



Regional Sewerage Program Technical Committee Meeting

AGENDA Thursday, October 29, 2020 2:00 p.m. Teleconference Call

PURSUANT TO THE PROVISIONS OF EXECUTIVE ORDER N-25-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 12, 2020, AND EXECUTIVE ORDER N-29-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 17, 2020 ANY COMMITTEE MEMBER MAY CALL INTO THE COMMITTEE MEETING WITHOUT OTHERWISE COMPLYING WITH ALL BROWN ACT'S TELECONFERENCE REQUIREMENTS.

In effort to prevent the spread of COVID-19, the Regional Sewerage Program Policy Committee Meeting will be held remotely by teleconference

Teleconference: (415) 856-9169/Conference ID: 747 889 453#

This meeting is being conducted virtually by video and audio conferencing. There will be no public location available to attend the meeting; however, the public may participate and provide public comment during the meeting by calling into the number provided above. Alternatively, you may email your public comments to the Recording Secretary Sally H. Lee at shlee@ieua.org no later than 24 hours prior to the scheduled meeting time.

Your comments will then be read into the record during the meeting.

Call to Order

Roll Call

Additions/Changes to the Agenda

1. Action Items

- A. Meeting Minutes for September 24, 2020
- B. Request by the City of Ontario for a Regional Connection Point to the Kimball Interceptor (Ontario Regional Sewer Connection #O-102)

2. Informational Items

- A. Groundwater Recharge/Recycled Water Semi-Annual Update
- B. Return to Sewer Pilot Study Updates (*Oral*)
- C. Operations & Compliance Updates (*Oral*)

(Continued)

3. Receive and File

- A. Annual Reports – Building Activity, Recycled Water & Energy
- B. Draft Regional Sewerage Program Policy Committee Meeting Agenda
- C. Recycled Water Distribution - Operations Summary

4. Technical Committee Items Distributed

- A. Notice of Availability of Recycled Water as Groundwater Recharge for FY 20/21

5. Other Business

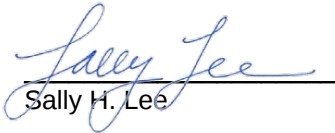
- A. IEUA General Manager's Update
- B. Committee Member Requested Agenda Items for Next Meeting
- C. Committee Member Comments
- D. Next Regular Meeting – November 26, 2020 (Thanksgiving Holiday)

6. Adjournment

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Recording Secretary (909) 993-1944, 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

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, October 22, 2020.


Sally H. Lee

**ACTION
ITEM**

1A



Regional Sewerage Program Technical Committee Meeting MINUTES OF SEPTEMBER 24, 2020

CALL TO ORDER

A regular meeting of the IEUA/Regional Sewerage Program – Technical Committee was held via teleconference on Thursday, September 24, 2020. Committee Chair Nicole deMoet/City of Upland called the meeting to order at 2:05 p.m. Recording Secretary Sally Lee took a roll call to establish a quorum. A quorum was present.

ATTENDANCE via Teleconference

Committee Members:

Amanda Coker (Alternate)	City of Chino
Eduardo Espinoza (Alternate)	Cucamonga Valley Water District (CVWD)
Ron Craig	City of Chino Hills
Chuck Hays	City of Fontana
Noel Castillo	City of Montclair
Courtney Jones (Alternate)	City of Ontario
Nicole deMoet	City of Upland
Shivaji Deshmukh	Inland Empire Utilities Agency (IEUA)

OTHERS PRESENT via Teleconference

Steve Nix	City of Upland
Kathy Besser	Inland Empire Utilities Agency
Randy Lee	Inland Empire Utilities Agency
Christina Valencia	Inland Empire Utilities Agency
Jerry Burke	Inland Empire Utilities Agency
Andy Campbell	Inland Empire Utilities Agency
Javier Chagoyen-Lazaro	Inland Empire Utilities Agency
Elizabeth Hurst	Inland Empire Utilities Agency
Sally Lee	Inland Empire Utilities Agency
Sylvie Lee	Inland Empire Utilities Agency
Liza Munoz	Inland Empire Utilities Agency
Cathleen Pieroni	Inland Empire Utilities Agency
Craig Proctor	Inland Empire Utilities Agency
Jeanina Romero	Inland Empire Utilities Agency
Ken Tam	Inland Empire Utilities Agency
Teresa Velarde	Inland Empire Utilities Agency
Jeff Ziegenbein	Inland Empire Utilities Agency

ADDITIONS/CHANGES TO THE AGENDA

There were none.

1. ACTION ITEMS**A. APPROVAL OF THE MEETING MINUTES OF AUGUST 27, 2020**

Motion: By Ron Craig/City of Chino Hills and seconded by Courtney Jones/City of Ontario to approve the meeting minutes of the August 27, 2020 Technical Committee meeting.

Motion carried: Ayes: 8; Noes: 0

With the following roll call vote:

Ayes: Craig, Jones, Coker, Espinoza, Hays, Deshmukh, Castillo, deMoet

Noes: None

Absent: None

Abstain: None

2. INFORMATIONAL ITEMS**A. OPERATIONS QUARTERLY UPDATE**

Randy Lee/IEUA gave an overview of the Operations Quarterly Update. He stated safety is a top priority and IEUA has consistently maintained a lower-than-industry level of incidents. Mr. Lee then detailed the steps and enhancements put in place to ensure information security in a constantly changing field. He also went over upgrades completed at the Chino Preserve Lift Station, which included remote and automated process improvements. Finally, he described the use of new technology in Collections and at the Regional Compost Facility. These upgrades included the installation of SmartCovers, which use cloud and cellular services to provide real-time information to help prevent sewer overflows, and the installation of smart bearing sensors, which alert staff of potential issues, while limiting exposure to potentially hazardous work environments.

Shivaji Deshmukh/IEUA stated that the Agency is always looking for new ways to collaborate with the contract agencies and welcomed any questions, ideas, or best practices that could contribute to that collaboration.

Amanda Coker/City of Chino clarified that the Chino Preserve Lift Station is a city of Chino facility, and that through an agreement, IEUA operates the facility on their behalf.

Eduardo Espinoza/CVWD asked if the SmartCovers also measure flow, or if there are other instruments used to take that measurement. Mr. Lee stated that the SmartCovers currently in place only measure water levels, not flow velocity, as the main goal is to prevent sanitary sewer overflows and the covers that measure flow are more costly.

B. ENGINEERING PROJECTS UPDATE

Jerry Burke/IEUA provided the quarterly Engineering and Construction Management projects updates. He provided details regarding the process, status, and budgets of the RP-1 12kV Switchgear

and Generator Control Upgrades, the RP-5 Pump Gallery Wire Replacement, and the Non-Reclaimable Wastewater System Manhole Upgrades.

Ms. Coker asked if RP-1 has always been on the grid and why was it taken off. Mr. Burke clarified that the 12kV gear is what distributes power throughout the plant, and it had to be taken off for only 72 hours during the project upgrades. Eduardo Espinoza/CVWD asked how IEUA managed when Edison had power outages and if IEUA was asked to run more generators. Mr. Lee explained the process and options regarding the use of energy, and stated IEUA had to confirm with AQMD that the use of backup generators would not count against the allowable annual operating hours.

C. GROUNDWATER RECHARGE BASIN CAPITAL PROJECTS UPDATE

Mr. Burke provided the Groundwater Recharge Basin Capital Projects Update. Mr. Burke stated that the Recharge Master Plan Update consists of seven basins and is a collaboration between Chino Basin Watermaster and IEUA, and IEUA is the lead agency to manage those projects. The overall goal is to provide the Chino groundwater basin with roughly 4,700 acre-feet (AF) per year of stormwater recharge capability and 7,000 AF per year of recycled water recharge through conveyance, capture, and storage enhancements. He gave an overview of the role of each of the basins, planned improvements, project status, and budgets. Mr. Burke concluded with a summary of the total project budget, showing a breakdown of grant funding and financing for each project. He also stated that project costs with an expected recycled water yield are equally shared with Chino Basin Watermaster, while projects with only stormwater benefit are fully reimbursed by Watermaster.

Mr. Espinoza thanked the team for their work in maintaining the basins and for the presentation.

Mr. Craig thanked IEUA for the presentation and stated that this collaboration is a fantastic example of the importance of a current, valid Optimum Basin Management Plan Update (OBMPU) and he looks forward to all stakeholders supporting moving forward with an updated OBMPU.

Chair de Moet congratulated IEUA on the award received for the work on the San Sevaine Basin.

D. FY 2019/20 FOURTH QUARTER BUDGET VARIANCE REPORT

Javier Chagoyen-Lazaro/IEUA presented the FY 2019/20 Budget Variance Report. He stated that two major events can define the FY 2019/20: COVID-19, which has affected everyone, and more specific to the Agency, financing transactions completed at the end of the fiscal year. Mr. Chagoyen-Lazaro went over the details of sources of funds, budget, and expenses. He stated COVID-19 has created delays in projects, which deferred capital expenditures in some areas, but created additional expenses in others. Mr. Chagoyen-Lazaro went on to provide a comparative of the actual cost of service to the 2015 projections which were basis for the multi-year adopted rates for the Regional Wastewater Operations Fund and the Recycled Water Fund for fiscal years 2015/16- 2019/20.

Chair deMoet stated she does not recall doing check-in presentations that include the projected rates and asked why they have not been presented before. Mr. Chagoyen-Lazaro stated they have been presented at the Technical and Policy committee meetings as well as Board meetings throughout the years and would provide the dates of the presentations.

E. FEDERAL LEGISLATIVE UPDATE

Kathy Besser/IEUA stated that in response to several grant-related questions and comments at last month's Technical committee meeting, she would provide an update on several bills and laws that IEUA is following. She explained the details and status of HR Bill 7073 and HR Bill 2 (The Moving Forward Act). She concluded with the topic of Appropriations Bills, stating that none have been signed into law this fiscal year, however, the House did pass a continuing resolution, which ensures that the government can continue to operate beyond the end of the Federal fiscal year at the previous year's levels and until new legislation is passed.

F. RETURN TO SEWER PILOT STUDY UPDATES

Ken Tam/IEUA stated that due to the delay of the Technical Subgroup meeting, there are no updates for the Technical Committee. He added that Argo will have a draft final report of their study for the Technical Subgroup to review at the next scheduled meeting. The results of the pilot study will be shared as an information item at the Technical and Policy Committee meetings once the project is complete.

G. OPERATIONS & COMPLIANCE UPDATES

There were no operations and compliance updates.

3. RECEIVE AND FILE**A. DRAFT REGIONAL SEWERAGE PROGRAM POLICY COMMITTEE MEETING AGENDA**

The draft Regional Sewerage Program Policy Committee Meeting agenda was received and filed by the Committee.

B. BUILDING ACTIVITY REPORT

The Building Activity Report for July 2020 was received and filed by the Committee.

C. RECYCLED WATER DISTRIBUTION – OPERATIONS SUMMARY

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

4. TECHNICAL COMMITTEE ITEMS DISTRIBUTED**A. NONE****5. OTHER BUSINESS****A. IEUA GENERAL MANAGER'S UPDATE**

Mr. Deshmukh/IEUA stated that in response to a previous request for additional information to be reported in the Recycled Water Distribution Operations Summary, a line item was added in the Total All Plans information box so that it now includes preliminary deliveries of recycled water, groundwater recharge, and recycled water direct use. The change will be included in future Technical and Policy Committee packets. Mr. Deshmukh also stated that due to a reduction in the original scope of work, the 2020 Land Use Demand Model has been renamed to 2020 Wastewater and Recycled Water Demand Forecast. The new forecast will encompass wastewater and recycled water demands in five-year increments through 2040, based on land use categories and inventories established in the 2015 Land Use Demand Model. A full update of the model will be performed, consisting of water, wastewater and recycled water forecasts as well as land use inventories in 2025. Lastly, Mr.

Deshmukh stated that City of Chino and City of Ontario have deferred the purchase of recycled water for at least a portion of fiscal year 2020/21, making the purchase of water available to any of the contracting agencies. If multiple interests exist, then IEUA will work with those agencies to accommodate the requests.

Chair deMoet thanked General Manager Deshmukh for making the change in the Recycled Water Distribution – Operations Summary to include direct use. She stated having the information readily available will benefit everyone.

B. COMMITTEE MEMBER REQUESTED AGENDA ITEMS FOR NEXT MEETING

No future agenda items were requested.

C. COMMITTEE MEMBER COMMENTS

Mr. Craig expressed appreciation for the follow-up on the grant funds and opportunities previously conveyed regarding relocation expenses for the RP-2 Treatment Plant.

D. NEXT MEETING – OCTOBER 29, 2020

6. ADJOURNMENT – Chair deMoet adjourned the meeting at 3:28 p.m.

Transcribed
by:

Sally H. Lee, Executive Assistant

**ACTION
ITEM**

1B

Date: October 29, 2020

To: Regional Technical Committee

From: Inland Empire Utilities Agency

Subject: Request by the City of Ontario for a Regional Connection Point to the Kimball Interceptor (Ontario Regional Sewer Connection #O-102)

RECOMMENDATION

It is recommended that the Regional Technical Committee approve the request by the City of Ontario for one new connection point to the Regional System (Ontario Regional Sewer Connection #O-102).

BACKGROUND

On June 29, 2020, IEUA received a request from the City of Ontario (Attachment “A”) for the approval of a sewer connection located in Kimball Avenue (Kimball Interceptor) in the City of Chino. The purpose of the connection is to provide wastewater service for the proposed commercial/residential development from the New Model Colony, generally south of Riverside Drive, west of Vineyard Avenue, north of Merrill Avenue and east of Euclid Avenue. This Regional Connection #O-102 will need to be made by connecting to the existing 60-inch Kimball Interceptor, located in the eastbound lane of Kimball Avenue, through a convergence structure to be designed and built by the user located generally in vicinity indicated (Attachment “B”).

SUMMARY OF FLOW RATE

Ontario Regional Connection #O-102: Peak Flow Rate = 14.061 MGD

The 60-inch Kimball Interceptor is designed to deliver a maximum flow rate of 47.73 MGD to the Regional Water Recycling Plant No. 5. The proposed additional average flow rate of 7.337 MGD is within the remaining pipeline capacity of 19.32 MGD.

ATTACHMENT A

June 29, 2020, City of Ontario Regional Interceptor Request

CITY OF



ONTARIO

ONTARIO MUNICIPAL UTILITIES COMPANY

PAUL S. LEON
MAYOR

June 29, 2020

SCOTT OCHOA
CITY MANAGER

DEBRA DORST-PORADA
MAYOR PRO TEM

SHEILA MAUTZ
CITY CLERK

ALAN D. WAPNER
JIM W. BOWMAN
RUBEN VALENCIA
COUNCIL MEMBERS

JAMES R. MILHISER
TREASURER

SCOTT BURTON
UTILITIES GENERAL MANAGER

Ms. Liza Munoz
Senior Engineer
Inland Empire Utility Agency
6075 Kimball Avenue
Chino, CA 91710

Dear Ms. Munoz:

Subject: Request for Regional Sewer Connection to the Kimball Interceptor located in Kimball Avenue at Euclid Avenue from the north for the Western Trunk Sewer.

The City of Ontario is hereby requesting a new Regional Point of Connection for the Western Trunk Sewer as identified in the City of Ontario Sewer Master Plan.

The City is proposing to connect a new 30-inch sewer line (Western Trunk Sewer) to the Kimball Interceptor at Manhole #17 within Kimball Avenue from the north side of Euclid Avenue (per IEUA drawing #D4606-5, Kimball Interceptor Contract EN97004 at station 101+92.35). The connection will require reconstructing the manhole to add a new 30-inch stub on the northern side of Manhole #17.

This proposed connection is for new development within the Western Trunk Sewer Tributary Area, which is included in the City of Ontario's Sewer Master Plan.

The total ultimate estimated Average Dry Weather Flow (ADWF) is 7.337 mgd, Peak Dry Weather Flow (PDWF) is 10.493 mgd, and Peak Wet Weather Flow (PWWF) is 14.061 mgd. This is based on the City's 2020 Sewer Master Plan Demand Factors and peaking formula $[PDWF = 1.77 \times (ADWF)^{0.893}; PWWF = 1.34 \times PDWF]$.

Please disregard my letter dated June 25, 2020, as it contains erroneous flow values and peaking formulas.

If you should need any further information, please contact Ahmed Aly at (909) 395-2657.

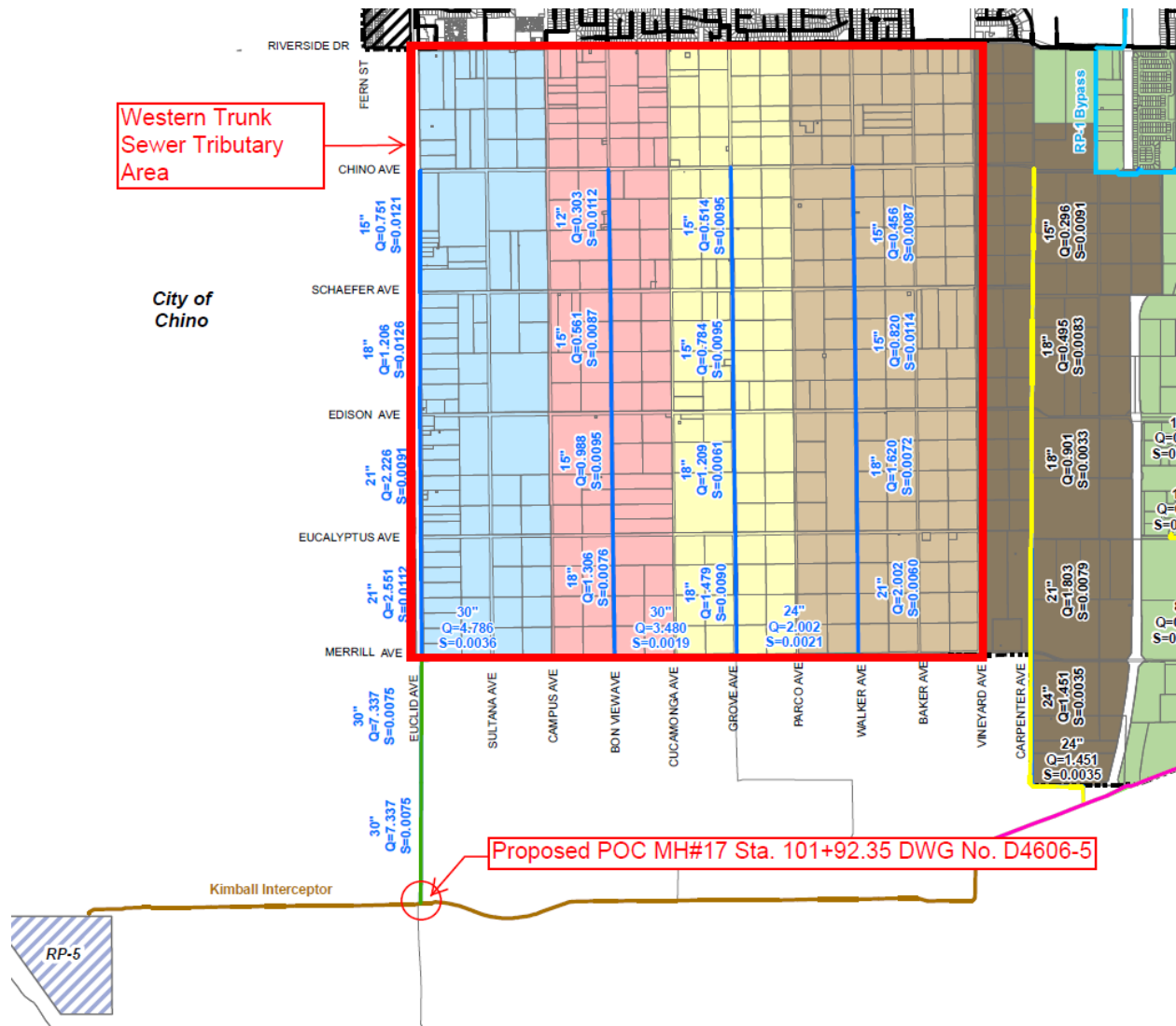
Sincerely,

Dennis Mejia, P.E.

Utilities Engineering Division Manager

EXHIBIT 1

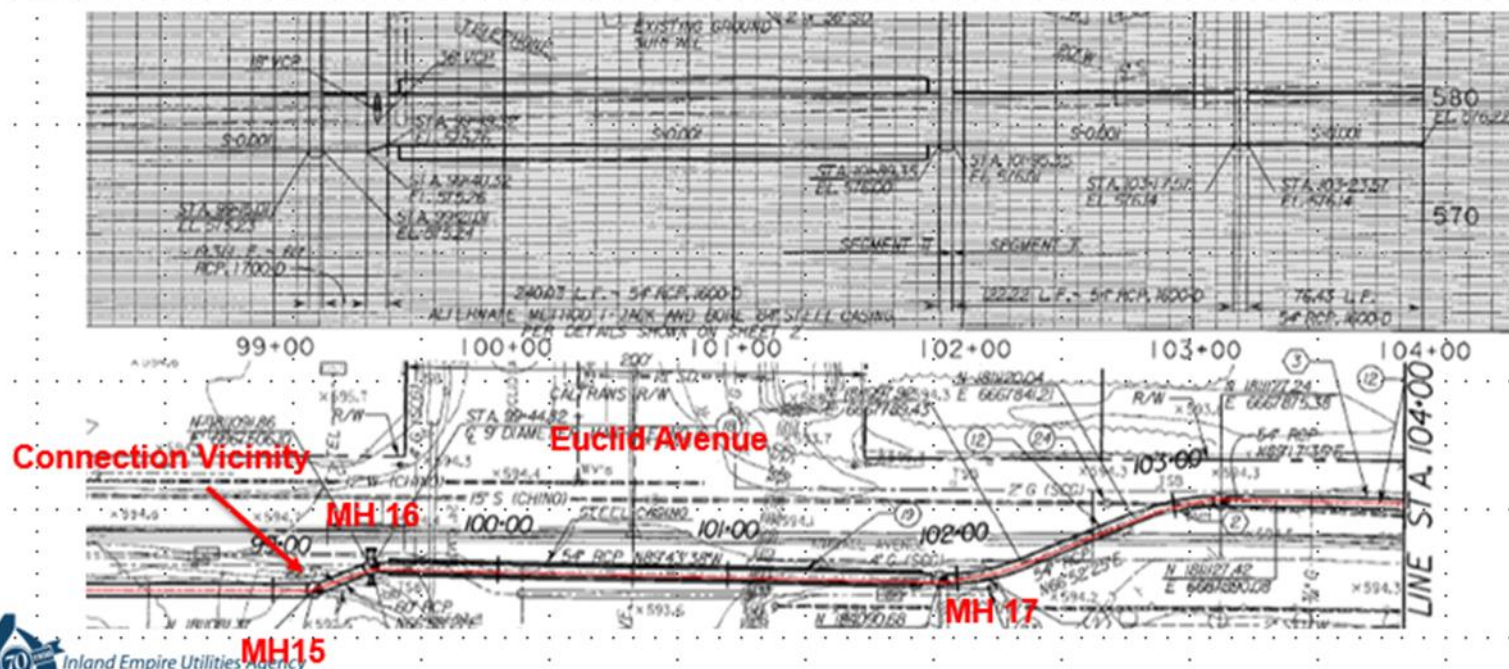
PROPOSED ONTARIO REGIONAL CONNECTION TRIBUTARY AREA



ATTACHMENT B
General Location for Connection #O-102

Attachment B

O-102 Connection Vicinity



**INFORMATION
ITEM**

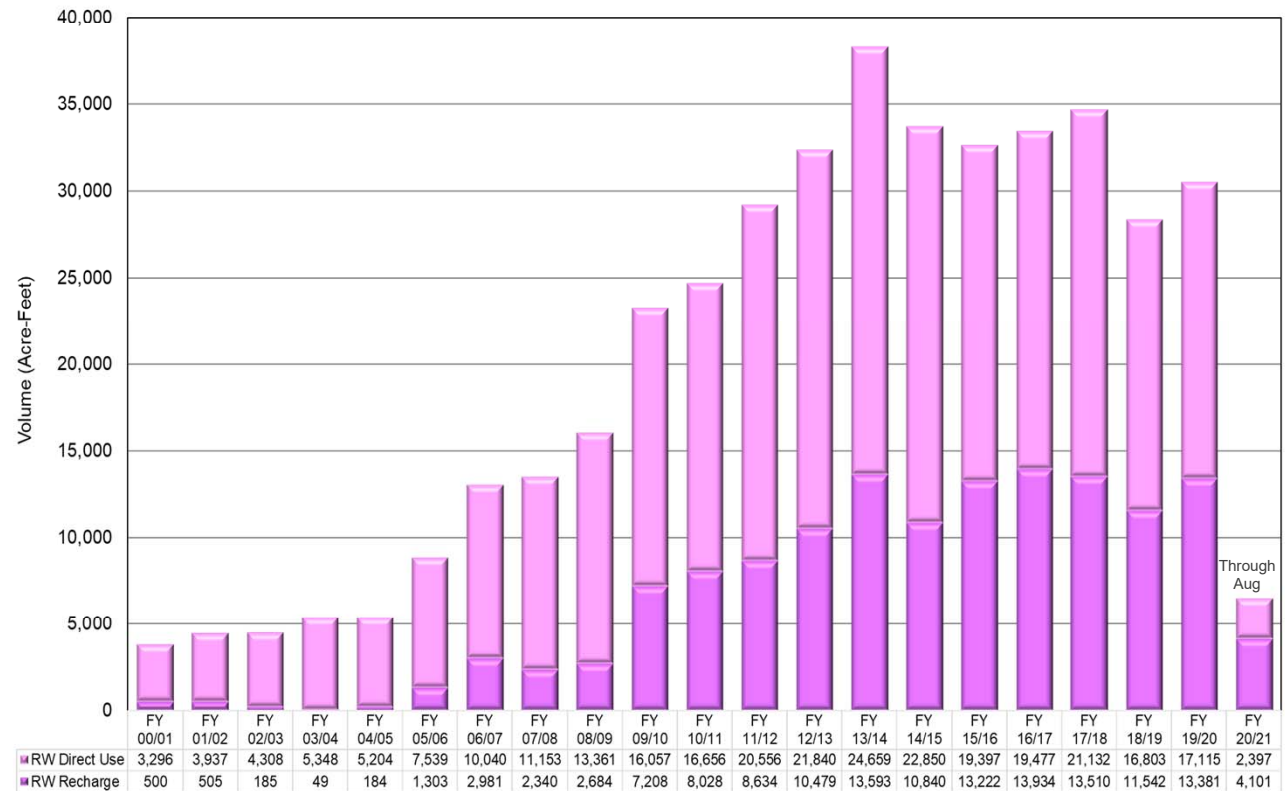
2A

Groundwater Recharge/Recycled Water Semi-Annual Update



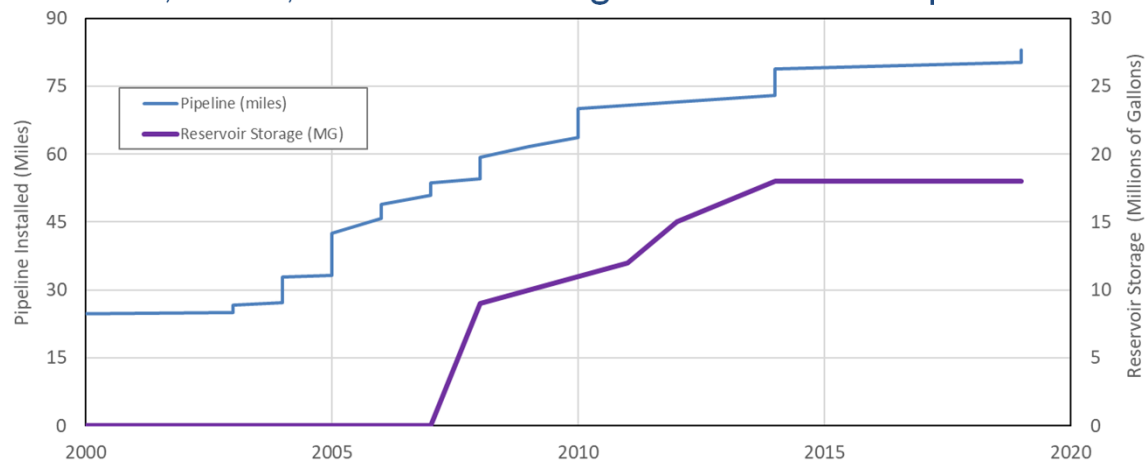
Historical Recycled Water (RW) Demand

- Pre 2005 Customers
 - Prado Park
 - Whispering Lakes GC
 - Ely Basin
- 2005-2015 Growth
 - RW GWR
 - Direct Use
- 2015 to 2020
 - Decreased Ag Use
 - Steady RW GWR

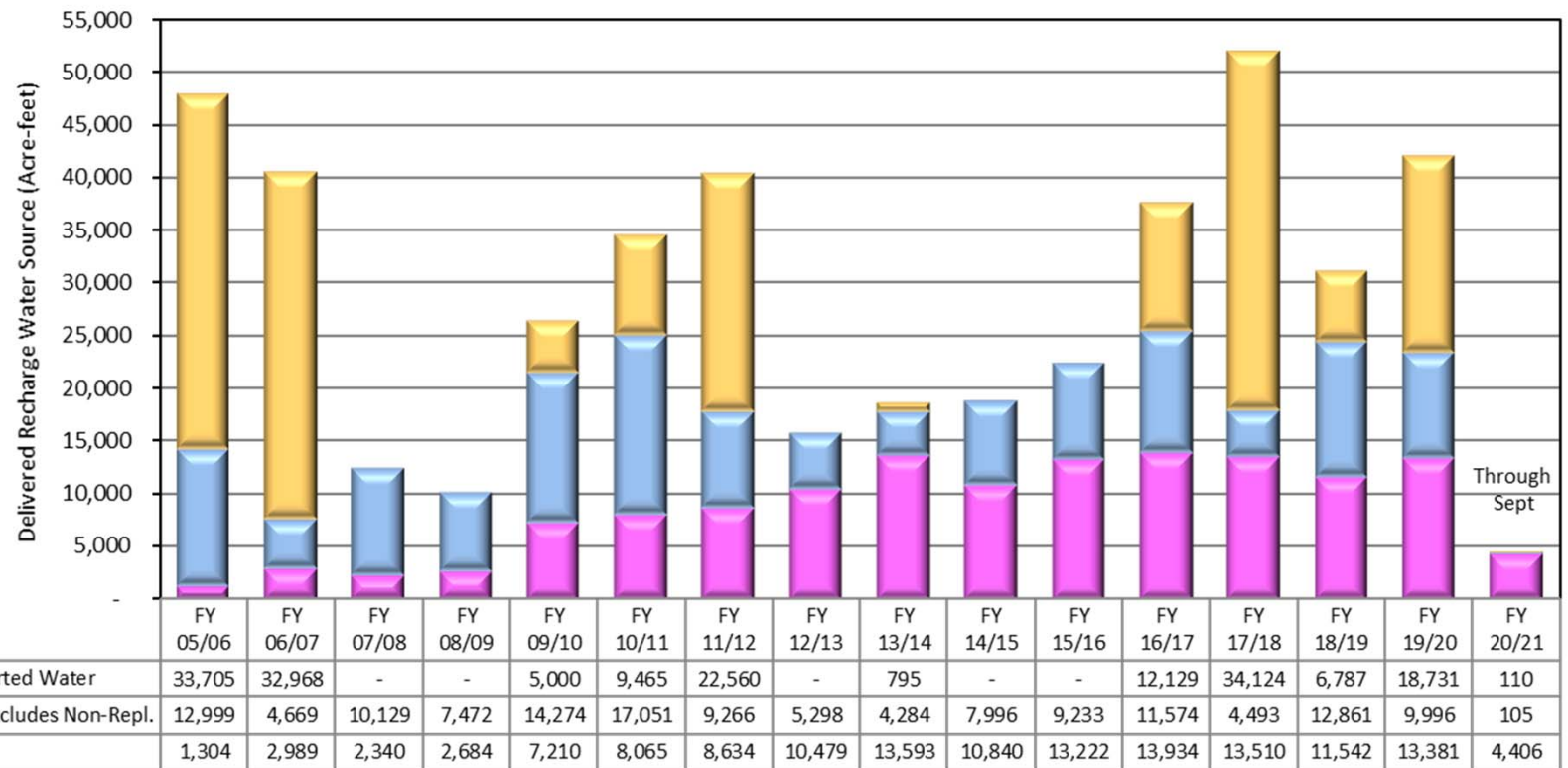


History of the RW Recharge Program

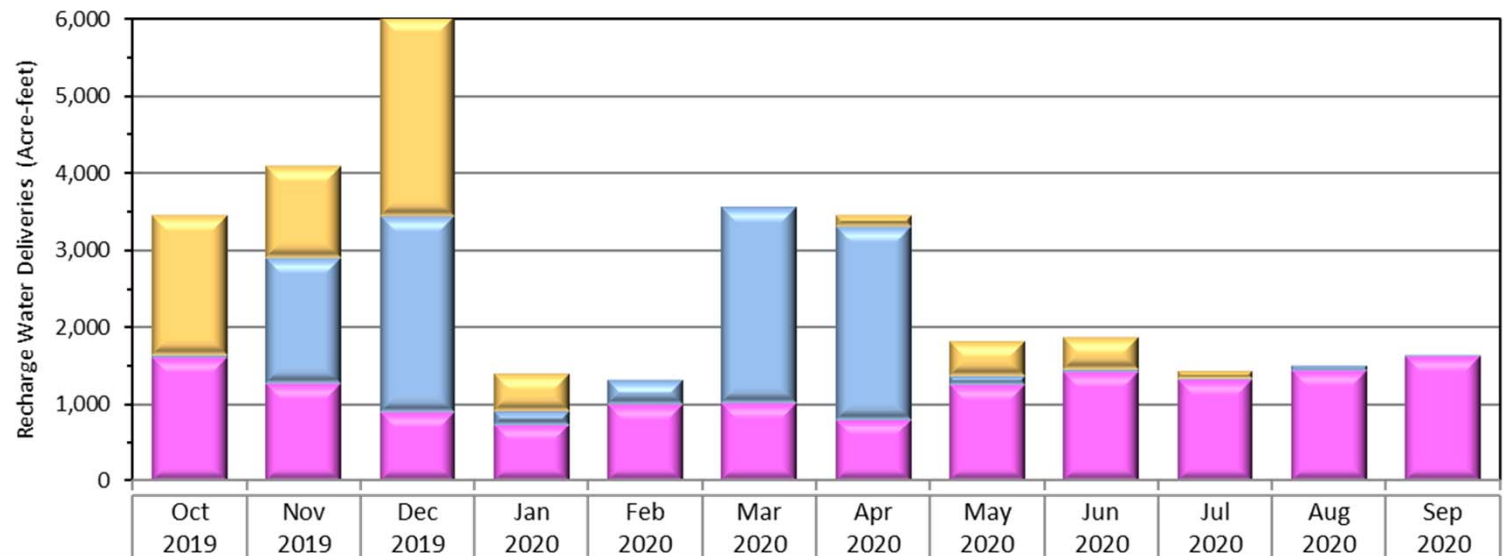
- 2002 - CBWM approved IEUA 30,000 AFY RW Recharge
- 2003 - Four Party Agreement for Recharge Program
- 2004 - Maximum Benefit Basin Plan Amendment for TDS
- 2004 - MOU with OCWD for Hydraulic Control
- 2005 - Recharge Facility Improvements Operational
- 2005, 2007, 2009 - Recharge Permits and Update



Groundwater Recharge Annual History



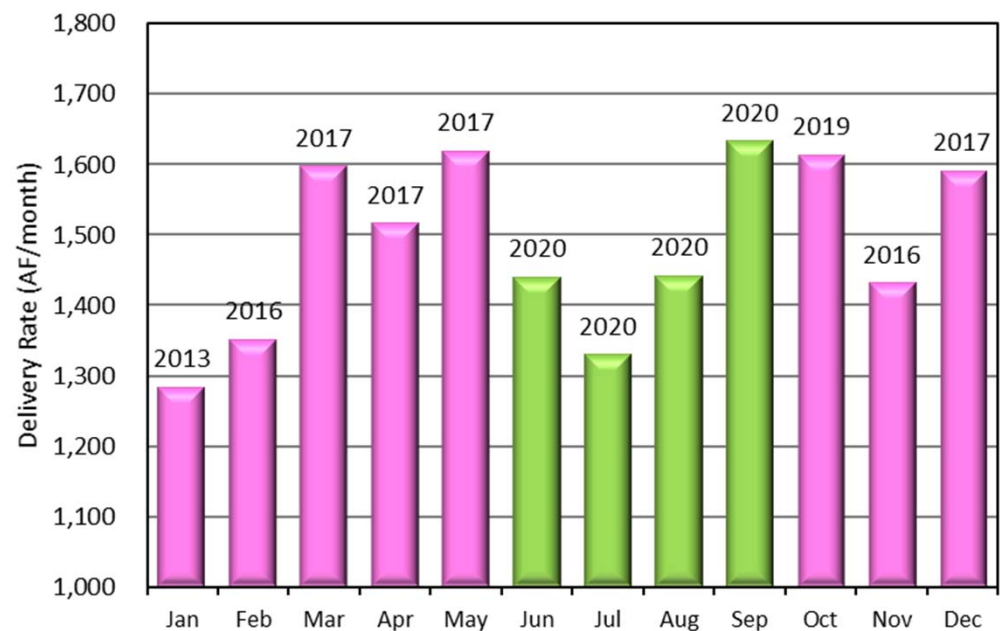
Groundwater Recharge Deliveries - Past 12 Months



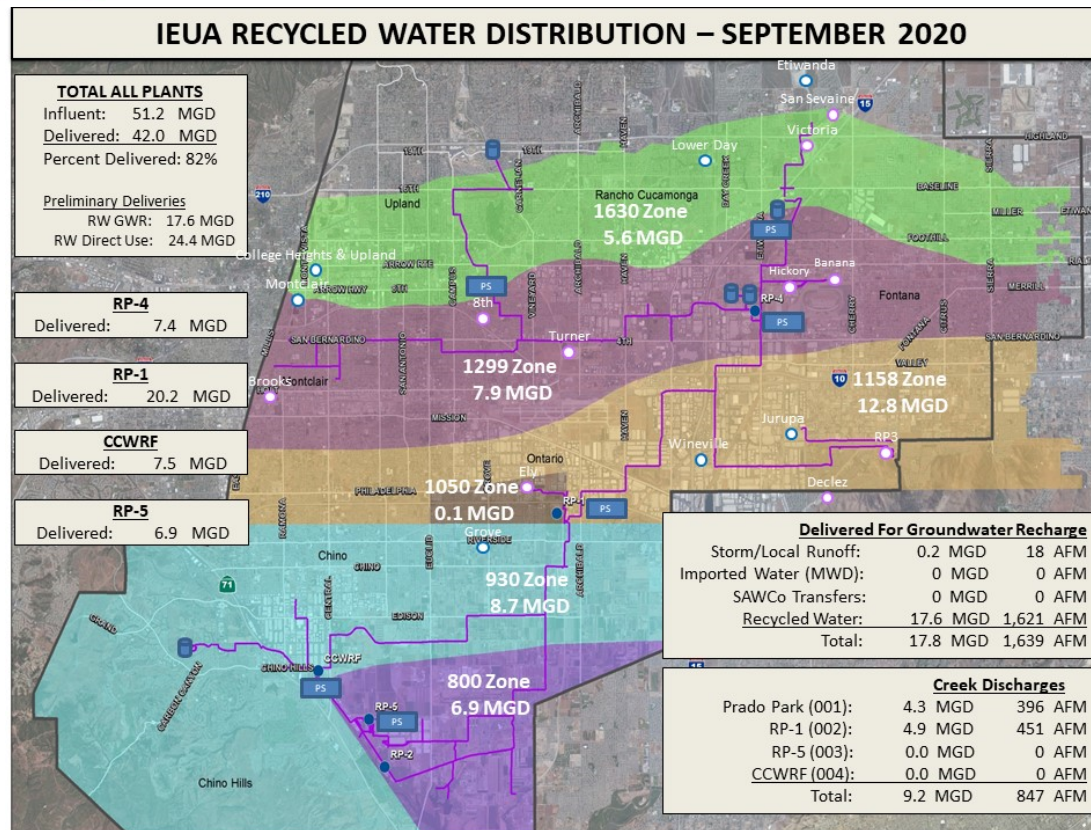
	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020
MWD and other Imported Water	1,813	1,198	2,577	492	0	0	148	453	425	110	0	0
Stormwater and LR (excluded Non-Replenishment)	38	1,616	2,536	182	321	2,547	2,494	125	21	12	81	12
Recycled Water	1,614	1,290	918	748	1,008	1,025	820	1,266	1,440	1,330	1,442	1,634

RW Recharge Deliveries - Historical Monthly Highs

Month	RW Recharge Deliveries - Historical Monthly Highs (AF)	Year of Occurrence
January	1,284	2013
February	1,352	2016
March	1,598	2017
April	1,517	2017
May	1,620	2017
June	1,440	2020
July	1,330	2020
August	1,442	2020
September	1,634	2020
October	1,614	2019
November	1,432	2016
December	1,591	2017



IEUA Recycled Water Distribution – September 2020



RECEIVE AND
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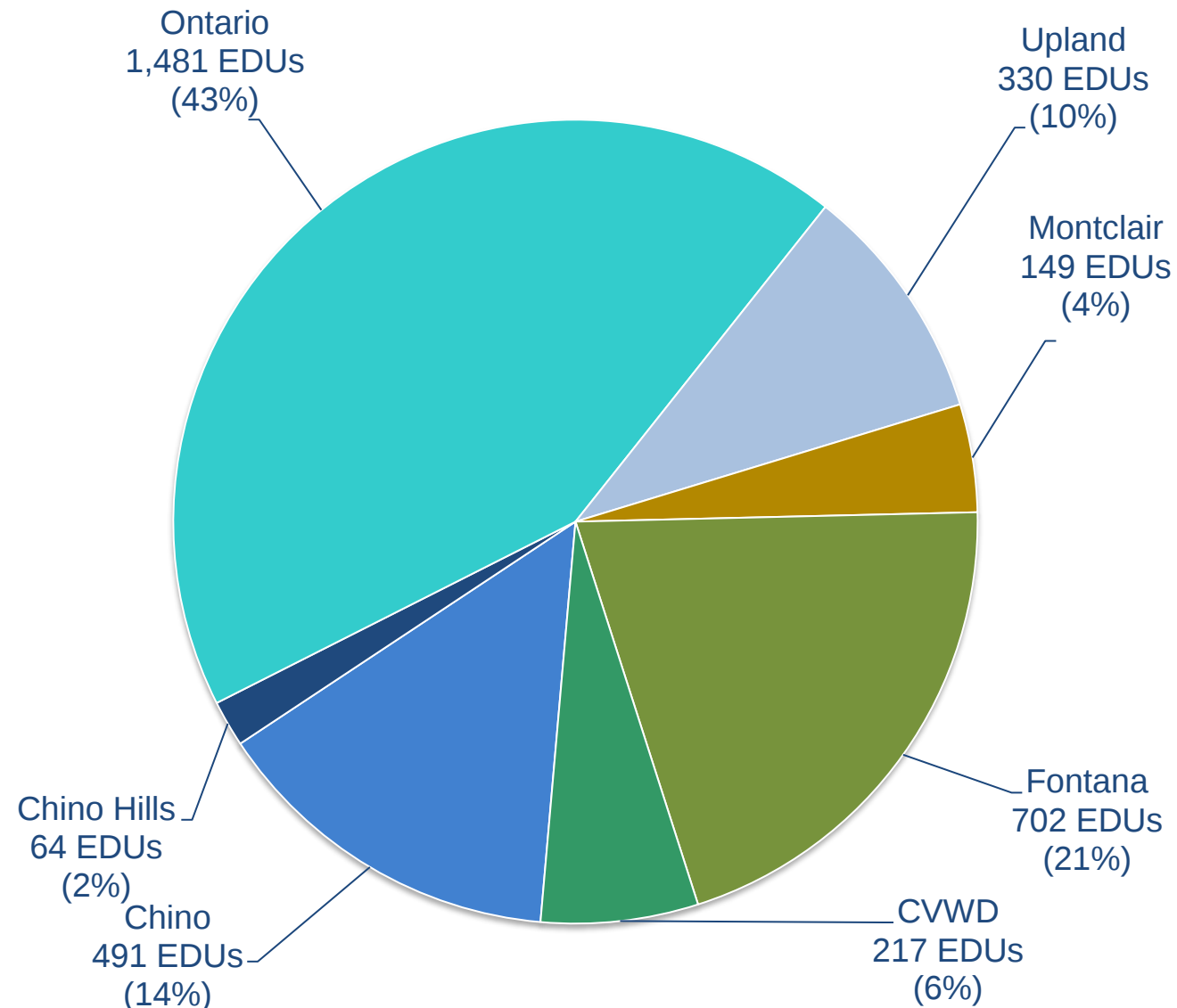
3A

FY 2019/2020 Annual Reports



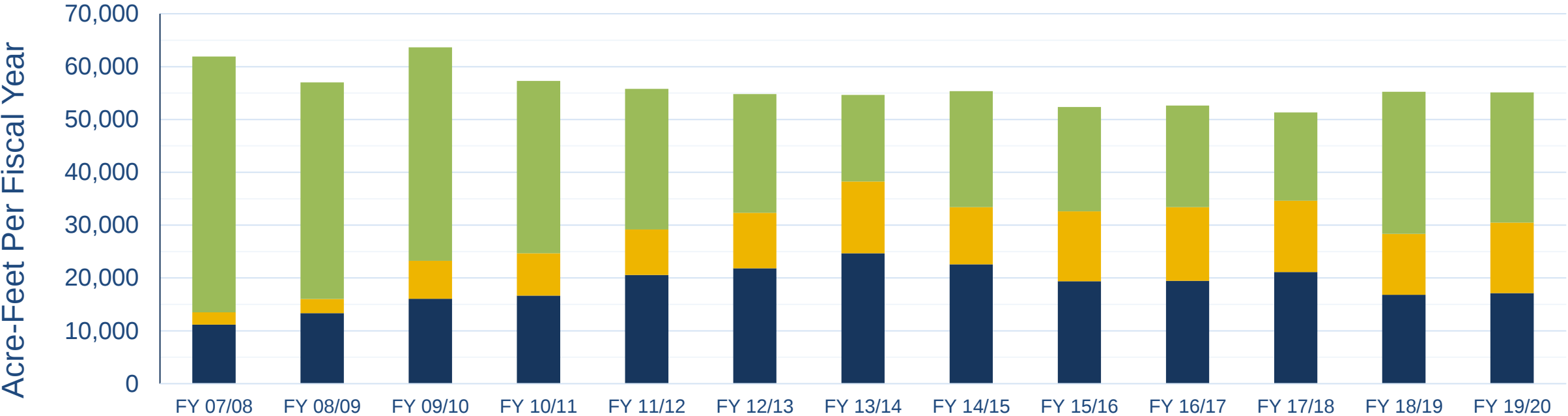
FY19/20 Building Activity

3,434 EDUs Resulted in \$23.9M Funding



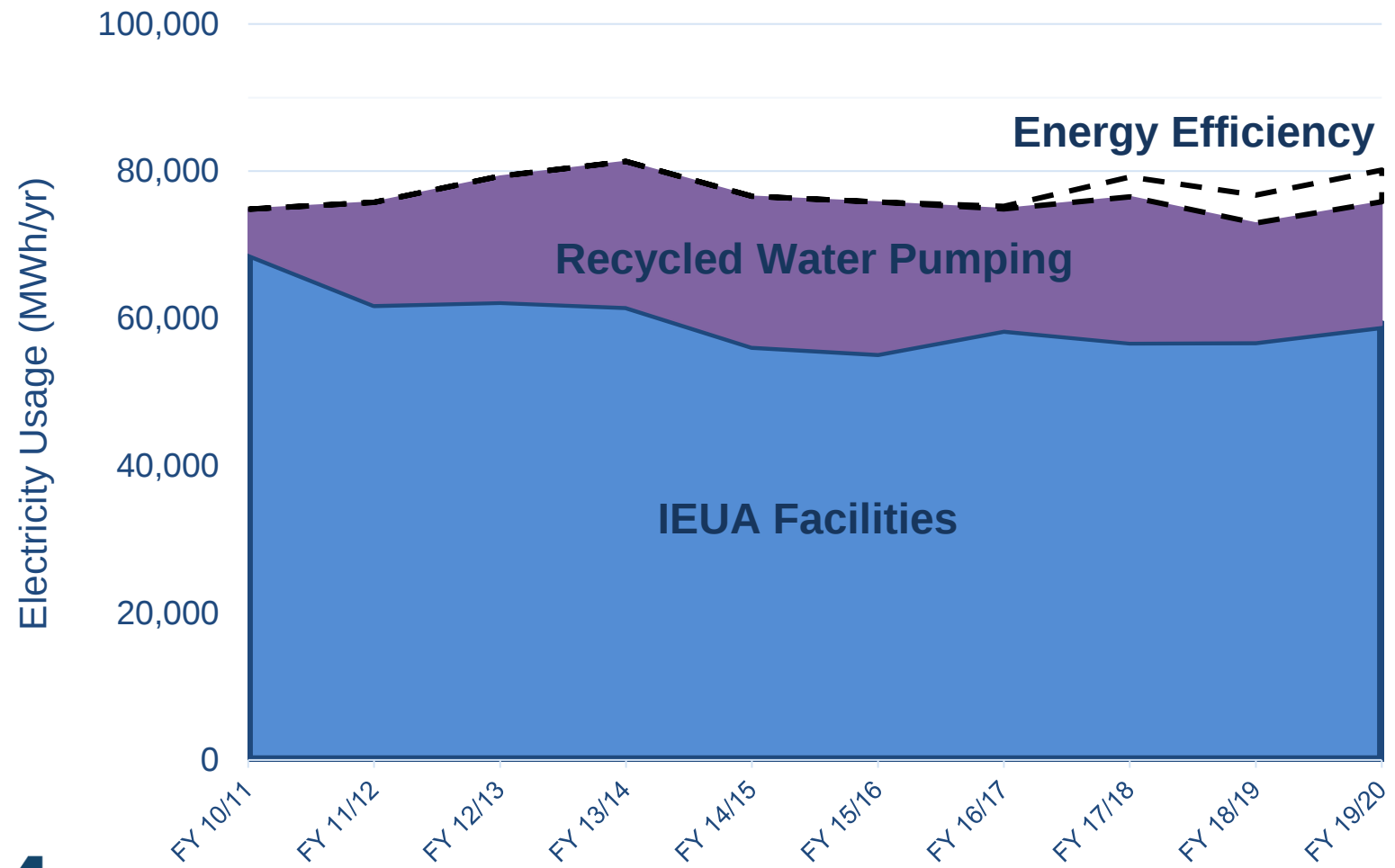
- EDU = Equivalent Dwelling Unit
- Partial EDU rounded to the nearest whole number

Recycled Water Deliveries



Direct	11,153	13,361	16,057	16,656	20,556	21,840	24,659	22,850	19,397	19,477	21,132	16,803	17,115
GWR	2,340	2,684	7,208	8,028	8,634	10,479	13,593	10,840	13,222	13,934	13,510	11,542	13,381
Effluent	48,412	40,962	40,379	32,607	26,607	22,487	16,399	21,961	19,752	19,226	16,707	26,888	24,635
Total	61,905	57,007	63,644	57,291	55,797	54,806	54,651	55,651	52,371	52,637	51,349	55,233	55,131

Electricity Usage



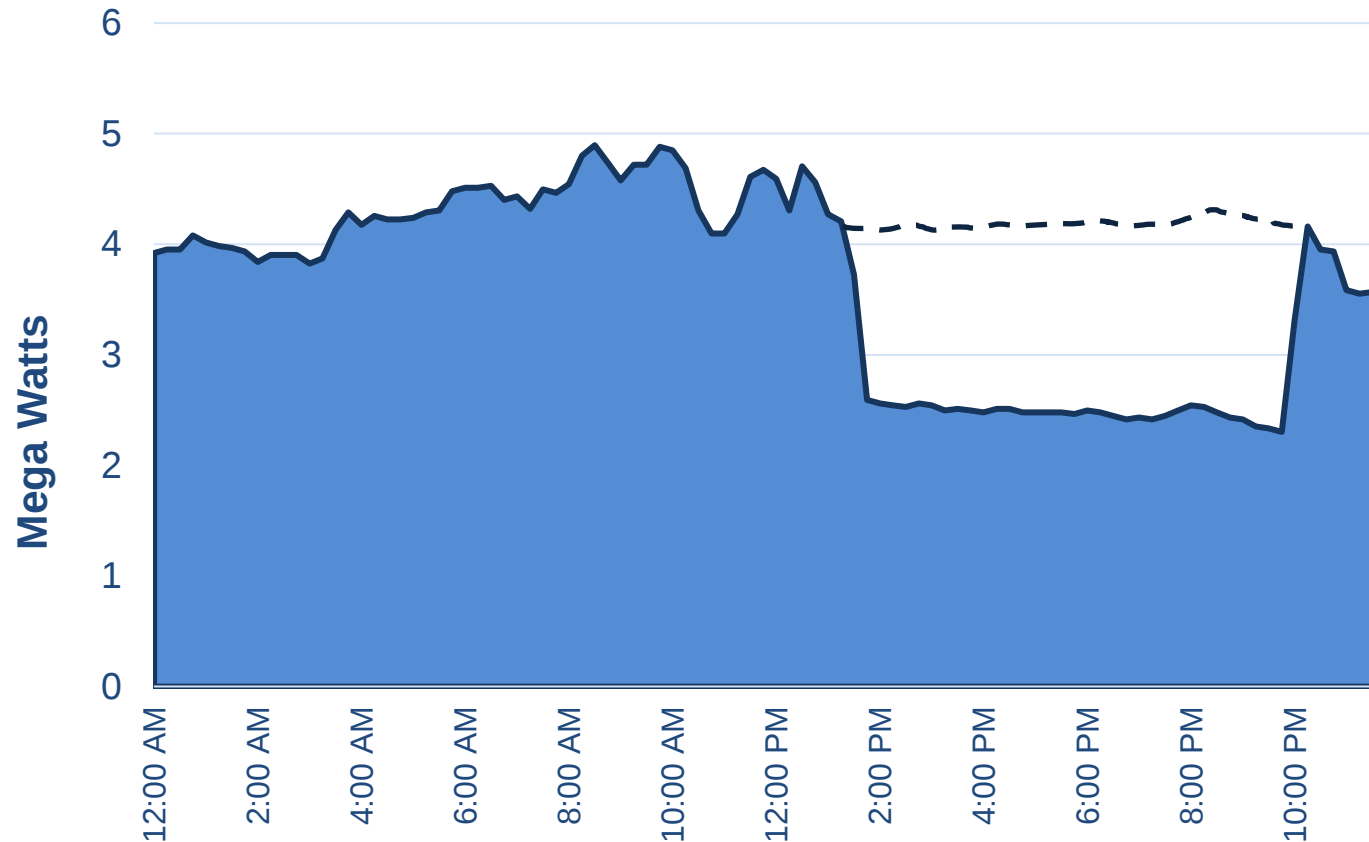
FY 2019/20 Energy Statistics

- 75,703 MWh of electricity consumption
- 10% of electricity from renewable energy
- Annual Cost: \$7.6 M
- RP1 Energy efficiency project completed with projected annual savings of \$41,000

Renewable Energy Projects
2008 – 2020 savings: \$1,040,000

Governor's Executive Order | Summer 2020 Heat Wave & Energy Shortage

RP-1 Electricity Load Shifting



- Extreme heat event Aug 17, 18, and 19
- Governor actions
 - State of Emergency Proclamation
 - Executive Order N-74-20
- Rotating power interruptions
- IEUA response
 - Load shifting (2 Mega Watts)
 - Energy storage (1 Mega Watt)

Building Activity Report - YTD Fiscal Year 2020/21



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

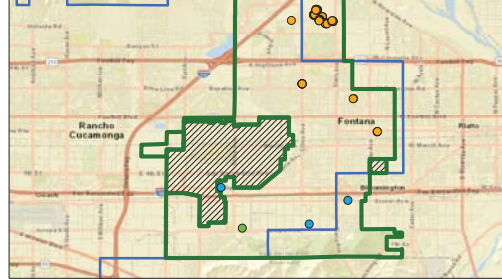
HALF MILE GRID: TOTAL EDU's (YTD)



TOTAL EDU BY WASTEWATER CONNECTION TYPE (YTD)

Contracting Agency	YTD Actual				Projected
	Commercial (EDUs)	Industrial (EDUs)	Residential (EDUs)	Total (EDUs)	
Chino	2	0	58	60	430
Chino Hills	7	0	1	8	182
CVWD	12	0	0	12	1650
Fontana	11	4	205	220	2406
Montclair	6	0	0	6	407
Ontario	19	-1	121	139	3865
Upland	14	0	0	14	381
Total	71	3	385	459	9321

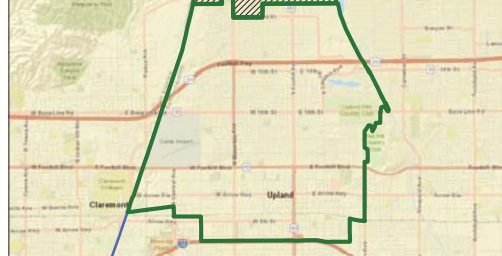
Fontana (Aug 2020)



Cucamonga Valley Water District (Aug 2020)



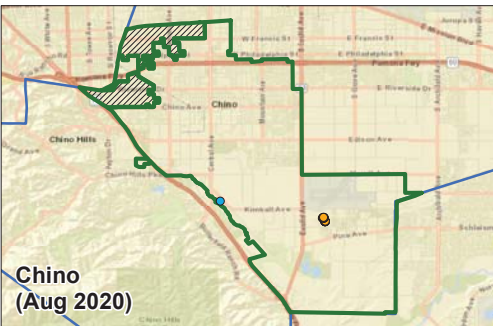
Upland (Aug 2020)



Chino Hills (Aug 2020)



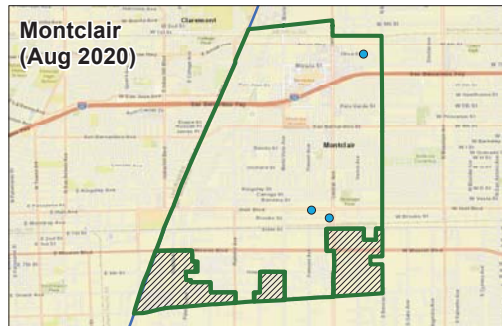
Chino (Aug 2020)



Ontario (Aug 2020)



Montclair (Aug 2020)



2020

IEUA FY 2019-2020 Recycled Water Annual Report

Water Smart
Thinking in Terms of Tomorrow



Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

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APPENDICES

APPENDIX A Recycled Water Effluent Monitoring Data for Calendar Year 2019

APPENDIX B Recycled Water Compliance Data for Calendar Year 2019

INTRODUCTION

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

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

TREATMENT PLANTS

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

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

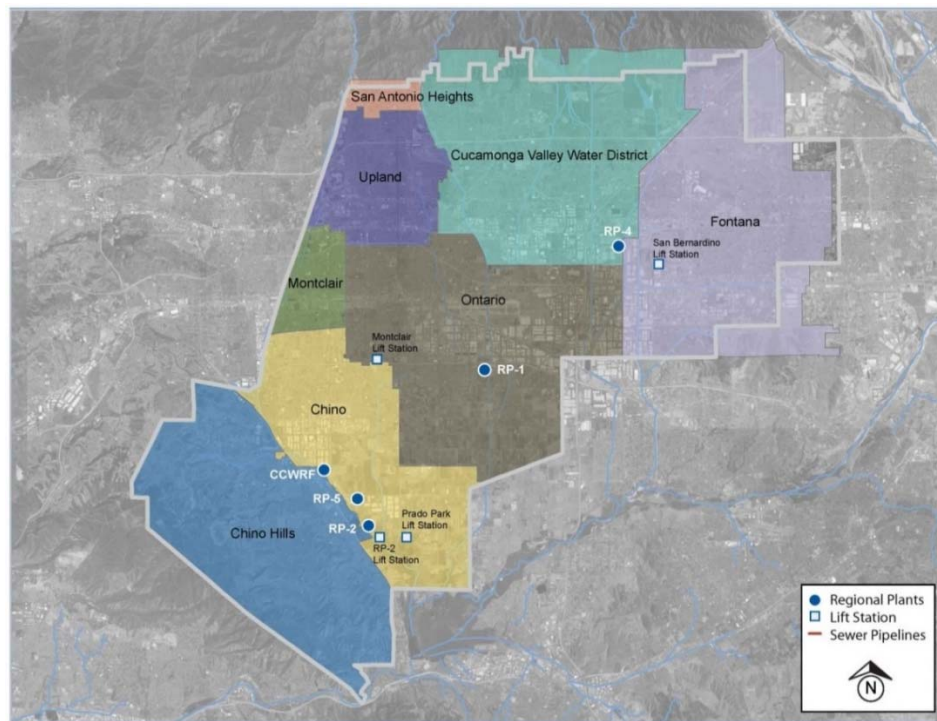


Figure 1 - IEUA Service Area

DEMANDS

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

The recycled water delivery volumes of direct use and groundwater recharge can vary seasonally and annually based on a variety of factors (e.g. the rainfall intensity, rainfall duration, and recharge basin maintenance activities). **Figure 2** shows IEUA's historical direct use and groundwater recharge of recycled water for the past 10 years.

Recycled water demands for the combined direct use and recharge purposes were approximately 54 percent of the available supply. During the peak demand summer months (July through September), the total recycled water demands were approximately 75 percent of the available supply.

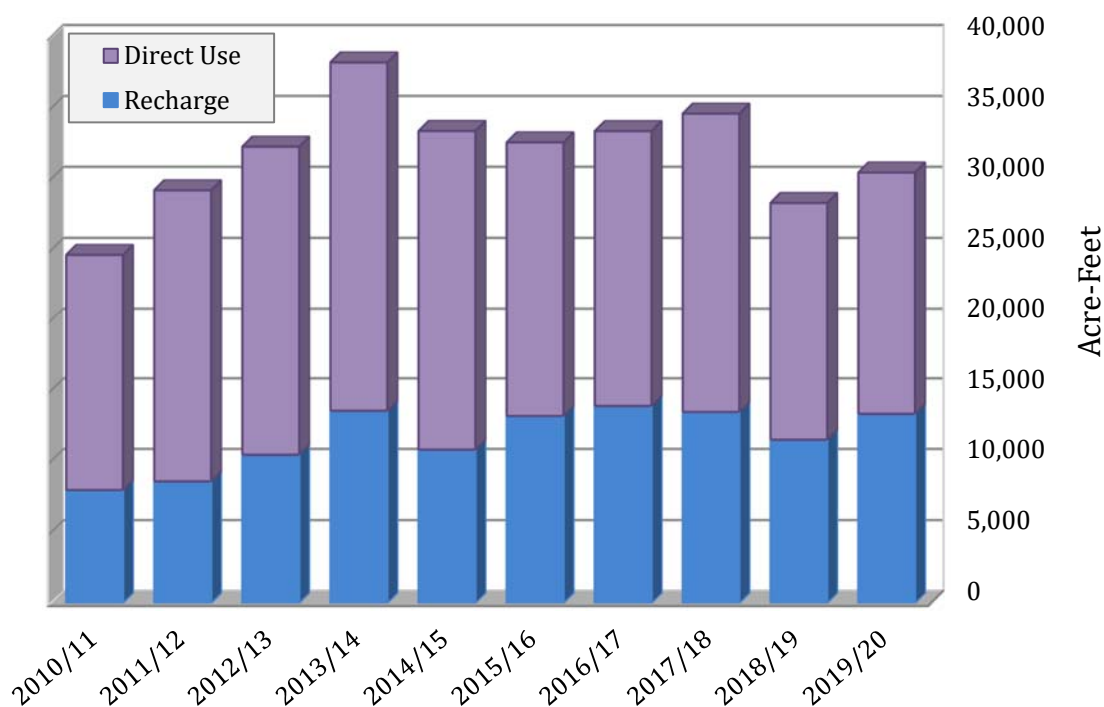


Figure 2 – Historical Recycled Water Direct Use and Groundwater Recharge

DEMANDS BY USE TYPE

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

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

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

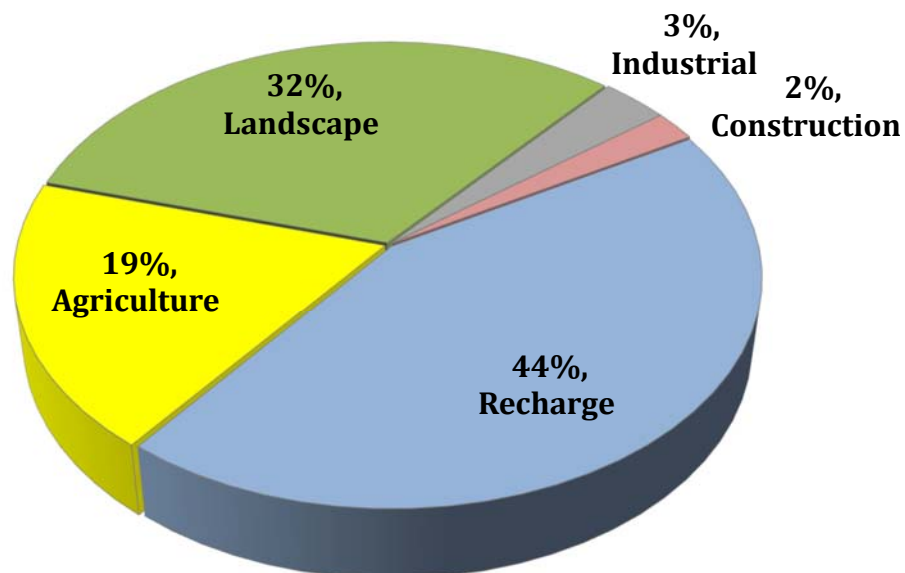


Figure 3 – Recycled Water Demand by Use Type for 2019/20

RETAIL DEMANDS

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

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

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

Table 2 shows the 2019/20 recycled water demand by agency. Each agency's total includes its direct use and its allocation from IEUA for recycled water groundwater recharge based on the Chino Basin Regional Sewage Service Contract.

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

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

CUSTOMERS DEMANDS

Table 3 lists the top ten largest direct reuse customer sites for the fiscal year (excluding groundwater recharge sites). During 2019/20, eighty-seven (87) new connections were made to the recycled water system with a total new demand estimated at 199 AFY. Connected new demand is the anticipated annual usage based on land size and previous potable water usage history.

Table 3 – Top 10 Recycled Water Customers for 2019/20

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

ECONOMIC AND ENVIRONMENTAL IMPACTS

The 30,495 AF of recycled water used during the fiscal year is the equivalent of the water supply for roughly 40,945 homes. The use of recycled water reduces the need to pump State Water Project water over the Tehachapi Mountains, an equivalent net energy demand reduction of 1,940 kilowatt-hours (kWh) per AF, and an overall reduction of approximately 53 percent in carbon dioxide emissions.

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

HISTORY

Early water recycling efforts in the 1970s by IEUA involved irrigation at the Whispering Lakes Golf Course adjacent to RP-1 in Ontario and at the El Prado Park and Golf Course in Chino. In the 1980s, recycled water continued to be an integral part of IEUA planning with implementation of the CCWRF and RP-4 recycling plants. These two recycling plants were sited specifically at higher elevations to reduce recycling plants water pumping costs. A backbone recycled water distribution system was installed in Chino and Chino Hills from CCWRF in 1997 and was initially operated by IEUA under Ordinance No. 63. This system was later turned over to the City of Chino and the City of Chino Hills and forms the core of the recycled water distribution network operated by these two cities.

The first major regional pipeline was constructed in 1995 and served the dual purpose of a regional recycled water distribution pipeline and an outfall allowing RP-4 effluent to be discharged with RP-1 effluent into Cucamonga Creek. The RP-4 outfall was designed as a pressurized system so that water could be pumped up from RP-1 to RP-4 as well as flow down in the opposite direction from RP-4 to RP-1 and the creek outfall.

In 1999, IEUA began groundwater recharge with recycled water at Ely Basin. The initial Ely Basin project was followed by the Chino Basin Watermaster's (CBWM) development of the Optimum Basin Management Program (OBMP) and the region's efforts (including IEUA's) to implement the OBMP. In 2000, the OBMP identified recycled water use as a critical component in drought-proofing and maintaining the region's economic growth. With imported water rates increasing and long-term supply reliability declining, the region committed to aggressively and proactively address regional impacts. The OBMP set the path for the development of a regional recycled water distribution system and a Recycled Water Implementation Plan.

The use of recycled water presented several advantages to IEUA and its member agencies: it is one of the most significant unused local water supplies; it is reliable during drought and climate change conditions; and it requires significantly less energy than imported water to deliver to customers and thus reduces greenhouse gas emissions. IEUA in partnership with its member agencies and CBWM invested approximately \$625 million since 2000 to increase the availability of local water supplies through water recycling, conservation, recharge improvements, the MWD groundwater storage and recovery project, the Chino Desalter, and other water management programs.

In 2002, IEUA Board of Directors adopted Ordinance No. 75, the Mandatory Use Ordinance, to establish incentives and encourage recycled water use from the regional distributions system. Also in 2002, the CBWM, Chino Basin Water Conservation District (CBWCD), San Bernardino

County Flood Control District (SBCFCD) and IEUA combined efforts to greatly expand groundwater recharge capacity through the Chino Basin Facilities Improvement Program.

In 2005, IEUA was permitted by the Regional Water Quality Control Board (RWQCB) to operate its recycled water groundwater recharge programs at five additional recharge sites (Banana, Hickory, Etiwanda Conservation Ponds, Declez, RP3, and Turner Basins). In 2007, IEUA was permitted to operate its recycled water groundwater recharge program at seven more recharge sites (Brooks, 8th Street, Victoria, Lower Day, San Sevaine, Etiwanda Spreading Grounds (later reconfigured as the Etiwanda Debris Basin) and Ely Basins. The 2007 permit was amended in 2009 to modify how IEUA tracks diluent water and recycled water blending, which effectively increased IEUA's ability to recharge using recycled water.

In November 2007, IEUA and its member agencies unanimously adopted the Three-Year Recycled Water Business Plan. IEUA and its member agencies committed to implementing the plan, which laid out a focused and cost-effective approach to rapidly increase the availability and use of recycled water within IEUA's service area.

Based on the series of regional decisions since 2000, over \$350 million was invested into the implementation of a robust Recycled Water Program. The region has achieved program success by leveraging heavily on grant funding and loans. With unanimous regional support, annual recycled water use grew from approximately 5,396 AF in 2004/05 to a peak of 38,251 AF in 2013/14. Over the past several years, recycled water demand has fallen slightly, which has been primarily driven by land use conversion from agriculture to urban.

APPENDIX A
RECYCLED WATER
EFFLUENT MONITORING DATA
FOR CALENDAR YEAR 2019

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

RP-1 (M-001A* & M-001B) Effluent Monitoring Data

Table No. 3a

	Flow			EC			pH			BOD ₅				TSS				TOC			TDS*			TIN			TN			NH ₃ -N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L		%		mg/L		%		mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 -8.5			20		15		20		15														4.5		
Jan-19	2.0	1.5	2.3	997	942	1068	6.9	6.6	7.1	<2	<2	<2	0.4	<2	<2	<2	0.4	6.0	5.2	6.7	578	558	594	4.8	4.5	5.5	5.6	5.2	6.3	<0.1	<0.1	<0.1
Feb-19	3.0	1.8	4.0	1002	929	1065	6.9	6.6	7.1	<2	<2	<2	0.7	<2	<2	<2	0.5	6.5	5.4	7.5	553	522	576	4.4	3.7	5.0	5.2	4.1	6.1	<0.1	<0.1	<0.1
Mar-19	2.6	1.3	3.5	1043	830	1171	7.0	6.6	7.3	2	<2	2	0.6	<2	<2	2	0.5	7.9	6.6	9.6	593	558	638	5.0	3.8	6.1	5.8	5.0	6.8	<0.1	<0.1	<0.1
Apr-19	2.8	1.6	3.1	1002	929	1065	7.1	6.9	7.2	2	<2	4	0.5	<2	<2	<2	0.5	8.4	7.3	14.4	527	502	564	4.4	3.3	6.5	5.5	4.6	6.2	<0.1	<0.1	<0.1
May-19	2.4	1.9	3.0	900	854	957	7.0	6.8	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	7.5	6.9	8.2	510	502	520	3.6	1.9	4.8	5.0	3.8	5.8	<0.1	<0.1	<0.1
Jun-19	1.9	1.2	2.1	944	892	980	7.1	6.8	7.2	<2	<2	2	0.5	<2	<2	2	0.5	7.4	6.9	8.2	545	524	562	2.3	0.8	4.1	3.8	2.2	5.0	<0.1	<0.1	<0.1
Jul-19	1.6	1.0	2.5	888	804	956	7.2	6.7	7.4	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.0	8.6	496	468	524	3.2	2.3	4.6	4.6	4.1	5.6	<0.1	<0.1	<0.1
Aug-19	1.4	1.0	1.8	834	796	1013	7.3	6.9	7.4	<2	<2	<2	0.5	<2	<2	<2	0.4	6.8	6.0	7.4	468	460	478	3.1	2.4	4.1	4.4	3.9	5.0	<0.1	<0.1	<0.1
Sep-19	1.8	0.1	2.6	858	811	981	7.2	6.8	7.5	<2	<2	2	0.5	<2	<2	<2	0.4	6.9	5.6	7.7	532	464	612	2.9	2.1	4.2	4.0	3.7	4.4	<0.1	<0.1	<0.1
Oct-19	2.7	2.5	3.0	825	789	871	7.1	6.7	7.5	<2	<2	2	0.5	<2	<2	<2	0.5	6.8	5.8	7.7	498	454	590	2.8	1.5	3.8	4.6	4.1	5.0	<0.1	<0.1	<0.1
Nov-19	2.1	0.0	2.5	877	845	927	7.0	6.7	7.3	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.3	7.9	478	456	500	3.4	2.1	4.2	4.9	4.5	5.2	<0.1	<0.1	0.2
Dec-19	1.9	1.5	2.5	889	783	922	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	7.0	5.9	8.1	474	456	490	4.4	3.6	5.4	6.0	5.3	6.7	<0.1	<0.1	<0.1
Avg	2.2	1.3	2.8	921	850	998	7.1	6.7	7.3	<2	<2	2	0.5	<2	<2	<2	0.5	7.1	6.2	8.5	521	494	554	3.7	2.7	4.9	5.0	4.2	5.7	<0.1	<0.1	<0.1
Min	1.4	0.0	1.8	825	783	871	6.9	6.6	7.1	<2	<2	<2	0.4	<2	<2	<2	0.4	6.0	5.2	6.7	468	454	478	2.3	0.8	3.8	3.8	2.2	4.4	<0.1	<0.1	<0.1
Max	3.0	2.5	4.0	1043	942	1171	7.3	6.9	7.5	2	<2	4	0.7	<2	<2	2	0.5	8.4	7.3	14.4	593	558	638	5.0	4.5	6.5	6.0	5.3	6.8	<0.1	<0.1	0.2

*M-001A is the compliance point for continuous monitoring parameters, TDS, and toxicity.

RP-1/RP-4 (M-002A) Effluent Monitoring Data

Table No. 3b

	Flow			EC			pH			BOD ₅				TSS				TOC			TDS			TIN			TN			NH ₃ -N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L		%		mg/L		%		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		
Limit>>>							6.5 -8.5			15		20		15																4.5		
Jan-19	25.5	13.2	41.3	740	676	805	6.8	6.6	7.1	<2	<2	2	0.5	<2	<2	5	0.6	6.1	5.0	7.8	481	428	508	6.1	6.1	6.1	6.9	6.9	6.9	<0.1	<0.1	<0.1
Feb-19	33.8	28.2	43.1	636	533	705	6.8	6.6	7.0	<2	<2	<2	0.6	<2	<2	<2	0.5	6.4	5.3	7.3	459	428	480	4.5	3.5	5.0	5.2	4.3	6.1	<0.1	<0.1	0.1
Mar-19	25.6	14.0	36.7	692	568	829	6.9	6.8	7.1	2	<2	2	0.6	<2	<2	2	0.5	7.8	6.7	9.4	465	424	480	5.0	3.5	6.1	6.6	6.5	6.7	<0.1	<0.1	<0.1
Apr-19	11.7	5.1	20.4	742	656	833	6.9	6.8	7.2	2	<2	3	0.5	<2	<2	<2	0.5	7.8	5.1	8.7	477	464	488	4.8	3.3	6.4	4.7	4.2	5.2	<0.1	<0.1	<0.1
May-19	14.2	4.4	28.4	773	707	834	7.0	6.8	7.4	<2	<2	2	0.5	<2	<2	<2	0.5	7.2	6.1	7.8	478	464	492	3.7	2.1	5.4	6.0	6.0	6.0	<0.1	<0.1	<0.1
Jun-19	9.2	3.8	12.0	866	747	936	7.0	6.6	7.2	<2	<2	2	0.6	<2	<2	<2	0.5	7.1	6.7	7.8	484	476	490	2.6	1.4	4.2	4.7	4.7	4.7	<0.1	<0.1	0.1
Jul-19	6.7	0.3	14.2	815	750	869	7.0	6.7	7.2	<2	<2	3	0.6	<2	<2	<2	0.5	6.9	6.0	8.5	458	434	480	3.4	2.5	4.3	5.3	5.3	5.3	<0.1	<0.1	<0.1
Aug-19	0.9	0.3	2.6	819	736	900	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	6.7	5.7	9.1	472	456	498	3.2	2.4	4.2	5.4	5.4	5.4	<0.1	<0.1	<0.1
Sep-19	3.7	0.3	10.5	805	680	850	7.0	6.7	7.2	<2	<2	<2	0.5	<2	<2	<2	0.5	6.6	5.7	7.3	449	430	466	2.8	2.0	3.9	4.0	4.0	4.0	<0.1	<0.1	<0.1
Oct-19	2.3	0.3	8.9	720	626	803	6.9	6.6	7.2	<2	<2	<2	0.6	<2	<2	<2	0.5	6.6	5.6	7.4	452	448	458	3.1	1.6	4.5	4.7	4.7	4.7	<0.1	<0.1	<0.1
Nov-19	10.7	2.1	31.2	752	678	837	6.9	6.5	7.3	<2	<2	2	0.5	<2	<2	<2	0.5	6.8	6.0	7.9	471	456	484	3.3	2.2	4.9	3.8	3.8	3.8	<0.1	<0.1	0.2
Dec-19	22.7	9.7	33.7	705	576	793	6.8	6.6	7.1	<2	<2	2	0.5	<2	<2	<2	0.5	6.9	5.5	7.8	444	416	460	4.1	3.5	5.2	6.1	6.1	6.1	<0.1	<0.1	0.1
Avg	13.9	6.8	23.6	755	661	833	6.9	6.7	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	6.9	5.8	8.1	466	444	482	3.9	2.8	5.0	5.3	5.2	5.4	<0.1	<0.1	<0.1
Min	0.9	0.3	2.6	636	533	705	6.8	6.5	7.0	<2	<2	<2	0.5	<2	<2	<2	0.5	6.1	5.0	7.3	444	416	458	2.6	1.4	3.9	3.8	3.8	3.8	<0.1	<0.1	<0.1
Max	33.8	28.2	43.1	866	750	936	7.0	6.8	7.4	2	<2	3	0.6	<2	<2	5	0.6	7.8	6.7	9.4	484	476	508	6.1	6.1	6.4	6.9	6.9	6.9	<0.1	<0.1	0.2

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

RP-5 (M-003) Effluent Monitoring Data

Table No. 3c

	Flow			EC			pH			BOD ₅				TSS				TOC			TDS			TIN			TN			NH ₃ -N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L		%		mg/L		%		mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 - 8.5			20		15		20		15														4.5		
Jan-19	5.8	4.2	8.0	914	866	966	6.8	6.6	6.9	<2	<2	<2	0.6	<2	<2	<2	0.6	5.0	4.6	5.2	572	556	596	8.2	8.2	8.2	8.9	8.9	8.9	<0.1	<0.1	<0.1
Feb-19	6.0	4.3	9.3	926	832	986	6.9	6.8	7.1	<2	<2	<2	0.5	<2	<2	<2	0.6	5.3	4.7	6.1	574	532	592	7.4	6.3	9.0	7.4	7.4	7.4	<0.1	<0.1	0.1
Mar-19	5.6	3.5	8.4	1005	946	1103	7.0	6.8	7.1	<2	<2	<2	0.9	<2	<2	3	0.9	5.6	4.9	6.3	600	566	646	10.5	7.3	17.2	12.4	12.4	12.4	<0.1	<0.1	<0.1
Apr-19	4.7	3.2	7.1	953	914	987	7.0	6.7	7.1	<2	<2	<2	0.6	<2	<2	<2	0.7	5.4	4.9	6.3	551	544	556	7.0	5.2	10.4	5.9	5.9	5.9	<0.1	<0.1	0.1
May-19	7.3	5.2	9.4	951	925	983	7.0	6.8	7.1	<2	<2	3	0.7	<2	<2	2	0.9	5.4	4.8	6.0	547	526	560	5.4	3.7	9.7	6.6	6.6	6.6	<0.1	<0.1	<0.1
Jun-19	3.8	2.1	6.8	992	970	1013	7.0	6.9	7.2	<2	<2	<2	0.7	<2	<2	<2	0.8	5.4	4.8	5.6	542	536	548	3.7	3.0	5.4	4.5	4.5	4.5	<0.1	<0.1	0.1
Jul-19	4.1	1.3	8.1	1003	982	1020	7.0	6.8	7.2	<2	<2	<2	0.5	<2	<2	7	0.4	5.7	5.3	6.6	515	500	530	2.7	1.3	3.9	3.5	3.5	3.5	<0.1	<0.1	<0.1
Aug-19	7.3	5.8	8.5	1016	977	1068	7.0	6.8	7.2	<2	<2	<2	0.7	<2	<2	3	0.6	5.5	4.6	6.2	513	492	530	4.0	2.1	5.9	2.9	2.9	2.9	<0.1	<0.1	<0.1
Sep-19	7.4	5.0	8.6	1030	985	1073	7.0	6.9	7.2	<2	<2	<2	0.8	<2	<2	<2	0.8	5.5	5.1	7.3	530	512	540	4.9	4.0	5.7	5.5	5.5	5.5	<0.1	<0.1	<0.1
Oct-19	6.7	5.1	8.8	946	897	1004	7.0	6.9	7.2	<2	<2	<2	0.6	<2	<2	<2	0.7	5.3	4.2	5.7	547	496	632	5.7	4.6	7.2	6.0	6.0	6.0	<0.1	<0.1	<0.1
Nov-19	7.7	4.8	9.8	918	841	940	6.9	6.7	7.2	<2	<2	2	0.5	<2	<2	<2	0.6	6.0	4.9	7.6	514	506	528	5.6	4.8	6.0	6.1	6.1	6.1	<0.1	<0.1	<0.1
Dec-19	9.4	8.0	11.0	869	798	909	6.8	6.6	7.0	<2	<2	<2	0.6	<2	<2	2	0.6	6.1	5.5	6.8	514	504	526	6.1	4.6	7.4	7.6	7.6	7.6	<0.1	<0.1	<0.1
Avg	6.3	4.4	8.7	960	911	1004	7.0	6.8	7.1	<2	<2	<2	0.6	<2	<2	<3	0.7	5.5	4.9	6.3	543	523	565	5.9	4.6	8.0	6.4	6.4	6.4	<0.1	<0.1	<0.1
Min	3.8	1.3	6.8	869	798	909	6.8	6.6	6.9	<2	<2	<2	0.5	<2	<2	<2	0.4	5.0	4.2	5.2	513	492	526	2.7	1.3	3.9	2.9	2.9	2.9	<0.1	<0.1	<0.1
Max	9.4	8.0	11.0	1030	985	1103	7.0	6.9	7.2	<2	<2	3	0.9	<2	<2	7	0.9	6.1	5.5	7.6	600	566	646	10.5	8.2	17.2	12.4	12.4	12.4	<0.1	<0.1	0.1

*Lab EC data used

CCWRF (M-004) Effluent Monitoring Data

Table No. 3d

	Flow			EC			pH			BOD ₅				TSS				TOC			TDS			TIN			TN			NH ₃ -N (grab)		
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg Dis	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
Date	MGD			µmhos/cm			unit			mg/L		%		mg/L		%		mg/L			mg/L			mg/L			mg/L			mg/L		
Limit>>>							6.5 - 8.5			20		15		20		15														4.5		
Jan-19	6.1	0.5	10.0	935	873	985	6.8	6.6	7.0	<2	<2	<2	0.5	<2	<2	<2	0.6	5.5	4.9	5.9	535	518	550	5.4	5.4	5.4	6.3	6.3	6.3	0.1	<0.1	0.2
Feb-19	7.4	5.5	11.4	942	835	986	6.9	6.7	7.1	<2	<2	2	0.4	<2	<2	2	0.6	6.5	5.3	7.7	523	478	546	5.1	4.3	5.6	6.6	6.3	6.8	<0.1	<0.1	0.1
Mar-19	5.5	0.7	8.0	959	908	1023	6.9	6.7	7.1	<2	<2	2	0.5	<2	<2	2	0.6	7.7	6.8	8.8	545	516	574	4.3	3.0	4.7	5.4	5.4	5.4	<0.1	<0.1	0.1
Apr-19	1.0	0.7	1.8	902	878	924	6.8	6.6	7.0	<2	<2	2	0.5	<2	<2	<2	0.6	6.8	6.3	7.6	511	506	514	4.3	3.0	5.1	4.9	4.9	4.9	<0.1	<0.1	<0.1
May-19	2.2	0.7	5.3	932	904	969	6.8	6.6	7.6	<2	<2	2	0.4	<2	<2	<2	0.5	7.0	6.2	7.7	535	508	548	4.0	2.7	4.8	4.7	4.7	4.7	<0.1	<0.1	<0.1
Jun-19	0.9	0.0	2.5	951	878	988	6.8	6.6	7.5	<2	<2	2	0.5	<2	<2	<2	0.5	7.1	6.4	7.7	542	532	550	4.9	3.5	5.8	6.5	6.5	6.5	<0.1	<0.1	<0.1
Jul-19	0.0	0.0	0.0	836	793	870	7.1	7.0	7.2	<2	<2	<2	0.6	<2	<2	<2	0.5	6.4	5.7	7.5				4.5	3.3	6.0	7.0	7.0	7.0			
Aug-19	0.0	0.0	0.0	815	794	854	7.1	7.0	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	6.6	5.8	7.9				4.8	4.1	5.7	5.8	5.8	5.8			
Sep-19	0.0	0.0	0.0	825	798	861	7.0	6.6	7.2	<2	<2	<2	0.5	<2	<2	<2	0.6	6.9	6.4	7.5				5.1	4.3	5.8	6.0	6.0	6.0			
Oct-19	0.0	0.0	0.0	794	742	837	7.1	7.0	7.2	<2	<2	<2	0.4	<2	<2	<2	0.5	6.7	5.8	7.5				5.0	3.8	5.9	6.7	6.7	6.7			
Nov-19	1.5	0.0	8.3	878	800	924	6.8	6.5	7.1	<2	<2	<2	0.5	<2	<2	<2	0.5	6.6	5.7	7.1	519	502	530	5.6	4.7	6.7	7.7	7.7	7.7	0.2	<0.1	0.3
Dec-19	4.6	2.6	6.8	881	780	929	6.8	6.6	7.0	<2	<2	<2	0.4	<2	<2	<2	0.5	6.6	5.9	7.4	482	464	500	5.4	4.6	7.2	6.5	6.5	6.5	<0.1	<0.1	0.1
Avg	2.4	0.9	4.5	888	832	929	6.9	6.7	7.2	<2	<2	2	0.5	<2	<2	<2	0.5	6.7	5.9	7.5	524	503	539	4.8	3.9	5.7	6.2	6.1	6.2	<0.1	<0.1	0.1
Min	0.0	0.0	0.0	794	742	837	6.8	6.5	7.0	<2	<2	<2	0.4	<2	<2	<2	0.5	5.5	4.9	5.9	482	464	500	4.0	2.7	4.7	4.7	4.7	4.7	<0.1	<0.1	<0.1
Max	7.4	5.5	11.4	959	908	1023	7.1	7.0	7.6	<2	<2	2	0.6	<2	<2	2	0.6	7.7	6.8	8.8	545	532	574	5.6	5.4	7.2	7.7	7.7	7.7	0.2	<0.1	0.3

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RP-1 (M-001A) Effluent Monthly Toxicity Data

Table No. 4a

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

RP-1 (M-002A) Effluent Monthly Toxicity Data

Table No. 4b

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

* MBC Laboratory

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RP-5 (M-003) Effluent Monthly Toxicity Data

Table No. 4c

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

CCWRF (M-004) Effluent Monthly Toxicity Data

Table No. 4d

TABLE NO. 1									
CHRONIC TOXICITY - SURVIVAL						CHRONIC TOXICITY - REPRODUCTION			
(Ceriodaphnia Dubia)						(Ceriodaphnia dubia)			
START DATE	END DATE	NOEC	TUc	2-Mo Median TUc	NOEC	TUc	2-Mo Median TUc	IC ₂₅	
01/14/19*	thru 01/18/19	100	1.0	1.0	100	1.0	1.0	100	
01/21/19*	thru 01/25/19	100	1.0	1.0	100	1.0	1.0	100	
02/25/19*	thru 03/01/19	100	1.0	1.0	100	1.0	1.0	100	
03/18/19*	thru 03/22/19	100	1.0	1.0	100	1.0	1.0	100	
04/22/19*	thru 04/26/19	100	1.0	1.0	100	1.0	1.0	100	
05/13/19*	thru 05/17/19	100	1.0	1.0	100	1.0	1.0	100	
06/17/19*	thru 06/21/19	100	1.0	1.0	100	1.0	1.0	100	
No Discharge During July 2019									
No Discharge During August 2019									
No Discharge During September 2019									
No Discharge During October 2019									
11/23/19	thru 11/29/19	100	1.0	1.0	100	1.0	1.0	100	
12/07/19	thru 12/12/19	100	1.0	1.0	100	1.0	1.0	100	

* MBC Laboratory

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RP-1 (M-001A & M-001B) & RP-1/RP-4 (M-002A) Effluent Monitoring and Coliform Data

Table No. 5a

	001 Turbidity		002 Turbidity		001 Temp		002 Temp		001 Daily Coliform		001 7-day Median		002 Daily Coliform*		002 7-day Median		001 FLR	001 DT	001 CT	002 FLR	002 DT	002 CT
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Max	Min	Min	Max	Min	Min
Date	NTU		NTU		°C		°C		MPN / 100 mL								gpm/ft ²	min	mg-min/L	gpm/ft ³	min	mg-min/L
Jan-19	0.6	0.7	0.5	0.7	22.1	22.7	22.5	23.2	<2	29.2	<1	1.0	<2	29.2	<1	1.0	4	147	793	4	143	870
Feb-19	0.6	0.7	0.5	1.5	21.4	22.3	21.1	22.3	<1	2.0	<1	<1	<1	2.0	<1	<1	4	126	747	4	104	592
Mar-19	0.7	1.0	0.6	1.4	22.5	23.5	21.7	23.4	<1	2.0	<1	<1	<1	2.0	<1	<1	4	138	550	4	154	770
Apr-19	0.9	1.3	0.8	1.2	24.5	25.9	24.0	24.9	<1	10.9	<1	<1	<1	10.9	<1	<1	3	159	777	3	148	816
May-19	0.9	1.1	0.8	1.6	25.4	26.0	23.9	25.8	<1	2.0	<1	<1	<1	2.0	<1	<1	3	153	789	3	153	658
Jun-19	0.8	1.0	0.7	1.0	26.5	27.2	26.6	27.8	<1	6.3	<1	<1	<1	6.3	<1	<1	3	152	706	3	172	795
Jul-19	0.9	1.2	0.8	1.9	28.5	29.9	27.6	28.5	<1	14.5	<1	<1	<1	14.5	<1	<1	3	133	607	3	126	604
Aug-19	0.8	0.8	0.6	1.1	30.0	30.2	28.8	29.1	<1	2.0	<1	<1	<1	2.0	<1	<1	4	132	571	4	136	651
Sep-19	0.7	0.8	0.6	0.8	29.8	30.7	28.7	29.6	<10	261.3	<1	<1	<10	261.3	<1	<1	4	134	669	4	126	618
Oct-19	0.6	0.8	0.5	0.8	27.9	28.8	26.5	27.3	<1	5.2	<1	<1	<1	5.2	<1	<1	4	124	639	4	127	700
Nov-19	0.6	0.8	0.5	0.8	26.1	26.8	23.3	25.9	<1	5.0	<1	<1	<1	5.0	<1	<1	4	126	580	4	141	543
Dec-19	0.6	0.9	0.7	1.1	23.3	24.2	21.3	23.3	<1	4.1	<1	<1	<1	4.1	<1	<1	4	126	549	4	135	528
Avg	0.7	0.9	0.6	1.2	25.7	26.5	24.7	25.9	<2	29	<1	<1	<2	29	<1	<1	4	138	670	4	139	679
Min	0.6	0.7	0.5	0.7	21.4	22.3	21.1	22.3	<1	2	<1	<1	<1	2	<1	<1	3	124	549	3	104	528
Max	0.9	1.3	0.8	1.9	30.0	30.7	28.8	29.6	<10	261	<1	1	<10	261	<1	1	4	159	793	4	172	870

Requirements for disinfected tertiary-treated recycled water Title 22 Compliance: Min: 450 mg/L-min CT & 90 min DT
*Beginning August 2009, 002 effluent coliform compliance point at M-001B (splitter box).

RP-5 (M-003) & CCWRF (M-004) Effluent Monitoring and Coliform Data

Table No. 5b

	003 Turbidity		004 Turbidity		003 Temp		004 Temp		003 Daily Coliform		003 7-day Median		004 Daily Coliform		004 7-day Median		003 FLR	003 DT	003 CT	004 FLR	004 DT	004 CT
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Max	Min	Min	Max	Min	Min
Date	NTU		NTU		°C		°C		MPN / 100 mL								gpm/ft ²	min	mg-min/L	gpm/ft ³	min	mg-min/L
Jan-19	0.6	0.7	0.5	0.6	21.4	21.9	21.5	22.5	<1	2.0	<1	<1	<1	3.1	<1	<1	4	127	455	3	127	518
Feb-19	0.6	0.8	0.7	0.8	21.4	21.6	21.1	21.8	<1	1.0	<1	<1	<1	2.0	<1	<1	4	106	499	3	112	519
Mar-19	0.6	0.9	0.7	1.0	22.9	23.7	22.1	22.9	<1	2.0	<1	<1	<1	1.0	<1	<1	4	147	526	3	128	482
Apr-19	0.7	0.9	0.6	0.7	24.1	25.1	23.0	23.5	<1	2.0	<1	<1	<1	1.0	<1	<1	3	144	591	2	137	572
May-19	1.0	1.4	0.6	0.9	23.9	25.1	23.1	25.6	<1	4.1	<1	1	<1	1.0	<1	<1	3	135	580	2	115	497
Jun-19	0.8	1.1	0.7	0.8	25.7	26.1	25.4	27.6	<1	1.0	<1	<1	<1	1.0	<1	<1	3	134	531	2	129	517
Jul-19	1.0	1.3	0.6	0.9	27.6	30.1			<5	104.3	<1	<1	<6	145.0	<1	<1	3	138	558	2	127	538
Aug-19	1.0	1.6	0.6	0.7	29.1	29.4			<1	<1.0	<1	<1	<1	<1.0	<1	<1	3	151	550	2	128	568
Sep-19	0.9	1.2	0.5	0.6	27.6	28.1			<1	1.0	<1	<1	<1	<1	<1	<1	3	145	587	2	122	508
Oct-19	0.9	1.2	0.6	0.7	24.7	26.5			<1	<1	<1	<1	<1	1.0	<1	<1	3	126	598	2	136	579
Nov-19	0.9	1.5	0.6	1.0	24.0	25.0	20.0	23.3	<1	1	<1	<1	<1	1.0	<1	<1	4	119	511	2	110	578
Dec-19	1.0	1.4	0.7	0.8	21.6	23.0	20.5	21.6	<1	1	<1	<1	<1	2.0	<1	<1	3	133	507	2	116	480
Avg	0.8	1.2	0.6	0.8	24.5	25.5	22.1	23.6	<1	10	<1	<1	<1	13	<1	<1	3	134	540	2	124	530
Min	0.6	0.7	0.5	0.6	21.4	21.6	20.0	21.6	<1	<1	<1	<1	<1	<1	<1	<1	3	106	455	2	110	480
Max	1.0	1.6	0.7	1.0	29.1	30.1	25.4	27.6	<5	104	<1	1	<6	145	<1	<1	4	151	598	3	137	579

Requirements for disinfected tertiary-treated recycled water Title 22 Compliance: Min: 450 mg/L-min CT & 90 min DT

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RP-1 (M-001A) & RP-1/RP-4 (M-002A) Effluent and Receiving Water (R-002U & R-002D) Data

Table No. 6a

	M-001A Cl ₂ Residual*		M-002A Cl ₂ Residual*		Upstream Cucamonga Creek (R-002U)										Downstream Cucamonga Creek (R-002D)									
					DO		Temp		pH		TDS	TIN	Total Hardness	TSS	DO		Temp		pH		Total Hardness	TSS		
	Avg	Max	Avg	Max	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg		
Date	mg/L				mg/L		°C		unit		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		°C		unit		mg/L	mg/L	
Jan-19	0.0	0.0	0.0	0.0	10.0	8.5	13.5	16.9	9.1	9.7	254	0.3	126	9	9.2	7.8	19.5	19.9	7.4	8.1	152	7		
Feb-19	0.0	0.0	0.0	0.0	10.4	9.0	10.7	12.4	8.8	9.7	154	0.8			9.8	9.1	17.3	19.0	7.7	8.0				
Mar-19	0.0	0.0	0.0	0.0	10.3	8.4	16.2	17.7	8.9	10.1	270	<0.2			11.5	10.2	20.2	21.3	8.1	8.6				
Apr-19	0.0	0.0	0.0	0.0	10.3	9.6	16.5	18.5	9.1	10.6	308	0.3	138	5	10.1	8.6	20.7	22.5	8.1	9.1	145	3		
May-19	0.0	0.0	0.0	0.0	10.4	9.2	18.1	19.1	9.3	10.0	332	1.0			11.4	8.8	20.9	22.6	8.5	9.0				
Jun-19	0.0	0.0	0.0	0.0	10.2	9.8	19.0	20.1	9.2	9.9	544	<0.2			10.4	10.0	22.2	24.2	8.3	8.7				
Jul-19	0.0	0.0	0.0	0.0	10.3	10.0	24.8	29.1	9.6	10.3	382	1.8	193	18	12.7	10.6	27.0	29.7	8.8	9.9	161	8		
Aug-19	0.0	0.0	0.0	0.0	9.7	9.1	23.2	24.3	9.7	10.0	382	1.2			11.4	7.5	23.5	24.6	9.0	9.6				
Sep-19	0.0	0.0	0.0	0.0	9.8	9.2	23.0	24.8	9.6	9.9	272	<0.2			10.7	8.6	25.3	26.6	9.1	9.3				
Oct-19	0.0	0.0	0.0	0.0	10.3	9.7	16.6	17.3	9.4	9.7	544	0.6	152	4	9.6	7.2	21.4	23.8	8.1	9.2	164	24		
Nov-19	0.0	0.0	0.0	0.0	11.7	10.6	16.9	21.0	9.6	10.6	418	<0.2			10.5	8.4	21.4	24.9	8.7	9.4				
Dec-19	0.0	0.0	0.0	0.0	12.2	10.9	11.4	14.3	8.9	9.8	150	1.0			10.1	8.5	19.9	21.0	8.1	8.6				
Avg	0.0	0.0	0.0	0.0	10.5	9.5	17.5	19.6	9.3	10.0	334	0.7	152	9	10.6	8.8	21.6	23.3	8.3	9.0	156	11		
Min	0.0	0.0	0.0	0.0	9.7	8.4	10.7	12.4	8.8	9.7	150	<0.2	126	4	9.2	7.2	17.3	19.0	7.4	8.0	145	3		
Max	0.0	0.0	0.0	0.0	12.2	10.9	24.8	29.1	9.7	10.6	544	1.8	193	18	12.7	10.6	27.0	29.7	9.1	9.9	164	24		

RP-5 (M-003) & CCWRF (M-004) Effluent and Receiving Water (R-003U, R-003D, & R-004U) Data

Table No. 6b

	M-003 Cl ₂ Residual*		M-004 Cl ₂ Residual*		Upstream Chino Creek (R-003U)									Downstream Chino Creek (R-003D)								Upstream Chino Creek (R-004U)										
					DO		Temp		pH		TDS	TIN	Total Hardness	TSS	DO		Temp		pH		Total Hardness	TSS	DO		Temp		pH		TDS	TIN	Total Hardness	TSS
	Avg	Max	Avg	Max	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Min	Avg	Max	Min	Max	Avg	Avg	Avg	Avg
Date	mg/L				mg/L		°C		unit		mg/L	mg/L	mg/L	mg/L	mg/L	°C		unit		mg/L	mg/L	mg/L	°C		unit		mg/L	mg/L	mg/L	mg/L		
Jan-19	0.0	0.0	0.0	0.0	12.7	8.9	22.0	22.7	7.0	9.7	554	3.6	176	7	8.2	7.7	17.2	18.3	7.0	7.9	288	6	14.7	9.5	16.9	22.8	8.6	10.4	748	<0.2	396	32
Feb-19	0.0	0.0	0.0	0.0	12.1	9.8	18.5	22.8	7.2	9.2	1140	3.9			8.6	8.6	16.8	17.8	7.6	8.3			13.7	11.6	15.9	22.5	7.6	10.5	1120	2.8		
Mar-19	0.0	0.0	0.0	0.0	9.6	7.5	20.6	22.6	7.0	11.0	406	3.7			8.0	7.3	19.4	19.9	7.6	7.7			15.0	13.1	15.3	21.0	8.4	9.6	336	2.1		
Apr-19	0.0	0.0	0.0	0.0	13.5	12.7	19.6	24.9	7.5	8.6	518	3.1	155	3	7.3	6.8	21.6	24.8	7.4	8.0	379	2	14.1	12.9	18.8	25.1	8.3	8.9	648	2.4	365	31
May-19	0.0	0.0	0.0	0.0	12.3	8.0	24.3	25.6	7.6	8.8	912	1.2			7.1	6.7	22.9	23.7	7.2	8.1			13.5	12.2	23.3	26.1	8.4	10.6	972	1.4		
Jun-19	0.0	0.0	0.0	0.0	16.3	15.0	27.2	28.4	7.8	8.6	556	4.0			7.0	6.0	23.9	24.7	7.5	7.8			13.4	9.9	28.1	30.6	8.5	10.2	650	<0.2		
Jul-19	0.0	0.0			12.4	9.3	30.2	31.6	8.5	9.3	486	3.5	308	10	7.3	6.8	26.7	29.7	7.2	7.9	578	11	13.6	12.5	29.5	31.8	8.8	9.5	512	3.7	319	8
Aug-19	0.0	0.0			13.3	9.7	25.6	28.6	8.1	9.3	716	5.0			7.3	7.1	27.9	28.1	7.2	7.7												
Sep-19	0.0	0.0			13.5	11.7	23.4	29.9	8.4	9.6					7.0	6.5	25.9	28.1	7.4	7.9												
Oct-19	0.0	0.0			14.1	11.2	25.2	31.0	8.3	10.3	624	<0.2	323	32	7.2	6.8	24.1	26.6	5.2	8.2	270	<5	14.1	11.2	25.2	31.0	8.3	10.3	646	<0.2	322	38
Nov-19	0.0	0.0	0.0	0.0	11.7	8.2	20.9	24.0	7.4	10.0	696	2.7			7.1	6.8	22.7	23.4	7.0	7.9			13.3	11.6	20.8	24.0	7.9	10.4	710	0.7		
Dec-19	0.0	0.0	0.0	0.0	14.6	11.8	18.4	22.3	7.8	8.6	334	3.1			7.4	7.1	19.3	21.1	7.0	7.8			16.4	14.0	14.3	17.4	8.4	10.1	646	2.7		
Avg	0.0	0.0	0.0	0.0	13.0	10.3	23.0	26.2	7.7	9.4	631	3.1	241	13	7.5	7.0	22.4	23.9	7.1	7.9	379	6	14.2	11.8	20.8	25.2	8.3	10.1	699	1.6	351	27
Min	0.0	0.0	0.0	0.0	9.6	7.5	18.4	22.3	7.0	8.6	334	<0.2	155	3	7.0	6.0	16.8	17.8	5.2	7.7	270	2	13.3	9.5	14.3	17.4	7.6	8.9	336	<0.2	319	8
Max	0.0	0.0	0.0	0.0	16.3	15.0	30.2	31.6	8.5	11.0	1,140	5.0	323	32	8.6	8.6	27.9	29.7	7.6	8.3	578	11	16.4	14.0	29.5	31.8	8.8	10.6	1,120	3.7	396	38

* A chlorine residual of 0.0 mg/L signifies a positive sodium bisulfite residual and a negative chlorine residual.

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RP-1 (REC-001) & RP-4 (REC-002) Recycled Water Data

Table No. 7a

	REC-001											REC-002										
	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS
	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg
Date	mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L			mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L		
Jan-19	2.3	6.9	0.6	793	<2	29.2	<1	1.0	<2	<2	475	5.8	6.8	0.5	884	<1	<1.0	<1	<1	<2	<2	469
Feb-19	0.1	6.9	0.6	747	<1	2.0	<1	<1.0	<2	<2	432	3.4	7.1	0.4	769	<1	3.1	<1	<1	<2	<2	427
Mar-19	2.8	7.0	0.7	550	<1	2.0	<1	<1.0	2	<2	452	5.9	7.1	0.4	841	<1	2.0	<1	<1	<2	<2	426
Apr-19	11.0	7.1	0.9	777	<1	10.9	<1	<1.0	2	<2	461	8.3	7.0	0.4	792	<1	<1.0	<1	<1	<2	<2	409
May-19	8.5	7.0	0.9	789	<1	2.0	<1	<1.0	<2	<2	469	7.2	7.0	0.3	919	<1	<1.0	<1	<1	<2	<2	424
Jun-19	12.5	7.1	0.8	706	<1	6.3	<1	<1.0	<2	<2	483	8.8	7.0	0.4	917	<1	<1.0	<1	<1	<2	<2	432
Jul-19	16.0	7.2	0.9	607	<1	14.5	<1	<1.0	<2	<2	438	9.0	7.1	0.5	754	<1	2.0	<1	<1	<2	<2	390
Aug-19	21.8	7.3	0.8	571	<1	2.0	<1	<1.0	<2	<2	438	9.0	7.1	0.5	755	<2	21.1	<1	<1	<2	<2	403
Sep-19	20.3	7.2	0.7	669	<10	261.3	<1	<1.0	<2	<2	434	9.0	7.2	0.5	824	<1	<1.0	<1	<1	<2	<2	411
Oct-19	21.1	7.1	0.6	639	<1	5.2	<1	<1	<2	<2	425	8.9	7.0	0.4	906	<1	<1	<1	<1	<2	<2	399
Nov-19	16.4	7.0	0.6	580	<1	5.0	<1	<1	<2	<2	445	7.4	7.0	0.6	817	<3	45.7	<1	<1	<2	<2	399
Dec-19	4.1	6.9	0.6	549	<1	4.1	<1	<1	<2	<2	430	7.5	6.8	0.9	1061	<13	365.4	<1	<1	<2	<2	449
Avg	11.4	7.1	0.7	664	<2	29	<1	<1	<2	<2	448	7.5	7.0	0.5	856	<2	37	<1	<1	<2	<2	419
Min	0.1	6.9	0.6	549	<1	2	<1	<1	<2	<2	425	3.4	6.8	0.3	754	<1	<1	<1	<1	<2	<2	390
Max	21.8	7.3	0.9	793	<10	261	<1	1	2	<2	483	9.0	7.2	0.9	1061	<13	365	<1	<1	<2	<2	469

RP-5 (REC-003) & CCWRF (REC-004) Recycled Water Data

Table No. 7b

	REC-003											REC-004											
	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS	Flow	pH	Turbidity	CT	Daily Coliform		7-day Median		BOD	TSS	TDS	
	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg	Avg	Avg	Avg	Min	Avg	Max	Avg	Max	Avg	Avg	Avg	
	mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L			mgd	unit	NTU	mg-min/L	MPN / 100 mL				mg/L			
Date	Jan-19	2.7	6.8	0.6	455	<1	2.0	<1	<1	<2	<2	543	1.4	6.8	0.5	518	<1	3.1	<1	<1	<2	<2	513
Feb-19	1.0	6.9	0.6	499	<1	1.0	<1	<1	<2	<2	557	0.6	6.9	0.7	519	<1	2.0	<1	<1	<2	<2	515	
Mar-19	1.5	7.0	0.6	526	<1	2.0	<1	<1	<2	<2	590	1.9	6.9	0.7	482	<1	1.0	<1	<1	<2	<2	517	
Apr-19	2.5	7.0	0.7	591	<1	2.0	<1	<1	<2	<2	519	6.0	6.8	0.6	572	<1	1.0	<1	<1	<2	<2	489	
May-19	1.3	7.0	1.0	580	<1	4.1	<1	1	<2	<2	512	4.8	6.8	0.6	497	<1	1.0	<1	<1	<2	<2	508	
Jun-19	5.4	7.0	0.8	531	<1	1.0	<1	<1	<2	<2	524	6.6	6.8	0.7	517	<1	1.0	<1	<1	<2	<2	504	
Jul-19	4.7	7.0	1.0	558	<5	104.3	<1	<1	<2	<2	492	6.8	7.1	0.6	538	<6	145.0	<1	<1	<2	<2	453	
Aug-19	1.0	7.0	1.0	550	<1	<1.0	<1	<1	<2	<2	503	7.0	7.1	0.6	568	<1	<1.0	<1	<1	<2	<2	449	
Sep-19	0.6	7.0	0.9	587	<1	1.0	<1	<1	<2	<2	509	7.2	7.0	0.5	508	<1	<1	<1	<1	<2	<2	452	
Oct-19	0.0	7.0	0.9	598	<1	<1	<1	<1	<2	<2	488	6.7	7.1	0.6	579	<1	1.0	<1	<1	<2	<2	441	
Nov-19	0.5	6.9	0.9	511	<1	1	<1	<1	<2	<2	501	5.6	6.8	0.6	578	<1	1.0	<1	<1	<2	<2	476	
Dec-19	0.3	6.8	1.0	507	<1	1	<1	<1	<2	<2	496	3.3	6.8	0.7	480	<1	2.0	<1	<1	<2	<2	458	
Avg	1.8	7.0	0.8	537	<1	10	<1	<1	<2	<2	519	4.8	6.9	0.6	532	<1	13	<1	<1	<2	<2	481	
Min	0.0	6.8	0.6	455	<1	<1	<1	<1	<2	<2	488	0.6	6.8	0.5	480	<1	<1	<1	<1	<2	<2	441	
Max	5.4	7.0	1.0	598	<5	104	<1	1	<2	<2	590	7.2	7.1	0.7	579	<6	145	<1	<1	<2	<2	517	

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RP-1 (M-001B) Effluent Monthly Inorganic & Organic Data

Table No. 8a

	Total Hardness	HCO ₃ ²⁻	B	Ca	CO ₃ ²⁻	Cl	F	Mg	Na	SO ₄	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																					
Jan-19	150			45				10			<0.5		<2	<0.5				36			
Feb-19	148	153	0.2	44	0	111	0.2	9	91	43	<0.25	<0.5	5	<0.5		<2	<0.25	40			
Mar-19	151	156	0.2	45	0	99	0.4	9	99	45	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	39			
Apr-19	143	162	0.3	43	0	98	0.2	9	95	49	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	44			
May-19	144	148	0.3	43	0	112	0.3	9	87	47	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	41	2	15	
Jun-19	149	123	0.3	43	0	123	0.2	10	99	48	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	41			
Jul-19	146	155	0.2	44	0	109	0.2	9	94	47	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	42	2	19	
Aug-19	150	178	0.2	47	0	94	0.2	8	96	40	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	39			
Sep-19	138	166	0.2	42	0	100	0.2	8	91	44	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	32			
Oct-19	137	162	0.2	41	0	96	0.2	8	93	41	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	36	2	18	
Nov-19	152	164	0.3	46	0	112	0.2	9	100	45	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	32			0.000
Dec-19	142	135	0.3	43	0	103	0.2	10	92	46	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	48			
Avg	146	155	0.2	44	0	105	0.2	9	94	45	<0.27	<0.5	4	<0.5	<0.05	<2	<0.25	39	2	17	0.000
Min	137	123	0.2	41	0	94	0.2	8	87	40	<0.25	<0.5	<2	<0.5	<0.03	<2	<0.25	32	2	15	0.000
Max	152	178	0.3	47	0	123	0.4	10	100	49	<0.50	<0.5	6	<0.5	<0.05	<2	<0.25	48	2	19	0.000

RP-1/RP-4 (M-002A) Effluent Monthly Inorganic & Organic Data

Table No. 8b

	Total Hardness	HCO ₃ ²⁻	B	Ca	CO ₃ ²⁻	Cl	F	Mg	Na	SO ₄	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits											1 mo avg; 2 max daily		14 mo avg; 20 max daily	8 mo avg; 15 max daily				120 mo avg; 150 max daily			
Jan-19	140			40		115		10			<0.5		<2	<0.5				44			
Feb-19	147	143	0.2	44	0	110	0.2	9	96	60	<0.25	<0.5	6	<0.5		<2	<0.25	42			
Mar-19	150	149	0.2	45	0	103	0.3	9	94	61	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	40	2	14	
Apr-19	149	156	0.2	45	0	100	0.2	9	102	63	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	45			
May-19	150	140	0.3	45	0	114	0.2	9	94	60	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	44	2	15	
Jun-19	145	119	0.3	42	0	119	0.2	10	100	61	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	41			
Jul-19	144	150	0.2	43	0	107	0.2	9	97	62	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	43	2	14	
Aug-19	151	163	0.2	48	0	94	0.2	8	104	64	<0.25	<0.5	4	<0.5	<0.05	<2	<0.25	40			
Sep-19	134	150	0.2	40	0	101	0.2	8	97	68	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	33			
Oct-19	137	153	0.2	41	0	95	0.2	8	98	54	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	35	2	16	
Nov-19	149	160	0.2	45	0	112	0.3	9	107	72	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	31			0.000
Dec-19	139	135	0.3	43	0	105	0.2	10	95	58	<0.25	<0.5	4	<0.5	<0.025	<2	<0.25	45			
Avg	145	147	0.2	43	0	106	0.2	9	99	62	<0.27	<0.5	5	<0.5	<0.05	<2	<0.25	40	2	15	0.000
Min	134	119	0.2	40	0	94	0.2	8	94	54	<0.25	<0.5	<2	<0.5	<0.03	<2	<0.25	31	2	14	0.000
Max	151	163	0.3	48	0	119	0.3	10	107	72	<0.50	<0.5	6	<0.5	<0.05	<2	<0.25	45	2	16	0.000

*Free Cyanide is analyzed using ASTM-D7237 for analysis of free cyanide in accordance with R8-2016-0036

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RP-5 (M-003) Effluent Monthly Inorganic Data

Table No. 8c

	Total Hardness	HCO ₃ ²⁻	B	Ca	CO ₃ ²⁻	Cl	F	Mg	Na	SO ₄	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																			34 mo avg; 68 max daily		0.014 mo avg; 0.028 max
Jan-19	210			59				15			<0.5		4	<0.5				52	3	13	0.000
Feb-19	244	144	0.2	69	0	167	0.1	17	103	74	<0.25	<0.5	7	<0.5		<2	<0.25	40	3	13	0.000
Mar-19	240	155	0.2	67	0	163	0.1	17	104	72	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	47			0.000
Apr-19	210	139	0.2	61	0	148	0.2	14	103	67	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	53	4	24	0.000
May-19	189	118	0.2	54	0	151	0.1	13	92	55	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	56	3	15	0.000
Jun-19	192	143	0.3	55	0	161	0.1	14	98	59	<0.25	<0.5	8	0.6	<0.05	<2	<0.25	46	3	15	0.000
Jul-19	194	137	0.2	59	0	166	0.1	11	107	63	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	33	3	17	0.000
Aug-19	181	138	0.3	54	0	148	0.1	11	104	50	<0.25	<0.5	5	<0.5	<0.05	<2	<0.25	41	2	16	0.000
Sep-19	176	130	0.2	51	0	155	0.1	12	100	54	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	50	3	17	0.000
Oct-19	187	127	0.2	54	0	155	0.1	13	106	54	<0.25	<0.5	6	<0.5	<0.05	<2	<0.25	56	8	23	0.000
Nov-19	183	129	0.3	52	0	153	0.2	13	101	56	<0.25	<0.5	7	<0.5	<0.025	<2	<0.25	53	3	14	NA*
Dec-19	183	116	0.3	53	0	157	0.1	14	104	58	<0.25	<0.5	7	<0.5	<0.025	<2	<0.25	47	3	16	0.000
Avg	199	134	0.3	57	0	157	0.1	14	102	60	<0.27	<0.5	7	<0.5	<0.05	<2	<0.25	48	3	17	0.000
Min	176	116	0.2	51	0	148	0.1	11	92	50	<0.25	<0.5	4	<0.5	<0.03	<2	<0.25	33	2	13	0.000
Max	244	155	0.3	69	0	167	0.2	17	107	74	<0.50	<0.5	8	0.6	<0.05	<2	<0.25	56	8	24	0.000

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

CCWRF (M-004) Effluent Monthly Inorganic Data

Table No. 8d

	Total Hardness	HCO ₃ ²⁻	B	Ca	CO ₃ ²⁻	Cl	F	Mg	Na	SO ₄	Cd, TR	Cr, Total	Cu, TR	Pb, TR	Hg, TR	Se, TR	Ag, TR	Zn, TR	Chlorodi-bromomethane	Bromodi-chloromethane	2,3,7,8-TCDD
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	pg/L
Limits																			34 mo avg; 68 max daily	46 mo avg; 67 max daily	
Jan-19	160			45				12			<0.5		4	<0.5				58	5	20	0.000
Feb-19	170	125	0.2	48	0	153	0.1	12	112	73	<0.25	<0.5	7	<0.5		<2	<0.25	59	4	18	
Mar-19	192	125	0.2	53	0	158	0.1	14	112	80	<0.25	<0.5	9	<0.5	<0.05	<2	<0.25	58			
Apr-19	159	120	0.2	46	0	128	0.2	11	108	81	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	54	5	26	0.000
May-19	151	134	0.3	44	0	139	0.1	10	112	86	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	50	3	20	
Jun-19	157	112	0.3	44	0	148	0.1	11	110	91	<0.25	<0.5	9	<0.5	<0.05	<2	<0.25	53	3	17	
Jul-19	149	111	0.2	43	0	134	0.1	10	101	54	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	47	4	23	0.000
Aug-19	137	109	0.3	39	0	125	<0.1	9	97	47	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	51	3	22	
Sep-19	141	119	0.2	36	0	125	<0.1	10	94	53	<0.25	<0.5	8	<0.5	<0.05	<2	<0.25	49	4	22	
Oct-19	144	114	0.2	41	0	120	0.1	10	97	47	<0.25	<0.5	7	<0.5	<0.05	<2	<0.25	63			
Nov-19	140	102	0.3	39	0	132	0.1	10	123	110	<0.25	<0.5	8	<0.5	<0.025	<2	<0.25	60	4	20	0.000
Dec-19	144	109	0.3	44	0	136	0.2	11	108	74	<0.25	<0.5	6	<0.5	<0.025	<2	<0.25	50	3	15	
Avg	154	116	0.2	44	0	136	0.1	11	107	72	<0.27	<0.5	7	<0.5	<0.05	<2	<0.25	54	4	20	0.000
Min	137	102	0.2	36	0	120	0.1	9	94	47	<0.25	<0.5	4	<0.5	<0.03	<2	<0.25	47	3	15	0.000
Max	192	134	0.3	53	0	158	0.2	14	123	110	<0.50	<0.5	9	<0.5	<0.05	<2	<0.25	63	5	26	0.000

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RP-1 (M-001B) Effluent Quarterly Data

Table No. 9a

RP-1/RP-4 (M-002A) Effluent Quarterly Data

Table No. 9b

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

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Jan-19	NR	NR	NR	NR	NR	NR
Feb-19	100	<1	<2	14	<1	3
Mar-19	98	<1	<2	15	<1	3
Apr-19	87	<1	<2	20	<1	3
May-19	72	<1	<2	19	<1	3
Jun-19	72	<1	<2	20	<1	3
Jul-19	59	<1	<2	14	<1	3
Aug-19	108	<1	<2	21	<1	13
Sep-19	104	<1	<2	20	<1	3
Oct-19	108	<1	2	17	<1	14
Nov-19	72	<1	2	24	<1	3
Dec-19	92	<1	<2	11	<1	3
Avg	88	<1	<2	18	<1	5
Min	59	<1	<2	11	<1	3
Max	108	<1	2	24	<1	14

RP-5 (M-003) Effluent Quarterly Data

Table No. 9c

CCWRF (M-004) Effluent Quarterly Data

Table No. 9d

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

	Al, TR	Sb, TR	As, TR	Ba, TR	Co, TR	Ni, TR
Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Jan-19	NR	NR	NR	NR	NR	NR
Feb-19	131	<1	<2	11	<1	3
Mar-19	108	<1	<2	10	<1	4
Apr-19	127	<1	<2	10	<1	3
May-19	112	<1	<2	11	<1	4
Jun-19	104	<1	2	11	<1	4
Jul-19	64	<1	<2	8	<1	3
Aug-19	107	<1	<2	9	<1	3
Sep-19	43	<1	2	7	<1	4
Oct-19	81	<1	2	7	<1	4
Nov-19	87	<1	2	8	<1	3
Dec-19	83	<1	2	10	<1	3
Avg	95	<1	<2	9	<1	3
Min	43	<1	<2	7	<1	3
Max	131	<1	2	11	<1	4

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Table No. 10

Mo-Yr	Flow				TIN								Agency-wide TIN				
	DP 001	DP 002	DP 003	DP 004	M-001B		M-002A		RP5		CC		Discharge		Limit		12-MRA
													flow wt.	total	flow wt.	total	flow-wt.
	MGD				mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
Jan-19	2.0	25.5	5.8	6.1	4.8	80	6.1	1,290	8.2	390	5.4	270	6.2	2,030	8	5,338	5.0
Feb-19	3.0	33.8	6.0	7.4	4.4	110	4.5	1,270	7.4	370	5.1	320	4.9	2,070	8	5,338	5.0
Mar-19	2.6	25.6	5.6	5.5	5.0	110	5.0	1,070	10.5	490	4.3	200	5.7	1,870	8	5,338	5.1
Apr-19	2.8	11.7	4.7	1.0	4.4	100	4.8	460	7.0	270	4.3	40	5.2	870	8	5,338	5.1
May-19	2.4	14.2	7.3	2.2	3.6	70	3.7	440	5.4	330	4.0	70	4.2	910	8	5,338	5.0
Jun-19	1.9	9.2	3.8	0.9	2.3	40	2.6	200	3.7	120	4.9	40	3.0	400	8	5,338	4.9
Jul-19	1.6	6.7	4.1	0.0	3.2	40	3.4	190	2.7	90	NA	0	3.2	320	8	5,338	4.8
Aug-19	1.4	0.9	7.3	0.0	3.1	40	3.2	20	4.0	240	NA	0	3.8	300	8	5,338	4.4
Sep-19	1.8	3.7	7.4	0.0	2.9	40	2.8	90	4.9	300	NA	0	4.0	430	8	5,338	4.7
Oct-19	2.7	2.3	6.7	0.0	2.8	60	3.1	60	5.7	320	NA	0	4.5	440	8	5,338	4.6
Nov-19	2.1	10.7	7.7	1.5	3.4	60	3.3	300	5.6	360	5.6	70	3.9	790	8	5,338	4.6
Dec-19	1.9	22.7	9.4	4.6	4.4	70	4.1	780	6.1	480	5.4	200	4.1	1,530	8	5,338	4.4
12-Mo Avg	2.2	13.9	6.3	2.4	3.7	70	3.9	510	5.9	310	4.9	100	4.4	1,000	8	5,338	4.8
Min	1.4	0.9	3.8	0.0	2.3	40	2.6	20	2.7	90	4.0	0	3.0	300	8	5,338	4.4
Max	3.0	33.8	9.4	7.4	5.0	110	6.1	1,290	10.5	490	5.6	320	6.2	2,070	8	5,338	5.1

NA: Not Analyzed, due to no discharge

Inland Empire Utilities Agency

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

Agency-wide TDS 12-Month Running Averages

Table No. 11

Mo-Yr	Flows								Total Dissolved Solids (TDS)								Agency-wide TDS				
	RP-1		RP-4		RP-5		CC		RP-1		RP-4		RP-5		CC		Discharge		Limit		12-MRA
	001 ¹	RW	002	RW	RP-5	RW	CC	RW	001	RW ²	002	RW	RP-5	RW ²	CC	RW ²	flow	total	flow	total	
	MGD								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	wt.	lbs/day	wt.	lbs/day	mg/L
Jan-19	2.0	2.3	25.5	5.8	5.8	2.7	6.1	1.4	578	475	481	469	572	543	535	513	503	216,860	550	366,960	490
Feb-19	3.0	0.1	33.8	3.4	6.0	1.0	7.4	0.6	553	432	459	427	574	557	523	515	485	223,550	550	366,960	490
Mar-19	2.6	2.8	25.6	5.9	5.6	1.5	5.5	1.9	593	452	465	426	600	590	545	517	495	211,930	550	366,960	489
Apr-19	2.8	11.0	11.7	8.3	4.7	2.5	1.0	6.0	527	461	477	409	551	519	511	489	476	190,620	550	366,960	489
May-19	2.4	8.5	14.2	7.2	7.3	1.3	2.2	4.8	510	469	478	424	547	512	535	508	487	195,100	550	366,960	488
Jun-19	1.9	12.5	9.2	8.8	3.8	5.4	0.9	6.6	545	483	484	432	542	524	542	504	489	199,960	550	366,960	488
Jul-19	1.6	16.0	6.7	9.0	4.1	4.7	0.0	6.8	496	438	458	390	515	492	NA	453	447	181,920	550	366,960	485
Aug-19	1.4	21.8	0.9	9.0	7.3	1.0	0.0	7.0	468	438	472	403	513	503	NA	449	447	180,140	550	366,960	482
Sep-19	1.8	20.3	3.7	9.0	7.4	0.6	0.0	7.2	532	434	449	411	530	509	NA	452	452	188,380	550	366,960	481
Oct-19	2.7	21.1	2.3	8.9	6.7	0.0	0.0	6.7	498	425	452	399	547	488	NA	441	445	179,360	550	366,960	477
Nov-19	2.1	16.4	10.7	7.4	7.7	0.5	1.5	5.6	478	445	471	427	514	501	519	476	465	201,020	550	366,960	473
Dec-19	1.9	4.1	22.7	7.5	9.4	0.3	4.6	3.3	474	430	444	449	514	496	482	458	461	206,940	550	366,960	471
Avg	2.2	11.4	13.9	7.5	6.3	1.8	2.4	4.8	521	448	466	422	543	519	524	481	471	197,980	550	366,960	484
Min	1.4	0.1	0.9	3.4	3.8	0.0	0.0	0.6	468	425	444	390	513	488	482	441	445	179,360	550	366,960	471
Max	3.0	21.8	33.8	9.0	9.4	5.4	7.4	7.2	593	483	484	469	600	590	545	517	503	223,550	550	366,960	490

NOTES: ¹ Prior to April 2010, 001 effluent flow included recycled water flow.

² Flow and TDS added to flow-weight for RP-1, RP-5, and CCWRF recycled water (May 2010)

NA: Not Analyzed, due to no discharge

APPENDIX B
RECYCLED WATER
COMPLIANCE DATA
FOR CALENDAR YEAR 2019

INLAND EMPIRE UTILITIES AGENCY
Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report
RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutants
Table 15a
RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutant Metals & CN, mg/L

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

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

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

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RP-5 (M-INF 3C) RP-2 Recycle Flow Remaining Priority Pollutants
Table 15b
RP-5 (M-INF 3C) RP-2 Recycle Flow Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene										<10			<10
1,2-Dichlorobenzene										<10			<10
1,3-Dichlorobenzene										<10			<10
1,4-Dichlorobenzene										<10			<10
2,4,6-Trichlorophenol										<10			<10
2,4-Dichlorophenol										<20			<20
2,4-Dimethylphenol										<10			<10
2,4-Dinitrophenol										<30			<30
2,4-Dinitrotoluene										<10			<10
2,6-Dinitrotoluene										<20			<20
2-Chloronaphthalene										<10			<10
2-Chlorophenol										<10			<10
2-Methyl-4,6-dinitrophenol										<20			<20
2-Nitrophenol										<10			<10
3,3-Dichlorobenzidine										<50			<50
4-Bromophenyl phenyl ether										<10			<10
4-Chloro-3-methylphenol										<10			<10
4-Chlorophenyl phenyl ether										<10			<10
4-Nitrophenol										<30			<30
Acenaphthene										<10			<10
Acenaphthylene										<10			<10
Anthracene										<10			<10
Azobenzene										<10			<10
Benzidine										<50			<50
Benzo(a)anthracene										<50			<50
Benzo(a)pyrene										<10			<10
Benzo(b)fluoranthene										<10			<10
Benzo(g,h,i)perylene										<20			<20
Benzo(k)fluoranthene										<10			<10
Bis(2-chloroethoxy)methane										<20			<20
Bis(2-chloroethyl)ether										<10			<10
Bis(2-chloroisopropyl)ether										<10			<10
Bis(2-ethylhexyl)phthalate			<15		<15		<15			<15			<15
Butyl benzyl phthalate										<7.5			<7.5
Chrysene										<10			<10
Dibenzo(a,h)anthracene										<10			<10
Diethyl phthalate										<15			<15
Dimethyl phthalate										<10			<10
Di-n-butyl phthalate										<10			<10
Di-n-octyl phthalate										<10			<10
Fluoranthene										<10			<10
Fluorene										<10			<10
Hexachlorobenzene										<10			<10
Hexachlorobutadiene										<10			<10
Hexachlorocyclopentadiene										<50			<50
Hexachloroethane										<10			<10
Indeno(1,2,3-cd)pyrene										<20			<20
Isophorone										<10			<10
Naphthalene										<10			<10
Nitrobenzene										<10			<10
N-Nitrosodimethylamine										<10			<10
N-Nitroso-di-n-propylamine										<10			<10
N-Nitrosodiphenylamine										<10			<10
Pentachlorophenol										<20			<20
Phenanthrene										<10			<10
Phenol										<10			<10
Pyrene										<10			<10

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

Table 15c

RP-5 (M-INF 3C) RP-2 Recycle Flow Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD										<0.06			<0.06
4,4-DDE										<0.06			<0.06
4,4-DDT										<0.08			<0.08
Aldrin										<0.04			<0.04
Alpha-BHC										<0.08			<0.08
Beta-BHC										<0.05			<0.05
Delta-BHC										<0.07			<0.07
Dieldrin										<0.06			<0.06
Endosulfan I										<0.1			<0.1
Endosulfan II										<0.07			<0.07
Endosulfan Sulfate										<0.09			<0.09
Endrin										<0.09			<0.09
Endrin aldehyde										<0.06			<0.06
Gamma-BHC										<0.1			<0.1
Heptachlor										<0.06			<0.06
Heptachlor epoxide										<0.07			<0.07
Chlordane										<1			<1
PCB-1016										<5			<5
PCB-1221										<5			<5
PCB-1232										<5			<5
PCB-1242										<5			<5
PCB-1248										<5			<5
PCB-1254										<5			<5
PCB-1260										<5			<5
Toxaphene										<5			<5

RP-5 (M-INF 3C) RP-2 Recycle Flow Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*										0.000			0.000
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report
RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants
Table 16a
RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutant Metals & CN, mg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)			<0.02			<0.02	<0.02			<0.02			<0.02
Arsenic (As)			<0.01			<0.01	<0.01			<0.01			<0.01
Beryllium (Be)			<0.01			<0.01	<0.01			<0.01			<0.01
Cadmium (Cd)			<0.01			<0.01	<0.01			<0.01			<0.01
Chromium (Cr)			<0.01			<0.01	0.01			<0.01			0.01
Copper (Cu)			0.03			0.08	0.23			0.04			0.23
Lead (Pb)			<0.02			<0.02	<0.02			<0.02			<0.02
Mercury (Hg)			<0.0005			<0.0005	0.0006				<0.0005		0.0006
Nickel (Ni)			<0.01			<0.01	<0.01			<0.01			<0.01
Selenium (Se)			<0.02			<0.02	<0.02			<0.02			<0.02
Silver (Ag)			<0.01			<0.01	<0.01			<0.01			<0.01
Thallium (Tl)			<0.05			<0.05	<0.05			<0.05			<0.05
Zinc (Zn)			0.09			0.17	0.65			0.14			0.65
CN, Aquatic Free		<2		<2					8	<2			8

RP-5 (M-INF 3D) RP-2 Lift Station Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<5			<5
1,1,2,2-Tetrachloroethane										<2.5			<2.5
1,1,2-Trichloroethane										<5			<5
1,1-Dichloroethane										<2.5			<2.5
1,1-Dichloroethene										<5			<5
1,2-Dichlorobenzene										<5			<5
1,2-Dichloroethane										<2.5			<2.5
1,2-Dichloropropane										<2.5			<2.5
1,3-Dichlorobenzene										<5			<5
1,4-Dichlorobenzene										<5			<5
2-Chloroethyl vinyl ether										<5			<5
Benzene										<5			<5
Bromodichloromethane										<5			<5
Bromoform										<5			<5
Bromomethane										<5			<5
Carbon tetrachloride										<2.5			<2.5
Chlorobenzene										<5			<5
Chloroethane										<5			<5
Chloroform										34			34
Chloromethane										<5			<5
cis-1,3-Dichloropropene										<2.5			<2.5
Dibromochloromethane										<5			<5
Ethylbenzene										<5			<5
Methylene chloride										<5			<5
Tetrachloroethene										<5			<5
Toluene										<5			<5
trans-1,2-Dichloroethene										<2.5			<2.5
trans-1,3-Dichloropropene										<2.5			<2.5
Trichloroethene										<5			<5
Trichlorofluoromethane										<10			<10
Vinyl chloride										<2.5			<2.5
Acrolein										<10			<10
Acrylonitrile										<1.25			<1.25

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RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants
Table 16b
RP-5 (M-INF 3D) RP-2 Lift Station Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene										<10			<10
1,2-Dichlorobenzene										<10			<10
1,3-Dichlorobenzene										<10			<10
1,4-Dichlorobenzene										<10			<10
2,4,6-Trichlorophenol										<10			<10
2,4-Dichlorophenol										<20			<20
2,4-Dimethylphenol										<10			<10
2,4-Dinitrophenol										<30			<30
2,4-Dinitrotoluene										<10			<10
2,6-Dinitrotoluene										<20			<20
2-Chloronaphthalene										<10			<10
2-Chlorophenol										<10			<10
2-Methyl-4,6-dinitrophenol										<20			<20
2-Nitrophenol										<10			<10
3,3-Dichlorobenzidine										<50			<50
4-Bromophenyl phenyl ether										<10			<10
4-Chloro-3-methylphenol										<10			<10
4-Chlorophenyl phenyl ether										<10			<10
4-Nitrophenol										<30			<30
Acenaphthene										<10			<10
Acenaphthylene										<10			<10
Anthracene										<10			<10
Azobenzene										<10			<10
Benzidine										<50			<50
Benzo(a)anthracene										<50			<50
Benzo(a)pyrene										<10			<10
Benzo(b)fluoranthene										<10			<10
Benzo(g,h,i)perylene										<20			<20
Benzo(k)fluoranthene										<10			<10
Bis(2-chloroethoxy)methane										<20			<20
Bis(2-chloroethyl)ether										<10			<10
Bis(2-chloroisopropyl)ether										<10			<10
Bis(2-ethylhexyl)phthalate			<15		<15		<15			<15			<15
Butyl benzyl phthalate										<7.5			<7.5
Chrysene										<10			<10
Dibenzo(a,h)anthracene										<10			<10
Diethyl phthalate										<15			<15
Dimethyl phthalate										<10			<10
Di-n-butyl phthalate										<10			<10
Di-n-octyl phthalate										<10			<10
Fluoranthene										<10			<10
Fluorene										<10			<10
Hexachlorobenzene										<10			<10
Hexachlorobutadiene										<10			<10
Hexachlorocyclopentadiene										<50			<50
Hexachloroethane										<10			<10
Indeno(1,2,3-cd)pyrene										<20			<20
Isophorone										<10			<10
Naphthalene										<10			<10
Nitrobenzene										<10			<10
N-Nitrosodimethylamine										<10			<10
N-Nitroso-di-n-propylamine										<10			<10
N-Nitrosodiphenylamine										<10			<10
Pentachlorophenol										<20			<20
Phenanthrene										<10			<10
Phenol										<10			<10
Pyrene										<10			<10

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RP-5 (M-INF 3D) RP-2 Lift Station Remaining Priority Pollutants

Table 16c

RP-5 (M-INF 3D) RP-2 Lift Station Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD										<0.06			<0.06
4,4-DDE										<0.06			<0.06
4,4-DDT										<0.08			<0.08
Aldrin										<0.04			<0.04
Alpha-BHC										<0.08			<0.08
Beta-BHC										<0.05			<0.05
Delta-BHC										<0.07			<0.07
Dieldrin										<0.06			<0.06
Endosulfan I										<0.1			<0.1
Endosulfan II										<0.07			<0.07
Endosulfan Sulfate										<0.09			<0.09
Endrin										<0.09			<0.09
Endrin aldehyde										<0.06			<0.06
Gamma-BHC										<0.1			<0.1
Heptachlor										<0.06			<0.06
Heptachlor epoxide										<0.07			<0.07
Chlordane										<1			<1
PCB-1016										<5			<5
PCB-1221										<5			<5
PCB-1232										<5			<5
PCB-1242										<5			<5
PCB-1248										<5			<5
PCB-1254										<5			<5
PCB-1260										<5			<5
Toxaphene										<5			<5

RP-5 (M-INF 3D) RP-2 Lift Station Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*	0.028	0.000	0.000	0.031	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.082	0.082
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report
RP-1 (M-001B) Effluent Remaining Priority Pollutants
Table 18a
RP-1 (M-001B) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic (As)		<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	2
Beryllium (Be)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper (Cu)		5.1	5.8	5.1	4.4	6.1	4.9	3.9	4.4	4.2	3.7	4.4	6.1
Lead (Pb)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)		2.9	3.0	2.9	3.3	3.2	3.4	13.5	3.1	14.2	3.1	2.8	14.2
Selenium (Se)		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver (Ag)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (Zn)	36	40	39	44	41	41	42	39	32	36	32	48	48
CN, Free		<2		<2					<2	<2			<2

RP-1 (M-001B) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<1			<1
1,1,2,2-Tetrachloroethane										<0.5			<0.5
1,1,2-Trichloroethane										<1			<1
1,1-Dichloroethane										<0.5			<0.5
1,1-Dichloroethene										<1			<1
1,2-Dichlorobenzene										<1			<1
1,2-Dichloroethane										<0.5			<0.5
1,2-Dichloropropane										<0.5			<0.5
1,3-Dichlorobenzene										<1			<1
1,4-Dichlorobenzene										<1			<1
2-Chloroethyl vinyl ether									<1	<1			<1
Benzene										<1			<1
Bromodichloromethane			<1		15		19			18			19
Bromoform			<1		<1		<1			<1			<1
Bromomethane										<1			<1
Carbon tetrachloride										<0.5			<0.5
Chlorobenzene										<1			<1
Chloroethane										<1			<1
Chloroform			<1		65		96			75			96
Chloromethane										<1			<1
cis-1,3-Dichloropropene										<0.5			<0.5
Dibromochloromethane			<1		2		2			2			2
Ethylbenzene										<1			<1
Methylene chloride										<1			<1
Tetrachloroethene										<1			<1
Toluene										<1			<1
trans-1,2-Dichloroethene										<0.5			<0.5
trans-1,3-Dichloropropene										<0.5			<0.5
Trichloroethene										<1			<1
Trichlorofluoromethane										<2			<2
Vinyl chloride										<0.5			<0.5
Acrolein									<2	<2			<2
Acrylonitrile									<0.25	0.58			0.58

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RP-1 (M-001B) Effluent Remaining Priority Pollutants
Table 18b
RP-1 (M-001B) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene									<1			<1	<1
1,2-Dichlorobenzene									<1			<1	<1
1,3-Dichlorobenzene									<1			<1	<1
1,4-Dichlorobenzene									<1			<1	<1
2,4,6-Trichlorophenol									<1			<1	<1
2,4-Dichlorophenol									<2			<2	<2
2,4-Dimethylphenol									<1			<1	<1
2,4-Dinitrophenol									<3			<3	<3
2,4-Dinitrotoluene									<1			<1	<1
2,6-Dinitrotoluene									<2			<2	<2
2-Chloronaphthalene									<1			<1	<1
2-Chlorophenol									<1			<1	<1
2-Methyl-4,6-dinitrophenol									<2			<2	<2
2-Nitrophenol									<1			<1	<1
3,3-Dichlorobenzidine									<5			<5	<5
4-Bromophenyl phenyl ether									<1			<1	<1
4-Chloro-3-methylphenol									<1			<1	<1
4-Chlorophenyl phenyl ether									<1			<1	<1
4-Nitrophenol									<3			<3	<3
Acenaphthene									<1			<1	<1
Acenaphthylene									<1			<1	<1
Anthracene									<1			<1	<1
Azobenzene									<1			<1	<1
Benzidine									<5			<5	<5
Benzo(a)anthracene									<5			<5	<5
Benzo(a)pyrene									<1			<1	<1
Benzo(b)fluoranthene									<1			<1	<1
Benzo(g,h,i)perylene									<2			<2	<2
Benzo(k)fluoranthene									<1			<1	<1
Bis(2-chloroethoxy)methane									<2			<2	<2
Bis(2-chloroethyl)ether									<1			<1	<1
Bis(2-chloroisopropyl)ether									<1			<1	<1
Bis(2-ethylhexyl)phthalate			<2		<2		<2		9	<2		<2	9
Butyl benzyl phthalate									<1			2	2
Chrysene									<1			<1	<1
Dibenzo(a,h)anthracene									<1			<1	<1
Diethyl phthalate									<2			<2	<2
Dimethyl phthalate									<1			<1	<1
Di-n-butyl phthalate									<1			<1	<1
Di-n-octyl phthalate									<1			<1	<1
Fluoranthene									<1			<1	<1
Fluorene									<1			<1	<1
Hexachlorobenzene									<1			<1	<1
Hexachlorobutadiene									<1			<1	<1
Hexachlorocyclopentadiene									<5			<5	<5
Hexachloroethane									<1			<1	<1
Indeno(1,2,3-cd)pyrene									<2			<2	<2
Isophorone									<1			<1	<1
Naphthalene									<1			<1	<1
Nitrobenzene									<1			<1	<1
N-Nitrosodimethylamine									<1			<1	<1
N-Nitroso-di-n-propylamine									<1			<1	<1
N-Nitrosodiphenylamine									<1			<1	<1
Pentachlorophenol									<2			<2	<2
Phenanthrene									<1			<1	<1
Phenol									<1			<1	<1
Pyrene									<1			<1	<1

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RP-1 (M-001B) Effluent Remaining Priority Pollutants

Table 18c

RP-1 (M-001B) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD													
4,4-DDE													
4,4-DDT													
Aldrin													
Alpha-BHC													
Beta-BHC													
Delta-BHC													
Dieldrin													
Endosulfan I													
Endosulfan II													
Endosulfan Sulfate													
Endrin													
Endrin aldehyde													
Gamma-BHC													
Heptachlor													
Heptachlor epoxide													
Chlordane													
PCB-1016													
PCB-1221													
PCB-1232													
PCB-1242													
PCB-1248													
PCB-1254													
PCB-1260													
Toxaphene													

RP-1 (M-001B) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*												0.000		0.000
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

INLAND EMPIRE UTILITIES AGENCY
Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report
RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants
Table 19a
RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Arsenic (As)		<2	<2	<2	<2	<2	<2	<2	<2	2	2	<2	2
Beryllium (Be)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper (Cu)		5.7	5.4	5.3	4.6	6.0	6.5	4.2	4.8	4.6	4.0	4.4	6.5
Lead (Pb)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)		3.0	3.1	3.0	3.3	3.3	3.5	13.3	3.4	14.1	3.2	2.9	14.1
Selenium (Se)		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver (Ag)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (Zn)	44	42	40	45	44	41	43	40	33	35	31	45	45
CN, Free		<2		<2					4	<2			4

RP-1/RP-4 (M-002A) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<1			<1
1,1,2,2-Tetrachloroethane										<0.5			<0.5
1,1,2-Trichloroethane										<1			<1
1,1-Dichloroethane										<0.5			<0.5
1,1-Dichloroethene										<1			<1
1,2-Dichlorobenzene										<1			<1
1,2-Dichloroethane										<0.5			<0.5
1,2-Dichloropropane										<0.5			<0.5
1,3-Dichlorobenzene										<1			<1
1,4-Dichlorobenzene										<1			<1
2-Chloroethyl vinyl ether										<1			<1
Benzene										<1			<1
Bromodichloromethane			14		15		14			16			16
Bromoform			<1		<1		<1			<1			<1
Bromomethane										<1			<1
Carbon tetrachloride										<0.5			<0.5
Chlorobenzene										<1			<1
Chloroethane										<1			<1
Chloroform			55		63		69			65			69
Chloromethane										<1			<1
cis-1,3-Dichloropropene										<0.5			<0.5
Dibromochloromethane			2		2		2			2			2
Ethylbenzene										<1			<1
Methylene chloride										<1			<1
Tetrachloroethene										<1			<1
Toluene										<1			<1
trans-1,2-Dichloroethene										<0.5			<0.5
trans-1,3-Dichloropropene										<0.5			<0.5
Trichloroethene										<1			<1
Trichlorofluoromethane										<2			<2
Vinyl chloride										<0.5			<0.5
Acrolein										<2			<2
Acrylonitrile										0.53			0.53

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RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants
Table 19b
RP-1/RP-4 (M-002A) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene					<1							<1	<1
1,2-Dichlorobenzene					<1							<1	<1
1,3-Dichlorobenzene					<1							<1	<1
1,4-Dichlorobenzene					<1							<1	<1
2,4,6-Trichlorophenol					<1							<1	<1
2,4-Dichlorophenol					<2							<2	<2
2,4-Dimethylphenol					<1							<1	<1
2,4-Dinitrophenol					<3							<3	<3
2,4-Dinitrotoluene					<1							<1	<1
2,6-Dinitrotoluene					<2							<2	<2
2-Chloronaphthalene					<1							<1	<1
2-Chlorophenol					<1							<1	<1
2-Methyl-4,6-dinitrophenol					<2							<2	<2
2-Nitrophenol					<1							<1	<1
3,3-Dichlorobenzidine					<5							<5	<5
4-Bromophenyl phenyl ether					<1							<1	<1
4-Chloro-3-methylphenol					<1							<1	<1
4-Chlorophenyl phenyl ether					<1							<1	<1
4-Nitrophenol					<3							<3	<3
Acenaphthene					<1							<1	<1
Acenaphthylene					<1							<1	<1
Anthracene					<1							<1	<1
Azobenzene					<1							<1	<1
Benzidine					<5							<5	<5
Benzo(a)anthracene					<5							<5	<5
Benzo(a)pyrene					<1							<1	<1
Benzo(b)fluoranthene					<1							<1	<1
Benzo(g,h,i)perylene					<2							<2	<2
Benzo(k)fluoranthene					<1							<1	<1
Bis(2-chloroethoxy)methane					<2							<2	<2
Bis(2-chloroethyl)ether					<1							<1	<1
Bis(2-chloroisopropyl)ether					<1							<1	<1
Bis(2-ethylhexyl)phthalate			<2		<2		<2			<2		<2	<2
Butyl benzyl phthalate					<1							<1	<1
Chrysene					<1							<1	<1
Dibenzo(a,h)anthracene					<1							<1	<1
Diethyl phthalate					<2							<2	<2
Dimethyl phthalate					<1							<1	<1
Di-n-butyl phthalate					<1							<1	<1
Di-n-octyl phthalate					<1							<1	<1
Fluoranthene					<1							<1	<1
Fluorene					<1							<1	<1
Hexachlorobenzene					<1							<1	<1
Hexachlorobutadiene					<1							<1	<1
Hexachlorocyclopentadiene					<5							<5	<5
Hexachloroethane					<1							<1	<1
Indeno(1,2,3-cd)pyrene					<2							<2	<2
Isophorone					<1							<1	<1
Naphthalene					<1							<1	<1
Nitrobenzene					<1							<1	<1
N-Nitrosodimethylamine					<1							<1	<1
N-Nitroso-di-n-propylamine					<1							<1	<1
N-Nitrosodiphenylamine					<1							<1	<1
Pentachlorophenol					<2							<2	<2
Phenanthrene					<1							<1	<1
Phenol					<1							<1	<1
Pyrene					<1							<1	<1

INLAND EMPIRE UTILITIES AGENCY

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RP-1/RP-4 (M-002A) Effluent Remaining Priority Pollutants

Table 19c

RP-1/RP-4 (M-002A) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.01
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

RP-1/RP-4 (M-002A) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*												0.000		0.000
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

INLAND EMPIRE UTILITIES AGENCY
Regional Plant Nos. 1, 4, 5, & Carbon Canyon Water Recycling Facility, 2019 NPDES Annual Report
RP-5 (M-003) Effluent Remaining Priority Pollutants
Table 20a
RP-5 (M-003) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Arsenic (As)		<2	<2	<2	<2	2	<2	<2	2	3	3	<2	3
Beryllium (Be)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper (Cu)		7.1	7.3	6.5	7.8	8.3	5.0	4.8	7.5	6.3	6.9	6.8	8.3
Lead (Pb)		<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)		4.2	4.1	3.5	3.8	3.7	3.5	3.5	3.3	3.9	3.4	3.6	4.2
Selenium (Se)		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver (Ag)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (Zn)	52	40	47	53	56	46	33	41	50	56	53	47	56
CN, Free		<2		<2					<2	<2			<2

RP-5 (M-003) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane										<1			<1
1,1,2,2-Tetrachloroethane										<0.5			<0.5
1,1,2-Trichloroethane										<1			<1
1,1-Dichloroethane										<0.5			<0.5
1,1-Dichloroethene										<1			<1
1,2-Dichlorobenzene										<1			<1
1,2-Dichloroethane										<0.5			<0.5
1,2-Dichloropropane										<0.5			<0.5
1,3-Dichlorobenzene										<1			<1
1,4-Dichlorobenzene										<1			<1
2-Chloroethyl vinyl ether										<1			<1
Benzene										<1			<1
Bromodichloromethane	13	13		24	15	15	17	16	17	23	14	16	24
Bromoform	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane										<1			<1
Carbon tetrachloride										<0.5			<0.5
Chlorobenzene										<1			<1
Chloroethane										<1			<1
Chloroform	38	36		66	48	47	52	62	47	39	43	41	66
Chloromethane										<1			<1
cis-1,3-Dichloropropene										<0.5			<0.5
Dibromochloromethane	3	3		4	3	3	3	2	3	8	3	3	8
Ethylbenzene										<1			<1
Methylene chloride										<1			<1
Tetrachloroethene										<1			<1
Toluene										<1			<1
trans-1,2-Dichloroethene										<0.5			<0.5
trans-1,3-Dichloropropene										<0.5			<0.5
Trichloroethene										<1			<1
Trichlorofluoromethane										<2			<2
Vinyl chloride										<0.5			<0.5
Acrolein										<2			<2
Acrylonitrile										0.29			0.29

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RP-5 (M-003) Effluent Remaining Priority Pollutants
Table 20b
RP-5 (M-003) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene										<1			<1
1,2-Dichlorobenzene										<1			<1
1,3-Dichlorobenzene										<1			<1
1,4-Dichlorobenzene										<1			<1
2,4,6-Trichlorophenol										<1			<1
2,4-Dichlorophenol										<2			<2
2,4-Dimethylphenol										<1			<1
2,4-Dinitrophenol										<3			<3
2,4-Dinitrotoluene										<1			<1
2,6-Dinitrotoluene										<2			<2
2-Chloronaphthalene										<1			<1
2-Chlorophenol										<1			<1
2-Methyl-4,6-dinitrophenol										<2			<2
2-Nitrophenol										<1			<1
3,3-Dichlorobenzidine										<5			<5
4-Bromophenyl phenyl ether										<1			<1
4-Chloro-3-methylphenol										<1			<1
4-Chlorophenyl phenyl ether										<1			<1
4-Nitrophenol										<3			<3
Acenaphthene										<1			<1
Acenaphthylene										<1			<1
Anthracene										<1			<1
Azobenzene										<1			<1
Benzidine										<5			<5
Benzo(a)anthracene										<5			<5
Benzo(a)pyrene										<1			<1
Benzo(b)fluoranthene										<1			<1
Benzo(g,h,i)perylene										<2			<2
Benzo(k)fluoranthene										<1			<1
Bis(2-chloroethoxy)methane										<2			<2
Bis(2-chloroethyl)ether										<1			<1
Bis(2-chloroisopropyl)ether										<1			<1
Bis(2-ethylhexyl)phthalate			<2		3		<2			<2			3
Butyl benzyl phthalate										<1			<1
Chrysene										<1			<1
Dibenzo(a,h)anthracene										<1			<1
Diethyl phthalate										<2			<2
Dimethyl phthalate										<1			<1
Di-n-butyl phthalate										<1			<1
Di-n-octyl phthalate										<1			<1
Fluoranthene										<1			<1
Fluorene										<1			<1
Hexachlorobenzene										<1			<1
Hexachlorobutadiene										<1			<1
Hexachlorocyclopentadiene										<5			<5
Hexachloroethane										<1			<1
Indeno(1,2,3-cd)pyrene										<2			<2
Isophorone										<1			<1
Naphthalene										<1			<1
Nitrobenzene										<1			<1
N-Nitrosodimethylamine										<1			<1
N-Nitroso-di-n-propylamine										<1			<1
N-Nitrosodiphenylamine										<1			<1
Pentachlorophenol										<2			<2
Phenanthrene										<1			<1
Phenol										<1			<1
Pyrene										<1			<1

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RP-5 (M-003) Effluent Remaining Priority Pollutants
Table 20c
RP-5 (M-003) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD										<0.006			<0.006
4,4-DDE										<0.006			<0.006
4,4-DDT										<0.008			<0.008
Aldrin										<0.004			<0.004
Alpha-BHC										<0.008			<0.008
Beta-BHC										<0.005			<0.005
Delta-BHC										<0.007			<0.007
Dieldrin										<0.006			<0.006
Endosulfan I										<0.01			<0.01
Endosulfan II										<0.007			<0.007
Endosulfan Sulfate										<0.009			<0.009
Endrin										<0.009			<0.009
Endrin aldehyde										<0.006			<0.006
Gamma-BHC										<0.01			<0.01
Heptachlor										<0.006			<0.006
Heptachlor epoxide										<0.007			<0.007
Chlordane										<0.1			<0.1
PCB-1016										<0.5			<0.5
PCB-1221										<0.5			<0.5
PCB-1232										<0.5			<0.5
PCB-1242										<0.5			<0.5
PCB-1248										<0.5			<0.5
PCB-1254										<0.5			<0.5
PCB-1260										<0.5			<0.5
Toxaphene										<0.5			<0.5

RP-5 (M-003) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NA*	0.000	0.000
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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

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CCWRF (M-004) Effluent Remaining Priority Pollutants
Table 21a
CCWRF (M-004) Effluent Remaining Priority Pollutant Metals & CN, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Antimony (Sb)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Arsenic (As)		<2	<2	<2	<2	2	<2	<2	2	3	2	2	3
Beryllium (Be)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium (Cd)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chromium (Cr)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper (Cu)		7.2	9.1	7.0	8.3	8.8	8.4	8.4	8.0	7.3	8.0	6.3	9.1
Lead (Pb)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury (Hg)			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (Ni)		3.4	3.8	3.4	3.5	4.1	3.4	3.2	3.6	3.7	3.2	3.1	4.1
Selenium (Se)		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver (Ag)		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Thallium (Tl)		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (Zn)	58	59	58	54	50	53	47	51	49	63	60	50	63
CN, Free		<2		<2					<2	<2			<2

CCWRF (M-004) Effluent Volatile Organics (EPA Methods 624, 601/602), µg/L

1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<0.5		<0.5
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane	20	18		26	20	17	23	22	22		20	15	26
Bromoform	<1	<1		<1	<1	<1	<1	<1	<1		<1	<1	<1
Bromomethane											<1		<1
Carbon tetrachloride											<0.5		<0.5
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform	50	41		50	63	51	78	82	64		52	44	82
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<0.5		<0.5
Dibromochloromethane	5	4		5	3	3	4	3	4		4	3	5
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<0.5		<0.5
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<0.5		<0.5
Acrolein											<2		<2
Acrylonitrile											0.42		0.42

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CCWRF (M-004) Effluent Remaining Priority Pollutants
Table 21b
CCWRF (M-004) Effluent Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1	<1	<1
1,2-Dichlorobenzene											<1	<1	<1
1,3-Dichlorobenzene											<1	<1	<1
1,4-Dichlorobenzene											<1	<1	<1
2,4,6-Trichlorophenol											<1	<1	<1
2,4-Dichlorophenol											<2	<2	<2
2,4-Dimethylphenol											<1	<1	<1
2,4-Dinitrophenol											<3	<3	<3
2,4-Dinitrotoluene											<1	<1	<1
2,6-Dinitrotoluene											<2	<2	<2
2-Chloronaphthalene											<1	<1	<1
2-Chlorophenol											<1	<1	<1
2-Methyl-4,6-dinitrophenol											<2	<2	<2
2-Nitrophenol											<1	<1	<1
3,3-Dichlorobenzidine											<5	<5	<5
4-Bromophenyl phenyl ether											<1	<1	<1
4-Chloro-3-methylphenol											<1	<1	<1
4-Chlorophenyl phenyl ether											<1	<1	<1
4-Nitrophenol											<3	<3	<3
Acenaphthene											<1	<1	<1
Acenaphthylene											<1	<1	<1
Anthracene											<1	<1	<1
Azobenzene											<1	<1	<1
Benzidine											<5	<5	<5
Benzo(a)anthracene											<5	<5	<5
Benzo(a)pyrene											<1	<1	<1
Benzo(b)fluoranthene											<1	<1	<1
Benzo(g,h,i)perylene											<2	<2	<2
Benzo(k)fluoranthene											<1	<1	<1
Bis(2-chloroethoxy)methane											<2	<2	<2
Bis(2-chloroethyl)ether											<1	<1	<1
Bis(2-chloroisopropyl)ether											<1	<1	<1
Bis(2-ethylhexyl)phthalate			<2		<2						<2	<2	<2
Butyl benzyl phthalate											<1	<1	<1
Chrysene											<1	<1	<1
Dibenzo(a,h)anthracene											<1	<1	<1
Diethyl phthalate											<2	<2	<2
Dimethyl phthalate											<1	<1	<1
Di-n-butyl phthalate											<1	<1	<1
Di-n-octyl phthalate											<1	<1	<1
Fluoranthene											<1	<1	<1
Fluorene											<1	<1	<1
Hexachlorobenzene											<1	<1	<1
Hexachlorobutadiene											<1	<1	<1
Hexachlorocyclopentadiene											<5	<5	<5
Hexachloroethane											<1	<1	<1
Indeno(1,2,3-cd)pyrene											<2	<2	<2
Isophorone											<1	<1	<1
Naphthalene											<1	<1	<1
Nitrobenzene											<1	<1	<1
N-Nitrosodimethylamine											<1	<1	<1
N-Nitroso-di-n-propylamine											<1	<1	<1
N-Nitrosodiphenylamine											<1	<1	<1
Pentachlorophenol											<2	<2	<2
Phenanthrene											<1	<1	<1
Phenol											<1	<1	<1
Pyrene											<1	<1	<1

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CCWRF (M-004) Effluent Remaining Priority Pollutants

Table 21c

CCWRF (M-004) Effluent Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD					<0.006			<0.006			<0.006		<0.006
4,4-DDE					<0.006			<0.006			<0.006		<0.006
4,4-DDT					<0.008			<0.008			<0.008		<0.008
Aldrin					<0.004			<0.004			<0.004		<0.004
Alpha-BHC					<0.008			<0.008			<0.008		<0.008
Beta-BHC					<0.005			<0.005			<0.005		<0.005
Delta-BHC					<0.007			<0.007			<0.007		<0.007
Dieldrin					<0.006			<0.006			<0.006		<0.006
Endosulfan I			0.05		<0.01			<0.01			<0.01		0.05
Endosulfan II					<0.007			<0.007			<0.007		<0.007
Endosulfan Sulfate					<0.009			<0.009			<0.009		<0.009
Endrin					<0.009			<0.009			<0.009		<0.009
Endrin aldehyde					<0.006			<0.006			<0.006		<0.006
Gamma-BHC					<0.01			<0.01			<0.01		<0.01
Heptachlor					<0.006			<0.006			<0.006		<0.006
Heptachlor epoxide					<0.007			<0.007			<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

CCWRF (M-004) Effluent Dioxins & Furans, pg/L (reported values based on detection limit)

PCDD/PCDF Congeners*	0.000			0.000			No Discharge		0.000		0.000
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*TEQ is calculated based on congener concentrations below the reporting limit (RL) set to zero

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants
Table 22a
RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		<0.05
Ag, Total Dissolved											<0.25		<0.25
As, Total Dissolved											<2		<2
Be, Total Dissolved											<0.5		<0.5
Cd, Total Dissolved											<0.25		<0.25
Cr, Total Dissolved											1.8		1.8
Cu, Total Dissolved											5.9		5.9
Ni, Total Dissolved											3		3
Pb, Total Dissolved											<0.5		<0.5
Sb, Total Dissolved											<1		<1
Se, Total Dissolved											<2		<2
Tl, Total Dissolved											<1		<1
Zn, Total Dissolved											8		8
CN, Free											<2		<2

Table 22b
RP-1 Cucamonga Creek Upstream (R-002U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<1		<1
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane											<1		<1
Bromoform											<1		<1
Bromomethane											<1		<1
Carbon tetrachloride											<1		<1
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform											<1		<1
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<1		<1
Dibromochloromethane											<1		<1
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<1		<1
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<1		<1
Acrolein											<2		<2
Acrylonitrile											<2		<2

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants
Table 22c
RP-1 Cucamonga Creek Upstream (R-002U) Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2,4,6-Trichlorophenol											<1		<1
2,4-Dichlorophenol											<2		<2
2,4-Dimethylphenol											<1		<1
2,4-Dinitrophenol											<3		<3
2,4-Dinitrotoluene											<1		<1
2,6-Dinitrotoluene											<2		<2
2-Chloronaphthalene											<1		<1
2-Chlorophenol											<1		<1
2-Methyl-4,6-dinitrophenol											<2		<2
2-Nitrophenol											<1		<1
3,3-Dichlorobenzidine											<5		<5
4-Bromophenyl phenyl ether											<1		<1
4-Chloro-3-methylphenol											<1		<1
4-Chlorophenyl phenyl ether											<1		<1
4-Nitrophenol											<3		<3
Acenaphthene											<1		<1
Acenaphthylene											<1		<1
Anthracene											<1		<1
Azobenzene											<1		<1
Benzidine											<5		<5
Benzo(a)anthracene											<5		<5
Benzo(a)pyrene											<1		<1
Benzo(b)fluoranthene											<1		<1
Benzo(g,h,i)perylene											<2		<2
Benzo(k)fluoranthene											<1		<1
Bis(2-chloroethoxy)methane											<2		<2
Bis(2-chloroethyl)ether											<1		<1
Bis(2-chloroisopropyl)ether											<1		<1
Bis(2-ethylhexyl)phthalate											<2		<2
Butyl benzyl phthalate											<1		<1
Chrysene											<1		<1
Dibenzo(a,h)anthracene											<1		<1
Diethyl phthalate											<2		<2
Dimethyl phthalate											<1		<1
Di-n-butyl phthalate											<1		<1
Di-n-octyl phthalate											<1		<1
Fluoranthene											<1		<1
Fluorene											<1		<1
Hexachlorobenzene											<1		<1
Hexachlorobutadiene											<1		<1
Hexachlorocyclopentadiene											<5		<5
Hexachloroethane											<1		<1
Indeno(1,2,3-cd)pyrene											<2		<2
Isophorone											<1		<1
Naphthalene											<1		<1
Nitrobenzene											<1		<1
N-Nitrosodimethylamine											<1		<1
N-Nitroso-di-n-propylamine											<1		<1
N-Nitrosodiphenylamine											<1		<1
Pentachlorophenol											<2		<2
Phenanthrene											<1		<1
Phenol											<1		<1
Pyrene											<1		<1
TCDD Scan											ND		ND

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RP-1 Cucamonga Creek Upstream (R-002U) Remaining Priority Pollutants

Table 22d

RP-1 Cucamonga Creek Upstream (R-002U) Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.01
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants
Table 23a
RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		<0.05
Ag, Total Dissolved											<0.25		<0.25
As, Total Dissolved											<2		<2
Be, Total Dissolved											<0.5		<0.5
Cd, Total Dissolved											<0.25		<0.25
Cr, Total Dissolved											0.8		0.8
Cu, Total Dissolved											4.0		4.0
Ni, Total Dissolved											3		3
Pb, Total Dissolved											<0.5		<0.5
Sb, Total Dissolved											<1		<1
Se, Total Dissolved											<2		<2
Tl, Total Dissolved											<1		<1
Zn, Total Dissolved											33		33

Table 23b
RP-1 Cucamonga Creek Downstream (R-002D) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<1		<1
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane											5		5
Bromoform											<1		<1
Bromomethane											<1		<1
Carbon tetrachloride											<1		<1
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform											23		23
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<1		<1
Dibromochloromethane											<1		<1
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<1		<1
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<1		<1
Acrolein											<2		<2
Acrylonitrile											0.55		0.55

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants
Table 23c
RP-1 Cucamonga Creek Downstream (R-002D) Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2,4,6-Trichlorophenol											<1		<1
2,4-Dichlorophenol											<2		<2
2,4-Dimethylphenol											<1		<1
2,4-Dinitrophenol											<3		<3
2,4-Dinitrotoluene											<1		<1
2,6-Dinitrotoluene											<2		<2
2-Chloronaphthalene											<1		<1
2-Chlorophenol											<1		<1
2-Methyl-4,6-dinitrophenol											<2		<2
2-Nitrophenol											<1		<1
3,3-Dichlorobenzidine											<5		<5
4-Bromophenyl phenyl ether											<1		<1
4-Chloro-3-methylphenol											<1		<1
4-Chlorophenyl phenyl ether											<1		<1
4-Nitrophenol											<3		<3
Acenaphthene											<1		<1
Acenaphthylene											<1		<1
Anthracene											<1		<1
Azobenzene											<1		<1
Benzidine											<5		<5
Benzo(a)anthracene											<5		<5
Benzo(a)pyrene											<1		<1
Benzo(b)fluoranthene											<1		<1
Benzo(g,h,i)perylene											<2		<2
Benzo(k)fluoranthene											<1		<1
Bis(2-chloroethoxy)methane											<2		<2
Bis(2-chloroethyl)ether											<1		<1
Bis(2-chloroisopropyl)ether											<1		<1
Bis(2-ethylhexyl)phthalate											<2		<2
Butyl benzyl phthalate											<1		<1
Chrysene											<1		<1
Dibenzo(a,h)anthracene											<1		<1
Diethyl phthalate											<2		<2
Dimethyl phthalate											<1		<1
Di-n-butyl phthalate											<1		<1
Di-n-octyl phthalate											<1		<1
Fluoranthene											<1		<1
Fluorene											<1		<1
Hexachlorobenzene											<1		<1
Hexachlorobutadiene											<1		<1
Hexachlorocyclopentadiene											<5		<5
Hexachloroethane											<1		<1
Indeno(1,2,3-cd)pyrene											<2		<2
Isophorone											<1		<1
Naphthalene											<1		<1
Nitrobenzene											<1		<1
N-Nitrosodimethylamine											<1		<1
N-Nitroso-di-n-propylamine											<1		<1
N-Nitrosodiphenylamine											<1		<1
Pentachlorophenol											<2		<2
Phenanthrene											<1		<1
Phenol											<1		<1
Pyrene											<1		<1
TCDD Scan											ND		ND

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RP-1 Cucamonga Creek Downstream (R-002D) Remaining Priority Pollutants

Table 23d

RP-1 Cucamonga Creek Downstream (R-002D) Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.01
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

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RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants
Table 24a
RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		<0.05
Ag, Total Dissolved											<0.25		<0.25
As, Total Dissolved											<2		<2
Be, Total Dissolved											<0.5		<0.5
Cd, Total Dissolved											<0.25		<0.25
Cr, Total Dissolved											0.9		0.9
Cu, Total Dissolved											5.6		5.6
Ni, Total Dissolved											4		4
Pb, Total Dissolved											<0.5		<0.5
Sb, Total Dissolved											<1		<1
Se, Total Dissolved											3		3
Tl, Total Dissolved											<1		<1
Zn, Total Dissolved											6		6

Table 24b
RP-5 Chino Creek Upstream (R-003U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<1		<1
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane											<1		<1
Bromoform											<1		<1
Bromomethane											<1		<1
Carbon tetrachloride											<1		<1
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform											<1		<1
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<1		<1
Dibromochloromethane											<1		<1
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<1		<1
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<1		<1
Acrolein											<2		<2
Acrylonitrile											<2		<2

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RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants
Table 24c
RP-5 Chino Creek Upstream (R-003U) Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2,4,6-Trichlorophenol											<1		<1
2,4-Dichlorophenol											<2		<2
2,4-Dimethylphenol											<1		<1
2,4-Dinitrophenol											<3		<3
2,4-Dinitrotoluene											<1		<1
2,6-Dinitrotoluene											<2		<2
2-Chloronaphthalene											<1		<1
2-Chlorophenol											<1		<1
2-Methyl-4,6-dinitrophenol											<2		<2
2-Nitrophenol											<1		<1
3,3-Dichlorobenzidine											<5		<5
4-Bromophenyl phenyl ether											<1		<1
4-Chloro-3-methylphenol											<1		<1
4-Chlorophenyl phenyl ether											<1		<1
4-Nitrophenol											<3		<3
Acenaphthene											<1		<1
Acenaphthylene											<1		<1
Anthracene											<1		<1
Azobenzene											<1		<1
Benzidine											<5		<5
Benzo(a)anthracene											<5		<5
Benzo(a)pyrene											<1		<1
Benzo(b)fluoranthene											<1		<1
Benzo(g,h,i)perylene											<2		<2
Benzo(k)fluoranthene											<1		<1
Bis(2-chloroethoxy)methane											<2		<2
Bis(2-chloroethyl)ether											<1		<1
Bis(2-chloroisopropyl)ether											<1		<1
Bis(2-ethylhexyl)phthalate											<2		<2
Butyl benzyl phthalate											<1		<1
Chrysene											<1		<1
Dibenzo(a,h)anthracene											<1		<1
Diethyl phthalate											<2		<2
Dimethyl phthalate											<1		<1
Di-n-butyl phthalate											<1		<1
Di-n-octyl phthalate											<1		<1
Fluoranthene											<1		<1
Fluorene											<1		<1
Hexachlorobenzene											<1		<1
Hexachlorobutadiene											<1		<1
Hexachlorocyclopentadiene											<5		<5
Hexachloroethane											<1		<1
Indeno(1,2,3-cd)pyrene											<2		<2
Isophorone											<1		<1
Naphthalene											<1		<1
Nitrobenzene											<1		<1
N-Nitrosodimethylamine											<1		<1
N-Nitroso-di-n-propylamine											<1		<1
N-Nitrosodiphenylamine											<1		<1
Pentachlorophenol											<2		<2
Phenanthrene											<1		<1
Phenol											<1		<1
Pyrene											<1		<1
TCDD Scan											ND		ND

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RP-5 Chino Creek Upstream (R-003U) Remaining Priority Pollutants

Table 24d

RP-5 Chino Creek Upstream (R-003U) Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.010
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

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RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants
Table 25a
RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		<0.05
Ag, Total Dissolved											<0.25		<0.25
As, Total Dissolved											<2		<2
Be, Total Dissolved											<0.5		<0.5
Cd, Total Dissolved											<0.25		<0.25
Cr, Total Dissolved											0.7		0.7
Cu, Total Dissolved											6.2		6.2
Ni, Total Dissolved											4		4
Pb, Total Dissolved											<0.5		<0.5
Sb, Total Dissolved											<1		<1
Se, Total Dissolved											<2		<2
Tl, Total Dissolved											<1		<1
Zn, Total Dissolved											41		41

Table 25b
RP-5 Chino Creek Downstream (R-003D) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<1		<1
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane											9		9
Bromoform											<1		<1
Bromomethane											<1		<1
Carbon tetrachloride											<1		<1
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform											28		28
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<1		<1
Dibromochloromethane											<1		<1
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<1		<1
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<1		<1
Acrolein											<2		<2
Acrylonitrile											0.26		0.26

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RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants
Table 25c
RP-5 Chino Creek Downstream (R-003D) Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2,4,6-Trichlorophenol											<1		<1
2,4-Dichlorophenol											<2		<2
2,4-Dimethylphenol											<1		<1
2,4-Dinitrophenol											<3		<3
2,4-Dinitrotoluene											<1		<1
2,6-Dinitrotoluene											<2		<2
2-Chloronaphthalene											<1		<1
2-Chlorophenol											<1		<1
2-Methyl-4,6-dinitrophenol											<2		<2
2-Nitrophenol											<1		<1
3,3-Dichlorobenzidine											<5		<5
4-Bromophenyl phenyl ether											<1		<1
4-Chloro-3-methylphenol											<1		<1
4-Chlorophenyl phenyl ether											<1		<1
4-Nitrophenol											<3		<3
Acenaphthene											<1		<1
Acenaphthylene											<1		<1
Anthracene											<1		<1
Azobenzene											<1		<1
Benzidine											<5		<5
Benzo(a)anthracene											<5		<5
Benzo(a)pyrene											<1		<1
Benzo(b)fluoranthene											<1		<1
Benzo(g,h,i)perylene											<2		<2
Benzo(k)fluoranthene											<1		<1
Bis(2-chloroethoxy)methane											<2		<2
Bis(2-chloroethyl)ether											<1		<1
Bis(2-chloroisopropyl)ether											<1		<1
Bis(2-ethylhexyl)phthalate											<2		<2
Butyl benzyl phthalate											<1		<1
Chrysene											<1		<1
Dibenzo(a,h)anthracene											<1		<1
Diethyl phthalate											<2		<2
Dimethyl phthalate											<1		<1
Di-n-butyl phthalate											<1		<1
Di-n-octyl phthalate											<1		<1
Fluoranthene											<1		<1
Fluorene											<1		<1
Hexachlorobenzene											<1		<1
Hexachlorobutadiene											<1		<1
Hexachlorocyclopentadiene											<5		<5
Hexachloroethane											<1		<1
Indeno(1,2,3-cd)pyrene											<2		<2
Isophorone											<1		<1
Naphthalene											<1		<1
Nitrobenzene											<1		<1
N-Nitrosodimethylamine											<1		<1
N-Nitroso-di-n-propylamine											<1		<1
N-Nitrosodiphenylamine											<1		<1
Pentachlorophenol											<2		<2
Phenanthrene											<1		<1
Phenol											<1		<1
Pyrene											<1		<1
TCDD Scan											ND		ND

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RP-5 Chino Creek Downstream (R-003D) Remaining Priority Pollutants

Table 25d

RP-5 Chino Creek Downstream (R-003D) Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.010
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26a

CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutant Metals & Cyanide, µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
Hg, Total Recoverable											<0.05		<0.05
Ag, Total Dissolved											<0.25		<0.25
As, Total Dissolved											2		2
Be, Total Dissolved											<0.5		<0.5
Cd, Total Dissolved											<0.25		<0.25
Cr, Total Dissolved											0.9		0.9
Cu, Total Dissolved											7.6		7.6
Ni, Total Dissolved											4		4
Pb, Total Dissolved											0.6		0.6
Sb, Total Dissolved											<1		<1
Se, Total Dissolved											3		3
Tl, Total Dissolved											<1		<1
Zn, Total Dissolved											7		7

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26b

CCWRF Chino Creek Upstream (R-004U) Volatile Organics (EPA Methods 624, 601/602), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,1,1-Trichloroethane											<1		<1
1,1,2,2-Tetrachloroethane											<0.5		<0.5
1,1,2-Trichloroethane											<1		<1
1,1-Dichloroethane											<0.5		<0.5
1,1-Dichloroethene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,2-Dichloroethane											<1		<1
1,2-Dichloropropane											<0.5		<0.5
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2-Chloroethyl vinyl ether											<1		<1
Benzene											<1		<1
Bromodichloromethane											<1		<1
Bromoform											<1		<1
Bromomethane											<1		<1
Carbon tetrachloride											<1		<1
Chlorobenzene											<1		<1
Chloroethane											<1		<1
Chloroform											<1		<1
Chloromethane											<1		<1
cis-1,3-Dichloropropene											<1		<1
Dibromochloromethane											<1		<1
Ethylbenzene											<1		<1
Methylene chloride											<1		<1
Tetrachloroethene											<1		<1
Toluene											<1		<1
trans-1,2-Dichloroethene											<0.5		<0.5
trans-1,3-Dichloropropene											<1		<1
Trichloroethene											<1		<1
Trichlorofluoromethane											<2		<2
Vinyl chloride											<1		<1
Acrolein											<2		<2
Acrylonitrile											<2		<2

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CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants
Table 26c
CCWRF Chino Creek Upstream (R-004U) Base/Neutral and Acid Extractibles (EPA Method 625), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
1,2,4-Trichlorobenzene											<1		<1
1,2-Dichlorobenzene											<1		<1
1,3-Dichlorobenzene											<1		<1
1,4-Dichlorobenzene											<1		<1
2,4,6-Trichlorophenol											<1		<1
2,4-Dichlorophenol											<2		<2
2,4-Dimethylphenol											<1		<1
2,4-Dinitrophenol											<3		<3
2,4-Dinitrotoluene											<1		<1
2,6-Dinitrotoluene											<2		<2
2-Chloronaphthalene											<1		<1
2-Chlorophenol											<1		<1
2-Methyl-4,6-dinitrophenol											<2		<2
2-Nitrophenol											<1		<1
3,3-Dichlorobenzidine											<5		<5
4-Bromophenyl phenyl ether											<1		<1
4-Chloro-3-methylphenol											<1		<1
4-Chlorophenyl phenyl ether											<1		<1
4-Nitrophenol											<3		<3
Acenaphthene											<1		<1
Acenaphthylene											<1		<1
Anthracene											<1		<1
Azobenzene											<1		<1
Benzidine											<5		<5
Benzo(a)anthracene											<5		<5
Benzo(a)pyrene											<1		<1
Benzo(b)fluoranthene											<1		<1
Benzo(g,h,i)perylene											<2		<2
Benzo(k)fluoranthene											<1		<1
Bis(2-chloroethoxy)methane											<2		<2
Bis(2-chloroethyl)ether											<1		<1
Bis(2-chloroisopropyl)ether											<1		<1
Bis(2-ethylhexyl)phthalate											<2		<2
Butyl benzyl phthalate											<1		<1
Chrysene											<1		<1
Dibenzo(a,h)anthracene											<1		<1
Diethyl phthalate											<2		<2
Dimethyl phthalate											<1		<1
Di-n-butyl phthalate											<1		<1
Di-n-octyl phthalate											<1		<1
Fluoranthene											<1		<1
Fluorene											<1		<1
Hexachlorobenzene											<1		<1
Hexachlorobutadiene											<1		<1
Hexachlorocyclopentadiene											<5		<5
Hexachloroethane											<1		<1
Indeno(1,2,3-cd)pyrene											<2		<2
Isophorone											<1		<1
Naphthalene											<1		<1
Nitrobenzene											<1		<1
N-Nitrosodimethylamine											<1		<1
N-Nitroso-di-n-propylamine											<1		<1
N-Nitrosodiphenylamine											<1		<1
Pentachlorophenol											<2		<2
Phenanthrene											<1		<1
Phenol											<1		<1
Pyrene											<1		<1
TCDD Scan											ND		ND

INLAND EMPIRE UTILITIES AGENCY

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

CCWRF Chino Creek Upstream (R-004U) Remaining Priority Pollutants

Table 26d

CCWRF Chino Creek Upstream (R-004U) Pesticides (EPA Method 608), µg/L

Constituent	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max.
4,4-DDD											<0.006		<0.006
4,4-DDE											<0.006		<0.006
4,4-DDT											<0.008		<0.008
Aldrin											<0.004		<0.004
Alpha-BHC											<0.008		<0.008
Beta-BHC											<0.005		<0.005
Delta-BHC											<0.007		<0.007
Dieldrin											<0.006		<0.006
Endosulfan I											<0.01		<0.01
Endosulfan II											<0.007		<0.007
Endosulfan Sulfate											<0.009		<0.009
Endrin											<0.009		<0.009
Endrin aldehyde											<0.006		<0.006
Gamma-BHC											<0.01		<0.01
Heptachlor											<0.006		<0.006
Heptachlor epoxide											<0.007		<0.007
Chlordane											<0.1		<0.1
PCB-1016											<0.5		<0.5
PCB-1221											<0.5		<0.5
PCB-1232											<0.5		<0.5
PCB-1242											<0.5		<0.5
PCB-1248											<0.5		<0.5
PCB-1254											<0.5		<0.5
PCB-1260											<0.5		<0.5
Toxaphene											<0.5		<0.5





IEUA FY 2019-2020 Annual Energy Report



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IEUA is committed to optimizing facility energy use and effectively managing renewable resources to contain future energy costs and provide for future rate stabilization.

Introduction

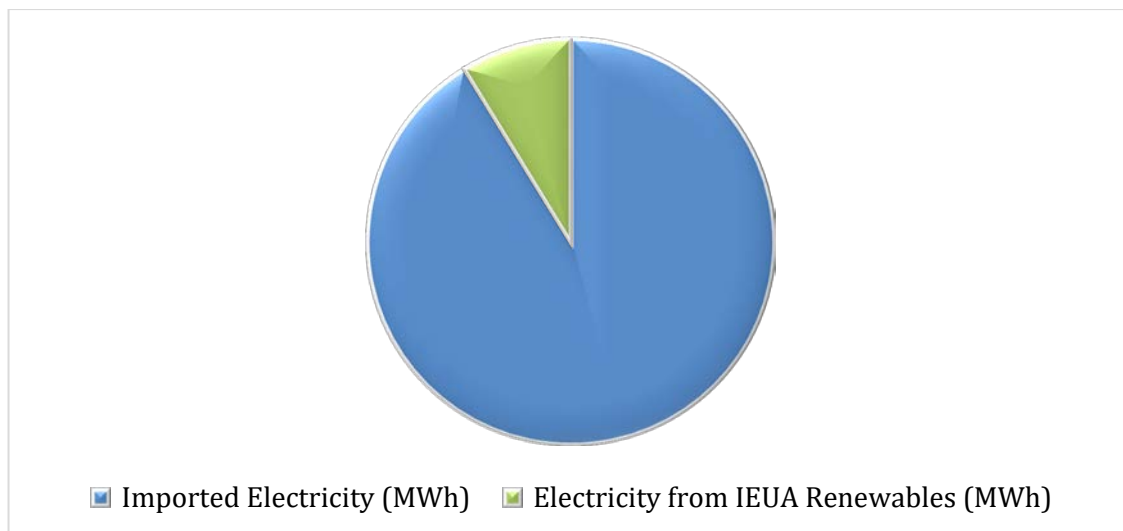
The 2019/20 Energy Report tracks IEUA's energy consumption and portfolio, renewable generation performance and savings, and energy efficiency projects for the fiscal year. The report includes a brief description of upcoming projects and initiatives that will be implemented over the next few years.

Summary

In 2019/20, IEUA:

- Consumed 75,703 MWh of electricity (Figure 1).
- Generated 10% of the electricity consumed from renewable energy (Figure 1). Savings to date since 2008 is approximately \$1,040,000.
- Spent \$7.6 million for utilities, that includes imported electricity, renewable energy and natural gas, and energy management services.
- Completed an energy efficiency project at RP-1.
- Commissioned 70 kW of solar on the RP-5 Lab rooftop.

Figure 1: IEUA Electricity Source for 2019/20



Did you know?

** In 2018 a typical U.S. household used 12,146 kWh (U.S. Energy Information Administration).*

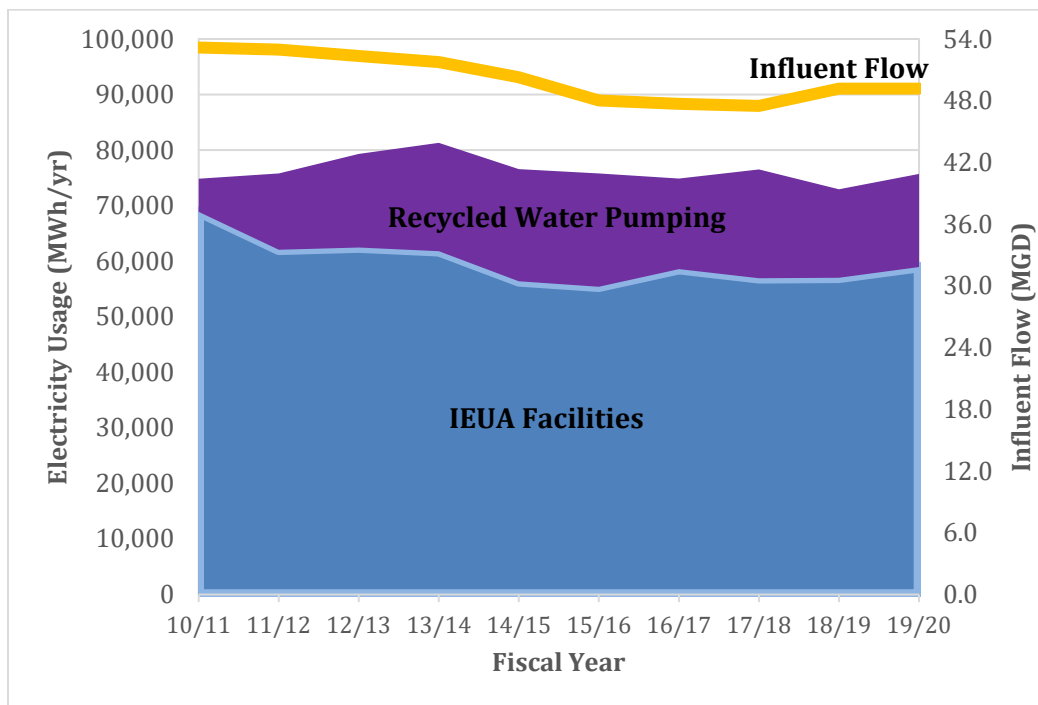
** The renewable energy generated by IEUA would be able to provide electricity to at least 648 homes.*

Flow and Energy Consumption

- In 2019/20, the annual average influent flow to the regional water recycling plants was 49.2 MGD which was a slight increase of 0.1% as compared to the previous fiscal year of 49.1 MGD (Figure 2).

- In 2019/20, IEUA facilities which include the regional water recycling plants, composting facility, and recycled water pumping used approximately 75,703 MWh of electricity (Figure 2). The electricity consumption for 2019/20 increased by 2.9% as compared to the previous fiscal year of 73,598 MWh. This was due to the increased recycled water pumping and groundwater recharge activity

Figure 2: IEUA Electricity Use and Regional Influent Flows



Utility Change in Time-of-Use (TOU)

- Southern California Edison (SCE) changed their peak time of use from 12 p.m.-6 p.m. to 4 p.m.-9 p.m. starting on March 2019. This change is due to the significant impact of solar installations across their service area and statewide. During the late afternoon to nighttime, there is typically a surge in imported demand after the solar is no longer producing power. Although, wastewater treatment is an around the clock process, there are some processes in Agency facilities that are offline during the new peak time such as the composting facility and dewatering, which results in reduced on-peak demand. Additionally, SCE decreased facility demand rates.

Expenditure

- The cost of electricity remains the highest non-labor operations and maintenance (O&M) expenditure for IEUA. In 2019/20, the annual cost for energy related utilities and energy management was \$7.6 million which had a decrease of 5% as compared to the previous fiscal year of \$8.0 million due to the increase in renewable generation and energy demand management from the battery storage systems.

IEUA has a diversified energy procurement approach, that includes on-site generation Power Purchase Agreements (PPA), energy demand management, electricity purchase from Southern California Edison, and direct access contract with Shell Energy North America, continues to provide rate stabilization and cost effectiveness.

Renewable Energy Production and Storage

- IEUA's diverse renewable portfolio consists of 5.0 MW solar, 1.0 MW of wind, 3.0 MW of engines, and 4.0 MW battery (Figure 3). The battery storage optimizes energy management by charging from the grid during off-peak periods and discharging during on-peak periods, therefore it is not considered as onsite generation. In order to increase onsite renewable generation, IEUA plans to complete the installation of the necessary emissions control required by South Coast Air Quality Management District to have the REEP engines operating as part of the RP-5 Expansion project.

Figure 3: IEUA's Diverse Renewable Portfolio



- In 2019/20, 7,867 MWh of electricity was generated onsite, 23% more than 2018/19. The increase is due to the operation of the 1.5 MW of additional solar at Inland Empire Regional Composting Facility (IERCF) for a full year.

- IEUA's renewable portfolio generated 10% of the electricity used in 2019/20. Of the electricity consumed by IEUA;
 - o 7,556 MWh was produced by the solar across IEUA facilities; and
 - o 311 MWh was produced by the wind turbine at RP-4.
- Although PPA average rates have been typically higher than the average grid price in previous years, renewable energy projects provided savings, as a result of lower standby charges compared to the facility demand charge rate. Due to the decrease in facility demand rates from the new SCE tariffs, PPA renewable energy projects received overall no savings in 2019/20. IEUA paid an estimated \$26,000 more on renewable energy than the grid.
- Generated solar electricity varies throughout the year due to the different number of sunlight hours, solar generation is usually higher in the summer and lower in the winter. In addition, CCWRF solar was inoperable beginning the second half of the previous fiscal year but was repaired and has been fully operational since November 2019.
- As a requirement by Southern California Edison (SCE), during the installation of the new solar at IERCF, the wind turbine had to be put offline in December 2018 until the proper protections were put in place to prevent impact to the transmission line. The wind turbine was put back online December 2019.
- The REEP engine has been offline since August 2017, they are expected to restart operation subsequent to the completion of the RP-5 Biosolids Facility project and the installation of the emission control equipment, which is anticipated in 2025.
- In 2015, IEUA partnered with Advanced Microgrid Solutions (AMS) through an energy management services (EMS) agreement to install 4 MW of battery storage and 1.5 MW of solar to optimize energy management and achieve cost savings through strategic procurement. The RP-1, RP-5, and CCWRF battery storage systems started commercial operation in November 2018. While the RP-4 and IERCF battery storage and solar system began commercial operation in March 2019. All facilities have completed their first year of operation. As of April 2020, the battery systems are now being operated and maintained by Enel X.

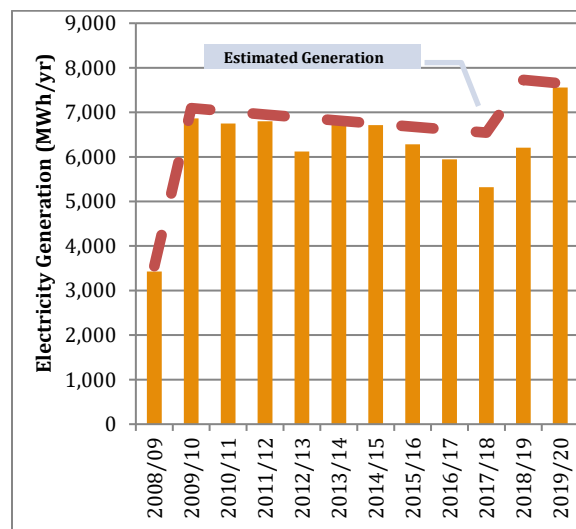
Solar



Solar Performance

- Solar across IEUA facilities generated 7,556 MWh of renewable energy, 21.7% more than 2018/19. The increased output was due to the 1.5 MW addition of solar at IERCF operating for a full year and the CCWRF solar going back online during the fiscal year. The disturbance in solar output, starting in FY2015/16 is caused by multiple solar inverters going offline. It should be noted that the existing 3.5 MW of solar is through a PPA with SunPower and the new solar is through an EMS contract.

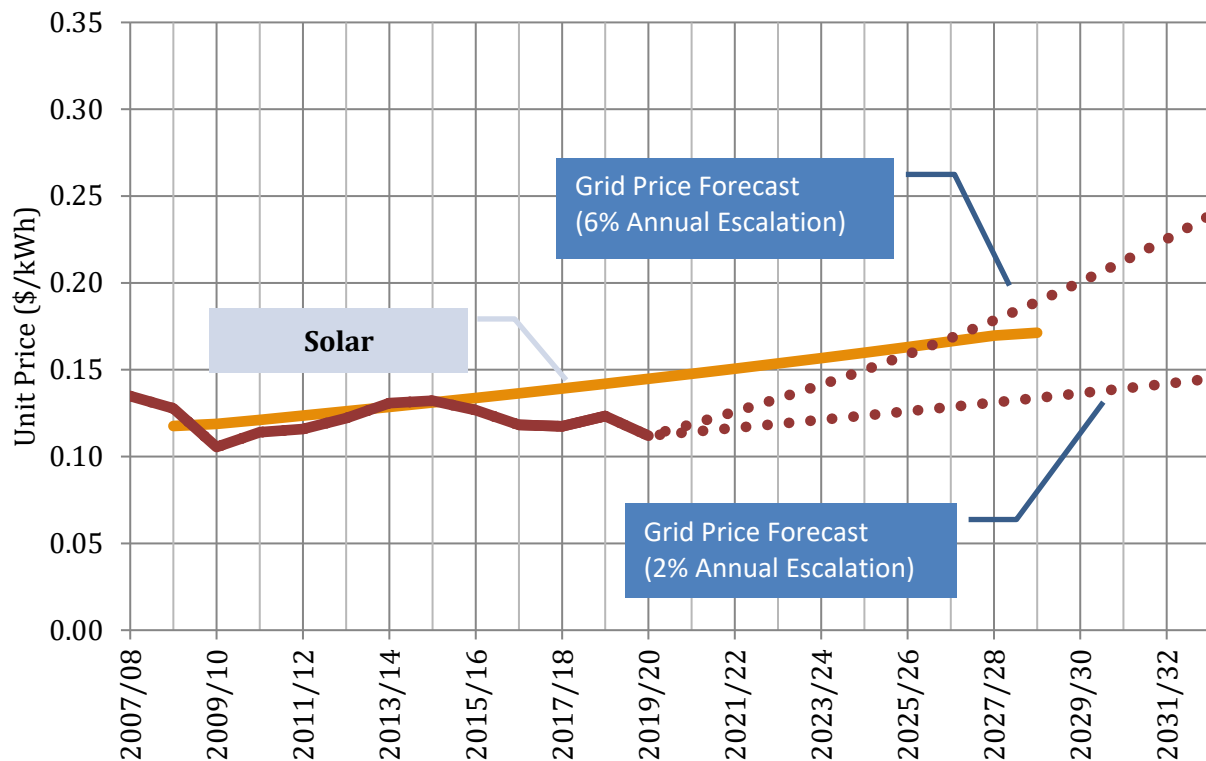
Figure 4: Solar Electricity Generation



Solar Cost

- For 2019/20, the SunPower PPA rate for the solar was higher than the average grid price. The solar projects provided no savings, as a result of lower facility demand charge rates compared to the standby charge rates. IEUA paid an estimated \$32,000 more than the grid.
- The current SunPower PPA will expire in 2029. Staff will negotiate with the provider to extend the contract or purchase the solar, whichever is most cost-effective for the Agency.

Figure 5: Cost of Solar Power from PPA vs Grid Import



- Solar generated an overall savings of \$342,327 from 2008/09 to 2019/20.

Table 1: Savings from Solar Power PPA

Savings FY 08/09 – FY 19/20	\$250,000
Range of Savings PPA Term (FY 08/09 – FY 28/29)	-\$475,000 (2% Esc) \$1,069,000 (6% Esc)

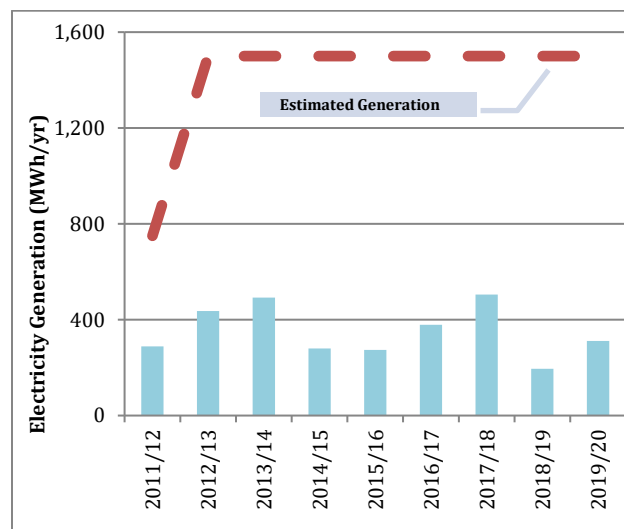
Wind



Wind Performance

- In FY 2019/20 the wind turbine at RP-4 generated 311 MWh of renewable energy, 59% higher than 2018/19 due to the system being offline more than half of the previous fiscal year.

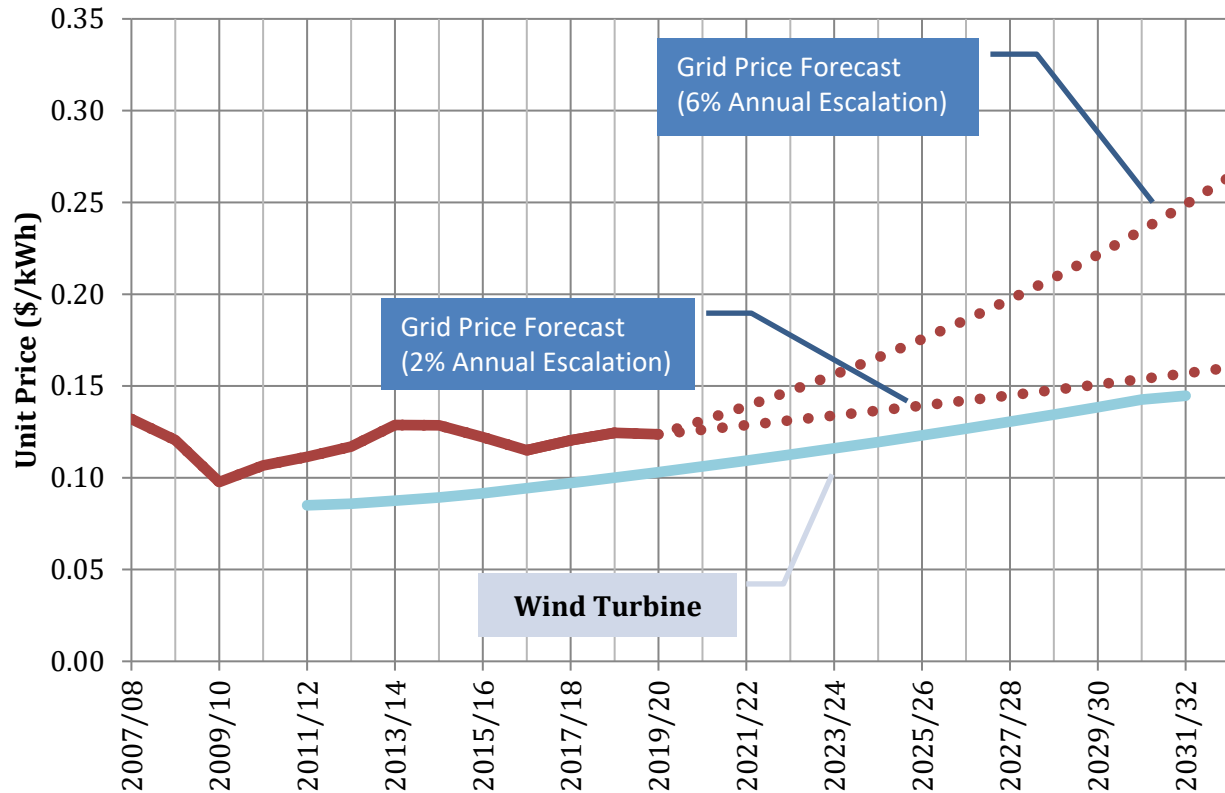
Figure 6: Wind Electricity Generation



Wind Cost

- For 2019/20, the PPA rate for the wind turbine was 20% lower than the average grid price. The wind turbine provided approximately \$6,000 in savings.

Figure 7: Cost of Wind Power vs Grid Import



- Wind generated \$84,000 in savings from 2011/12 to 2019/20.

Table 2: Savings from Wind Power

Savings FY 11/12 – FY 19/20	\$84,000
Range of Savings PPA Term (FY 11/12 – FY 31/32)	\$152,000 (2% Esc) \$338,000 (6% Esc)

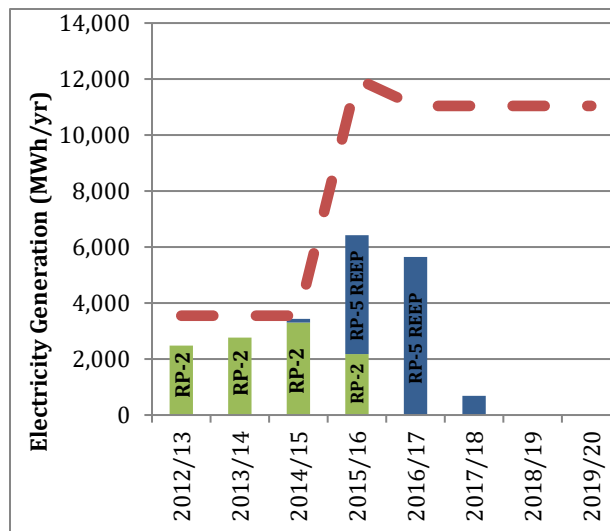
Engine



Engine Performance

- Renewable energy was not generated by the REEP engines since they did not operate the entire fiscal year. The REEP engines at RP-5 were put offline in August 2017. The engines are expected to go back online in 2025 after the completion of the RP-5 Biosolids Facility project, and the installation of the SCAQMD required emission controls.

Figure 8: Engine(s) Electricity Generation



Battery Storage + Solar



Battery Storage + Solar Performance

- The AMS battery storage at RP-1, RP-5 and CCWRF (2.5 MW combined) started commercial operation in November 2018, and the 1.5 MW battery storage at RP-4 and 1.5 MW of solar at IERCF started commercial operation on March 2019. In the first year of commercial operation, RP-1, RP-5, and CCWRF experienced a combined average demand reduction of 333 kW with a total bill savings of \$124,000. While the system at IERCF and RP-4 achieved an average demand reduction of 334 kW and solar generation of 2,255 MWh with a total bill savings of \$297,000 in the first term year. Since the minimum guaranteed savings per the contract was not met, the battery system owners reconciled the remainder of the expected savings to the Agency.

Energy Efficiency Projects

- IEUA continues to work with Southern California Edison (SCE) and Southern California Regional Energy Network (SoCalREN) to conduct comprehensive energy audits and to implement projects to reduce electricity consumption and demand throughout its facilities and operations. In FY 19/20, the following process optimization project was completed:
 - Automated ammonia controls installation at the RP-1 aeration basins.
 - o Completed: August 2019
 - o Expected annual savings: 326,00 kWh and \$41,000
 - o Incentive: \$32,000
 - o Avoided power usage: 37 kW
- Since the start of the partnership in 2015, the Agency's implementation of energy efficiency projects has accumulated:
 - o Expected annual savings: 4,308,000 kWh and \$499,000
 - o Incentive: \$405,000
 - o Avoided power usage: 227 kW

RP-5 Lab Rooftop Solar

- As part of the RP-5 Lab Project, 70 kw of solar was installed on the rooftop of the Lab building. The solar was commissioned in November 2019.

Upcoming Projects

Pumping Project

- This project will replace 4 recycled water pumps at RP-1. The project is expected to be completed in September 2020.

Greenhouse Gas Emissions Annual Reporting

- IEUA will continue to voluntarily report its greenhouse gas emissions to The Climate Registry.

Beneficial Use of Biogas

- IEUA evaluated opportunities to beneficially use the biogas generated at RP-1 in addition to onsite use for digesters heating. From the study, the following alternatives were explored:
 - o Internal Combustion Engines
 - o Microturbines
 - o Fuel Cell through a PPA
 - o Pipeline Injection
 - o Compressed Natural Gas (CNG) Station

- It was concluded that the Internal Combustion Engine would be the most cost-effective.

Other Energy Related Activities

New Direct Access Contract

- IEUA issued a Request for Proposal (RFP) for an electric energy service provider. Two proposals were received, and Shell Energy North America was awarded the contract. On average, direct access account rates are about \$0.02/kWh lower than bundled account rates.

In-Conduit Hydroelectric Power Generation

- IEUA has issued a Request For Information (RFI) for recommendations for feasible and cost-effective in-conduit hydropower technology projects. The responses received included expected electricity generation, installation impact to current recycled water operation, and interconnection agreement challenges with SCE. Staff will evaluate again this technology at a later time.

University of California Office of President (UCOP) Biomethane Purchase Partnership

- UCOP is looking to purchase Renewable Natural Gas (RNG) via pipeline injection. After IEUA's discussions with UCOP and similarity in scenarios presented in the Beneficial Use of Biogas study, it was concluded that this option was not cost-effective for the Agency.

SCE Overgeneration Pilot Study

- IEUA participated in a pilot study executed by SCE to explore the possibilities of using water pumping to ease the grid during times when energy production is higher than demand. The study found that water agencies in the SCE service area are open to support grid reliability and participate in over-generation events with the implementation of changes in the Demand Response program.

Air Source Heat Pumps for Preheating of Emergency Backup Generators

- IEUA is currently evaluation electricity and cost savings associated with heat pump technology for preheating standby generators.

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3B



Regional Sewerage Program Policy Committee Meeting

Thursday, November 5, 2020

3:30 p.m.

Teleconference Call

PURSUANT TO THE PROVISIONS OF EXECUTIVE ORDER N-25-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 12, 2020, AND EXECUTIVE ORDER N-29-20 ISSUED BY GOVERNOR GAVIN NEWSOM ON MARCH 17, 2020 ANY COMMITTEE MEMBER MAY CALL INTO THE COMMITTEE MEETING WITHOUT OTHERWISE COMPLYING WITH ALL BROWN ACT'S TELECONFERENCE REQUIREMENTS.

In effort to prevent the spread of COVID-19, the Regional Sewerage Program Policy Committee Meeting will be held remotely by teleconference

Teleconference: 1-415-856-9169/Conference ID: 253 787 211#

This meeting is being conducted virtually by video and audio conferencing. There will be no public location available to attend the meeting; however, the public may participate and provide public comment during the meeting by calling into the number provided above. Alternatively, you may email your public comments to the Recording Secretary Sally H. Lee at shlee@ieua.org no later than 24 hours prior to the scheduled meeting time. Your comments will then be read into the record during the meeting.

Call to Order/Flag Salute

Roll Call

Public Comment

Members of the public may address the Committee on any item that is within the jurisdiction of the Committee; however, no action may be taken on any item not appearing on the agenda unless the action is otherwise authorized by Subdivision (b) of Section 54954.2 of the Government Code. Comments will be limited to three minutes per speaker.

Additions/Deletions to the Agenda

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

1. Technical Committee Report (Oral)

- Regional Contract Negotiations Update

2. Action Item

- A. Meeting Minutes for October 1, 2020

3. Informational Items

- A. Annual Reports – Building Activity, Recycled Water & Energy
B. Recycled Water Program Semi-Annual Update

4. Receive and File

- A. Recycled Water Distribution – Operations Summary

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 – December 3, 2020

6. Adjournment

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Recording Secretary (909) 993-1926, 48 hours prior to the scheduled meeting so that the Agency can make reasonable arrangements.

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, October 29, 2020.

Sally H. Lee

RECEIVE AND
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3C

IEUA RECYCLED WATER DISTRIBUTION – SEPTEMBER 2020

TOTAL ALL PLANTS

Influent: 51.2 MGD

Delivered: 42.0 MGD

Percent Delivered: 82%

Preliminary Deliveries

RW GWR: 17.6 MGD

RW Direct Use: 24.4 MGD

RP-4

Delivered: 7.4 MGD

RP-1

Delivered: 20.2 MGD

CCWRF

Delivered: 7.5 MGD

RP-5

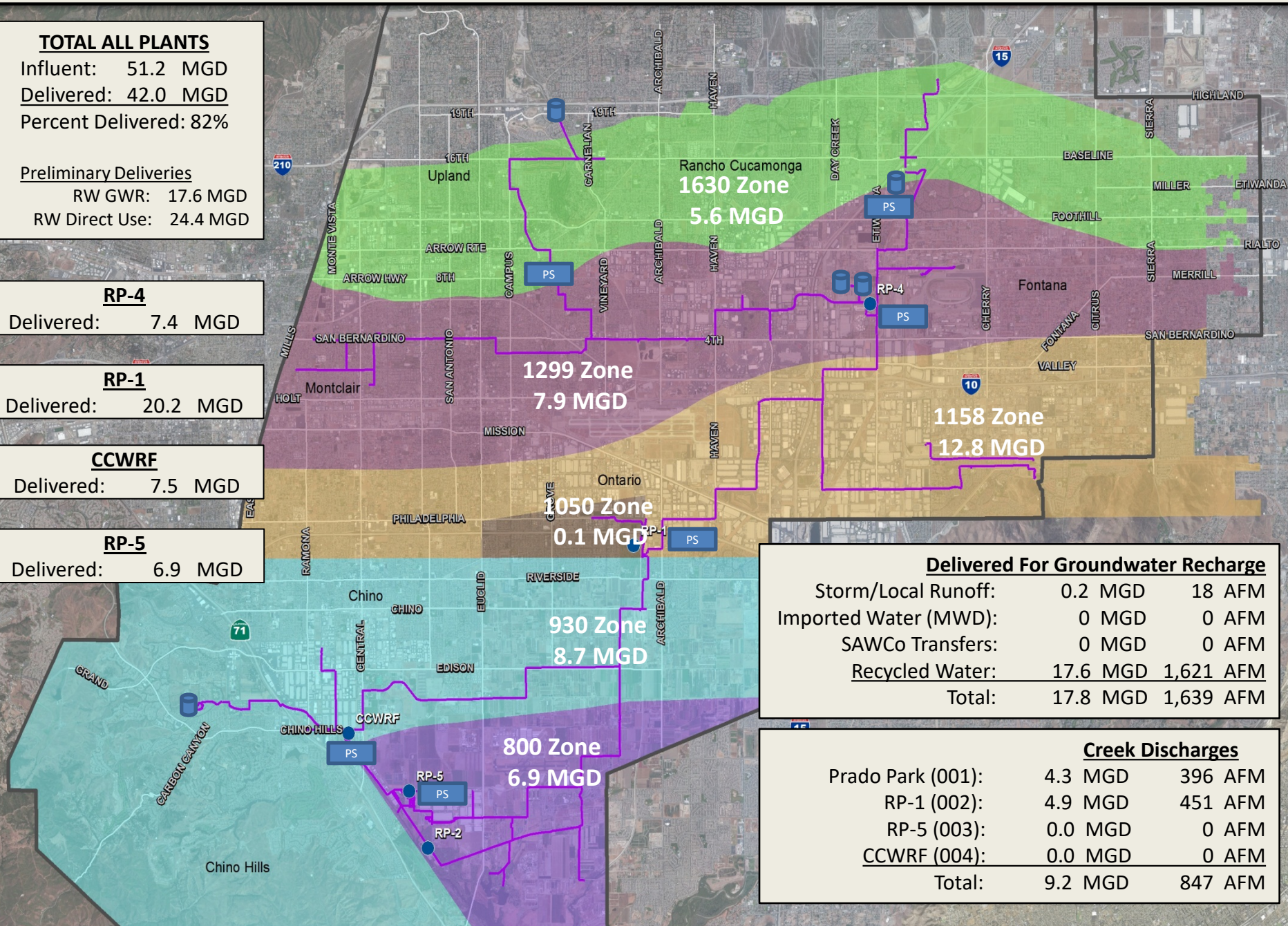
Delivered: 6.9 MGD

Delivered For Groundwater Recharge

Storm/Local Runoff:	0.2 MGD	18 AFM
Imported Water (MWD):	0 MGD	0 AFM
SAWCo Transfers:	0 MGD	0 AFM
Recycled Water:	17.6 MGD	1,621 AFM
Total:	17.8 MGD	1,639 AFM

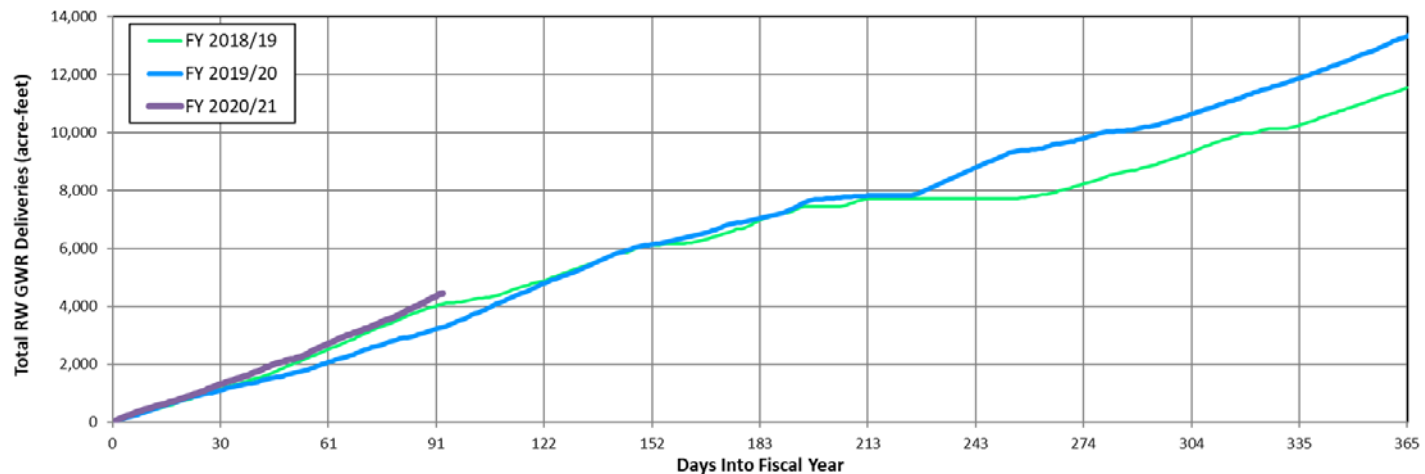
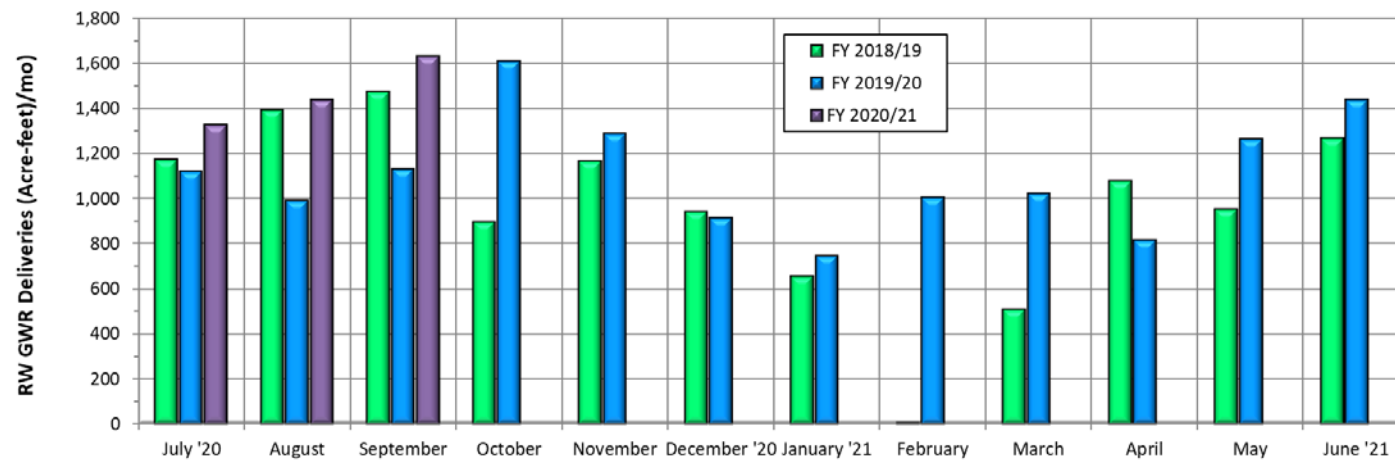
Creek Discharges

Prado Park (001):	4.3 MGD	396 AFM
RP-1 (002):	4.9 MGD	451 AFM
RP-5 (003):	0.0 MGD	0 AFM
CCWRF (004):	0.0 MGD	0 AFM
Total:	9.2 MGD	847 AFM



Recycled Water Recharge Actuals - September 2020 (Acre-Feet)

Basin	9/1-9/5	9/6-9/12	9/13-9/19	9/20-9/26	9/27-9/30	Month Actual	FY To Date Actual	Deliveries are draft until reported as final.	
Ely	0.0	0.0	0.0	0.0	0.8	0.8	262		
Banana	0.0	0.0	0.0	0.0	0.0	0.0	0		
Hickory	21.2	10.6	25.7	12.2	15.3	85.0	218		
Turner 1 & 2	0.0	0.0	0.0	0.0	0.0	0.0	0		
Turner 3 & 4	0.0	0.0	0.0	0.0	0.0	0.0			
8th Street	17.0	20.3	11.3	54.8	37.2	140.6	453		
Brooks	17.5	27.6	39.4	26.6	20.1	131.2	414		
RP3	145.1	180.2	190.0	228.8	138.9	883.0	1686		
Declez	0.0	0.0	0.0	0.0	0.0	0.0	329		
Victoria	23.0	27.4	44.2	56.0	32.8	183.4	556		
San Sevaïne	41.9	53.4	54.1	51.5	8.9	209.8	488		
Total	265.7	319.5	364.7	429.9	254.0	1,633.8	4,406	3,252	AF previous FY to day actual



TECHNICAL COMMITTEE ITEMS DISTRIBUTED

4A

Date: October 8, 2020

To: Regional Technical Committee

From: Eddie Lin, Senior Associate Engineer
IEUA – Department of Planning & Environmental Resources

Subject: Notice of availability of recycled water as groundwater recharge for FY 20-21

The City of Chino has elected to forgo their full share of groundwater recharge for the current FY 20-21. The City of Ontario has elected to forgo their 1st and 2nd quarter (July through December 2020) share of groundwater recharge.

If your Agency would be interested in acquiring any portion of the available groundwater recharge, please notify IEUA by **October 28, 2020**. The available recharge will be redistributed to the interested Agencies by an adjusted pro rata basis (within base entitlement). The recharge will be invoiced at the FY 20-21 GWR rate of \$550/AF.

Please note, the amount of recharge that will be available will depend on a number of factors, such as available recycled water for groundwater recharge, climate conditions, and basin availability. For estimating purposes, actual recharge of recycled water for FY 19-20 is provided in the table below.

FY 2019-20 Recycled Water Base Entitlement					
Contracting Agency	EDU's FY 2018-19	Base Entitlement Allocation (%)	Base Entitlement (AF)	RW Direct Use (AF)	GWR Pro-rata Share (AF)
Chino	370,820	10.8%	6,106	4,795	1,449
Chino Hills	304,111	8.9%	5,008	1,417	1,188
CVWD	825,343	24.1%	13,591	1,038	3,225
Fontana	689,243	20.1%	11,350	211	2,693
Montclair	144,563	4.2%	2,381	298	565
Ontario	772,176	22.5%	12,715	7,817	3,017
Upland	318,093	9.3%	5,238	703	1,243

Based on the information above, the estimated recycled water that would be available as groundwater recharge in storage would be approximately 1,500 AF from the City of Chino (FY 20-21) and approximately 1,500 AFY from the City of Ontario (1-2Q, FY 20-21), for an approximate total of 3,000 AF.

Please contact Eddie Lin at elin@ieua.org for any additional information.