: Clearing
  - Power Center 4: Clearing
- **Liquids:**
  - Primary Clarifiers: Clearing
  - Aeration Basin Channel: Excavation
  - Secondary Clarifier 4B: Shutdown & Demo



## RP-5: Major Activities – Solids Sep. to Jan. Time Lapse





## RP-5: Major Activities – Excavation 1<sup>st</sup> Week

- Week of 1/4/21
- Scoop: 3.5 cyd
- 4 Scoops per truck: 14 cyd
- 4 Days of hauling
- Truck trips: 648
- Cubic Yards: 9,072
- ½ Ton Truck = 1 cyd





# RP-5: Major Activities - Excavation

## January Total

- Truck trips: 2,042
- Cubic Yards: 28,588





## RP-5: Major Activities - Excavation





## RP-5: Major Activities - Excavation





## RP-5: Major Activities – Excavation Hauling



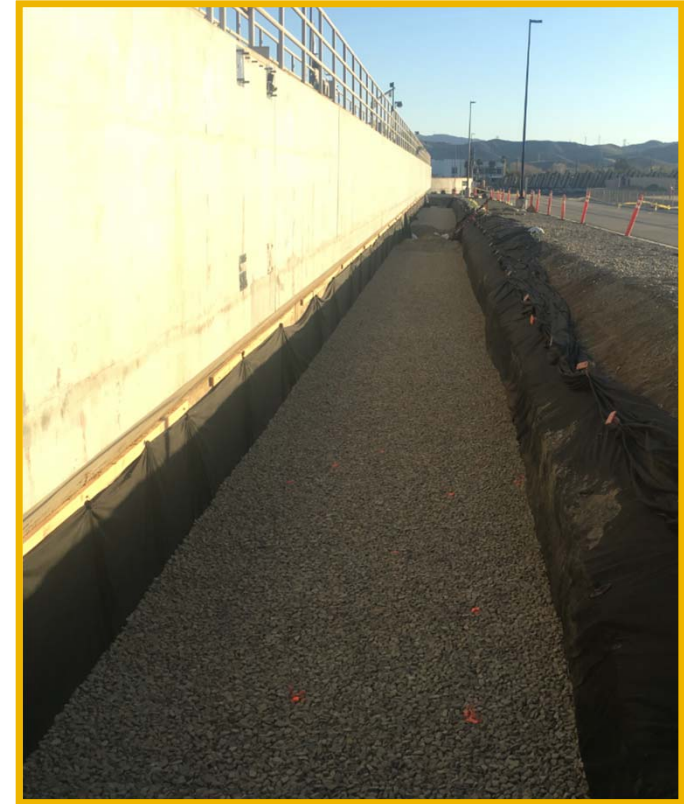
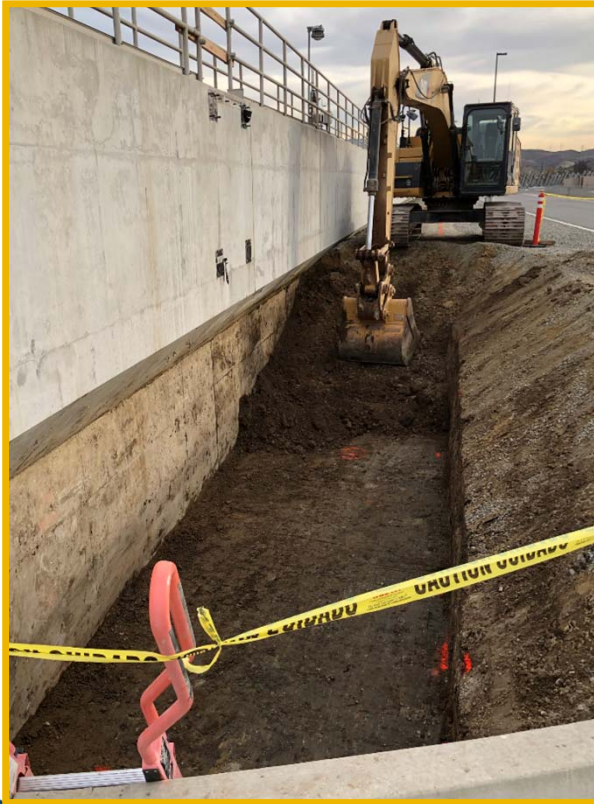


## RP-5: Major Activities – Excavation Hauling



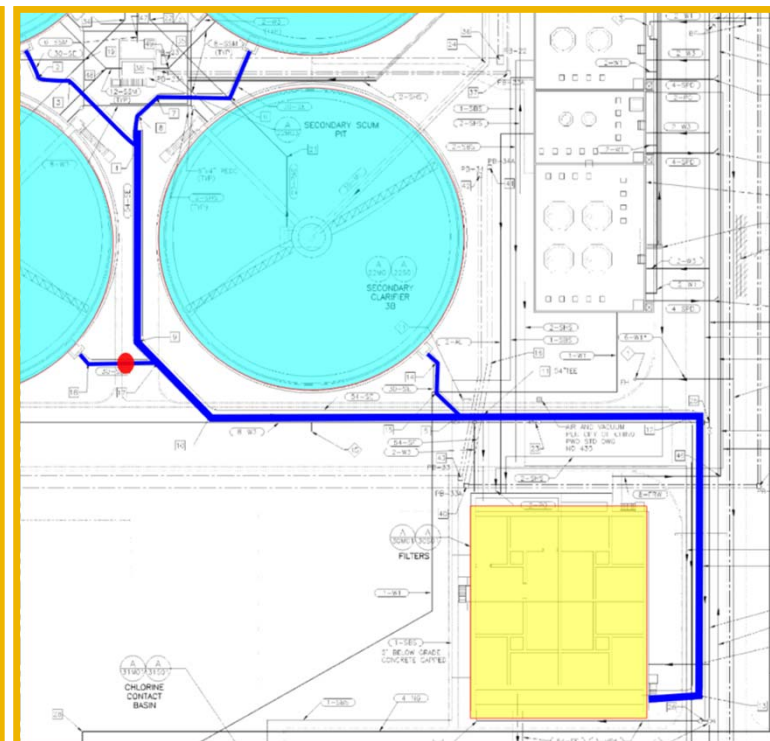
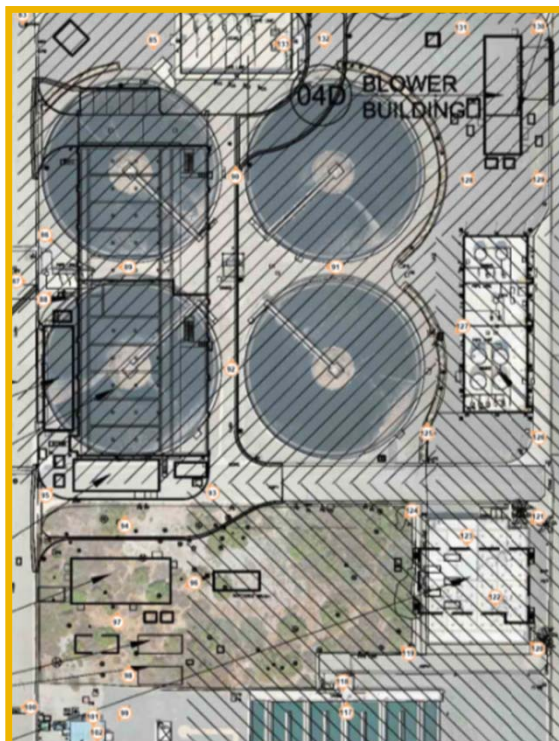


## RP-5: Major Activities – Excavation Aeration Basin



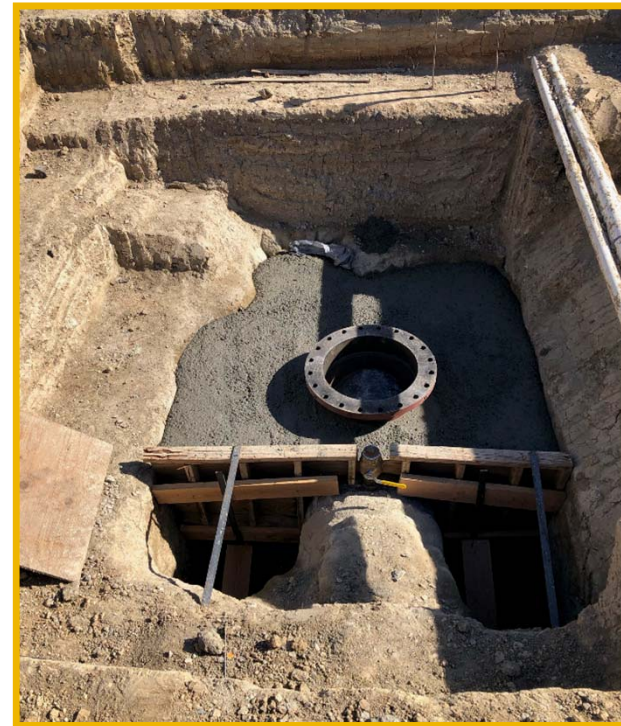
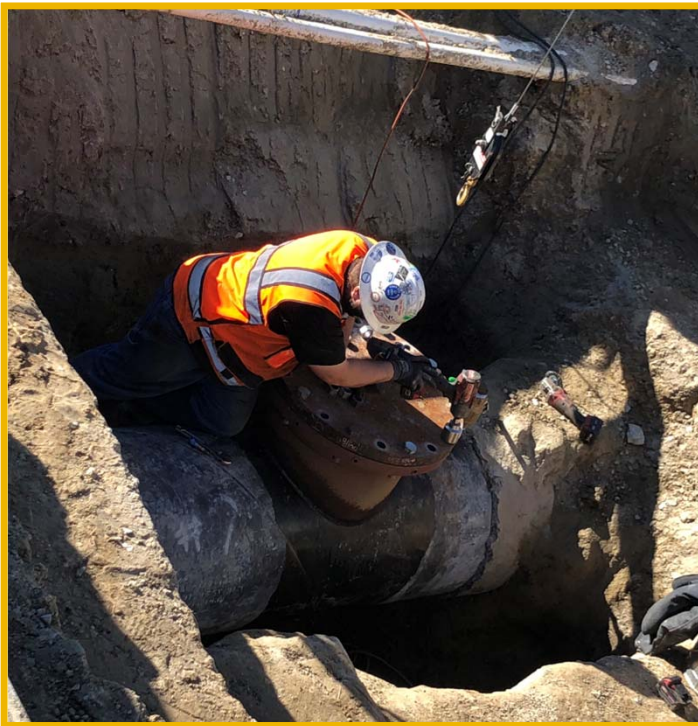
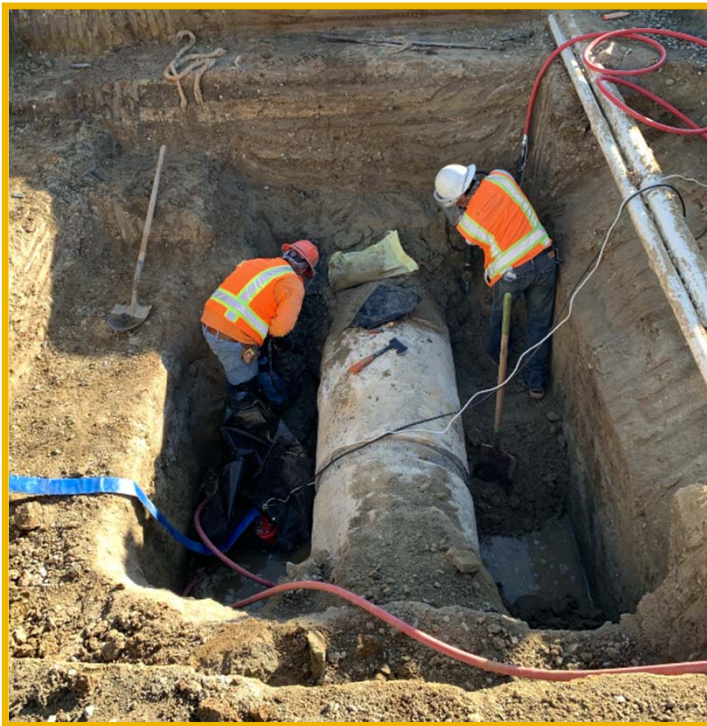
# RP-5: Major Activities – Secondary Clarifier 4B Shutdown

- Construct MBR Phase 1
- Three Remain Online
- Common Effluent Header
  - No valves
- No plant shutdown



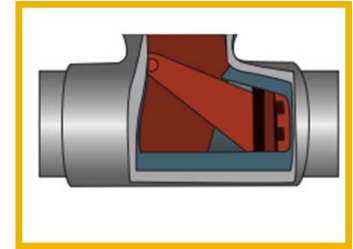
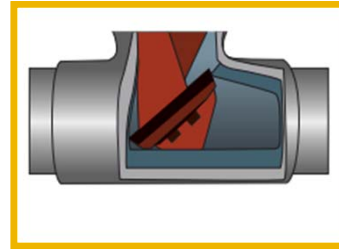
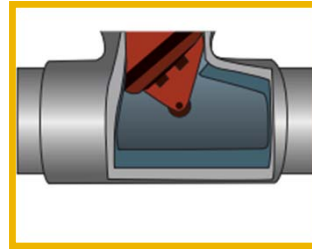


## RP-5: Major Activities – Secondary Clarifier 4B Shutdown



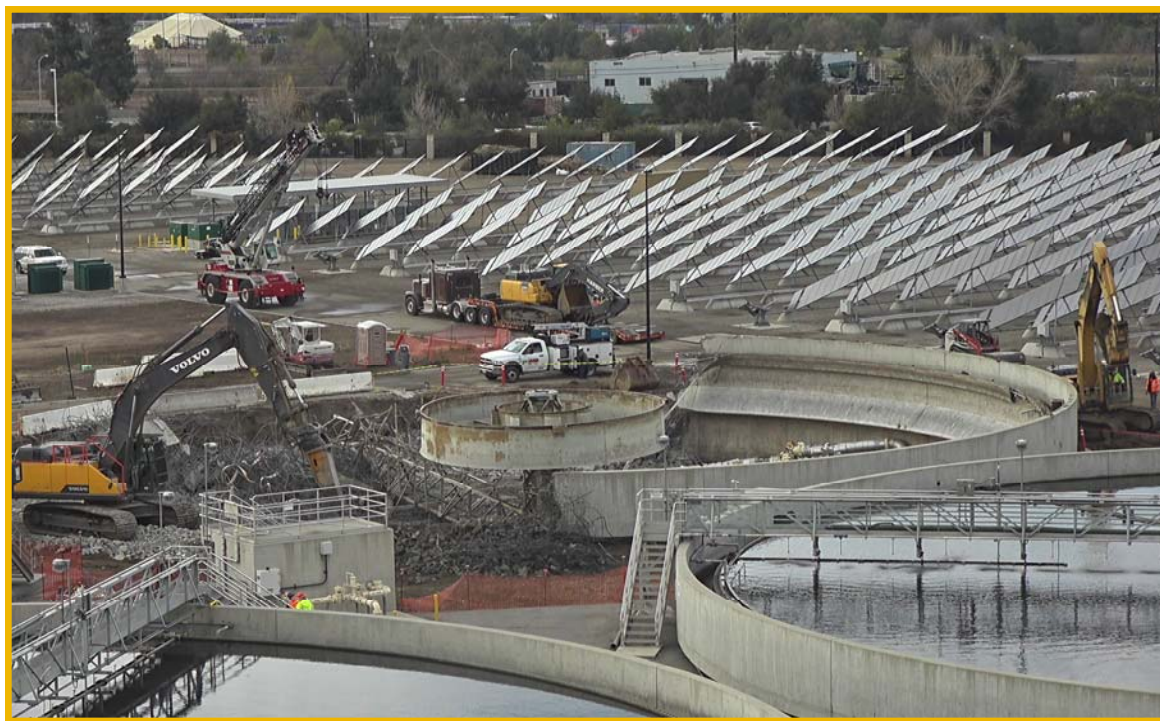


# RP-5: Major Activities – Secondary Clarifier 4B Shutdown





## RP-5: Major Activities – Secondary Clarifier 4B Demo



# RP-5: Major Activities Next Month

- **Solids:**
  - Digesters: Excavation and Foundation
  - Thickening Building: Excavation and Foundation
  - Power Center 9: Excavation
  - Power Center 4: Excavation
- **Liquids:**
  - Aeration Basin Channel: Foundations & Slab On Grade
  - Secondary Clarifier 4B: Demo & Foundation
  - Primary Clarifier: Excavation



Questions?

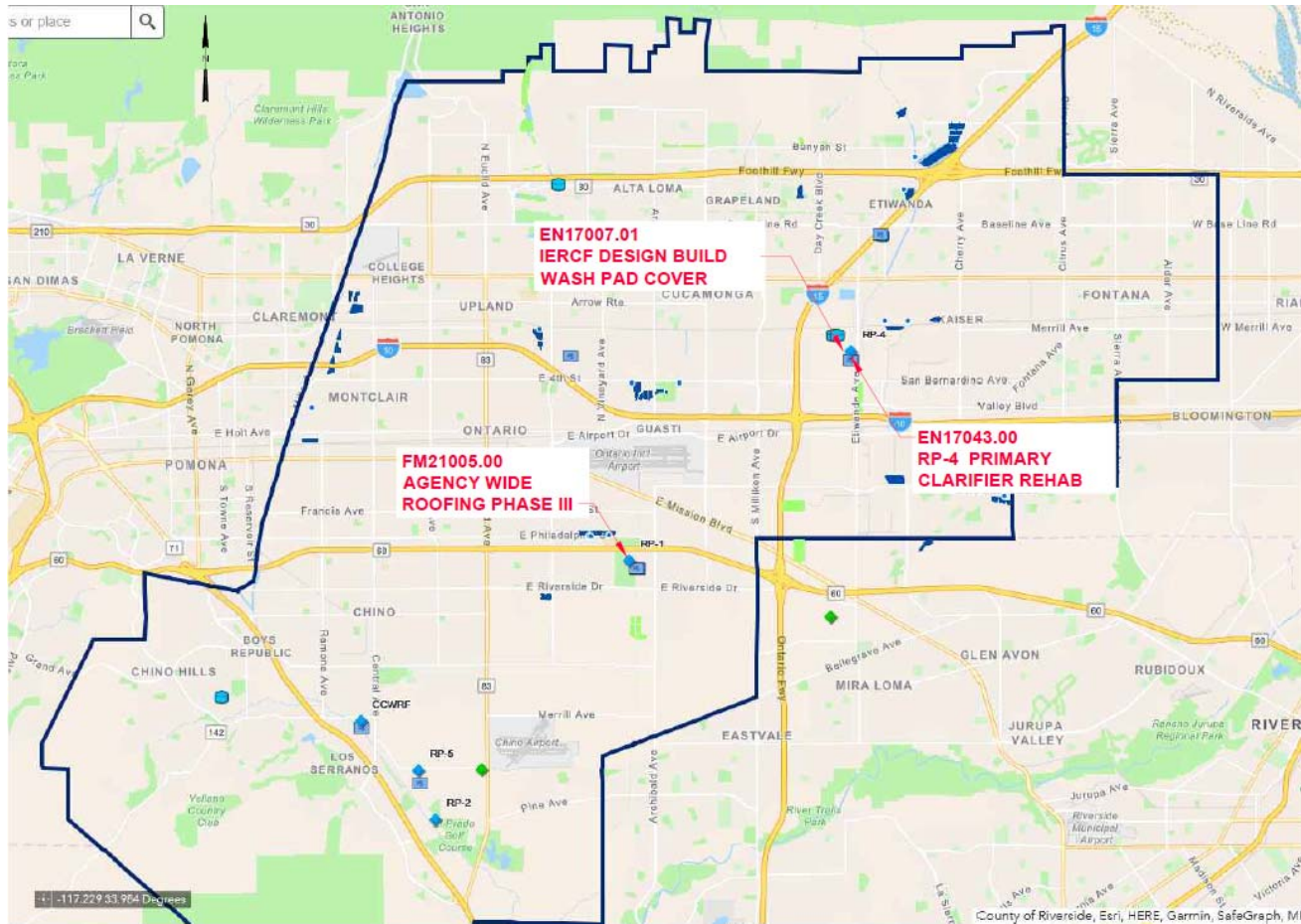


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# Engineering and Construction Management Project Updates



Jerry Burke, PE  
Manager of Engineering  
February 2021



# Project Location Map



# Agency Wide Roofing Phase III

Project Goal: Extend Asset Life



**Total Project Budget: \$5M**  
**Project Completion: January 2021**  
**Construction Percent Complete: 95%**

| Phase                     | Consultant/<br>Contractor | Current<br>Contract | Amendments/<br>Change Orders |
|---------------------------|---------------------------|---------------------|------------------------------|
| Design                    | GPa                       | \$77K               | 0%                           |
| Construction<br>(Current) | Exbon                     | \$1.3M              | 0.1%                         |

# IERCF Design Build Wash Pad Cover

Project Goal: Improve Efficiency

**Total Project Budget: \$457K**

**Project Completion: January 2021**

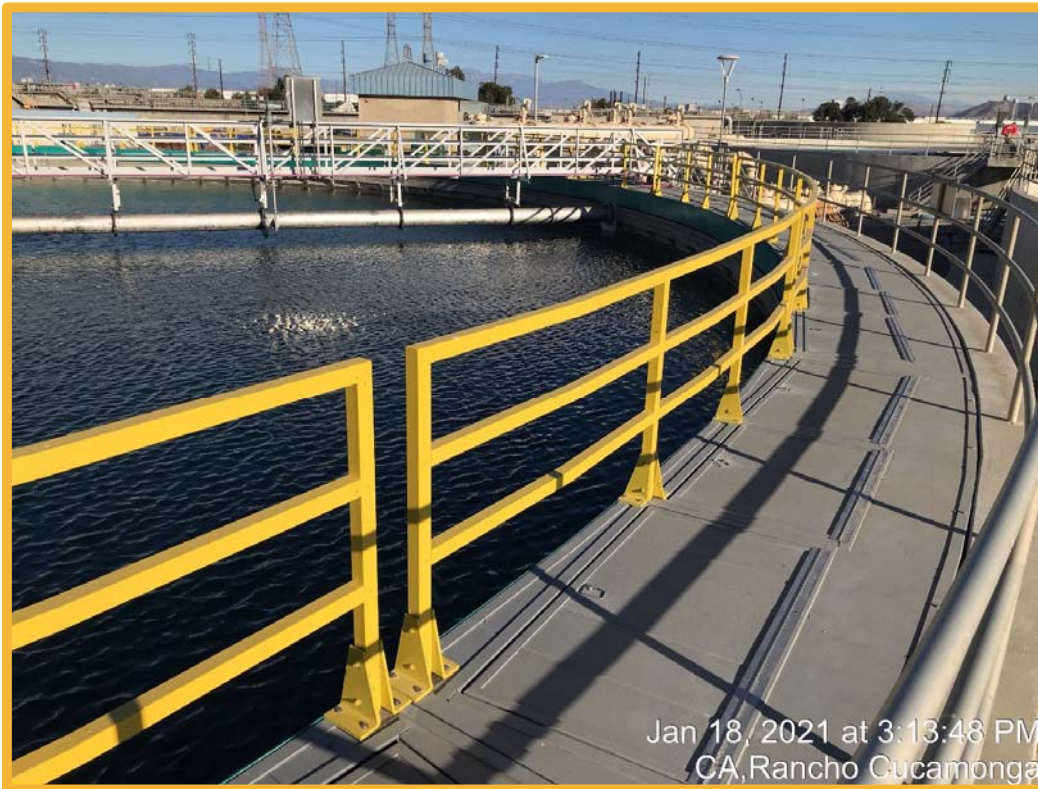
**Construction Percent Complete: 100%**

| Phase        | Consultant/<br>Contractor | Current<br>Contract | Amendments/<br>Change Orders |
|--------------|---------------------------|---------------------|------------------------------|
| Design/Build | Next Stage<br>Engineering | \$314K              | 6.4%                         |



# RP-4 Primary Clarifier Rehab

Project Goal: Extend Asset Life and Improve Efficiency



**Total Project Budget: \$28M**  
**Project Completion: November 2021**  
**Construction Percent Complete: 40%**

| Phase                  | Consultant Contractor | Current Contract | Amendments/ Change Orders |
|------------------------|-----------------------|------------------|---------------------------|
| Design                 | Carollo Engineering   | \$1.7M           | 33%                       |
| Construction (Current) | W.M. Lyles            | \$10.6M          | 1.6%                      |