

NOTICE OF MEETING

**OF THE
REGIONAL SEWERAGE PROGRAM
TECHNICAL COMMITTEE**

OF THE



WILL BE HELD ON

THURSDAY, JANUARY 30, 2020

2:00 P.M.

**HASBROUCK CONFERENCE ROOM, BUILDING B
AT THE OFFICE OF THE AGENCY
6075 KIMBALL AVENUE
CHINO, CA 91708**



Regional Sewerage Program Technical Committee Meeting

AGENDA

**Thursday, January 30, 2020
2:00 p.m.**

Location

Inland Empire Utilities Agency
Hasbrouck Conference Room – Building B
6075 Kimball Avenue
Chino, CA 91708

Call to Order and Roll Call

Additions/Changes to the Agenda

1. Action Items

- A. Meeting Minutes for October 31, 2019
- B. RP-4 Primary Clarifier and Process Rehabilitation Construction Contract Award
- C. Pilot Return to Sewer Flow Study

2. Informational Items

- A. 2020 Land Use Demand Model
- B. RP-2 Update
- C. Draft 2020 Water Resilience Portfolio

3. Receive and File

- A. Draft Regional Sewerage Program Policy Committee Meeting Agenda
- B. Building Activity Report
- C. Recycled Water Distribution - Operations Summary
- D. Regional Sewerage Program Pretreatment Subcommittee Minutes
- E. Proposed 2020 IEUA Legislative Policy Principles
- F. State Legislative Report
- G. Rate Study Workshop #6

4. Previous Technical Committee Items Requested

None

(Continued)

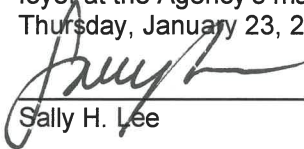
5. Other Business

- A. IEUA General Manager's Update
- B. Committee Member Requested Agenda Items for Next Meeting
- C. Committee Member Comments
- D. Next Regular Meeting – February 27, 2020

6. Adjournment

DECLARATION OF POSTING

I, Sally H. Lee, Executive Assistant of the Inland Empire Utilities Agency, A Municipal Water District, hereby certify that a copy of this agenda has been posted to the IEUA Website at www.ieua.org and posted in the foyer at the Agency's main office at 6075 Kimball Avenue, Building A, Chino, CA, on Thursday, January 23, 2020.



Sally H. Lee

**ACTION
ITEM**

1A



Regional Sewerage Program Technical Committee Meeting MINUTES OF OCTOBER 31, 2019

CALL TO ORDER

A regular meeting of the IEUA/Regional Sewerage Program – Technical Committee was held on Thursday, October 31, 2019, at the Inland Empire Utilities Agency located at 6075 Kimball Avenue, Chino, California. Committee Chairman Noel Castillo called the meeting to order at 2:04 p.m.

ATTENDANCE

Committee Members:

David Crosley	City of Chino
Eduardo Espinoza (Alternate)	Cucamonga Valley Water District
Ron Craig	City of Chino Hills
Chuck Hays	City of Fontana
Noel Castillo	City of Montclair
Katie Gienger (Alternate)	City of Ontario
Nicole deMoet	City of Upland
Shivaji Deshmukh	Inland Empire Utilities Agency

OTHERS PRESENT

May Atencio	City of Fontana
Kathy Besser	Inland Empire Utilities Agency
Jerry Burke	Inland Empire Utilities Agency
Pietro Cambiaso	Inland Empire Utilities Agency
Javier Chagoyen-Lazaro	Inland Empire Utilities Agency
Amanda Coker	City of Chino
Christiana Daisy	Inland Empire Utilities Agency
Elizabeth Hurst	Inland Empire Utilities Agency
Praseetha Krishnan	Cucamonga Valley Water District
Sylvie Lee	Inland Empire Utilities Agency
Laura Mantilla	Inland Empire Utilities Agency
Scott Oakden	Inland Empire Utilities Agency
Jesse Pompa	Inland Empire Utilities Agency
Cathleen Pieroni	Inland Empire Utilities Agency
Steve Smith	Inland Empire Utilities Agency
Mark Wiley	City of Chino Hills

ADDITIONS/CHANGES TO THE AGENDA

There were none.

1. ACTION ITEMS**A. APPROVAL OF THE MEETING MINUTES OF JULY 25, 2019**

Dave Crosley/City of Chino asked for a correction to be made on page 3, second paragraph to reflect 6,000 acre-feet (AF) per year instead of 76,000 AF per year.

Motion: By Dave Crosley/City of Chino and seconded by Chuck Hays/City of Fontana to approve the revised meeting minutes of July 25, 2019.

Motion carried: Unanimously.

B. LOWER DAY BASIN IMPROVEMENT CONSTRUCTION CONTRACT AWARD

Jerry Burke/IEUA gave a presentation on the Lower Day Basin Improvement Construction Contract Award. He reviewed the project location, the contractor selection process, the project budget and schedule. He stated that the project improvements will add the ability to percolate approximately 1,000 AF of recycled water in the groundwater aquifer. He mentioned that Ferreira Coastal Construction has completed many projects at the Agency and staff has been satisfied with their work. He stated that if approved, the construction contract will be awarded in November 2019 and construction will be completed in September 2020. He stated that IEUA is requesting the Committee recommend the IEUA Board of Directors authorize IEUA to award the construction contract for the Lower Day Basin Improvement, Project No. RW15004, to the lowest, responsive bidder, Ferreira Coastal Construction Co., for the not-to-exceed amount of \$2,988,000.

Nicole deMoet/City of Upland noted that this project is completely reimbursable through the Chino Basin Watermaster (CBWM). She asked if this project was a part of the recharge recycled water rate study of \$9.7 million. Javier Chagoyen-Lazaro/IEUA answered yes, the cost of this project, net of reimbursements from CBWM, will be included in the groundwater recharge rates.

Ron Craig/City of Chino Hills asked what portions of the project is covered by grants or State Revolving Funds (SRF). Jesse Pompa/IEUA stated that this project is funded by both grants and SRF loans. This project received \$1.125 million in grant funding and the balance is in SRF loans.

Motion: By Dave Crosley/City of Chino and seconded by Nicole deMoet/City of Upland to recommend the IEUA Board of Directors to award the construction contract for the Lower Day Basin Improvement, Project No. RW15004, to the lowest, responsive bidder, Ferreira Coastal Construction Co., for the not-to-exceed amount of \$2,988,000.

Motion carried: Unanimously.

C. 1158 EAST & WEST RESERVOIR REHABILITATION CONSTRUCTION CONTRACT AWARD

Mr. Burke gave a presentation on the 1158 East & West Reservoir Rehabilitation Construction Contract Award. He reviewed the project location, project scope, the contractor selection process, and project budget and schedule. Mr. Burke explained that this contract is for the re-coating of the

existing 1158 reservoirs in the city of Rancho Cucamonga. This project aims to make improvements to the interior roof support, replace the interior coating, and remove the exterior asbestos cladding. Mr. Burke noted that all the bids came in above the engineers estimate and explained the reason for the high bid costs. IEUA is requesting that the Committee recommend the IEUA Board of Directors award the construction contract for the 1158 East & West Reservoir Rehabilitation, Project Nos. EN21004/EN22004, to the lowest, responsive bidder, Spiess Construction Company, Inc., for the not-to-exceed amount of \$2,715,800.

Mr. Craig asked how large the tanks were. Steve Smith/IEUA stated that they are 3.5 million gallons each. Noel Castillo/City of Montclair asked for clarification of the normal contingency percentage. Mr. Burke/IEUA stated that the contingency budget is normally set at ten percent; however, for this project it was set slightly higher because of the specific temperature and humidity the coating needs to be applied. There are optional items in the contingency budget to bring in de-humidifiers or humidifiers if necessary.

Motion: By Chuck Hays/City of Fontana and seconded by Eduardo Espinoza/Cucamonga Valley Water District to recommend to the IEUA Board of Directors to award the construction contract for the 1158 East & West Reservoir Rehabilitation, Project Nos. EN21004/EN22004, to the lowest, responsive bidder, Spiess Construction Company, Inc., for the not-to-exceed amount of \$2,715,800.

Motion carried: Unanimously.

D. PROPOSED MULTI-YEAR EDU MONTHLY RATE ADOPTION FOR FISCAL YEARS 2020/21 AND 2021/22

Javier Chagoyen-Lazaro/IEUA stated that he will be combining this item with Item 2B – 2020 Rate Study Update and parts of 3B – FY 2018/19 Fourth Quarter Budget Variance Report, as they are closely related. Mr. Chagoyen-Lazaro gave a presentation on the cost of service, proposed EDU rates for FY 2020/21 and 2021/22, the 2020 rate study's proposed rates and fees, and timeline. He stated that during the rate study, it was determined that more time was needed to define an equivalent dwelling unit (EDU) by conducting sampling studies. A discrepancy in the Regional Contract between the current definition of an EDU and the actual data being received at the plants. Actual sampling will more appropriately assess loading factors to ensure consistency on the definition of an EDU, amongst the various user categories (residential, commercial, and industrial). The monthly EDU rate proposed is assuming a three percent year over year, which helps maintain adequate reserves levels for the Regional Operations funds. If the Agency implements all the rehabilitation and replacement (R&R) projects, included in the capital improvement plan (CIP), the Agency will need to draw from reserves over the next two years. After the two years, rates adjustments will replenish reserves to an appropriate level. Mr. Chagoyen-Lazaro explained that the plan is to revisit the rate study after the flow and load study is completed. IEUA is currently proposing to adopt the monthly EDU rates to accommodate some of member agencies' deadlines to meet Prop 218 and tax roll timelines. Moving forward, the goal is to summarize all the information from the rate workshops, present it to the Agency Board of Directors, and have all the rates approved by February/March 2020. IEUA is requesting the Committee recommend the IEUA Board of Directors approve the proposed multiyear EDU Monthly Rate for FYs 2020/21 and 2021/22 for the Agency's Regional Wastewater Operations and Maintenance Fund.

Katie Gienger/City of Ontario asked for the basis of the three percent increase. Mr. Chagoyen-Lazaro stated that the percentage is based on current budget projections for operation and maintenance costs. Rate increases for subsequent years will be largely dependent on adjustments to the definition of an EDU as result of the sampling studies, O & M costs, and R & R project needs. Ms. Gienger asked for clarification on how the definition of an EDU will change the rates. Mr. Chagoyen-Lazaro stated that revenue is allocated through the current number of EDUs, based on the definition of an EDU, defined in Exhibit J in the Regional Contract.

Mr. Craig asked if the rates were adopted today, and if the definition of an EDU is revised, will there be a way to revisit the rate to match the findings of the modified EDU. Mr. Chagoyen-Lazaro explained that the item will be brought back to the Technical Committee to share the results of the study. The normal process will be replicated in an aggregated way.

Eduardo Espinoza/Cucamonga Valley Water District mentioned that Carollo began the EDU analysis and he asked when and how it was decided to study EDUs further. He stated that the Agency is probably also waiting for the CASA study on the EDU. He also mentioned that there will be shift in the EDU cost from residential to industrial customers. He asked how that shift will be transitioned to different customer types. Mr. Chagoyen-Lazaro stated that when the Carollo study was done, IEUA was not aware there needed to be further study on the EDU. Once the information was shared, it was noticed that the numbers were not consistent, which not only affected the monthly EDU, but also the wastewater connection fees. To address the inconsistency, and for the rates to be compliant, it was determined further study was needed.

Chuck Hays/City of Fontana asked based on the five year look ahead, how close the rates are to the cost of service. Mr. Chagoyen-Lazaro stated that it can get very close to the cost of service. He stated that close observation is needed on the average, as some years will be closer to the cost of service than others, dependent on necessary R & R projects. With the implementation of the Asset Management Plan over the next few years, R & R projects and related costs should be more predictable making it easier for the Agency to establish cost of services rates.

Mr. Espinoza stated that there is anxiety tied to these changes in EDU and potential related costs shifts. He stated that Ken Tam/IEUA is working on the possibility of conducting a sensitivity study.

Motion: By Chuck Hays/City of Fontana and seconded by Ron Craig/City of Chino Hills to recommend to the IEUA Board of Directors to approve the proposed multiyear Equivalent Dwelling Unit (EDU) Monthly rate for Fiscal years (FYs) 2020/21 and 2021/22 for the Agency's Regional Wastewater Operations and Maintenance fund.

Motion carried: Unanimously.

2. INFORMATIONAL ITEMS

A. RP-5 EXPANSION UPDATE AND FINANCIAL PLANNING WORKSHOP

Mr. Burke gave a presentation on the RP-5 Expansion Project with the description of the project, project budget and schedule. Ms. Gienger asked if this project was related to the Army Corp. of

Engineers raising the level of the dam. Mr. Burke stated that yes, Regional Water Recycling Plant No. 2 (RP-2) will be in the flood zone after the operating level of the Prado is raised in 2023. For that reason, the Agency is relocating the Solids Treatment Facility to Regional Water Recycling Plant No. 5 (RP-5). Mr. Burke reported that the plans were distributed today to the four pre-qualified firms. He gave an overview of the timeline of the project milestones, transition from the design phase to the construction phase, and pre-qualified construction team. He stated that there is a staff recommendation for a construction manager but have not awarded the contract. Eduardo Espinoza/CVWD asked how the Agency is able to get competitive prices with pre-qualified contractors. Mr. Burke stated that the prices were negotiated and have an executed pre-selection agreement with them. Shivaji Deshmukh/IEUA stated that the pre-selected manufacturers were selected through a competitive design process.

Mr. Chagoyen-Lazaro gave a presentation on the financial aspect of the project by giving an overview of the RP-5 Project within the Ten Year Capital Improvement Plan (TYCIP), how the RP-5 will be financed, project cash flow and funding sources, existing annual debt service, project annual debt service, future financing and annual debt service, considerations in how to mitigate debt service cost increases, outstanding principal debt, debt coverage ratio, and the financing timeline.

Ms. Gienger stated that at a recent Regional Sewerage Program Technical meeting, there was a workshop on the JCSD Water Intertie project and there was consideration of the best time to complete the project. She requested for an additional information bullet on slide 14 be added to consider if these projects make sense and if they are appropriate in the timeline currently considered.

Mr. Castillo asked regarding the life cycle of these improvements. He stated that the debt will be paid off beyond 2050. Mr. Burke stated the plants solids capacity is 30 MGD with the potential to go to 40 MGD if necessary. Sylvie Lee/IEUA stated that when the Wastewater Facilities Master Plan was completed, there was no forecast for another expansion in the southern service area. However, if there are different methods for waste loading or other treatment needs are necessary, those additions may need to be implemented. In long term considerations, capacity improvements to recovery capacity at RP-1 was needed. Improvements to RP-4 was a consideration for even farther into the future.

B. 2020 RATE STUDY UPDATE

Mr. Chagoyen-Lazaro stated that he covered this item when presenting 1D. He asked if there were any additional questions on this matter.

Ms. Gienger asked regarding the timeline, the final technical memos completion and adoptions of the rates. Mr. Deshmukh ensured Ms. Gienger that the Agency will consider the member agencies in giving them enough time to review the technical memos.

Mr. Chagoyen-Lazaro stated that Christina Valencia/IEUA would like to extend an invitation to all the member agencies to schedule one on one meetings with IEUA staff to address any questions regarding the rate study.

C. GRANTS DEPARTMENT SEMI-ANNUAL UPDATE

Jesse Pompa/IEUA gave an overview of the history of grants and State Revolving Fund (SRF) loan funding programs, active grants and SRF loans, current funding applications, SRF loan projects on State Water Resources Control Board fundable list, total interest savings, and Climate Change Action Plan (CCAP).

Mr. Espinoza asked for clarification on the \$70.9 million drinking water open funding agreements. Jesse Pompa stated that most of the funding is for the phase 3 expansion for the Chino Basin Desalter Authority. Mr. Craig asked if the SRF loans had a lower reserve requirement than the general obligation bonds. Mr. Chagoyen-Lazaro stated that in the Agency's calculations, the same calculations as regular bonds are applied. In terms of the debt service reserve, the next fiscal year debt service needs to be included the reserves for SRF loans. Mr. Craig asked regarding the amount of principal forgiveness (PF). Mr. Pompa stated that the PF limit was up to \$2.5 million, typically 50 percent of the project cost up to \$2.5 million. He stated that in 2018, the PF was about \$11.5 million.

D. SANTA ANA RIVER UPPER AGENCY FLOWS MEMORANDUM OF UNDERSTANDING

Sylvie Lee/IEUA stated that this Memorandum of Understanding (MOU) will initiate the discussion on the Santa Ana River Flows. As work on the Upper Santa Ana River Multiple Species Habitat Conservation Plan (HCP) is approaching completion, this MOU was developed to memorialize and reaffirm the commitments of the four Santa Ana River Watermaster parties, IEUA, Orange County Water District, San Bernardino Valley Municipal Water District, and Western Municipal Water District.

Ms. Gienger stated that since both documents reference the 1969 judgement and the Santa Ana River Watermaster, she recommends that the MOU be brought to the Water Managers meeting and perhaps Chino Basin Watermaster.

E. PLANNING & ENVIRONMENTAL RESOURCES ANNUAL REPORTS

Pietro Cambiaso/IEUA gave a presentation on the FY 2018/19 building activity, regional contracting agencies EDU projections, regional water use trend and trends by source, recycled water deliveries, and the Agency's electricity usage.

Mr. Craig stated that it may be helpful to have another chart showing the amount of water discharged to the Santa Ana River. Ms. Gienger asked if the Agency used projections given by the member agencies or projections based on trends for the RP-5 expansion project. Ms. Lee stated that when the process was started in 2015, they were based on projections that were consistent with the land use models in each of the newer homes. There was a study completed that provided the projections for each area of growth, which was incorporated into the Wastewater Facilities Master Plan. When Parsons took over the master plan, there may have been more detailed analysis on the strength projections. With revenue projections, the Agency is more conservative. However, with projections for treatment plant expansions, the Agency looks at detailed information.

F. PFAS UPDATE

Mr. Cambiaso gave an overview of what PFOA and PFAS are, PFOA and PFAS sources, drinking water regulatory requirements, testing challenges, how the Agency is monitoring the data, potential

impacts to the Agency, different treatment technologies, and the Agency's plan of response. Mr. Cambiaso provided a detailed response on the testing requirements and capabilities.

Ms. deMoet asked for the range in effluent discharge for PFOA. Mr. Cambiaso stated that for recycled water it will only impact RP-1 and RP-4 because these locations recharge water. Effluent discharge will be tested at all the facilities. He explained that testing began in July 2018. Ms. Gienger asked that the letters that were sent to Governor Newsom and the Division of Drinking Water be shared with the Committee.

G. GROUNDWATER RECHARGE/RECYCLED WATER SEMI-ANNUAL UPDATE

Steve Smith/IEUA gave a presentation on the groundwater recharge annual history, historical monthly deliveries from FY 2005/16 to FY 2019/20, groundwater recharge levels for FY 2018/19, historical recycled water demand, and cleaning activity at Ely Basin, Banana Basin, Hickory Basin, and Etiwanda Debris Basin.

Ms. Gienger stated that she would like to ensure that recharging the dry year yield (DYY) is not impacting recycled water recharge. Mr. Smith stated that typically it does not. Most of the imported water is going into the basins where there is not a lot of recycled water.

H. ENGINEERING AND CONSTRUCTION MANAGEMENT PROJECT UPDATES

Mr. Burke gave an overview of the following projects: Headquarters Driveway Improvements; TCE Plume Cleanup; Agency-wide Chemical Containment Coating Rehabilitation and Repairs; RP-1 Aeration Basin Catwalk Safety Railing; and RP-4 Influent Screen Replacement.

3. RECEIVE AND FILE

A. LETTER TO REGIONAL CONTRACTING AGENCIES RE: CBP

The letter to the Regional Contracting Agencies regarding the Chino Basin Project was received and filed by the Committee.

B. FY 2018/19 FOURTH QUARTER BUDGET VARIANCE REPORT

The FY 2018/19 Fourth Quarter Budget Variance Report was received and filed by the Committee.

C. BUILDING ACTIVITY REPORT

The Building Activity Report was received and filed by the Committee.

D. RECYCLED WATER DISTRIBUTION – OPERATIONS SUMMARY

The Recycled Water Distribution = Operations Summary was received and filed by the Committee.

E. IEUA RATE STUDY WORKSHOP #4 AND #5

The IEUA Rate Study Workshop #4 and #5 was received and filed by the Committee.

F. DRAFT POLICY MEETING AGENDA

The draft November 7, 2019 Policy Meeting agenda was received and filed by the Committee.

4. PREVIOUS TECHNICAL COMMITTEE ITEMS REQUESTED

None.

5. OTHER BUSINESS

A. IEUA GENERAL MANAGER'S UPDATE

Shivaji Deshmukh/IEUA stated that the regular November 2019 and December 2019 Technical Committee meetings fall on major holidays. He brought this up for the committee's consideration. The Committee decided to cancel the November 28, 2019 and December 26, 2019 meetings until an urgent matter needed to be addressed.

B. COMMITTEE MEMBER REQUESTED AGENDA ITEMS FOR NEXT MEETING

Ms. deMoet requested a brief presentation on the status of the decommissioning of RP-2.

C. COMMITTEE MEMBER COMMENTS

None.

D. NEXT MEETING – JANUARY 30, 2020

6. ADJOURNMENT – Chairman Castillo adjourned the meeting at 3:42 p.m.

Transcribed

by:

Sally Lee, Executive Assistant

**ACTION
ITEM**

1B

Date: January 2020/February 2020

To: Regional Committees

From: Inland Empire Utilities Agency 

Subject: RP-4 Primary Clarifier and Process Rehabilitation Construction Contract Award

RECOMMENDATION

It is requested that the Regional Committees recommend the Inland Empire Utilities Agency (IEUA) Board of Directors award the construction contract for the Regional Water Recycling Plant No. 4 (RP-4) Primary Clarifier and Process Rehabilitation, Project Nos. EN17043/EN17110, to the lowest, responsive bidder for the not-to-exceed amount of \$10,553,000.

BACKGROUND

RP-4 continues to treat wastewater as a scalping plant; however, several components of the treatment process require repair, new installations, and demolition. The scope of the project includes structural rehabilitation and a myriad of upgrades to process facilities throughout the entire plant including headworks, primary/secondary clarifiers, aeration basins, etc.

On December 17, 2019, IEUA received three construction bids from a group of seven pre-qualified contractors. W.M. Lyles Co., was the lowest responsive, responsible bidder with a bid price of \$10,553,000; Engineer's estimate was \$13,120,000.

The following table presents the anticipated project cost:

Description	Estimated Cost
Design Services	\$1,945,094
Design Consultant Contract	\$1,645,094
IEUA Design Services (actuals)	\$300,000
Construction Services	\$1,947,474
Engineering Services During Construction	\$847,474
IEUA Construction Services (~10%)	\$1,100,000
Construction	\$11,608,300
Construction (This Action)	\$10,553,000
Contingency (~10%)	\$1,055,300
Total Project Cost (This Project):	\$15,500,868
Total Project Cost (Trident Filter):	\$5,000,000
Total Project Cost (Aeration Basin Rehabilitation):	\$6,500,000
Total Project Cost:	\$27,000,868
Total Project Budget:	\$28,643,938

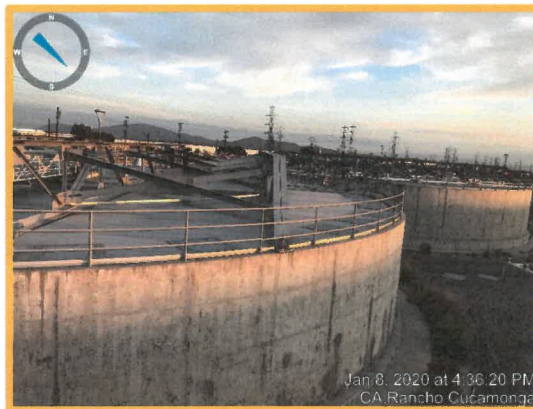
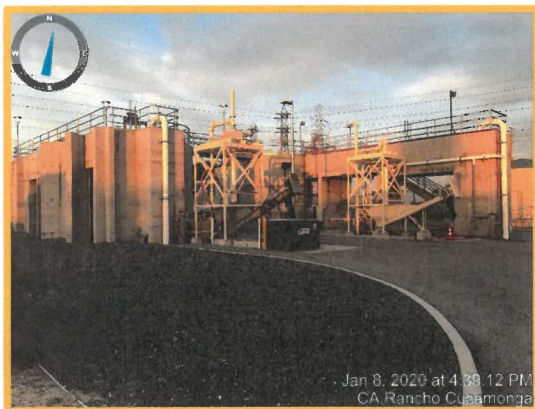
The following is the project schedule:

Project Milestone	Date
Construction Contract Award	February 2020
Construction Completion	August 2021

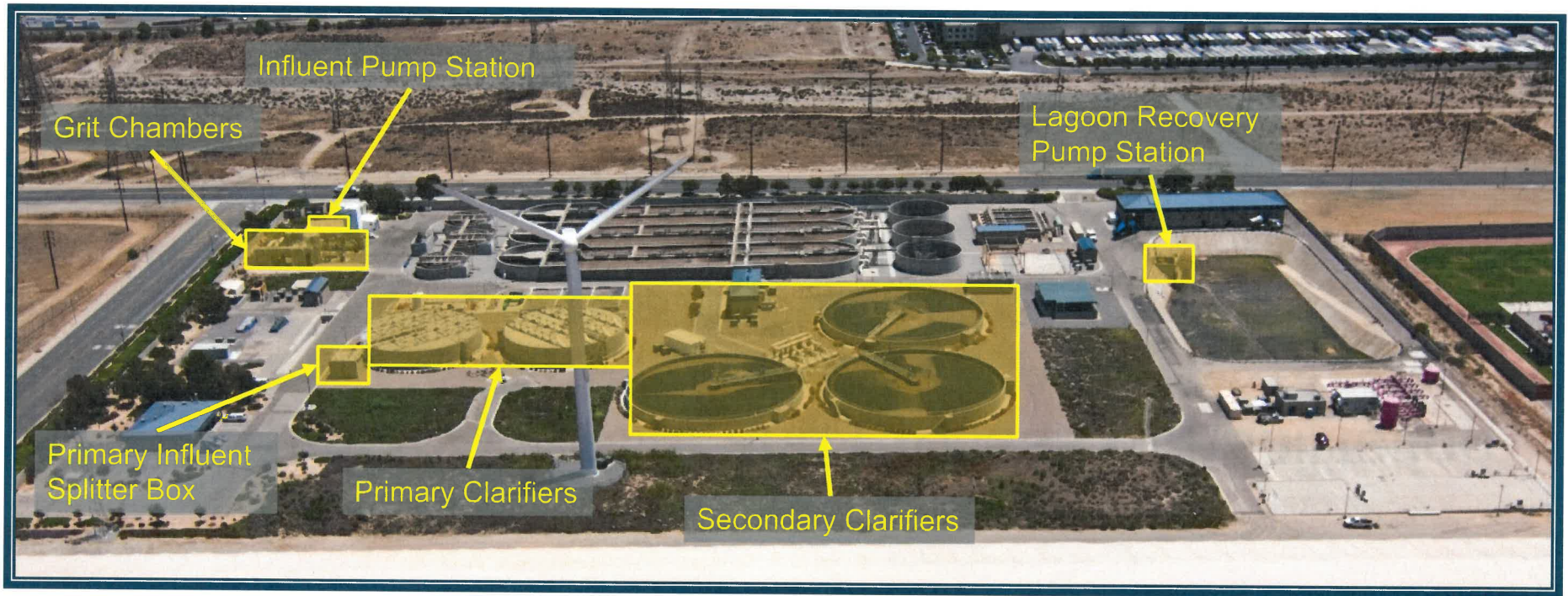
The RP-4 Primary Clarifier and Process Rehabilitation Project is consistent with IEUA's Business Goal of Wastewater Management, specifically the Asset Management objective that IEUA will ensure the treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

RP-4 Primary Clarifier and Process Rehabilitation Construction Contract Award

Project No. EN17043 & EN17110



Project Location

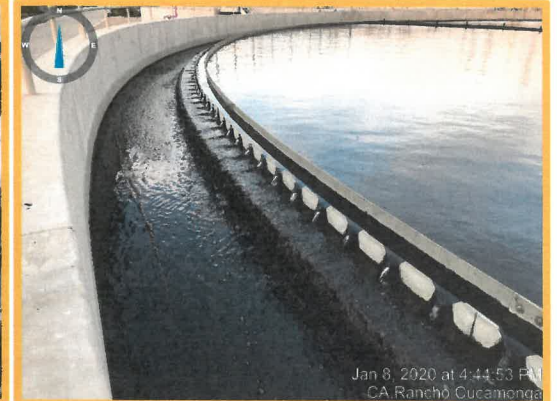


The Project

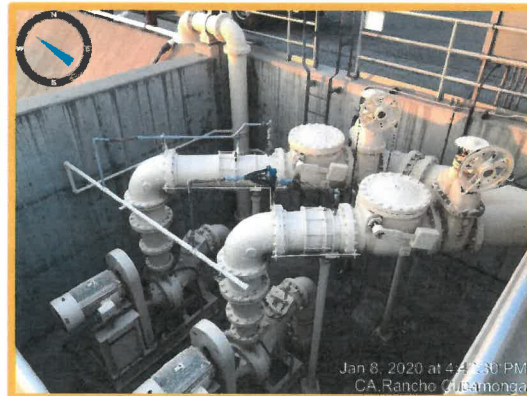
- Perform concrete rehabilitation and mechanical upgrades to RP-4
- Scope of Work:
 - Reestablish Grit Chamber No. 1
 - Replace/Rehabilitate internal components of primary clarifiers
 - Improve primary sludge wasting
 - Install sun covers and scum pump station for secondary clarifiers
 - Reconfigure Lagoon Pump Station



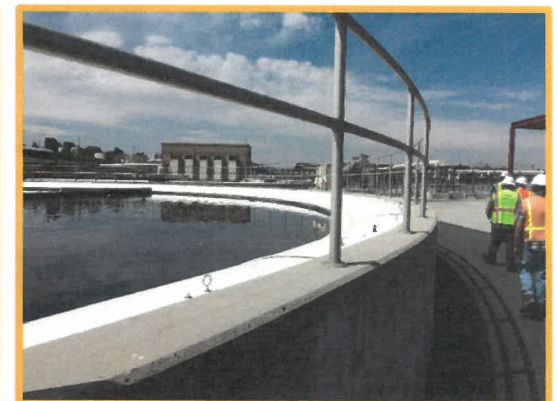
Influent Pump Station



Secondary Clarifier Effluent Channel



3 Lagoon Pump Station



Clarifier Weir Cover Example

Contractor Selection

Three bids were received on December 17, 2019:

Bidder's Name	Final Bid Amount
W.M. Lyles Co.	\$10,553,000
Stanek Constructors, Inc.	\$10,556,000
J.F. Shea Construction, Inc.	\$11,600,000
Engineer's Estimate	\$13,120,000

Project Budget and Schedule

Description	Estimated Cost
Design Services	\$1,945,094
Design Consultant Contract	\$1,645,094
IEUA Design Services (actuals)	\$300,000
Construction Services	\$1,947,474
Engineering Services During Construction	\$847,474
IEUA Construction Services (~10%)	\$1,100,000
Construction	\$11,608,300
Construction Contract (this action)	\$10,553,000
Contingency (~10%)	\$1,055,300
Total Project Cost (This Project):	\$15,500,868
Total Project Cost (Trident Filter):	\$5,000,000
Total Project Cost (Aeration Basin Rehabilitation):	\$6,500,000
Total Project Costs (All)	\$27,000,868
Total Project Budget:	\$28,643,938

Project Milestone	Date
Construction	
Construction Contract Award	February 2020
Construction Completion	August 2021

Recommendation

- It is requested that the Regional Committees recommend the IEUA Board of Directors award the construction contract for the RP-4 Primary Clarifier and Process Rehabilitation, Project Nos. EN17043/EN17110, to the lowest, responsive bidder for the not-to-exceed amount of \$10,553,000.

The RP-4 Primary Clarifier and Process Rehabilitation Project is consistent with **IEUA's Business Goal of Wastewater Management**, specifically the Asset Management objective that IEUA will ensure the treatment facilities are well maintained, upgraded to meet evolving requirements, sustainably managed, and can accommodate changes in regional water use.

**ACTION
ITEM**

1C



Date: January 30, 2020

To: Regional Technical Committee

From: Inland Empire Utilities Agency *AM*

Subject: Pilot Return to Sewer Flow Study

RECOMMENDATION

This action item is seeking authorization from the Regional Technical Committee for IEUA to initiate the Pilot Return to Sewer Flow Study.

BACKGROUND

In February 2019, IEUA presented to the Regional Contract Negotiation (RCN) group an overview of the growth forecasting process. The overview included background on the forecasting projections provided by the Regional Contracting Agencies (RCAs) and the use of the projections in the Ten-Year Capital Improvement Plan (TYCIP), the Comprehensive Annual Financial Report (CAFR), and IEUA's budget projections for revenue forecasting. During this RCN session, IEUA proposed an alternative growth forecasting methodology via the use of the 2016 Land Use Demand Model (LUDM).

In May 2019, the alternative growth forecasting method was presented to the RCN group. During that meeting the LUDM was discussed and it was identified that wastewater return to sewer and strength would be needed to move forward with the alternative growth forecasting method. IEUA proposed to the RCN group that the study by Applied Research in Government Operations (ARGO), which was previously brought before the Regional Technical Committee for consideration in April 2018, was an alternative study that could determine return to sewer factors utilizing water consumption data from the Montclair and Monte Vista Water District service areas. The RCN group established a subcommittee to review the LUDM and the pilot return to sewer flow study.

In July 2019, the RCN subcommittee held two meetings to discuss both the LUDM and the pilot return to sewer flow study. Representatives from ARGO were invited to present their proposal. The RCN subcommittee were in favor of region-wide joint IEUA-RCA forecasting method utilizing the LUDM with appropriate input from their respective Planning Departments. After further discussion on the pilot return to sewer study, the RCN group requested to bring the pilot study back to the main RCN group for discussion.

In November 2019, IEUA presented a memorandum summarizing the RCN subcommittee findings. The RCN group discussed the pilot return to sewer flow study and agreed to move

forward pending an approval by the Regional Technical Committee in January 2020. IEUA will coordinate with the RCN group to request participation from interested representatives from the RCAs to serve as part of the technical group to work with ARGO on the review of the data and results of the pilot study.

Pilot Return to Sewer Flow Study

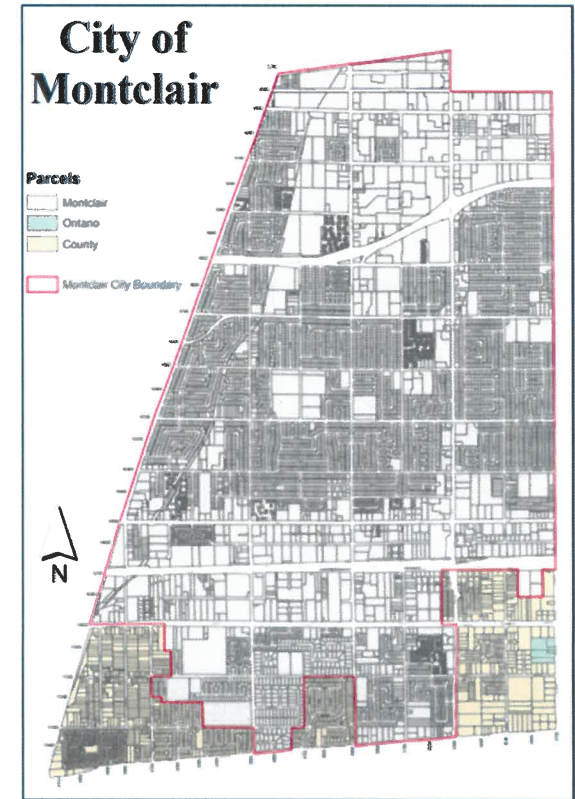


Forecasting Method/Pilot Return to Sewer Flow Study

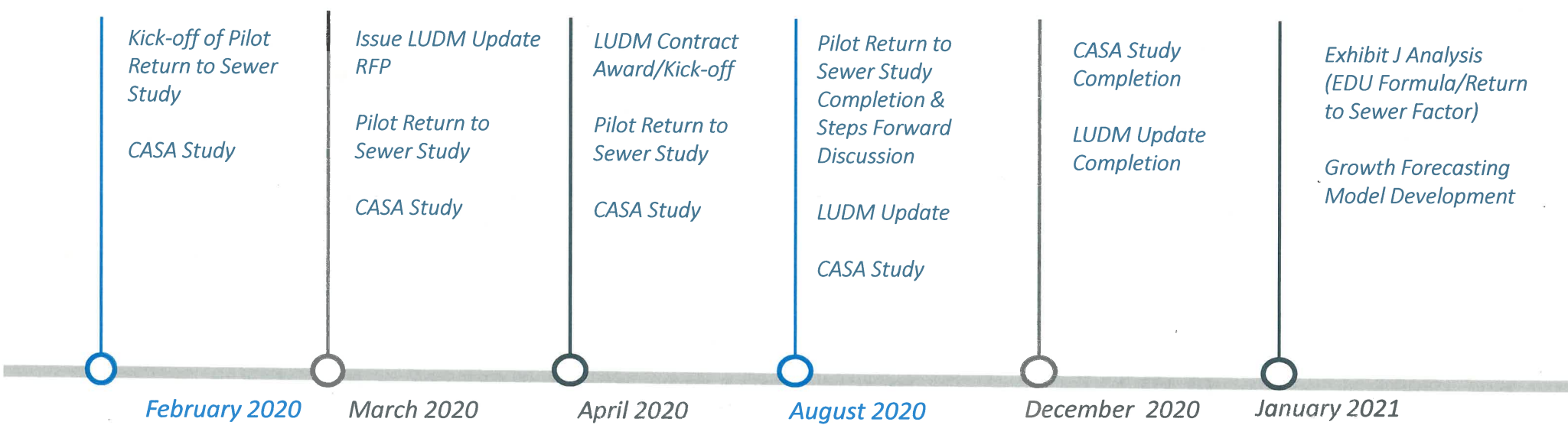
- April 2018 – Pilot Return to Sewer Flow Study with Advanced Research in Government Operations (ARGO) presented to Regional Technical Committee
- February to May 2019 – Regional Contract Negotiation (RCN) Growth Forecast Discussions
 - Land Use Demand Model (LUDM)
 - Development of Wastewater Strength & Return to Sewer Factors
- July 2019 – RCN Subcommittee
 - Discussion on LUDM
 - ARGO discussion on Pilot Return to Sewer Flow Study
- November 2019 – RCN Group
 - Agreement to move forward upon approval by Regional Technical Committee

Pilot Return to Sewer Flow Study

- Pilot Study for the Montclair/Monte Vista Water District Service Area
- Calculation of Return to Sewer Factor
 - Water demands and subtracting estimated outdoor demands
 - Minimum-month water consumption data
 - Regression model
- RCN Subcommittee Involvement
 - Data review with Technical Group
- Timeline for completion ~ 6 months
 - Monthly meetings with Technical Group



Tentative Timeline/Schedule



Recommendation

This action item is seeking authorization from the Regional Technical Committee for IEUA to initiate the Pilot Return to Sewer Flow Study.

*The Pilot Return to Sewer Flow Study is consistent with the **IEUA's Business Goal of Business Practices & Wastewater Management**. The project will specifically support planning efforts related regional growth forecasting.*



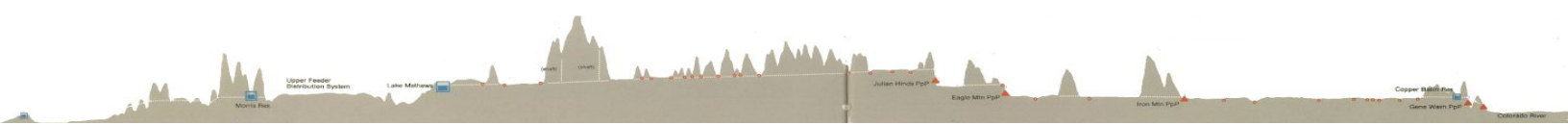
Inland Empire Utilities Agency

Sewer Return Flow Estimation

Proposed Scope of Work

May 2018

Updated: 22 May 2019



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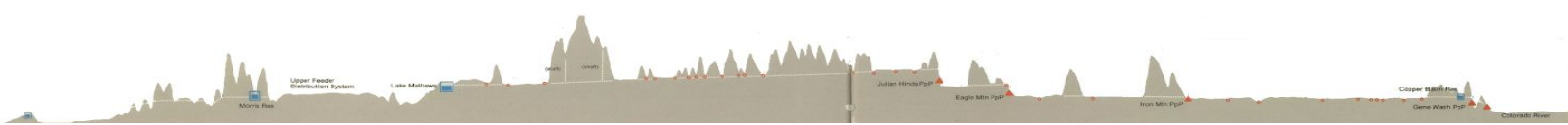
Project Overview

In collaboration with the Inland Empire Utilities Agency (IEUA) and Monte Vista Water District (MVWD), Applied Research in Government Operations (ARGO) proposes to estimate indoor sewer flows in the IEUA service area. The goal is to research the potential need to update Exhibit J “Equivalent Dwelling Unit Computations” utilized to calculate sewer fees.¹ The intended outcome of this preliminary research and development study is to offer recommendations and scope a potential full study to update the rates in Exhibit J.

This novel research is important particularly in light of recent legislation (SB 606 / AB 1668) to make conservation a California way of life, which sets new standards for indoor and outdoor water use. Team ARGO which staffs the California Data Collaborative (CaDC) was funded by the Water Foundation to conduct the first ever rapid assessment of residential water budgets statewide. That planning tool and parcel level landscape area measurements will be invaluable in supporting this study.

The proposed methodology uses a land use based demand model provided by IEUA in concert with creative external customer categorization tools. Those classifications of commercial and other sewer customers will be integrated with water use (where available), vegetation, and evapotranspiration information maintained by ARGO to establish return to sewer factors by land

¹ <https://www.ieua.org/download/equivalent-dwelling-unit-computations-regional-contract-exhibit-j/>



use type and business category. These estimated sewer flows will be broken down by subcategories of commercial and industrial use to enable easy and straightforward fees.

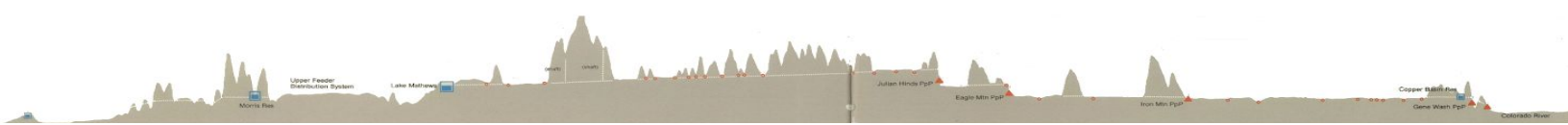
NOTE ON EXPERIMENTAL NATURE OF THIS APPROACH: This research and development project leverages novel data integration and new methodological approaches. As an experiment, the final results may not reach the level of accuracy required to update return to sewer flow specifications. The goal of this study is to 1) identify whether a full study is needed to update Exhibit J and 2) leverage the results of this applied research and development to scope that study.

Project goals

- Integrate IEUA land use categories with novel data on commercial customers to explore appropriate categories for sewer fee setting.
- Estimate return to sewer flows through a more granular understanding of customer demand utilizing customer metered use data.
- Collaborate with Agency staff to incorporate return to sewer flow estimation in IEUA planning and operations.
- Develop reusable tools so the estimation methodology developed in this study can serve as an ongoing resource for IEUA.

Data Assets

- Maintained by ARGO:
 - Bi-Monthly meter reads from customers in the MVWD, geocoded and matched to parcel data
 - Use of this data in this study will require written permission from MVWD
 - Additional IEUA retailers may provide their data by becoming SCUBA subscribers: <http://californiadatacollaborative.org/join-us/>
 - Parcel polygons for IEUA from San Bernardino County Assessor
 - Aerial measurements of Photosynthetically Active Vegetation (PSAV) areas for each parcel
 - Evapotranspiration data from the DWR CIMIS program
- To be developed as part of this project:
 - Categorization of commercial and industrial customers
 - Integration of Yelp and other available categorizations of IEUA customers within a defined shapefile
 - OPTIONAL integration of business listing data (this would require additional funds to purchase the data). Some potential vendors include:



- Factual <http://developer.factual.com/places/categories/>
- Dunn & Bradstreet
- Provided by IEUA
 - Land use types for all properties in the IEUA service area
 - The SAWPA commercial and industrial NAICS code integration would be useful to obtain as well
 - Estimated annual unit water demands for each land use type and retail service area in IEUA
 - Measured sewers flows at IEUA treatment facilities (coarse grained and to be utilized as an order of magnitude check).
 - If possible, it would be highly useful for IEUA or IEUA's engineering firm consultants to measure sewer flows at regional sewer trunks
 - Wastewatershed shapefile indicating the area provided service by each wastewater treatment plant.

Proposed Approach to Categorize Commercial

Goal: analytical foundation of granular commercial entity linkages to enable return to sewer flow analysis.

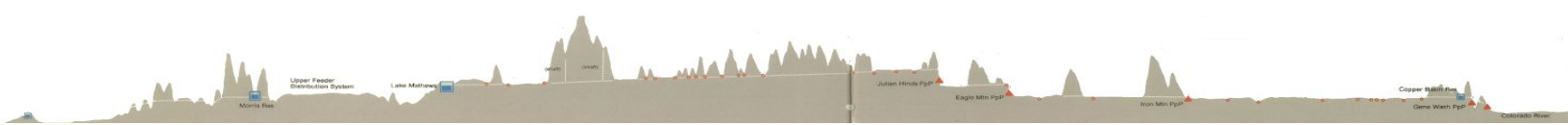
The category of “commercial” encompasses a wide variety of customer types and water use patterns. ARGO proposes to tackle that by linking various novel data sources that have subcategories of commercial types. Such data sources will include Yelp, County Assessor and other useful linkages. A presentation describing this approach is provided here:

https://docs.google.com/presentation/d/1OjMr7GqNbQqW0iVEyFT8pNNCMqx4a4na7pvsp2ZOqeA/edit#slide=id.g24b20221c9_2_4

That ongoing study has only matched about 1/3 of commercial customers in MNWD's service area. Note in addition to issues with granular classification, it is often challenging to correctly and precisely assign landscape area to commercial customers. This is a known issue with many remote sensing vendors. Shopping centers for example with many business entities are an outstanding area of open research. The goal is to leverage and improve upon that commercial entity classification pipeline in conjunction with IEUA provided land use information to develop best available customer categorizations. Those granular categories will be integrated with estimates of indoor use and return to sewer volumes to scope prospective categories.

Proposed Methodologies to Estimate Indoor Use

Goal: estimates of indoor use returned to sewer flow broken down by commercial subcategories developed through an iterative process incorporating the linkages described above.



Isolating indoor consumption from total consumption is a complex problem, and in the absence of dedicated indoor and outdoor metering, any approach is bound to be inexact. To get the most robust estimates possible, ARGO proposes to use a combination of different methods, each with distinct benefits and drawbacks. These different methods can then be compared and integrated to show the return to sewer flows by subcategory of commercial customer. The following sections details the different proposed methodologies and their expected benefits and drawbacks.

Method 1: Subtract Estimated Outdoor Demands from Outdoor Allocations

The first method will subtract estimates of annual outdoor water use from estimates of total water use for each retail agency and land use type. The estimated sewer flow per acre using Method 1 for a given land use and retail agency is then

$$\text{Indoor Sewer Flow} = LUD - \text{Outdoor allocation per acre}$$

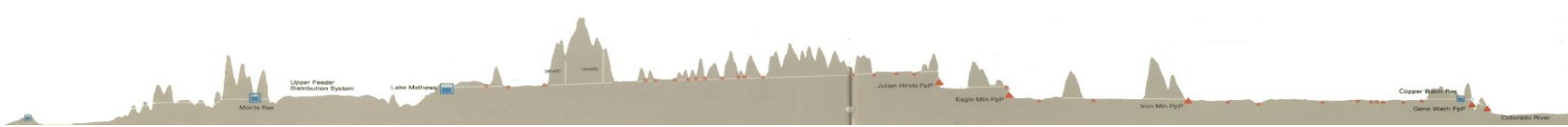
Where *LUD* is the Land Use Unit Demand from the IEUA demand model (af/ac/year) and

$$\text{Outdoor allocation per acre} = ET \text{ Factor} \times \text{evapotranspiration} \times PS\&A\&V \text{ Area} \times C$$

Is an estimate of outdoor water use under an assumption about the intensity of watering. Specifically,

- *ET Factor* (also called a crop coefficient, or landscape factor) is a coefficient capturing our assumptions about both the average water needs of vegetation in the IEUA service area and the irrigation efficiency of customers in the area. These factors often range from 1.2 for heavily trafficked turf with low irrigation efficiency, to 0.5 for drought tolerant plants with efficient irrigation
- *evapotranspiration* is the (yearly) reference evapotranspiration for the area
- *PSAV Area* is the area of photosynthetically active turf and shrubs/trees in the area. This value is derived from 4-band aerial imagery and provided to ARGO through a partnership with Claremont Graduate University
- *C* is a unit conversion factor to convert to af/ac/year

This process is shown in Figure 1. Assessor parcel polygons with PSAV area are joined with land use data shapefiles. The average PSAV area per acre for each retailer and land use is combined with evapotranspiration data as specified above to calculate outdoor LUDs. These outdoor LUDs are then subtracted from total LUDs in the IEUA demand model to obtain estimates of the indoor LUD.



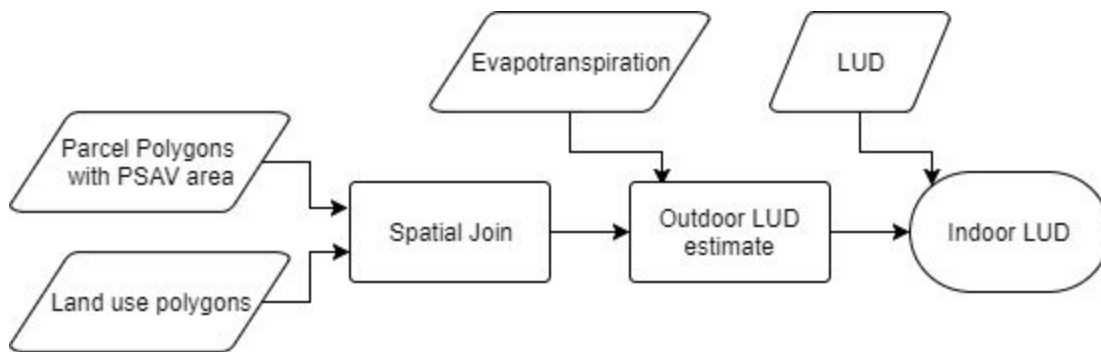


Figure 1. Indoor land use unit demand calculation using Method 1.

Benefits and Drawbacks

Simplicity - Method 1 benefits from conceptual simplicity and fits neatly into the existing framework of the IEUA demand model. Calculations can be done at the aggregate level for each land use type and retailer without resorting to customer-level calculations.

Accuracy (under assumptions) - To the extent that, on average, vegetation is irrigated as indicated by the ET factor, then this method should produce an accurate estimate of indoor sewer flows.

Assumptions - This method relies on empirically estimated vegetation area that is classified as commercial and an assumed ET factor, and therefore has a higher level of uncertainty. Fortunately, we can build confidence in this approach by looking at agency-wide efficiency targets in the Statewide Efficiency Explorer (SEE). The SEE uses the same efficiency framework used here and produces highly accurate estimates of residential water production for most IEUA retailers using an ET factor of 0.8.

Scenario Builder

Supplier

Q Ontario City of

Residential Efficiency Goal: 17672.91 AF
 Residential Use: 16611.75 AF
 Efficiency: 1061.16 AF within goal in this scenario | -6%
 Data Quality: Useful first approximation



Date Range

Jul 2016 - Jun 2017

GPCD

55

ET Adjustment Factor

0.8

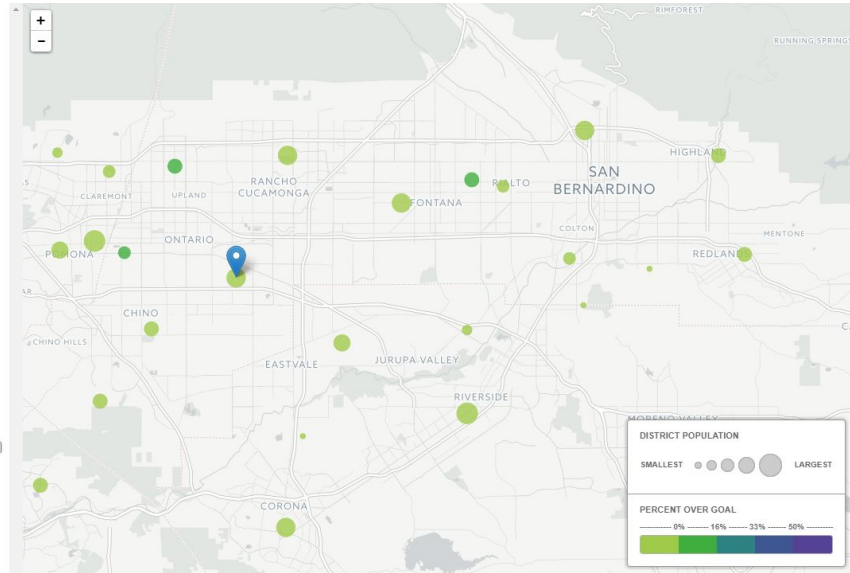


Figure 2. IEUA retailer water production is well-approximated using an efficiency budget framework.

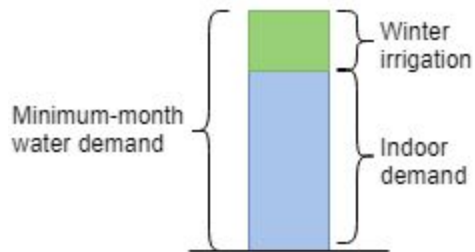
The SEE also opens the possibility of tailoring the ET factor to specific circumstances of each retail agency by selecting an ET factor that best fits the observed water production trends in the SEE.

Method 1 may produce a slight overestimate of indoor sewer flows because both the LUDs and the SEE budgets are estimates of water production, not consumption. This can be compensated for by subtracting reported distribution system water loss from the IEUA 2015 Urban Water Management Plan ("UWMP") to develop estimates of consumption.

Method 2: Extrapolate Minimum-Month from MVWD to subtract estimated outdoor demands

The second method aims to make use of meter-level consumption data from the Monte Vista Water District to estimate indoor sewer flows using the minimum-month method. These estimates can then be converted to unit demands and extrapolated to other retailers in the IEUA service area. This process is shown in Figure 3.

First, MVWD customers will be matched with IEUA land use types, and indoor sewer flows will be estimated for each customer using meter reads from the lowest month of water use available, which should correspond to the month with the most precipitation, and therefore the least demand for outdoor irrigation. The customer-level estimates of indoor sewer flows can then be summed within each land use type and divided by the area devoted by that land use to obtain indoor unit demands (indoor LUDs) for each land use type in MVWD.



At this point the indoor LUD is almost certain to be an overestimate of true sewer flows due to the presence of small amounts of outdoor irrigation even in periods of high precipitation (due to sprinkler timers, moderate climate, etc). An approach that has been used in Orange County is to directly account for this winter irrigation and subtract it away. This is done by deriving irrigation intensities (*volume water / vegetation area*) from dedicated irrigation meters during the minimum month. The average irrigation intensity can then be subtracted from each indoor LUD to obtain an adjusted indoor LUD.

From here, there are several possibilities. One is to assume that differences in indoor sewer flows are negligible across retailers, and that most inter-agency variation in unit demands comes from differences in outdoor irrigation. In this case, no extrapolation is necessary. A second approach assumes that while total LUDs vary across retailers, the ratio of water for indoor use remains fixed across retailers. In this case, an *indoor ratio* can be calculated for each land use in MVWD, and this can be used to estimate indoor LUDs for the same land use in a different retailer as follows:

$$\text{indoor LUD for retailer} = \text{MVWD indoor ratio} \times \text{LUD}$$

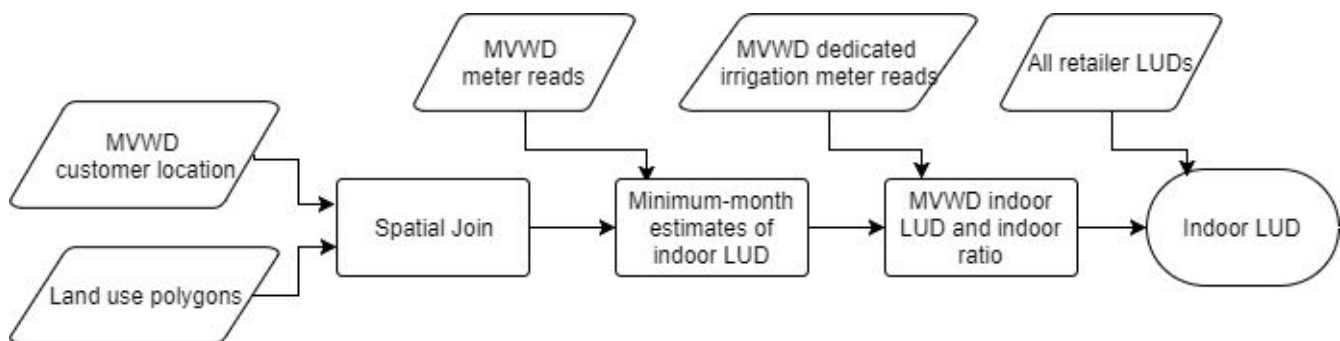
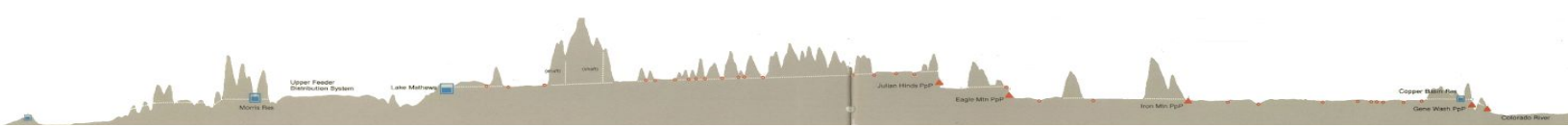


Figure 3. Indoor land use unit demand calculation using Method 2.

Benefits and Drawbacks

Directness - Method 2 estimates indoor sewer flows directly, so it is able to avoid the uncertainty in PSAV area estimates and ET factor assumptions used by Method 1.



Inaccuracy - As state above, Method 2 without an adjustment for winter irrigation is likely an overestimate. In one respect this is a benefit as well as a drawback because it allows one to place a hard upper bound on what realistic indoor flows may be.

Generalizability - There are several assumptions made in this approach. One is the assumption that winter irrigation for dedicated irrigation accounts can accurately model winter irrigation for other customer types. Another is that customer behavior in MVWD can accurately be extrapolated to other retail service areas.

Method 3: Regression model of residential water demand

This method approaches the problem of sewer flow estimation by estimating per-capita water use as it is influenced by factors like evapotranspiration, income, and education. This could be done using a regression model of water use at the level of census block groups, for example:

$$water\ use = \beta_1 * population + \beta_2 * income * population + ... + \beta_n * PSAV\ area + ...$$

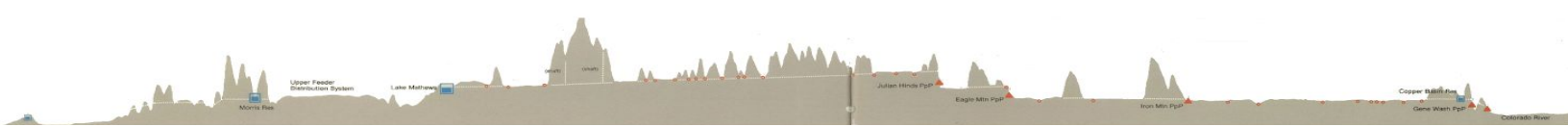
$$= (\beta_1 + \beta_2 * income + \beta_3 * education + ...) * population + ... + \beta_n * PSAV\ area + ...$$

In a model like this, the value $(\beta_1 + \beta_2 * income + \beta_3 * education + ...)$ can be interpreted as a per-capita water use that is modulated by income, education, etc. If outdoor water use is properly controlled for by including factors like vegetation area and evapotranspiration in the model, then this per-capita value should capture only indoor use.

This per-capita value can then be customized to individual census blocks in the IEUA service area by providing the correct values of income, education, etc. Multiplying by population and dividing by the area of residential land use in each area can then create residential unit demands for each census block.

For CII demand the model above would need to change slightly because population is not the primary driver of indoor demand for CII customers. Instead we can utilize the fine-grained customer categories derived earlier to estimate unit demands for each CII category while controlling for outdoor use with a model similar to the following:

$$water\ use = \beta_1 * restaurant + \beta_2 * office + ... + \beta_n * PSAV\ area * ET + ...$$



Accuracy and Quality Control

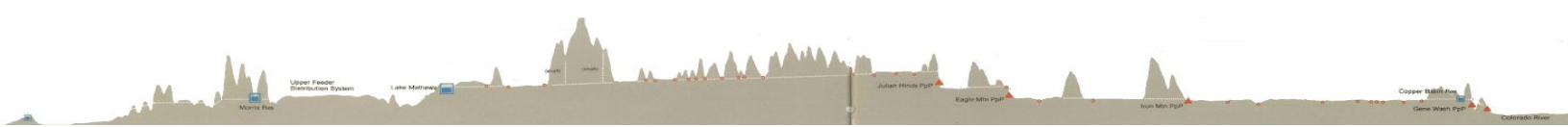
There are a number of quality control steps that should be taken to ensure that the estimates provided by the methods above are realistic.

- The simplest check is to compare LUDs derived from MVWD customers to the LUDs provided by IEUA. This will serve as a baseline to ensure that data from multiple sources is compatible.
- The second natural check is to compare the results from the multiple estimation methods used above. The estimates will probably differ, but there should be rough consensus between approaches, and the differences should be explicable.
- As an optional additional step, if metered sewer flow data become available for each sewershed in the future, then aggregate indoor sewer flows can be computed for each of IEUA's sewer catchment basins using the LUD estimates derived during the study. These values can then be compared against these future "ground-truth" sewer flow measurements for each catchment provided by IEUA to gain another estimate of the accuracy of each method.

Cost of Service

Given the exploratory nature of this project, ARGO proposes to investigate the three methodologies discussed above. That exploratory analysis, cost of potential external data and integration of IEUA land use is costed out below:

Item Type	Item	Task Description	Cost
Necessary Foundational Data Integration and Exploratory Analysis	Incorporating IEUA Land Use Information	Aligning IEUA land use data formats to make compatible with SCUBA data infrastructure	\$2,500
	Integrate data to categorize commercial and industrial customers	Integrate publicly available information to categorize commercial entities (such as Yelp and County Assessor information) along with IEUA provide CII categorization (from for example SAWPA).	\$2,500
	Investigate three proposed methodologies	Method 1: Subtract estimated outdoor demands from outdoor allocations	\$4,500
		Method 2: Utilize metered use data and minimum month method to subtract estimated outdoor demands	\$4,500



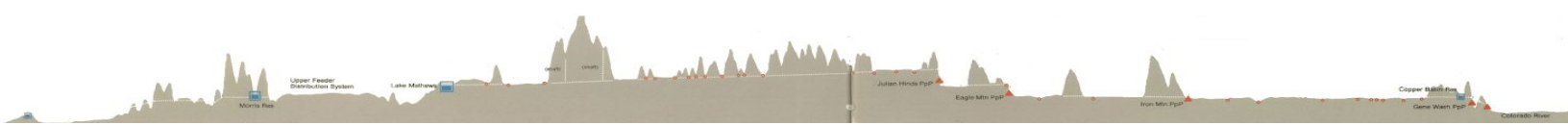
		Method 3: Regression model of residential water demand	\$4,500
Dissemination of Results	Bi-weekly calls/webinars and/or in person meetings to update and collaborate with staff	Ad hoc presentations developed to discuss results with agency staff and others at agency staff direction	\$2,500
		Final report summarizing results from this analysis and next steps	\$8,000
Subtotal	Professional services		\$29,000
Data purchase	OPTIONAL - Data purchase to improve accuracy of CII customer classification	Business and commercial entity classifications.	\$9,000
Subtotal	Data purchase		\$9,000
TOTAL			\$38,000

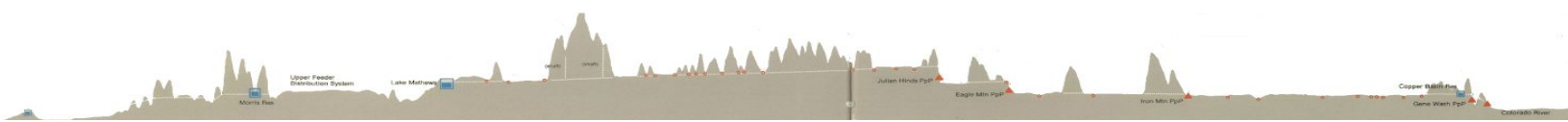
This work will be collaboratively developed with IEUA staff through three month iterations to test and refine the methodologies proposed above. That work will result in reusable code as a resource for IEUA and a final report summarizing results of the project for senior management.

Project Timeline

The following timeline provides ARGO staff's estimation of the time required to complete the work. We estimate 6 months to conduct the study with monthly check-ins and focused research iterations developed in conjunction with IEUA staff.

Month	M1			M2			M3			M4			M5			M6							
Week	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Task																							
Kickoff meeting																							
First iteration																							



11

November 7, 2019

To: Regional Contract Negotiation (RCN) Group
Cc: Kearns & West
From: RCN Forecasting Subcommittee
Subject: Forecasting (Return to Sewer Factor) Recommendation

Background:

Annual Growth Forecasting (under Section 9A.A.1 of the Regional Contract) was identified as a subtopic as part of Topic No. 6 – Reports Required Under Contract. During the Reports subcommittee discussion session on January 23, 2019, the subcommittee members requested a report back to the main RCN group on growth forecasting from IEUA. Key questions posed by the subcommittee members were how the forecasting projections (expressed as Equivalent Dwelling Units (EDUs)) were used and whether any adjustments were made to the Regional Contracting Agencies (RCAs) projections. During this meeting, subcommittee members also expressed an interest in sharing their respective forecasting methods.

On February 27, 2019, IEUA presented to the main RCN group an overview of the growth forecasting process. The overview included background on the forecasting information request, the use of the forecast projections in the Ten-Year Capital Improvement Plan (TYCIP), the Comprehensive Annual Financial Report (CAFR), and IEUA's budget projections for revenue forecasting. As part of this presentation, IEUA noted that there were adjustments made to the RCAs forecast projections for revenue and budgeting purposes. IEUA also shared a potential alternative methodology to growth forecasting via the use of the 2016 Land Use Demand Model (LUDM) which was developed during the last Urban Water Master Plan update. The main RCN group agreed to consider this alternative method and requested IEUA to provide further detail on the methodology.

On May 23, 2019, IEUA presented the proposed alternative method of forecasting. The presentation described the development of the 2016 LUDM which was based on Planning documents from the respective City Planning Departments from 2015. The LUDM grouped 13 land use categories based on water demand. IEUA proposed to use the LUDM as a foundation for the proposed forecasting method by establishing wastewater strength and return to sewer factors for the land use categories in the LUDM.

In order to establish the wastewater strength and return to sewer factors for the proposed forecasting alternative, it was noted that IEUA was currently participating in a statewide study of current sewer system flows and loadings associated with different types of land uses. As a supplement to that statewide flow and loading study, IEUA proposed the study by Applied Research in Government Operations (ARGO) which was brought before the Regional Technical Committee for consideration in April 2018, as an alternative pathway to determine return to sewer factors. IEUA recommended to the main RCN group that a subcommittee be established to review the ARGO study. The main RCN group

agreed with the establishment of the subcommittee with IEUA to coordinate the meetings and discussions.

Subcommittee Meeting Summaries:

July 8, 2019 Meeting Summary:

IEUA and representatives from the Cities of Chino, Chino Hills, Fontana, Ontario, and Montclair met to review and discuss the proposal to use the LUDM and ARGO study. IEUA staff recapped the presentation given on May 23, 2019 to describe the LUDM. IEUA introduced Chris Tull from ARGO to present their proposal for the return to sewer project.

Chris described the project as a pilot study which would utilize data that ARGO currently has for the Monte Vista Water District (MVWD) as part of their work in the California Data Collaborative to calculate water demand for assessments of residential water budgets. The proposal focused on three separate methods to calculate a return to sewer factor. The first step would be to acquire the business classifications. ARGO proposed to use Yelp, County Assessor and other third-party data sources to identify all commercial users within the MVWD/Montclair service area. The subcommittee members commented that in place of Yelp data, each of the contracting agencies had the capability of providing a comprehensive list to ARGO during the study. Chris mentioned that Yelp and other third-party data would be used only in the case of where commercial lists were unavailable.

The first method of calculating the return to sewer factors would entail subtracting estimated outdoor water demands from the Land Use Demand. Using existing parcel information from the residential water budget data, ARGO would then calculate a return to sewer factor.

The second method ARGO proposed would evaluate a minimum-month of water consumption data to subtract estimated outdoor demands. This method would focus on the lowest months of water use which typically correspond with the months of highest precipitation.

The third method would use a regression model to estimate both the commercial and residential return to sewer factor. The residential regression model would be influenced by factors such as evapotranspiration, income, and education. The commercial regression model would use the categories derived in the first step of the study to estimate the indoor water use while controlling the outdoor use.

IEUA thanked Chris Tull for presenting their proposal and requested the subcommittee members review the proposal and provide feedback during the next subcommittee meeting. In the meantime, IEUA staff would re-confirm with MVWD on their willingness to participate in the study.

July 22, 2019 Meeting Summary:

IEUA and representatives from the Cities of Chino, Chino Hills, Fontana, Ontario, and Montclair met to further discuss the ARGO proposal. IEUA advised that on July 15th, a conference call with MVWD, IEUA, and ARGO was held. During the call, MVWD confirmed they would allow IEUA to use their consumption data for the pilot study.

Discussion ensued regarding subcommittee members concerns for the ARGO study. The City of Chino wanted to have a tie-in with the ongoing statewide loading study as there were concerns the ARGO study would not be defensible. City of Montclair did not question the defensibility of the proposed

study but had concerns about the data derived from their service area due to the age of the facilities (old v. new) and questioned whether this study should be performed at a later date. The City of Fontana echoed concerns about why Montclair's service area was selected. IEUA reiterated the ARGO study is considered a pilot based on available data which would allow the contracting agencies an opportunity to evaluate an alternative should the ongoing statewide loading study be inconclusive. Fontana mentioned that they would work internally to provide the data ARGO would need should the study move forward. City of Ontario staff echoed Chino's concerns on any potential tie-ins to the statewide loading study and was also concerned about the old v. new commercial facilities. The proposal from the subcommittee group was to bring the proposal back to the larger negotiation group for discussion.

The subcommittee also discussed forecasting and the methods the contracting agencies are currently utilizing. In general, some contracting agencies are having the projections provided by their respective Planning departments, while others were unsure due to recent staff turnover. In general, members of the subcommittee were in favor of a region-wide joint forecasting method with appropriate input from their respective Planning Departments.

Recommendations:

The determination of the subcommittee was to bring the ARGO proposal back to the main RCN group for discussion. IEUA staff is in support of initiating the ARGO study as it provides a data-based approach using an available dataset which is independent of the statewide flow and loading study. As reported to the main RCN group, the statewide loading study's anticipated completion is in 2021. The ARGO proposal would be completed prior to the date and should the data from the MVWD/Montclair service area be promising, a full-scale study could be planned for the remainder of the contracting agencies' service areas.

**INFORMATION
ITEM**

2A

Date: January 30, 2020
To: Regional Technical Committee
From: Inland Empire Utilities Agency 
Subject: 2020 Land Use Demand Model

This is an information item regarding the 2020 Land Use Demand Model scope of work.

BACKGROUND

In 2015, a land use-based water demand model (Model) was developed as part of the Inland Empire Utilities Agency (IEUA) Urban Water Management Plan (UWMP). The Model was based on General Plan land use data of existing and future development in each City and retail agency boundaries within the IEUA service area. The various land use categories were aligned into 13 main categories that were utilized for the development of corresponding water unit use factors and demands. This model was capable of forecasting water demands for each City and retail agency in order to be totaled as a regional demand for the IEUA service area.

This year, IEUA intends to update the Model to reflect existing and future development based on current General Plans aligning with the established 13 land use categories. Unit use factors will be similarly developed for water, recycled water and sewer demands in 5-year increments to the furthest build-out date. Based on the recommendations during the 2019 Regional Contract Negotiations, the 2020 Model will be utilized in planning projections for water, recycled water and wastewater.

Attached is the draft scope of work that was circulated to the Regional Contracting Agencies (RCA) in December 2019. Based on feedback and input from the RCA by mid-February, the Request For Proposal will be released at the beginning of March 2020. The proposed schedule is as follows:

- March 2020 - Issue Request For Proposal
- April 2020 - Award Consulting Services Contract
- December 2020 - Complete the scope of work

**Request for Proposals For Consulting Services For The
2020 Land Use-Based Water Demand Model Update**

1. REQUEST FOR PROPOSALS

Proposals are being accepted by Inland Empire Utilities Agency (hereinafter referred to as "IEUA"), a Municipal Water District, for Consulting Services (hereinafter referred to as "Consultant") required for the 2020 Land Use-Based Water Demand Model Update (hereinafter referred to as "Model").

2. PROCESSING OF PROPOSALS

A non-mandatory pre-proposal meeting will be held on (date and time) with prospective Consultants at IEUA Headquarters, located on 6075 Kimball Ave, Building A, Chino, California, 91708.

Any relevant questions concerning the Request For Proposals (RFP) for the Scope of Work other than those asked at the pre-proposal meeting shall be directed in writing to IEUA's Project Manager:

Liza Muñoz
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, California 91708
Office: (909) 993-1522
Email: lmunoz@ieua.org

All questions must be received prior to (date and time). The answers to these questions will be sent to all prospective Consultants. No answers will be given on an individual basis.

To receive consideration, ten (10) copies of the proposal, one complete electronic copy of the proposal (provided on USB drive), and one separately sealed fee proposal envelope must be received at IEUA's Headquarters located on 6075 Kimball Ave, Building A, Chino, California, 91708 by (date and time) and addressed to the attention of Liza Muñoz. The package of the ten proposals and one electronic copy shall be clearly marked "**Consulting Services for the 2020 Land Use-Based Water Demand Model Update – DO NOT OPEN**" and the fee proposal envelope marked "**FEE PROPOSAL - Consulting Services for the 2020 Land Use-Based Water Demand Model Update - DO NOT OPEN**". All proposals will be held in confidence prior to the opening date of all proposals. IEUA reserves the right, after opening the proposals, to reject any or all proposals, or, to accept proposal(s) that in its sole judgment, are in the best interest of IEUA.

Prospective Consultants assume the risk of any delay in mail or handling of mail by IEUA's employees. Applicants are therefore responsible for ensuring that proposals are received on time at the specified location by the specified time whether they are sent by mail or delivered in person. Oral, telegraphic, or telephonic proposals or modifications will not be considered. More than one proposal from an individual, firm, partnership, corporation or association under the same or different names shall not be considered.

3. IEUA DESCRIPTION

Inland Empire Utilities Agency (IEUA) is a regional sewage treatment and water agency that provides wastewater treatment, solids handling, and recycled water to the west end of San Bernardino county. Its 242 square mile service area includes the cities of Upland, Montclair, Ontario, Fontana, Chino and Chino Hills; Cucamonga Valley Water District which services the City of Rancho Cucamonga and the unincorporated areas of San Bernardino County, including the Chino Agricultural Preserve. IEUA, a special assessment district, is governed by a five seat publicly elected Board of Directors. Each director is assigned to one of the five divisions which are: Division 1 - Upland/Montclair; Division 2 - Ontario/ Agricultural Preserve; Division 3 - Chino/ Chino Hills; Division 4 - Fontana; Division 5 - Rancho Cucamonga. The Regional Technical and Policy Committees provide information on technical and policy issues, and there are representatives from each of the contracting agencies on these committees.

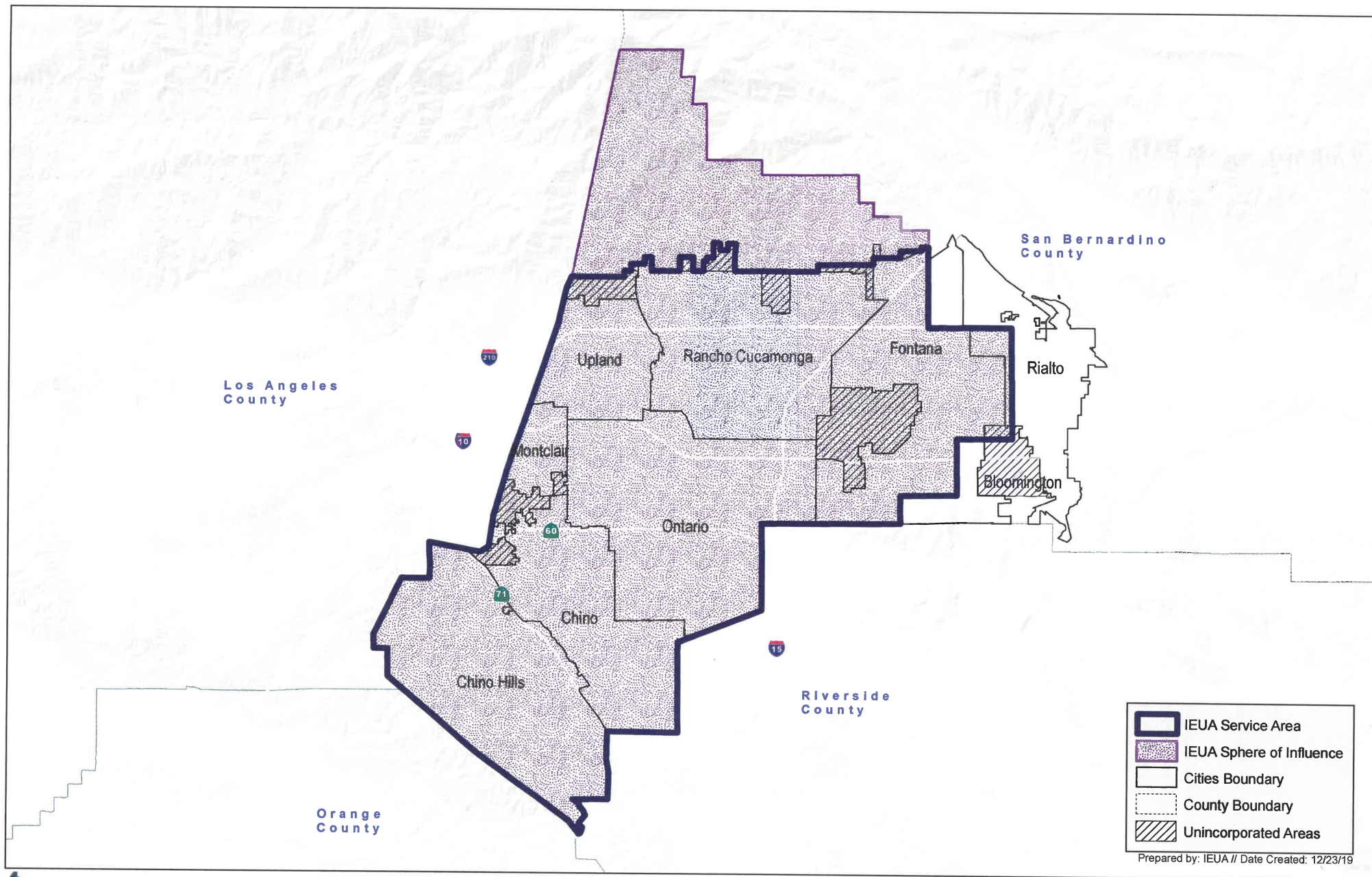
Five regional water recycling plants are used to treat wastewater from IEUA's service area. They are: Regional Water Recycling Plant No. 1 (RP-1), located in the City of Ontario; Regional Water Recycling Plant No. 2 (RP-2), located in the City of Chino; Regional Water Recycling Plant No. 4 (RP-4), located in the City of Rancho Cucamonga; and Carbon Canyon Water Recycling Facility (CCWRF), located in the City of Chino and Regional Water Recycling Plant No. 5 (RP-5), located in the City of Chino. In conjunction to these facilities, IEUA maintains and operates a desalter facility, Chino I Desalter, in the City of Chino and biosolids composting facility, Inland Empire Composting Facility, in the City of Rancho Cucamonga on behalf of the Chino Basin Desalter Authority and Inland Empire Regional Composting Authority, respectively. IEUA is also the Metropolitan Water District of Southern California (MWD) representative for the contracting agencies.

The water resource inventory for the IEUA service area is made up of Stormwater, Recycled Water, Local Surface Water, Groundwater, and Imported Water.

- Stormwater comes primarily from rain and snow starting in the San Gabriel Mountains and moving down through the Santa Ana watershed and diverted into groundwater recharge basins.
- Recycled water is generated from IEUA's four recycling plants.
- Local surface water is similar to stormwater, but the water is diverted and treated at a water treatment facility within the service area.
- Groundwater makes up for the majority of the area's annual water supply and comes primarily from the Chino basin and from basins adjacent to the Chino Basin. These basins include Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins.
- Imported water is purchased from MWD. The focus of this effort will primarily deal with recycled water and groundwater. The following provides a brief overview of these water supply sources.

4. REQUEST FOR PROFESSIONAL SERVICES

- Inland Empire Utilities Agency (IEUA) is seeking professional services from a qualified consultant to update the comprehensive land use-based water demand model developed in 2015. The model will be based on the latest General Plan land use data and will incorporate existing and future development in the region for the next 25 years. The model scenarios and corresponding results will support updates of the Urban Water Management Plan, Recycled Water Program Strategy, Equivalent Dwelling Unit factors, Integrated Resources Plan and others. The model boundary shall be IEUA's sphere of influence which includes the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto, and Upland. See Figure 1.



The consultant shall perform the following tasks, including but not limited to:

- Review available information to familiarize with the extent and quality of existing information.
 - Land Use Based Demand Model Development Technical Memorandum – May 2016
 - Land Use Based Demand Model in Excel format - 2015
 - Land Use Based Demand Model in Access database format - 2015
 - Land Use Based Demand Model shapefiles - 2015
- Utilize City General Plans to identify existing and future development in land use. The consultant shall include all relevant General Plans within the IEUA service area until a build-out date as specified in general plans. Compare these categories and correlate with the 2015-developed land use categories as listed below:

Residential Very Low (1 - 2)
Residential Low (3 - 7)
Residential Medium (8 - 14)
Residential High (15 - 24)
Residential Very High (25+)
Commercial
Industrial
Public/Institutional
Parks, Schools, Irrigation
Agriculture
Unique Water Users

- The model shall have the ability to forecast demands to the furthest build-out date among the corresponding general plans in 5-year increments.
- Update the IEUA service area shapefiles to show the 2015-developed land use categories as designated by each of the Cities' General Plans within the IEUA sphere of influence.
- Collect data to populate and update the 2015 Land Use-Based Water Demand Model that can be integrated into IEUA's Geographic Information System (GIS) version 10.6.1. such as:
 - Land use category
 - Acreage
- Map layers and data shall be broken down to a resolution similar to that of the General Plan documents. The land use data shall be formatted in a way and aligned with each city and retail agency boundary within the IEUA sphere of influence. The data shall also roll up to align with the IEUA service area boundary.
 - The model shall have a summary page indicating statistics for each city and retail agency, including but not limited to land use categories, corresponding unit factors, demands and projections. Other statistics shall be added as necessary to provide a "snapshot" for each agency.
 - The model and corresponding data shall be standardized in such a manner that will allow IEUA streamlined data collecting, processing and performing updates from General Plans.
- Develop/update unit factors for water use, recycled water use, and wastewater flow for each land category. Coordinate with each City and Retail agency on the unit factor development for their service area. These factors shall be applied to each land use section on a per-acre basis. The calculated demand per land use area shall be in acre-foot (AF) and incorporated into the overall demand forecast.
- Update adjustment factors based on socio-economic conditions, climate change, densification of existing lands, conservation, and unbilled consumption

- The model shall have the ability to forecast water and recycled water demands and wastewater flows for each City and Retail agency and shall sum up to a regional demand for the IEUA sphere of influence through 2050 in 5-year increments. The demand projections will be utilized in other planning studies such as the Urban Water Management Plan, Recycled Water Program Strategy, Integrated Resources Plan, Equivalent Dwelling Unit (EDU) projections, growth projections, and recycled water supply projections. IEUA as well as its member agencies can use the model for system or supply planning purposes based on land use.
- Provide recommendations for database and model improvements or efficiencies (i.e. user-friendly updates, scenario development, web-based model for consolidation of inputs, updates, scenarios, results) for IEUA's consideration.
- Meetings/Workshops - Provide resources to lead meetings as described:
 - Kickoff meeting – Attend a meeting with IEUA to discuss scope of work and schedule of completion. Duration of two hours.
 - As needed conference calls with IEUA for tracking progress and status updates. Duration of one hour per week.
 - Monthly meetings – Once a month, a meeting to be held at IEUA headquarters to discuss progress. Duration of two hours.
 - Retail agency meetings – Coordinate at least four (4) meetings with each City to obtain the data, develop unit factors and finalize the model update. Duration of two hours for each meeting to be held at City offices.
 - Modeling Workshops – Conduct two (2) workshops with retail member agencies: 1) to provide an overview of the data needs, collection process and schedule; and 2) after the completion of the update, demonstrate demand forecasting for each retail agency and the regional demand for the IEUA sphere of influence. Duration of four (4) hours for each workshop to be held at IEUA headquarters.
- Deliverables:
 - A Technical Memorandum (TM) summarizing the process used to develop/update the recycled water and water demands, and wastewater flow projections which include the following, not limited to: assumptions, land use unit factor development/methodologies, model input summaries, demand projections by member agency in 5-year increments through 2050
 - Updated Land Use-based Demand Model and GIS shapefiles
 - A User Guide for updating data and running scenarios.

5. PROJECT SCHEDULE *(Tentative)*

- ♦ February 2020 - Issue Request for Proposal
- ♦ April 2020 – Award Contract
- ♦ December 2020 – Complete scope of work

**INFORMATION
ITEM
2B**

Regional Plant No. 2 Decommissioning Update



RP-2 History



- In operation since the 1960's by City of Chino
- RP-2 on ground leased from Army Corps of Engineers (ACOE)
- IEUA took over operations in the 1970s
- Solids design capacity 26.3 mgd
- Liquids treatment ceased in 2002

RP-2 Relocation



- ACOE is raising Prado Dam Spillway in 2023
- RP-2 will be underwater
- Solids treatment relocating to the RP-5 as part of the RP-5 Expansion Project
- Scheduled Completion 2023
- RP-2 land lease terminates in 2035
- Facilities must be removed to ACOE satisfaction

RP-5 Expansion Preliminary Design Report (PDR)

- Phase I Environmental Site Assessment (ESA) completed in March 2017
- ESA identified 14 Recognized Environmental Conditions (REC's)
- Most REC's are due to chemical storage tanks used for the treatment process
- Phase II ESA required to determine if remediation is necessary
- ESA's are only valid for a period of 1 year



RP-2 Demolition Cost Estimate

Table 3-1: Preliminary Cost Estimate

Item	
1	Cut Concrete and CMU Walls \$130,000
2	Remove Concrete and CMU Walls \$110,000
3	Concrete and Materials Removal \$330,000
4	Core Drill/Drain Rock \$150,000
5	Compacted Fill \$695,000
6	Grating and Equipment Removal \$460,000
7	Rough Grading \$25,000
8	Electrical Materials Removal \$300,000
9	Yard Piping Removal (8-in-diameter and above) \$560,000
10	Not used
11	Hazardous Materials Survey \$165,000
12	Phase II ESA \$622,000
13	Waste Management Allowance \$500,000
14	Hazardous Materials Abatement (Hazardous Materials Survey findings are needed to determine extent of this item) \$817,000
15	Site Restoration Allowance \$200,000
16	Soils Remediation Allowance (Phase II ESA findings are needed to determine extent of this item) \$16,320,000
17	
18	Subtotal of Items 1 thru 16 \$21,484,000
19	15% Overhead and Profit \$3,223,000
20	8% Inflation to Midpoint of Construction/Remediation \$1,719,000
21	4% Bonds and Insurances \$859,000
22	Subtotal - Construction Costs \$27,285,000
23	30% Contingency (30% of Construction Subtotal) \$8,186,000
24	Total Construction Cost \$35,471,000
25	Design, Permits, CM, Monitoring, Eng. Contingency (20% of Total Construction Cost) \$7,094,000
26	Total Project Cost Estimate \$42,565,000

- Cost Estimate ranges between \$9M - \$43M
- Wide range due to unknown level of remediation
- Phase II ESA will determine the level of remediation required
- Decommissioning RP-2 will begin in 2024
- Phase II ESA will be completed in the early 2030's
- Demolition complete by 2034

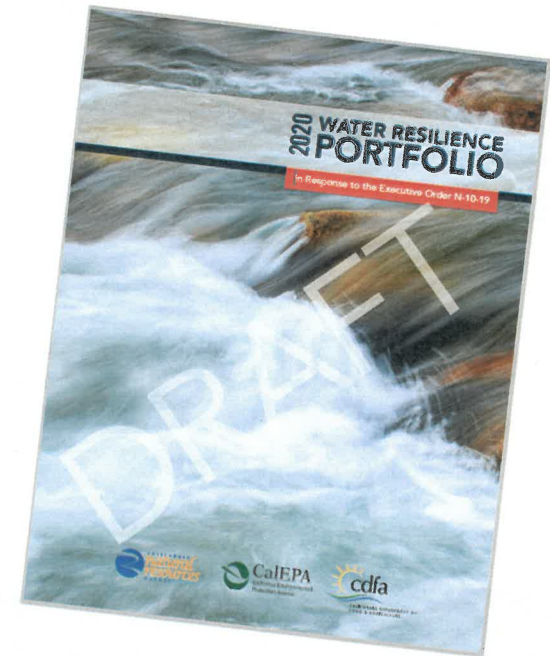
**INFORMATION
ITEM
2C**

Draft 2020 Water Resilience Portfolio



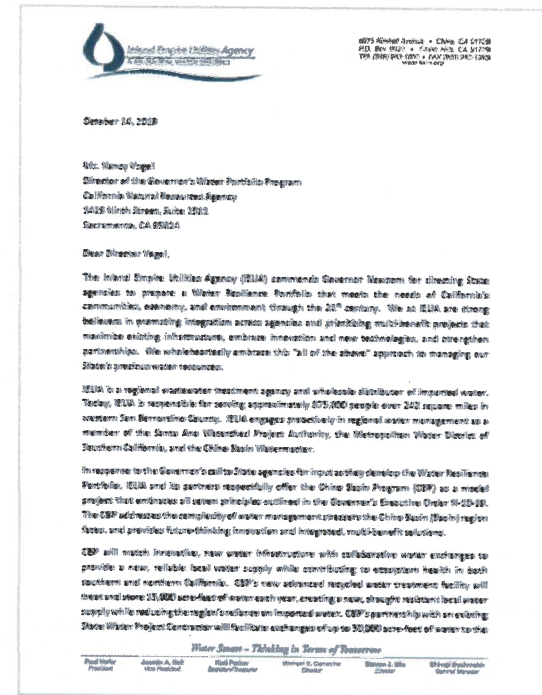
Background and Actions

- Executive Order N-10-19, April 2019
 - Develop a set of actions to meet California's water needs through the 21st century by:
 - Prioritizing multi-benefit approaches
 - Utilizing natural infrastructure
 - Encouraging regional approaches within watersheds
 - Incorporating successful approaches from other parts of the world
 - Integrating investments, policies, and programs across state government
 - Strengthening partnerships with local, federal and tribal governments, water agencies and irrigation districts, and other stakeholders



IEUA Engagement

- September 2019 – meetings with key State agencies
- October 2019 – IEUA letter to Ms. Vogel
 - Support integration and multi-benefit projects, such as Chino Basin Program
 - Support IRWM framework
 - Communication Plan needed
 - Develop metrics that define resilience and reliability instead of traditional “return on investment”
 - Focus and funding should be on projects addressing climate change and other impacts on water quality



Proposed Action Items

<http://waterresilience.ca.gov>

131 Recommended Actions within the Following Four Categories (with 32 subcategories):

- Maintain and Diversify Water Supplies
- Protect and Enhance Natural Systems
- Build Connections
- Be Prepared



Summary of Recommended Actions Impacting IEUA

- State Funding

- Plan, permit and build Delta conveyance (tunnel)
- Increase SRF funding capacity, pilot stormwater projects for SRF funding
- Fund the State Water Efficiency and Enhancement Program and prioritize on-farm irrigation efficiency projects to DAC farmers in stressed SGMA areas
- Fund water reuse and groundwater recharge projects with multiple benefits
- Encourage investments in upper watersheds
- Fund healthy soils program for farms/ranches
- Build on IRWM Program – structure funding sources to promote integrated solutions

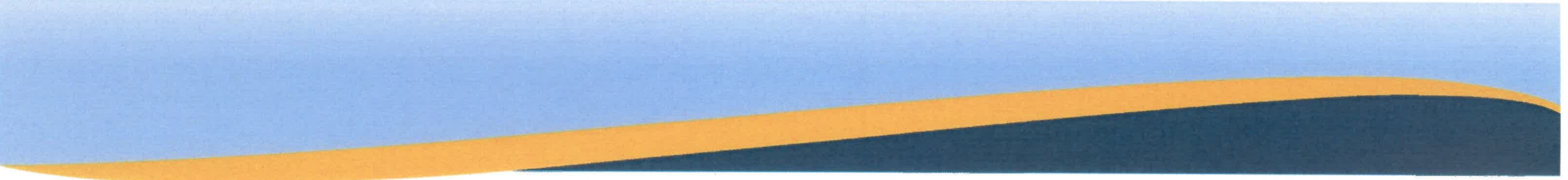
- Regulatory

- Conservation: continue with SB 606/AB 1668 implementation
- Groundwater: continue with SGMA. Create flexible transfer markets
- Recycling/Reuse: complete direct potable reuse permitting regulations
- Stormwater: support cities in capturing stormwater
- Accelerate state permitting of WSIP projects
- Simplify permitting of multi-benefit/multi-partner projects, such as Voluntary Agreements
- Add requirement to UWMPs for districts receiving water from Delta-based projects to demonstrate efforts to reduce reliance

Discussion Regarding WSIP Recommendations

Expand smart surface water storage where it can benefit water supply and the environment

- 7.1. Accelerate state permitting and approvals of projects selected under Water Storage Investment Program (Proposition 1) so that they are ready to go; for example, advance the largest off-stream reservoir in the suite of projects – Sites Reservoir – in a manner that protects and enhances fish and wildlife and water reliability.
- 7.2. Acquire through contract a portion of storage, dedicated for environmental purposes, for the life of the water storage projects the Water Commission selected under the Water Storage Investment Program funded by Proposition 1.



Questions and Comments

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Regional Sewerage Program Policy Committee Meeting

AGENDA

**Thursday, February 6, 2020
4:00 p.m.**

Location

Inland Empire Utilities Agency
Boardroom
6075 Kimball Avenue
Chino, CA 91708

Call to Order and Roll Call

Pledge of Allegiance

Public Comment

Changes/Additions/Deletions to the Agenda

1. Technical Committee Report (Oral)

- Regional Contract Negotiations Update

2. Action Item

- A. Meeting Minutes for November 7, 2019
- B. RP-4 Primary Clarifier and Process Rehabilitation Construction Contract Award

3. Informational Items

- A. Draft 2020 Water Resilience Portfolio

4. Receive and File

- A. Building Activity Update
- B. Recycled Water Distribution – Operations Summary
- C. Proposed 2020 IEUA Legislative Policy Principles
- D. State Legislative Report
- E. Rate Study Workshop #6
- F. 2020 Land Use Demand Model
- G. Pilot Return to Sewer Flow Study

(Continued)

5. Other Business

- A. IEUA General Manager's Update
- B. Committee Member Requested Agenda Items for Next Meeting
- C. Committee Member Comments
- D. Next Meeting – March 5, 2020

6. Adjournment

DECLARATION OF POSTING

I, Laura Mantilla, Executive Assistant of the Inland Empire Utilities Agency, A Municipal Water District, hereby certify that a copy of this agenda has been posted to the IEUA Website at www.ieua.org and posted in the foyer at the Agency's main office at 6075 Kimball Avenue, Building A, Chino, CA, on Thursday, January 30, 2020.

Laura Mantilla

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Building Activity Report - YTD Fiscal Year 2019/20



Legend

- Service Area
- Unincorporated

EDU (YTD)

Residential

- <=1.0
- 1.0 - 10.0
- >10.0

Commercial

- <=1.0
- 1.0 - 10.0
- >10.0

Industrial

- <=1.0
- 1.0 - 10.0
- >10.0

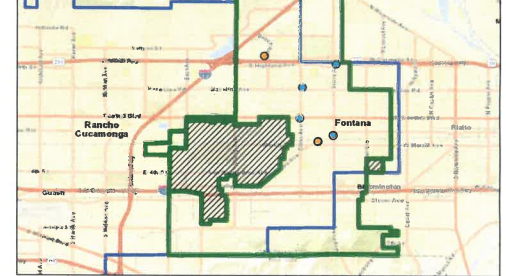
HALF MILE GRID: TOTAL EDU's (YTD)



TOTAL EDU BY WASTEWATER CONNECTION TYPE (YTD)

Contracting Agency	YTD Actual			Total (EDUs)	Projected
	Commercial (EDUs)	Industrial (EDUs)	Residential (EDUs)		
Chino	22	5	226	253	470
Chino Hills	40	0	7	47	272
CVWD	48	1	17	66	1240
Fontana	41	0	252	293	595
Montclair	10	0	0	10	407
Ontario	110	43	490	643	2960
Upland	9	0	95	104	446
Total	280	49	1,087	1,416	6390

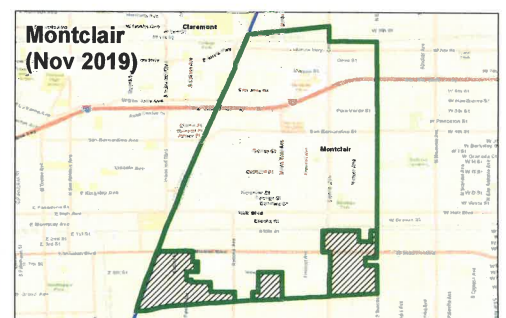
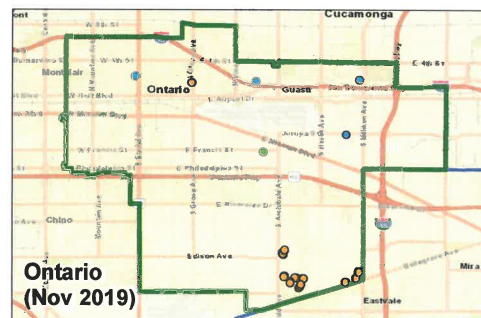
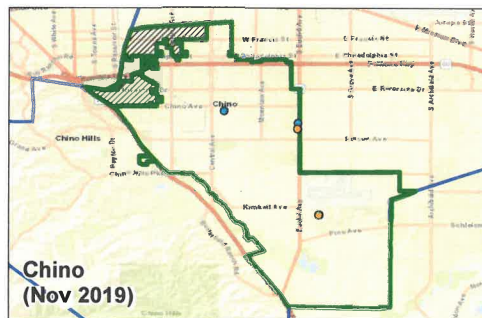
Fontana (Nov 2019)



Cucamonga Valley Water District (Nov 2019)



Upland (Nov 2019)



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IEUA RECYCLED WATER DISTRIBUTION – DECEMBER 2019

TOTAL ALL PLANTS

Influent: 50.1 MGD

Delivered: 15.2 MGD

Percent Delivered: 30%

RP-4

Delivered: 7.4 MGD

RP-1

Delivered: 4.2 MGD

CCWRF

Delivered: 3.2 MGD

RP-5

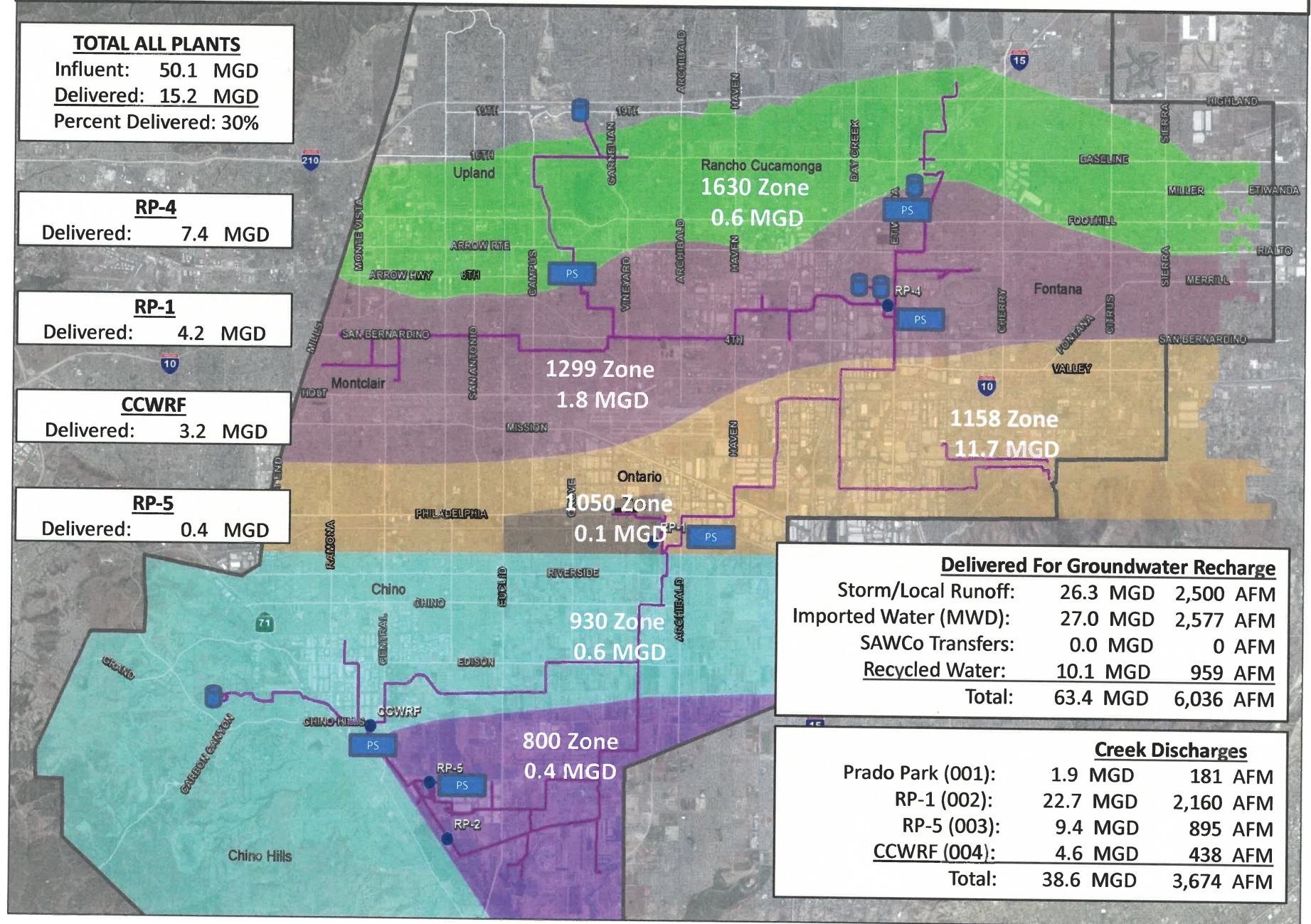
Delivered: 0.4 MGD

Delivered For Groundwater Recharge

Storm/Local Runoff:	26.3 MGD	2,500 AFM
Imported Water (MWD):	27.0 MGD	2,577 AFM
SAWCo Transfers:	0.0 MGD	0 AFM
Recycled Water:	10.1 MGD	959 AFM
Total:	63.4 MGD	6,036 AFM

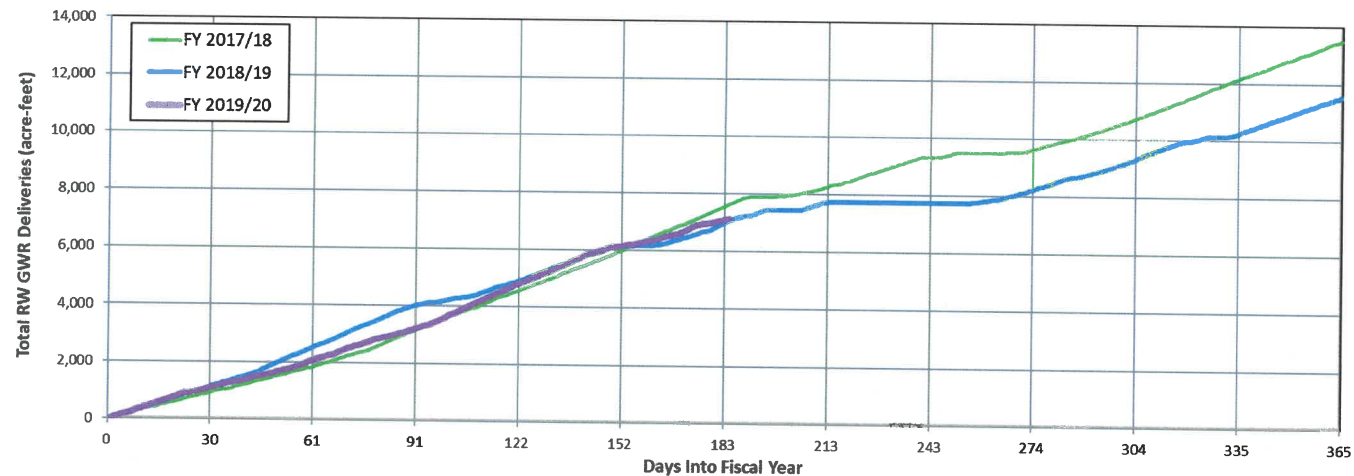
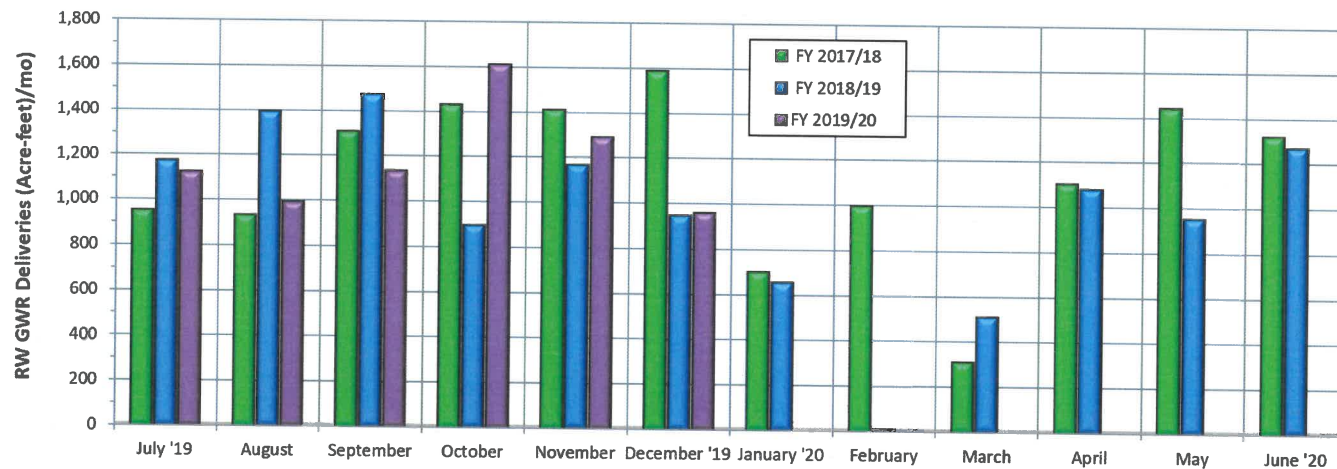
Creek Discharges

Prado Park (001):	1.9 MGD	181 AFM
RP-1 (002):	22.7 MGD	2,160 AFM
RP-5 (003):	9.4 MGD	895 AFM
CCWRF (004):	4.6 MGD	438 AFM
Total:	38.6 MGD	3,674 AFM



Recycled Water Recharge Deliveries / Plan - December 2019 (Acre-Feet)

Basin	12/1-12/8	12/9-12/15	12/16-12/22	12/23-12/31	Month Actual	FY To Date Actual	Deliveries are draft until reported as final.	
Ely	0.1	0.0	42.8	0.8	43.7	615		
Banana	0.0	7.3	16.9	0.0	24.2	746		
Hickory	0.0	0.0	30.0	0.0	30.0	152		
Turner 1 & 2	0.0	0.0	0.0	0.0	0.0	199		
Turner 3 & 4	0.0	0.0	0.0	0.0	0.0			
8th Street	0.0	0.0	0.0	0.0	0.0	614		
Brooks	0.0	0.0	31.2	0.0	31.2	561		
RP3	196.4	204.7	201.8	202.6	805.5	3232		
Declez	0.0	0.0	0.0	0.0	0.0	407		
Victoria	0.0	0.0	27.0	0.0	27.0	591		
San Sevaire	0.0	0.0	0.0	0.0	0.0	0		
Total	196.5	212.0	349.7	203.4	961.6	7,117	945	AF previous FY to day actual



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**REGIONAL SEWERAGE PROGRAM
PRETREATMENT SUBCOMMITTEE**

December 3, 2019
1:30 PM
IEUA HQ Building A, Chaffey Conference Room
6075 Kimball Avenue
Chino, CA 91710

Minutes

Members Present

Ruben Valdez.....	City of Chino
Andy Zummo.....	City of Chino Hills
Tere Worsham.....	CVWD
Abigail Gomez.....	City of Fontana
Michael Birmelin.....	City of Ontario
Craig Proctor.....	IEUA
Robert Herbster.....	City of Upland

Others Present

Ken Tam.....	IEUA
Michael Barber.....	IEUA
Heather Young.....	City of Ontario

1. Introductions

Introductions of those present were given.

2. Informational Items & Updates

a. Tech Meeting Report

- Information items included an update on the RP-5 Expansion, the 2020 Rate Study and the Environmental Resources update on PFAS.

b. Treatment Plants

RP-1/RP-4:

- RP-4 met all the NPDES requirements during the months of June 2019 through November 2019.

- On September 22, 2019, an RP-1 effluent (M-001B) grab sample collected and tested for total coliform had a confirmed result of 261.3 MPN/100mL. The NPDES permit specifies that “no total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.”

RP-5:

- RP-5 met all the NPDES requirements during the months of June 2019 through November 2019.

CCWRF:

- CCWRF met all the NPDES requirements during the months of June 2019 through November 2019.

Agency-wide:

- The Agency-Wide 12-month running average TDS for the months of June 2019 through October 2019 were 488, 485, 482, 481, and 477 mg/L respectively, which did not exceed the 550 mg/L Agency-wide 12-month running average limit.
- The Agency-wide 12-month running average incremental increase between secondary effluent and water supply TDS for the months of June 2019 through October 2019 were 206, 206, 207, 206, and 204 mg/L respectively, which did not exceed the 250 mg/L Agency-wide 12-month running average limit.

Collections System:

- One Sanitary Sewer Overflow (SSO) occurred during the months of June through November 2019. On November 25, 2019, a Category 1 SSO of approximately 37,000 gallons occurred at the intersection of 5th St. and Berlyn Ave. in the City of Ontario. The SSO point of origin was a manhole. The cause of the SSO was attributed to not taking proper precautions when opening a flange to a pressurized NRWS pipeline. A portion of the flows were recovered and returned to the collection system.

Recycled Water:

- On October 3, 2019, upon review of the USGS data, IEUA staff identified that a recycled water release had occurred between August 29th at 10:45 p.m. through September 23rd at 11:30 a.m. The cause of the recycled water release has been attributed to a damaged inlet valve at Brooks Basin, causing the recycled water to bypass the basin and flow downstream to Chino Creek, ultimately reaching the Santa Ana River. The duration of the recycled water release was approximately 25.5 days with a total discharge volume of 151.6 acre-feet or 49 million gallons based on metered flows from the Orchard Street turnout into San Antonio Channel.

- No agricultural runoff events were reported to IEUA by member agencies during the months of June 2019 through November 2019.

c. Pretreatment Programs

Aquamar in the City of Rancho Cucamonga was issued a Notice of Violation and Order for Corrective Action in August for discharging wastewater below its permitted limit for pH in February and for failure to notify IEUA within 24 hours of becoming aware of the violation. Results of industries investigation found an infrequently used acidic cleaner may have contributed to the violation. As a corrective action Aquamar discontinued using the cleaning chemical. Due to changes in staffing the violation was not initially identified. To prevent a recurrence, the review of all self-monitoring data has been reassigned to the Quality Assurance Manager. Subsequent monitoring for pH indicated compliance. No further action required.

DSM Nutritional Products in the City of Ontario was issued a Notice of Violation and Order for Corrective Action in October for exceeding the permitted local daily limit for Zinc in July. A compliance meeting was held with industry. Results of industries investigation found the conductivity meter out of calibration and CIP dosing levels 2-3 times higher than recommended by chemical vendor. Corrective actions were implemented. Subsequent monitoring for TDS indicated compliance.

Forbes Industries in the City of Ontario was issued a Notice of Violation and Order for Corrective Action and ordered to attend a Show Cause meeting for exceeding their permitted daily limit for copper in August. During the Show Cause meeting industry reported the cause of the copper violation was due to cutting brass stock on its waterjet machine. To prevent a recurrence, Forbes will outsource this process, increase cleaning of its wastewater holding tank, and install a settling weir to improve solids removal. If corrective actions are unsuccessful, Forbes will evaluate a closed-loop filtration system. Subsequent monitoring for copper indicated compliance.

Net Shapes in the City of Ontario was issued a Notice of Violation and Order for Corrective Action for exceeding its permitted federal monthly average limit for Oil and Grease in August. Results of industries investigation found the violation was most likely due to failure to clean the sample box. As part of its corrective action, operator training has been conducted. Subsequent monitoring for Oil and Grease indicated compliance.

Wing Lee Farms (WLF) in the City of Chino was issued a Notice of Non-Compliance (NNC) for discharging wastewater in excess of its maximum daily discharge limit for flow, failure to respond to a previous NNC, and for operating its clarifier beyond its rated capacity. WLF responded to the NNC stating it is in the design process to install an effluent flow meter and additional pretreatment

equipment. WLF has requested an increase in wastewater capacity and agreed to lower production until the capacity issue is resolved.

3. Discussion Items

a. Dental Amalgam Rule

IEUA updated the committee on the status of the inventory list of active dental offices. The one-time dental compliance certification forms have been mailed to 450 dental offices within the IEUA service area. To date, IEUA and the member agencies have received 160 completed forms representing a 36% response rate. A second round of certification mailings was recently completed. The committee discussed following up with the dental offices that have been non-responsive. IEUA requested the member agencies continue to provide information on any new dental facilities that locate within their service area and provide copies of completed certifications to IEUA.

b. CASA Study Non-Residential Site Sampling Update

IEUA provided an update on the CASA non-residential sampling program study. Carollo Engineering and its sub-contractor V&A are finalizing the non-residential site locations for Southern California. Several of the locations provided by the member agencies are being considered for the study. It is expected site selection will be finalized in January with monitoring to be conducted shortly thereafter.

c. 1,2,3 TCP and PFAS

IEUA updated the committee on 1,2,3-TCP and PFAS. 1,2,3-TCP is a chlorinated hydrocarbon, manmade chemical found at industrial or hazardous waste sites. It has been used as a cleaning and degreasing solvent and is also associated with pesticide products. In July 2017, the Division of Drinking Water (DDW) approved the MCL for 1,2,3-TCP of 5 ppt and compliance monitoring began in January 2018. Immediately following adoption of the MCL, 1,2,3-TCP decreased to occasional non-detects, but after mid-2019, 1,2,3-TCP is well above the MCL. IEUA recycled water used for groundwater recharge consistently exceeds the 5 ppt MCL and is currently being sampled twice a week for 16 consecutive weeks or until the average of 4-weeks does not exceed the MCL. If we continue to exceed the MCL, the DDW can choose to suspend recycled water groundwater recharge. 1,2,3-TCP is not being produced at the treatment plants. However, 1,2,3-TCP is known to be found in the groundwater. A Corrective Actions Report is due to the DDW by February 15, 2020.

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been in use since the 1940s and have been found in many consumer products like cookware, food packaging, and stain repellants. PFAS manufacturing and processing facilities, airports, and military installations that

use firefighting foams are some of the main sources of PFAS. In August 2019, DDW established Notification Levels (NL) at concentrations of 6.5 ppt for PFOS and 5.1 ppt for PFOA. IEUA's recycled water used for groundwater recharge consistently exceeds the 5.1 ppt NL for PFOA and is currently being sampled twice a week for 16 consecutive weeks or until the average of 4-weeks does not exceed the NL. PFAS are not being produced at the treatment plant and therefore a source will need to be identified. Currently the source is unknown. A Corrective Actions Report is due to the DDW by February 15, 2020. The IEUA lab is looking to purchase lab equipment (LC-MS-MS) to analyze for PFAS and other CECs in the next fiscal year.

IEUA requested the member agencies provide any 1,2,3-TCP and PFAS data collected from their drinking water wells/treated water for the last 3 years.

d. NRWS Sulfide Issues

IEUA gave a brief update on the recent sulfide issues identified in a section of the North Non-Reclaimable Wastewater System located in Rancho Cucamonga and Ontario. Staff has been working with several of the industries that discharge to that part of the system and Calcium Nitrate is being added to control the sulfides. Since the addition of Calcium Nitrate, sulfide testing along the system has indicated non-detected.

e. Regional Ordinance Update

The committee was reminded that IEUA will be updating its Regional Wastewater Ordinance in early 2020.

f. Local Limits – Fats, Oils & Grease (FOG)

The Committee continued its discussion on whether IEUA should implement a local limit for FOG. Committee member opinions are mixed on what benefit would be achieved by having a FOG local limit. Discussion on the Local Limits/Point of Connection Standards will be revisited at the next committee meeting.

The next pretreatment meeting is tentatively scheduled for March 3, 2020.

The meeting adjourned at 3:00 p.m.

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Proposed 2020 IEUA Legislative Policy Principles

Water Resources and Systems Resiliency

- Support administrative/legislative and/or regulatory activities that preserve IEUA's and the region's ability to pursue water supply options and oppose constraints on supply development.
- Support administrative and legislative actions promoting the resiliency and improved operability of IEUA's systems.
- Support administrative and legislative action to identify and promote the use of salt-less water softening technology. Oppose any efforts to endorse salt-based technologies.
- Support administrative and legislative actions that protect, respond and plan for drought conditions while maintaining the necessary environmental protections.
- Support administrative and legislative actions on water-use efficiency that create and/or improve regulations and mandates recognizing the variations among the different communities, regions and counties with respect to their capability of withstanding the impacts of drought.
- Support administrative and legislative actions that promote and/or improve water quality from various constituents including salinity, perchlorates, nitrates and volatile organic compounds.
- Support alternative efforts to a sustainable approach to ensure every Californian has access to safe, clean and reliable water and oppose efforts to impose public goods charge.
- Support member agency and regional legislative positions that align with IEUA's current policy principles.

Organics Recycling/Compost Use

- Support legislation that promotes the use of compost for multiple uses such as erosion control to protect water resources, water conservation, fire ravaged land remediation, and healthy soils.
- Support administrative and legislative approaches for connecting carbon sequestration with healthy soils and the use of compost.

Regulations/Compliance

- Support regulations that restrict the use of uncomposted and contaminated organics in commercial compost products.
- Support administrative and legislative actions for environmental compliance (e.g., air, water, hazardous materials and waste) that provide for regulatory compliance flexibility, promote consistency and reduce regulatory redundancy.
- Support the development of Public Health Goals (PHGs), Response Levels (RLs), Notification Levels (NLs) or Maximum Contaminant Levels (MCLs) that are established in a process affording robust opportunities for scientific review and public comment and that consider feasibility and implementation costs. Support administrative/legislative actions to improve clarity and workability of California Environmental Quality Act (CEQA) and eliminate other duplicative state processes.
- Actively monitor and participate where appropriate in the development of water use efficiency regulations.

Energy

- Promote water-energy nexus administrative/legislative and/or regulatory activities that preserve IEUA's and the region's ability to pursue supply options and oppose constraints on supply development.
- Support administrative and legislative actions that remove barriers and encourage energy sector investments in water conservation and energy management programs.
- Support legislation and other programs that would increase the value of the Renewable Energy Credits (RECs) generated and sold by wastewater treatment agencies that utilize their renewable energy on-site in California.
- Support legislation and other programs that would facilitate self-generation projects interconnection to the electric grid by reducing interconnection costs, metering requirements, project review process and timeline.
- Support administrative and legislative actions that encourage renewable energy through organics management, including landfill diversion.

Financial

- Support maintaining tax exempt status for municipal debt.
- Support measures to reduce the cost of financing water infrastructure projects.
- Support efforts to reauthorize, increase of the funding cap federal funding, and extension of Title XVI/WIIN grant program, the federal EPA/State Revolving Loan program, and other funding mechanisms.
- Support funding and incentive programs to promote water use efficiency, including EPA's *WaterSense* program, education programs and tax exemptions incentives.
- Support funding programs that promote energy efficiency, increase renewable generation, strengthen local grids and energy reliance.
- Support federal funding for drought relief and adaptive water management opportunities in California.
- Advocate for funding that ensures a fair and equitable financing process for the public.
- Support efforts to reinstate public agency advanced bond refunding.
- Support funding opportunities that align with the Chino Basin Program and other regional programs promoting beneficial outcomes to IEUA and its member agencies.
- Support legislative or public initiatives that include bond funding for water projects.

Administrative/Other

- Support legislative actions that are aligned with the Agency's goals and objectives and support member agency and regional legislative positions.
- Support legislation that increases local control and limits additional financial burdens related to employee relations and collective bargaining that can be appropriately negotiated at the bargaining table.
- Oppose any measure that imposes mandates upon local government that are more properly decided at the local level.
- Support local government efforts to establish workforce engagement, succession planning and mentoring programs.

- Support legislation that streamlines the Workers' Compensation system and makes it easier for employers, employees, and health care providers to navigate.
- Support reform measures that provide sustainable and secure public pensions and other post-retirement benefits to ensure responsive and affordable public services.

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December 23, 2019

To: Inland Empire Utilities Agency

From: Michael Boccadoro
Beth Olhasso
Maddie Munson

RE: December Report

Overview:

A relatively dry fall turned itself around once December rolled in. Where over 90 percent of the state was experiencing drought conditions at the end of November, just 3.5 percent now has abnormally dry conditions. The snowpack is at 109 percent of normal for this time of the year and reservoirs, which never hit critically low levels in 2019, are starting to replenish.

The Public Policy Institute of California (PPIC) recently released a report titled “A Path Forward for California’s Freshwater Ecosystems.” The report highlights that while the Endangered Species Act (ESA) has been successful at protecting extinctions, it places an emphasis on reducing harm to listed species, rather than improving overall ecosystem conditions necessary to recover their populations.

The standoff over the Biological Opinions (BiOps) that permit the flow of water through and out of the Delta continues. As reported previously, the state announced that they were going to sue the federal government over the BiOps, but have yet to do so. Recently, Tom Birmingham, General Manager of Westlands Water District, sent a letter to the state stating that Westlands would have to pull out of the Voluntary Agreements should the state proceed with a lawsuit. He also asked the state to disclose their problems so an attempt can be made to make changes to the BiOps to alleviate any concerns. Additionally, Senator Diane Feinstein sent a letter to the Governor and Interior Secretary David Bernhardt urging them to work together to identify a solution.

December is a slow month in the Capitol. Final bill action was taken by Governor Newsom in October and members remain in their districts until January. Some planning is being done in preparation for the second year of the two-year session, but work will begin in earnest in January. It is believed that the Governor’s Water Resilience Portfolio will be released in January around the time of the budget release and the Governor’s State of the State address, at which time discussions on a resiliency/water/resources/wildfire bond will likely intensify.

Inland Empire Utilities Agency

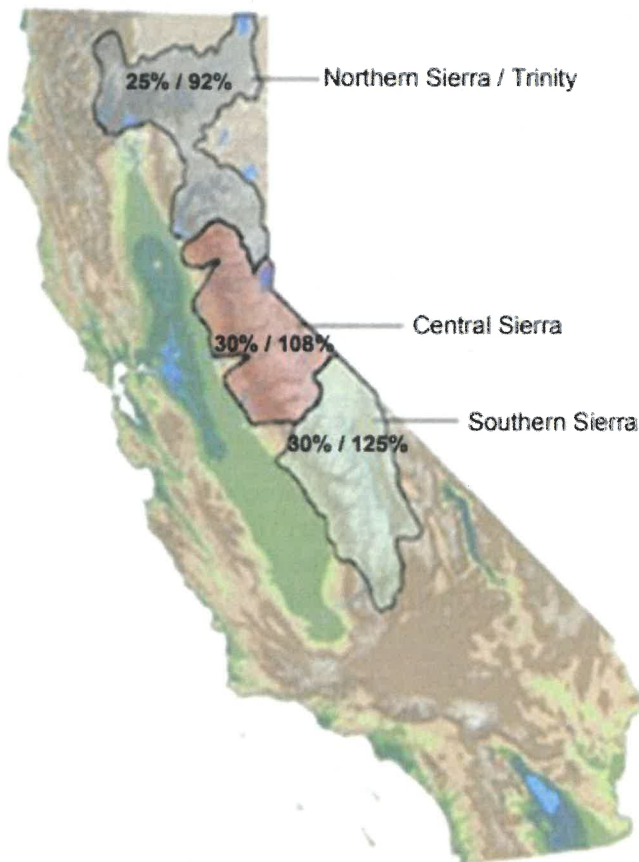
Status Report – December 2019

Water Supply Conditions

The high-pressure ridge that kept any significant precipitation away from California throughout the fall finally dissipated around the Thanksgiving holiday. At the end of November, over 90 percent of the state was experiencing abnormally dry conditions. By December 17, virtually all of the state was free of any drought conditions, with only 3.5 percent of the state experiencing abnormally dry conditions. Focus now shifts to the growing snowpack, as a healthy snowpack is the state's main way of storing water for the spring. While the first manual snow survey isn't set until after the first of the year, electronic sensors throughout the Sierras are measuring a snowpack at 109 percent of normal for this time of year. While this is a great start, Mother Nature still has a lot of work to do to build on the early storms with only 29 percent of the April 1 averages already on the ground.

Current Regional Snowpack from Automated Snow Sensors

% of April 1 Average / % of Normal for This Date



NORTH	
Data as of December 19, 2019	
Number of Stations Reporting	30
Average snow water equivalent (Inches)	7.4
Percent of April 1 Average (%)	25
Percent of normal for this date (%)	92

CENTRAL	
Data as of December 19, 2019	
Number of Stations Reporting	42
Average snow water equivalent (Inches)	9.1
Percent of April 1 Average (%)	30
Percent of normal for this date (%)	108

SOUTH	
Data as of December 19, 2019	
Number of Stations Reporting	27
Average snow water equivalent (Inches)	7.5
Percent of April 1 Average (%)	30
Percent of normal for this date (%)	125

STATE	
Data as of December 19, 2019	
Number of Stations Reporting	99
Average snow water equivalent (Inches)	8.1
Percent of April 1 Average (%)	29
Percent of normal for this date (%)	109

Statewide Average: 29% / 109%

PPIC Report on Ecosystem Management

The Public Policy Institute of California (PPIC) recently released a report titled “[A Path Forward for California’s Freshwater Ecosystems](#).” The report highlights that while the Endangered Species Act (ESA) has been successful at protecting extinctions, it places an emphasis on reducing harm to listed species, rather than improving overall ecosystem conditions necessary to recover their populations. It also notes that the ESA is not forward-looking enough to respond to change and reduce future species listings. They recommend a new ecosystem-based management system that emphasizes the simultaneous management of water, land and species to improve ecosystem condition for native biodiversity and human uses.

The report includes three “reform” initiatives:

Reform 1: Promote inclusive planning and governance: establish ecosystem-based management that relies on collaborative planning and governance:

- Identify the desired ecosystem condition
- Establish metrics
- Provide strong scientific support
- Set up transparent governance
- Ensure reliable funding

Reform 2: Employ multiple ecosystem management tools that go beyond traditional project of agency-specific approaches:

- Establish ecosystem water budgets
- Employ functional flows
- Manage flow and quality together
- Manage native and non-native species
- Manage at the appropriate scale

Reform 3: Encourage sustainable watershed management plans.

- Align agency actions
- Promote comprehensive agreements
- Set timelines and backstops
- Update water quality control plans
- Incentivize or mandate plans.

BiOps Next Steps

As reported last month, Governor Newsom has announced that the state will sue the Trump Administration over the recently released Biological Opinions (BiOps). However, the state has yet to file suit and no further detail has been given on what grounds will be included in the suit. Tom Birmingham, General Manager of Westlands Water District, recently sent a letter to Natural Resources Secretary Wade Crowfoot and CalEPA secretary Jared Blumenfeld outlining how such a lawsuit would require Westlands to pull out of the Voluntary Agreements. Birmingham notes that without certainty that comes with the BiOps, it would be impossible to reach an agreement with on the Voluntary Agreements.

The Voluntary Agreements are extremely important to Governor Newsom and Secretary Crowfoot. Newsom weighed in on the matter when he was still Governor-elect, and concerns of impacts to the Voluntary Agreements is the reason the Governor vetoed SB 1 (Atkins).

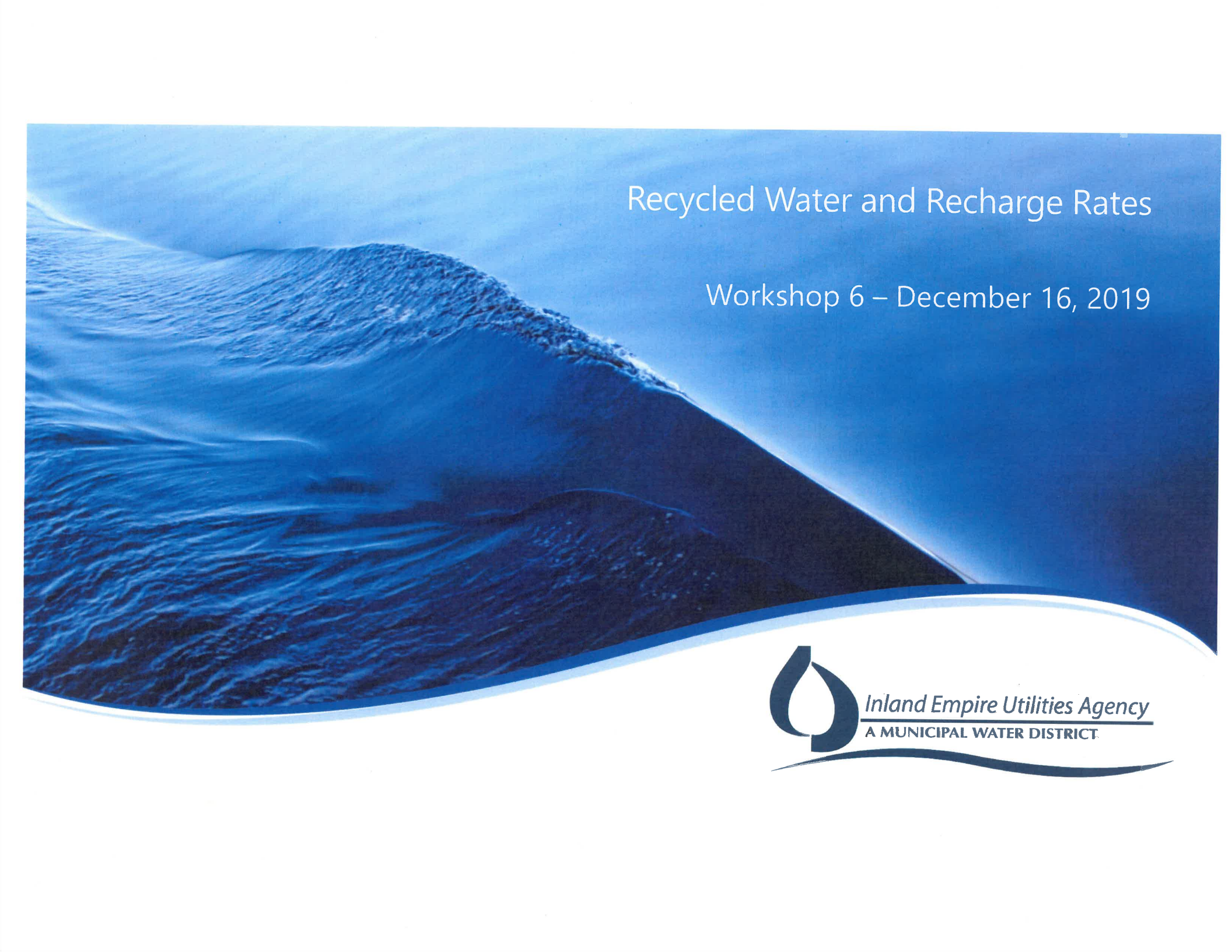
Birmingham asked the Secretaries to outline their concerns and noted that the federal government seemed open to working with the state to come up with an amicable solution without going to court. Senator Diane Feinstein posted the letter on Twitter that urged the Governor to work with Interior Secretary David Bernhardt to avoid “disastrous” consequences.

Legislative Update

December was a quiet month in the Capitol. With members back in their districts and all final action on bills taken by the Governor in October, there isn’t much to report on the legislative front. Attention is slowly turning to new bill ideas for January. Discussions of a broad resiliency bond continue, but remain very general as stakeholders await the release of the Water Resilience Portfolio, which will likely serve as an outline for water bond discussions. When members come back in January, things will move quickly with the Governor’s budget to be released by January 10, and all two-year bills needing to move out of their house of origin by January 31.

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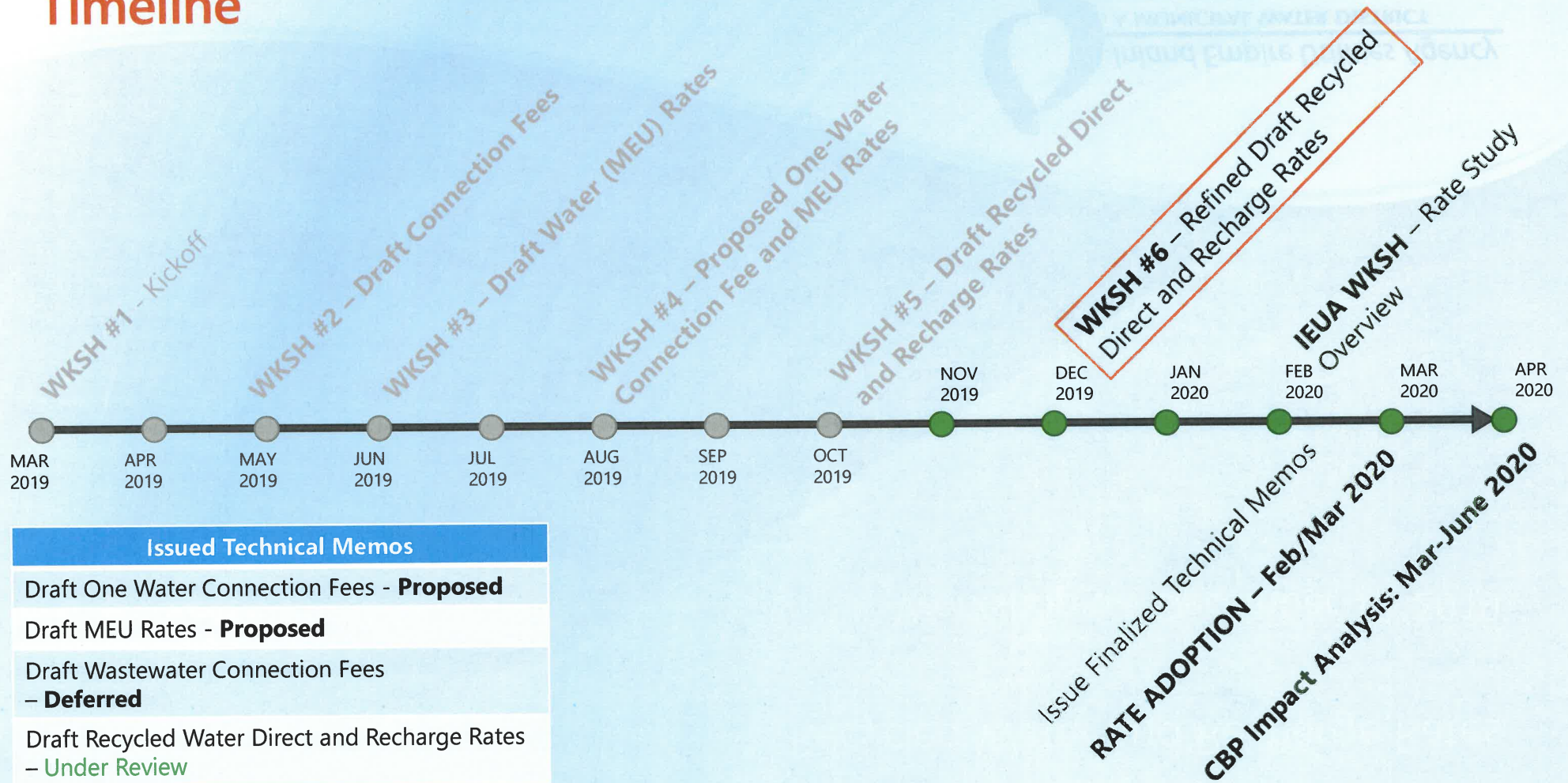


Recycled Water and Recharge Rates

Workshop 6 – December 16, 2019



Timeline



Rate Study Objectives

Establish rates that

- Meet cost/benefit nexus regulatory requirements, Prop 26
- Fully recover the cost of providing the service
- Continue to provide member agencies with a reliable, sustainable, cost effective local resource

IEUA Funding Strategy: Based upon a comprehensive and integrated approach

- ✓ Draft Analysis Complete
- ✓ Tech Memo Distributed
- ✓ Draft Recycled and Recharge Analysis Underway



- ✓ Approved rates for Fiscal Years 2020/21 and 2021/22



- ✓ Draft Analysis Complete
- ✓ Tech Memo Distributed



- ✓ Draft Analysis Complete
- ☐ On hold pending sampling study

2020 Rate Study

FY 2020/21 IEUA Proposed Rates/Fees

As July 1	Wastewater Connection Fee (EDU)	Monthly Sewer (EDU)	One Water Connection Fee (MEU)	Monthly Water (MEU)	Recycled Water Direct Use (AF)	Recycled Water Recharge (AF)
FY 2019/20 Adopted	\$6,955	\$20.00	\$1,684	\$1.04	\$490	\$550
FY 2020/21	\$7,164	\$20.60	\$1,735	\$1.06	TBD 2020 Rate Study	TBD 2020 Rate Study
FY 2021/22	\$7,379	\$21.22	\$1,787	\$1.08		
FY 2022/23	To be reviewed based on the sewer use evaluation results		\$1,841	\$1.10		
FY 2023/24			\$1,896	\$1.12		
FY 2024/25			\$1,953	\$1.14		

Monthly Sewer (EDU) Rates adopted November 20, 2019, effective July 1, 2020



Recycled Water Rate Structure Alternatives

Current Rate Structure: Rates per AF are calculated by dividing revenue requirements by projected usage

Calculated Direct Use Rates

TM Table 11: Recycled Water Direct Use Rate

WC Rate Calculation	Current Rates	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Required Revenues from Rates (\$Millions)		\$18.42	\$19.09	\$20.09	\$20.70	\$21.61
Projected Demands (AF)		36,500	36,700	37,500	37,500	38,000
Recycled Water Rate per AF	\$490	\$505	\$520	\$536	\$552	\$569

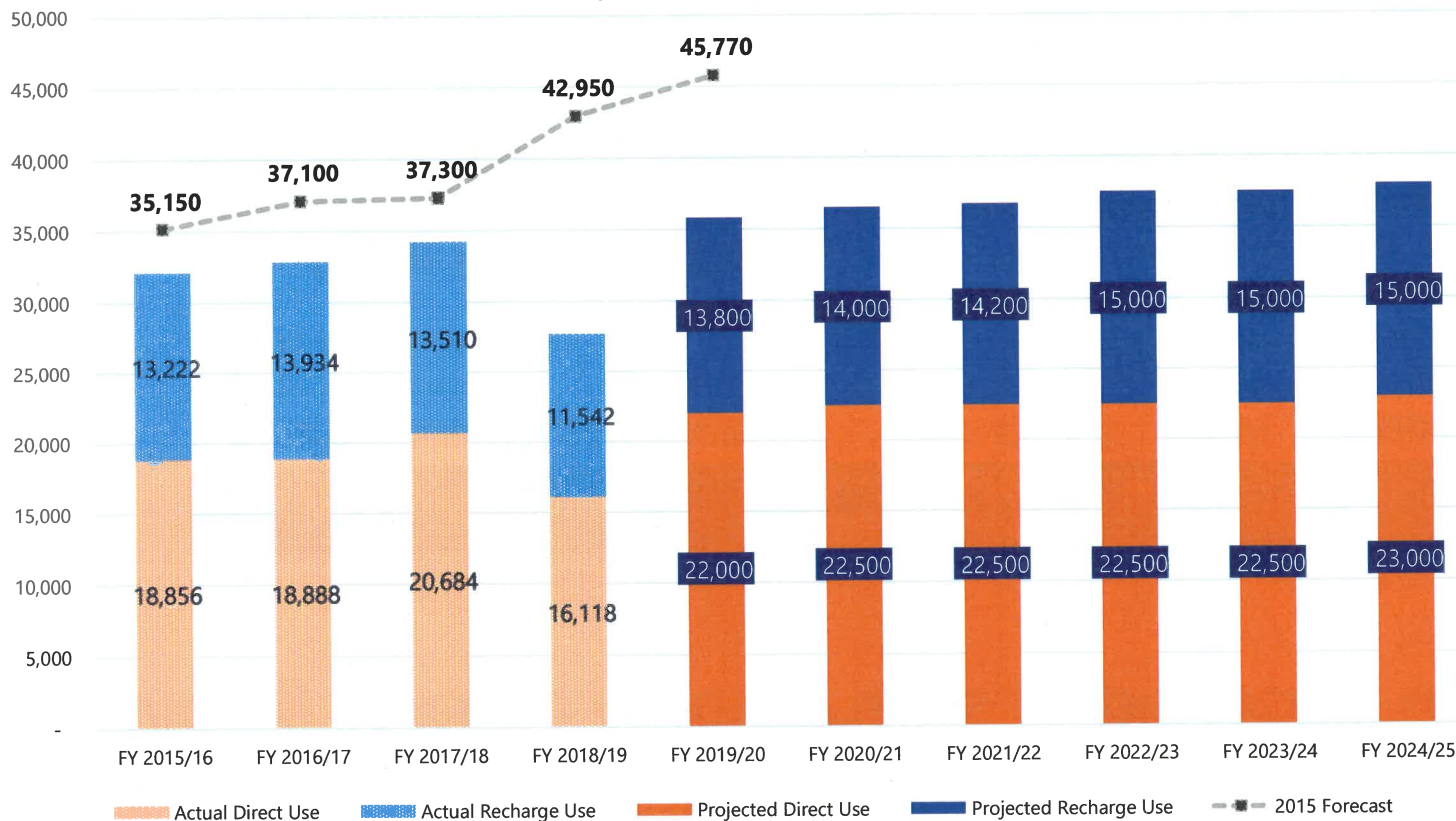
Calculated Recharge Rates

TM Table 12: Recharge Water Surcharge Rate

RW Rate Calculation	Current Rates	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Required Revenues from Rates (\$Millions)		\$1.01	\$1.23	\$1.57	\$1.88	\$2.24
Projected Demands (AF)		14,000	14,200	15,000	15,000	15,000
Recharge Surcharge Rate per AF	\$60	\$72	\$87	\$105	\$125	\$149
Direct Usage Rate per AF	\$490	\$505	\$520	\$536	\$552	\$569
Total Recharge Rate per AF	\$550	\$577	\$607	\$641	\$677	\$718

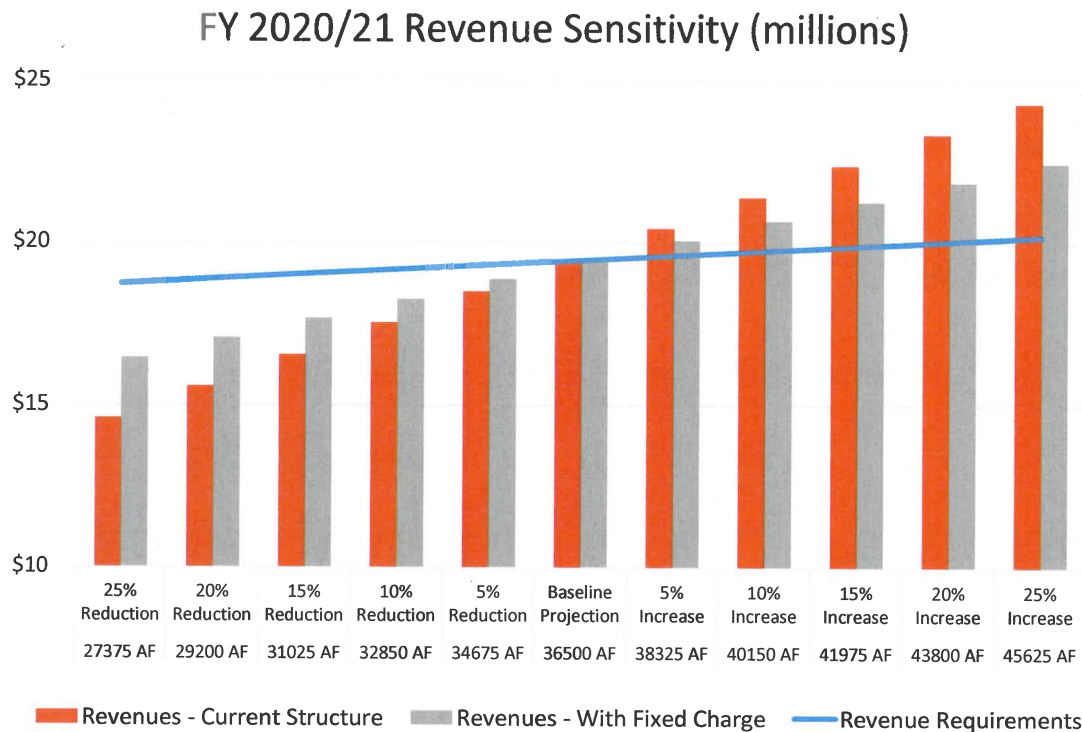
Recycled and Recharge Usage:

Recycled Water Demand (AF)



- ~\$11 million in revenue shortfalls due to lower than projected deliveries between FYs 2015/16 – 2018/19

Fixed Rate Component: Will help to stabilize revenues for IEUA and costs for member agencies



- During times of **low usage**, the fixed charges will hold revenues higher to cover a greater share of fixed costs
- During times of **high usage**, the fixed charges will mitigate a portion of cost increases for member agencies

Fixed Rate Component: Annual debt service less offsetting revenues and transfers

- Recycled Water fund receives offsetting revenues for debt service from:
 - Property Taxes
 - Transfers from Regional Wastewater Capital Improvement (RC) fund
- Connection Fees for eligible debt service help smooth year-to-year changes in fixed revenue collection

TM Table 13: Direct Use Fixed Charge Revenue Requirement

RW Fixed Charge Revenues, (\$ Millions)	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Debt Service	\$9.12	\$9.47	\$9.42	\$9.41	\$9.18
Short Term Inter-Fund Loan	3.00	3.00	5.00	6.00	5.50
Fixed Offsetting Revenues and Transfers					
Property Tax - Debt and Capital	\$(2.17)	\$(2.17)	\$(2.17)	\$(2.17)	\$(2.17)
Transfer from RC Debt Service	(2.54)	(2.54)	(2.54)	(2.67)	(2.67)
Connection Fees for Debt Service	-	(0.10)	(1.63)	(2.25)	(1.15)
Fixed Rate Revenue Requirement	\$7.41	\$7.66	\$8.08	\$8.32	\$8.69

Note: Presented totals may vary from values above due to rounding for presentation purposes.

Alternative Rate Structure: Will set a specific amount of fixed costs to recover each year

- Volumetric rates would be calculated based on the total revenue requirements **less** fixed revenue requirements

TM Table 18: Direct Use Variable Revenue Requirement

Budget Item	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Total Revenue Requirement	\$18.42	\$19.09	\$20.09	\$20.70	\$21.61
Less: Fixed Rate Revenue Requirement	\$(7.41)	\$(7.66)	\$(8.08)	\$(8.32)	\$(8.69)
Variable Rate Revenue Requirement	\$11.01	\$11.43	\$12.01	\$12.38	\$12.92
Recycled & Recharge Water Demands (AF)	36,500	36,700	37,500	37,500	38,000
Direct Recycled Variable Water Rate (\$/AF)	\$302	\$311	\$320	\$330	\$340
Recharge Surcharge (\$/AF)	\$72	\$87	\$105	\$125	\$149
Total Recharge Variable Rate (\$/AF)	\$374	\$398	\$425	\$455	\$489

Rate Structure Alternatives

- **Presented 10/16/2019**

1. Retain current volumetric rate structure with per AF charges for direct and recharge use
2. Add a fixed component based on 3-year rolling average total use
3. Add a fixed component based on EDUs

- **Additional alternatives developed based on feedback from Workshop #5**

New Alternatives

4. Add a fixed component based on EDUs and 3-year rolling average
5. Add a fixed component based on EDUs and MEUs

Other Fixed Rate Structures: Fixed revenue split based on use of debt proceeds

- Recycled Water fund debt service cost was analyzed to determine the amounts attributable to use
 - 28.75% Recharge use
 - Infrastructure and investment specific to recharge use
 - 71.25% All recycled water use
 - Infrastructure and investments that serve both direct and recharge users

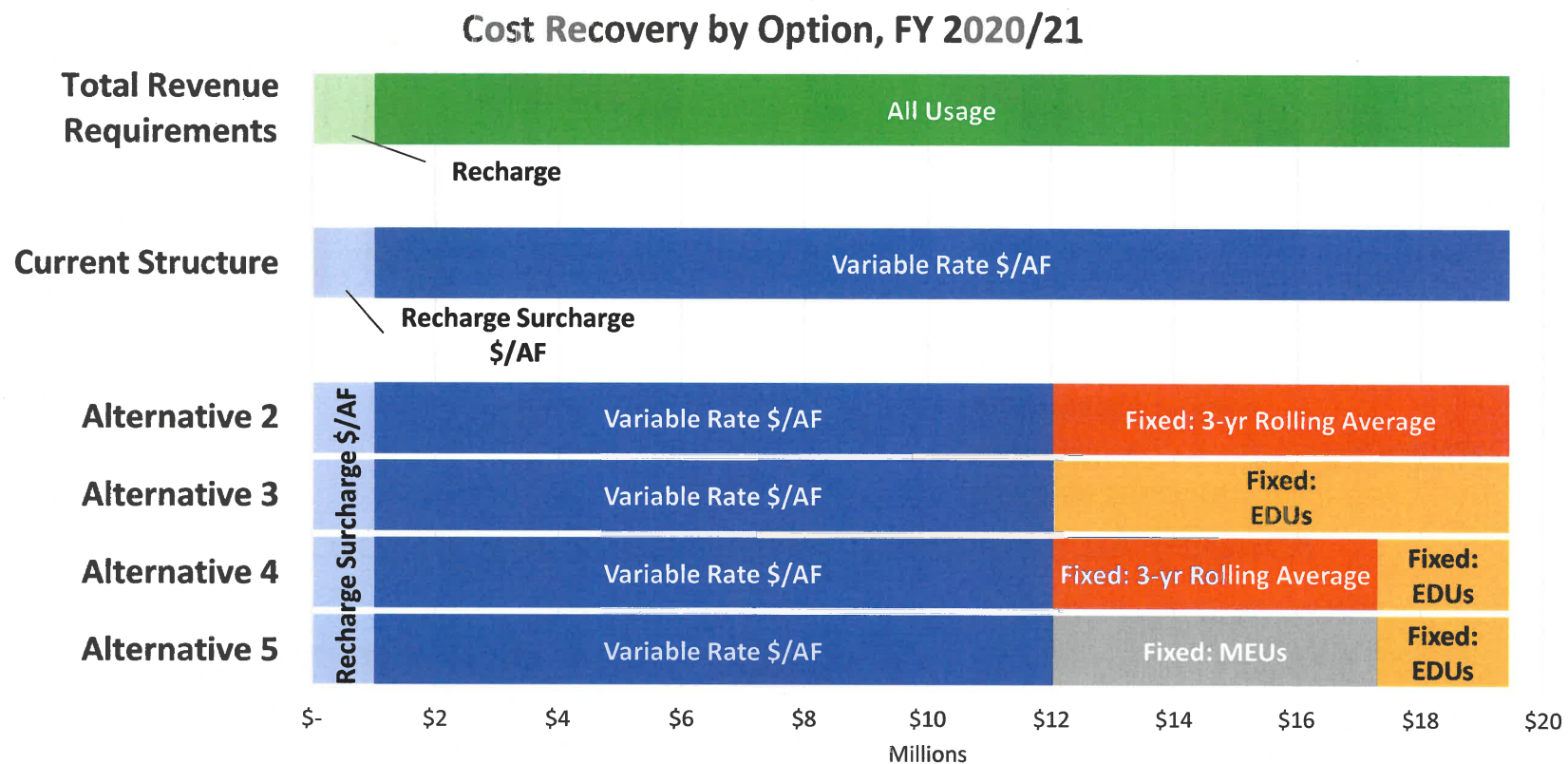
RW Fixed Charge Revenues, (\$ Millions)	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Fixed Rate Revenue Requirement	\$7.41	\$7.66	\$8.08	\$8.32	\$8.69
Related to Recharge Use	\$2.13	\$2.20	\$2.32	\$2.39	\$2.50
Related to All Recycled Water Use	\$5.28	\$5.46	\$5.75	\$5.93	\$6.19

Note: Column totals may not tie due to rounding.

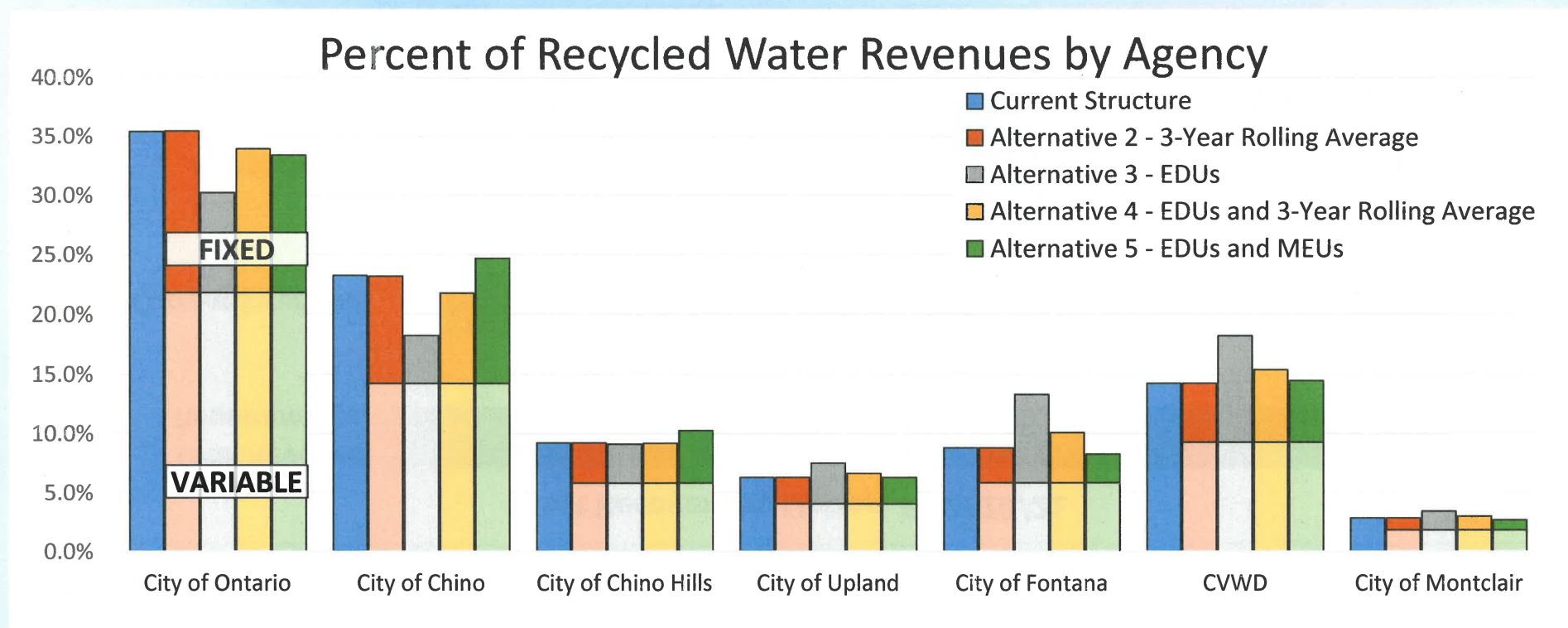
Fixed Revenue Collection: Set to reflect recharge water entitlements and recycled water capacity requirements

- For Rate Alternatives 4 and 5 the portion of fixed costs (debt service) related to recharge facilities allocated based on:
 - Contracting agency recharge EDU entitlements
- Portion of fixed costs (debt service) related to all recycled water use allocated based on:
 - **Alternative 4:** 3-year Rolling Average Direct Use
 - **Alternative 5:** Recycled Water MEUs

Rate Structure Alternatives: Comparison of cost recovery under each rate alternative



Member Agency Impacts: Revenues under each fixed charge option assessed by member agency



Note: Actual revenues by agency would vary as they would reflect actual rather than projected consumption

Recommended Rate Structure Alternative

- **Alternative 2:** Add a fixed component based on 3-year rolling average total use
 - Current variable rate structure is not sustainable
 - Most program costs are fixed in nature
 - Wet weather patterns = decreased demand = revenue shortfall
 - Adding a fixed component will
 - Mitigate a portion of cost increases during times of high demand
 - Provide revenue stability during times of low demand
 - More equitably recover capital investment

Next Steps:

1. Finalize and distribute Technical Memorandums:
 - One Water Connection Fees
 - Water Resources MEU Rates
 - Direct Use Recycled and Recharge Water Rates
2. Final rate workshop on proposed rates Feb 2020
3. Adopt proposed rate adjustments Mar 2020 to allow for Prop 218
4. Develop long-term projections to assess the impact of the CBP on all rates

Timeline

