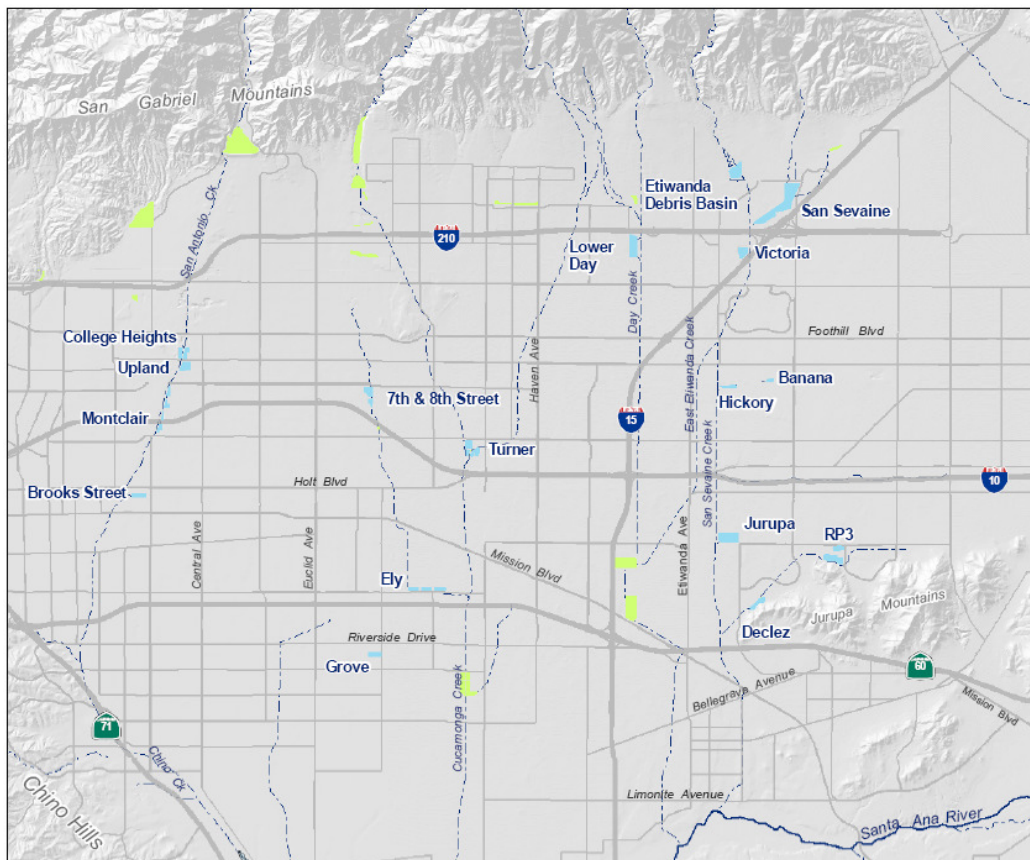


# Chino Basin Recycled Water Groundwater Recharge Program

## 2021 Annual Report



May 1, 2022



**Randy Lee, P.E.**  
Director of Operations and Maintenance

**Peter Kavounas, P.E.**  
General Manager

May 1, 2022

Regional Water Quality Control Board, Santa Ana Region

**Attention: Ms. Jayne Joy**  
3737 Main Street, Suite 500  
Riverside, California 92501-3348

**Subject: Transmittal of the Annual Report for 2021  
Chino Basin Recycled Water Groundwater Recharge Program**

Dear Ms. Joy:

The Inland Empire Utilities Agency (IEUA) and the Chino Basin Watermaster (CBWM) hereby submit the *2021 Annual Report* for the *Recycled Water Groundwater Recharge Program*. The recycled water groundwater recharge program is being implemented by IEUA and CBWM and its annual reporting is pursuant to requirements of the following orders:

- California Regional Water Quality Control Board, Santa Ana Region. Order No. R8-2007-0039. Water Recycling Requirements for IEUA and CBWM. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County, June 29, 2007.
- California Regional Water Quality Control Board, Santa Ana Region. Order No. R8-2009-0057 Amending Order No. R8-2007-0039 for IEUA and CBWM. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County, October 23, 2009.

## **ACTIVITIES, FINDINGS, AND CONCLUSIONS**

The following bullets summarize the principal activities, findings, and conclusions of the *Recycled Water Groundwater Recharge Program* for 2021:

- The 2021 calendar year include annual program recharge of 25,209.5 acre-feet (AF), which includes 10,075.8 AF of storm water and dry weather flows (including well pump to waste recharge); 14,759.2 AF of recycled water; and 374.5 AF of imported water.
- During 2021, recycled water quality monitoring was conducted in accordance with Monitoring and Reporting Program No. R8-2007-0039. No primary or secondary regulated maximum contaminant limits (MCLs) or notification levels (NLs) were exceeded during 2021 with the exception of the primary MCL for 1,2,3-trichloropropane (1,2,3-TCP) and NL for perfluorooctanoic acid (PFOA).
- No corrective actions were necessary for RP-1 and RP-4. No unit process changes occurred during 2021.

- In-aquifer blending of recycled water, diluent water, and native groundwater is evident at monitoring wells near 8<sup>th</sup> Street, Banana, Hickory, Brooks, Ely, Turner, Victoria, and RP3 Basins. For 8<sup>th</sup> Street, Banana, Hickory, and Brooks Basins, blending was observed to be occurring both in the groundwater mound and downgradient. Evidence includes variations in water chemistry, variations in water levels, and recharge ratios of water sources.
- At the end of 2021, the volume-based 120-month running average recycled water contributions (RWCs), inclusive of groundwater underflow, by basin were: 8<sup>th</sup> Street - 24%; Banana - 34%; Brooks - 14%; Declez 8%, Ely - 25%, Hickory - 19%, RP3 - 22%; San Sevaine - 12%; Turner Basin Cells 1&2 - 23%; Turner Basin Cells 3&4 – 26%; and Victoria - 27%. These basins are all in compliance with their maximum RWC limits.
- CBWM has verified in the Recycled Water Groundwater Recharge Quarterly Monitoring Reports that there was no reported pumping of groundwater in 2021 for domestic or municipal use from zones that extend 500 feet and 6-months underground travel time from the 8<sup>th</sup> Street, Banana, Brooks, Declez, Ely, Hickory, Turner, RP3, San Sevaine, and Victoria recharge sites.
- Sufficient data exist to estimate approximate arrival times of recycled water at several monitoring wells based on observed trends in EC, TDS, and chloride concentration at the following monitoring wells 8TH-1/1 (22 months) 8TH-2/2 (123 months) for 8th Street Basin; BRK-1/1 (5 months), BRK-1/2 (17 months) and BRK-2/1 (28 months) for Brooks Basin; Philadelphia Well (13 months) for Ely Basin, BH-1/2 (2 months) for Hickory Basin; California Speedway Infield Well (29 months) and Speedway 2 (83 months) for Banana Basin; T-1/2 (3.2 months) for Turner Cell 1; T-2/2 (13 months) and Ontario Well No. 25 (48 months) for Turner Cell 4; VCT-1/1 (7.5 months) for Victoria Basin, DCZ-1/1 (21 months), RP3-1 (3.3 months) for RP3 Basin Cell 1, and SSV-2 (4.9 months) for San Sevaine Basin 2. Other monitoring wells have not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water at these well sites.
- Comparison of the pre-recharge groundwater elevation contour map (Fall 2003) with the most recent groundwater elevation contour map (Spring 2020) indicates that for area near the recharge basins, there were minor regional changes in groundwater elevation, but the recharge program has not significantly changed groundwater flow directions. The 2021 groundwater elevations measured in the program monitoring wells have generally changed less than the contour interval (25 feet) used in the past regional groundwater elevation maps. The only significant differences in groundwater flow direction between the 2003 through 2020 maps is 1) the mound at 8<sup>th</sup> Street, which between 2012 and 2016 had a more westward direction as opposed to a south-southwest direction in 2003 and 2) a large mound at the Turner basin that influences the contour at the basin in 2018. For 8<sup>th</sup> Street basin, the difference may indicate the 8<sup>th</sup> Street Basin downgradient monitoring well location (8TH-2) is not appropriately located to characterize downgradient recharge water quality. Other differences include a deeper and larger area pumping depression has developed in the vicinity of the Chino Desalter well field (area of hydraulic control) and a smaller pumping depression has developed in Pomona west of Brooks Basin. Some changes in the contouring style/methodology are evident between the 2003 and 2018 maps. For example, the groundwater contours in the area north of Victoria and San Sevaine basins have not been interpreted since the 2008 contour map.

## DECLARATION

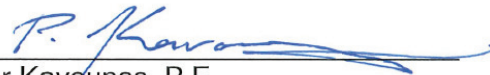
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments thereto; and that, based on my inquiry of the individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Executed on the 1<sup>st</sup> day of May 2022 in the Cities of Chino and Rancho Cucamonga.

Digitally signed by  
Randy Lee  
Date: 2022.04.28  
11:11:14 -07'00'

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Randy Lee, P.E.  
Director of Operations and Maintenance

  
Peter Kavounas, P.E.  
General Manager



# Chino Basin Recycled Water Groundwater Recharge Program

## 2021 Annual Report

**Prepared by:**

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*Sr. Environmental Resources Planner – Regulatory Compliance*

**Reviewed and Approved by:**



Randy Lee, P.E.

*Director of Operations and Maintenance*

May 1, 2022

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## 1 INTRODUCTION

This is the 2021 Annual Report for the Chino Basin Recycled Water Groundwater Recharge Program. Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (CBWM), Chino Basin Water Conservation District, and San Bernardino County Flood Control District are partners in the implementation of the Chino Basin Recycled Water Groundwater Recharge Program. The recharge program is part of a comprehensive program to enhance water supply reliability and improve the groundwater quality in local drinking water wells throughout the Chino Groundwater Basin by increasing the recharge of storm water, imported water and recycled water. Figure 1-1 is a location map of the recharge basin locations used in the Recycled Water Groundwater Recharge Program. Recharge operations for 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, RP3, Turner, San Sevaire, and Victoria Basins have previously been summarized in the four 2021 quarterly monitoring reports to the Regional Board Water Quality Control Board (Regional Board) for these basins where recharge of recycled water has been initiated.

In calendar year 2021, 25,209.5 acre-feet (AF) of water were recharged in the Chino Basin, this includes: 10,075.8AF of storm water and dry weather flows (including pump to waste recharge), 14,759.2 AF of recycled water, and 374.5 AF of imported water. The reported recharge volumes for supplemental water (imported and recycled) include the application of a reduction factor to the metered volumes to account for evaporative losses.

### 1.1 Requirements of Order No. R8-2007-0039

This Recycled Water Groundwater Recharge Program is subject to requirements in the following documents issued by the California Regional Water Quality Control Board Santa Ana Region:

- Order No. R8-2007-0039 Water Recycling Requirements for IEUA and CBWM, Chino Basin Recycled Water Groundwater Recharge Program, Phase I and Phase II Projects, San Bernardino County, June 29, 2007;
- Monitoring and Reporting Program No. R8-2007-0039 for IEUA and CBWM, Chino Basin Recycled Water Groundwater Recharge Program Phase I and Phase II Projects, San Bernardino County, June 29, 2007;
- Order No. R8-2009-0057 Amending Order No. R8-2007-0039 for IEUA and CBWM, Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County, October 23, 2009; and

Revised Monitoring and Reporting Program No. R8-2007-0039 for IEUA and CBWM. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County, October 27, 2010.

The Monitoring and Reporting Program (MRP) in the Order No. R8-2007-0039 describes the requirements for the Annual Reports. The following is an excerpt from Section VI of the MRP:

3. The annual report shall include the following:

- a. A list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures. The report shall restate, for the record, the laboratories used by the users to monitor compliance with this Order and their status of certification. Upon request by Regional Board staff, the users shall also provide a summary of performance.
  - b. A mass balance to ensure that blending is occurring in the aquifer at each recharge basin. Recharge water groundwater flow paths shall be determined annually from groundwater elevation contours and compared to the flow and transport model's flow paths, travel of recharge waters, including leading edge of the recharged water plume, any anticipated changes. The flow and transport model shall be updated to match as closely as possible the actual flow patterns observed within the aquifer if the flow paths have significantly changed.
  - c. A summary of corrective actions taken as a result of violations, suspensions of recharge, detections of monitored constituents and any observed trends, information on the travel of the recycled water (estimated location of the leading edge), description of any changes in operation of any unit processes or facilities, and description of any anticipated changes, including any impacts on other unit processes.
  - d. A summary of calibration records for equipment, such as pH meters, flow meters, turbidity meters, and lysimeters.
  - e. All downgradient public drinking water systems. A summary discussion on whether domestic drinking water wells extracted water within the buffer zone defined by the area less than 500 feet and 6 months underground travel time from the recharge basins, including the actions/measures that were undertaken to prevent reoccurrence. If there were none, a statement to that effect shall be written.
  - f. A summary of the results and recommendations of any tracer testing conducted during the past year.
4. At least one year after the blended recharged water has reached at least one groundwater monitoring well, the users shall submit a report to the CDHS and Regional Board evaluating the compliance with the minimum underground retention time, distance to the nearest point of extraction, blending, and the maximum RWC requirements. The annual report shall include water quality data on turbidity, coliform, total nitrogen, dissolved oxygen, regulated contaminants, TOC, and non-regulated contaminants compliance.

## 1.2 Title 22, Division 4, Chapter 3. Article 5.1 §60320.100

On June 18, 2014, the State Water Resources Control Board – Division of Drinking Water (DDW) adopted new regulations pertaining to Groundwater Replenishment Reuse Projects (GRRP), which can be found in Title 22 California Code of Regulations, Division 4, Chapter 3. Article 5.1 “Indirect Potable Reuse: Groundwater Replenishment - Surface Application” found in Sections §60320.100 through 60320.130.

The DDW GRRP regulations require that all GRRPs permitted prior to June 18, 2014 submit a report to the DDW and the Regional Board to assess compliance of the existing permit with the GRRP requirements. The IEUA submitted the Compliance Assessment Report (CAR) for the Chino Basin Recycled Water Groundwater Recharge Project dated June 18, 2015 and began additional monitoring and reporting in 3Q15. IEUA submitted revised CAR to DDW in December 2018. The DDW provided comments on the CAR in July 2019. The IEUA responded to the DDW comments in November 2019.

### 1.3 Organization of the Annual Report

The remainder of this report describes the requirements of the annual report per the MRP in Order R8-2007-0039 and is organized as follows:

- Section 2 – Recycled Water Quality Monitoring discusses compliance with recycled water production specifications and other water quality requirements.
- Section 3 – Groundwater Recharge Monitoring discusses the blending and movement of recycled water recharge in the groundwater basin.
- Section 4 – References includes supporting information consulted in performing the analyses described herein and in preparing this report.



## 2 RECYCLED WATER QUALITY MONITORING

### 2.1 Recycled Water Quality Specifications

During 2021, recycled water quality monitoring was conducted in accordance with the required frequency for all parameters as specified in MRP No. R8-2007-0039. All monitoring and compliance data for the year can be found in the quarterly monitoring reports submitted to the Regional Board (IEUA 2021a, 2021b, 2021c, 2022).

#### 2.1.1 *Detections and Compliance with Narrative Limits*

Recycled Water Specifications A.5 through A.9 are narrative limits in the Order No. R8-2008-0039. The 2021 recycled water quality monitoring data and associated limits for specifications A.5 through A.9 are shown in Tables 2-1 and 2-2 of the quarterly monitoring reports.

Table 2-1 of the quarterly reports presents monitoring and compliance data for the narrative permit limits in Order R8-2008-0039 for pH, turbidity, total nitrogen (TN), total inorganic nitrogen (TIN), total organic carbon (TOC), and total dissolved solids (TDS). The monitoring and compliance for the parameters in Table 2-1 of the quarterly monitoring reports is based on the analysis of the two separate recycled water sources, Regional Plant No. 1 (RP-1) and Regional Plant No. 4 (RP-4) sampled at the IEUA National Pollutant Discharge Elimination System (NPDES) permit monitoring locations (M-001B/REC-001 and REC-002) at their respective facilities. In accordance with MRP No. R8-2007-0039, the required monitoring frequency for turbidity and pH is continuous; total inorganic nitrogen, total nitrogen, and total organic carbon is weekly; and total dissolved solids is monthly. Compliance with the TN limit of 5 mg/L can also be met at the lysimeters (Table 2-5a of quarterly reports) or at locations specified in alternative monitoring plans (Table 2-5b of quarterly reports). None of the narrative limits for turbidity, TDS, TIN, pH, or TOC were exceeded during 2021.

Table 2-2 of the quarterly report presents IEUA's Agency-wide 12-month running average for TDS and TIN as required by the NPDES permit. During 2021, there were no exceedances of the agency-wide 12-month running average for TDS and TIN.

#### 2.1.2 *Detections and Compliance with Regulated and Non-regulated Contaminants*

Recycled Water Specifications A.1 through A.3 and A.15 of Order No. R8-2007-0039 are limits based primary maximum contaminant levels (MCLs), secondary MCLs, and Action Levels established by the Environmental Protection Agency (EPA). The monitoring for compliance of these parameters is based on the analysis of a sample collected at a recycled water sampling point along the distribution pipeline. The sample point was the RP-4 1299 Pressure Zone Pump Station, as it represents a mixture of recycled water from both RP-1 and RP-4 (RW Blend). During the Compliance Assessment Report (CAR) review, DDW identified that 001B effluent must be sampled and reported independently of the RW Blend.

The 2021 recycled water quality monitoring data and associated limits for Recycled Water Specifications A.1 through A.3 are shown in Table 2-3a (RW Blend) and Table 2-3b (001B Effluent) of the quarterly monitoring reports. Compliance determination for these constituents is based on 4-quarter running averages. In accordance with MRP No. R8-2007-0039, the required monitoring frequency for constituents with primary MCLs is quarterly and constituents with secondary MCLs is annually. During 2021, the 4-quarter running average concentrations for constituents with primary MCLs, secondary MCLs, and action levels did not exceed compliance limits, with the exception of 1,2,3-Trichloropropane (see Section 2.5).

Non-regulated contaminants include the remaining priority pollutants, endocrine disrupting chemicals & pharmaceuticals, and unregulated chemicals. These constituents do not have associated limits; however, they require annual monitoring in accordance with MRP No. R8-2007-0039 (Table II. Recycled Water Monitoring). Several non-regulated contaminants are sampled and reported more frequently than the required annual frequency due to having the same analysis methods used to monitor compounds with primary MCLs. Additionally, in accordance with Title 22, Division 4, Chapter 3. Article 5.1 §60320.120(b) the monitoring frequency of recycled water for chemicals with State notification levels (NLs) increased from annually to quarterly. The non-regulated contaminants monitoring data for recycled water can be found in Table 2-4a (RW Blend) and Table 2-4b (001B Effluent) of the quarterly monitoring report.

The compliance sampling point for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5) is not done at the RW Blend location. Compliance sampling for these parameters is performed at lysimeters at basins actively receiving recycled water. Compliance for TTHMs and HAA5 were consistently met throughout 2021 at the selected compliance lysimeters.

## 2.2 Groundwater Quality Monitoring

Groundwater quality data is collected at designated monitoring wells, and at the nearest down gradient potable water supply well near recharge basins utilizing recycled water. Location maps for wells monitored for the recharge program are presented on Figures 2-1 through 2-7 for Hickory & Banana, Turner, 7th & 8th Street, Ely, Brooks, Declez & RP3, and San Sevaïne & Victoria Basins, respectively. Groundwater quality samples are collected and tested quarterly for all constituents listed in Table 1 of Section V in the MRP R8-2007-0039. At the monitoring wells specified in Condition No. 19 in the Phase I Findings of Fact (FOF) of Order No. R8-2005-0033 and Condition No. 25 in the Phase II FOF of Order No. R8-2007-0039, quarterly and annual groundwater sampling for specific constituents specified in Condition No. 27 of the Phase II FOF.

The 2014 GRRP regulations require two downgradient monitoring wells to be monitored quarterly for Priority Pollutants, and that the wells are located (A) no less than two weeks but no more than six months of travel through the unsaturated zone affected by the project, and (B) at least 30 days upgradient of the nearest drinking water well be monitored quarterly for Priority Toxic Pollutants.

All quarterly groundwater quality data collected at the monitoring wells is reported in Table 2-9a and 2-9b of the quarterly monitoring reports. Annual monitoring well data for 2021 can be found in Table 2-9b in the 3Q21 report.

Groundwater quality monitoring results can be used to assess background or baseline conditions, to estimate the time of arrival of recharge waters and the percentage of recycled water at a monitoring well, and to assess the impacts of recharged water on down-gradient groundwater supplies. Section 3.2 and Section 3.4 of this report describe how the groundwater quality monitoring results are used for these purposes in more detail. Section 2.5 of this report describes any exceedances of a primary or secondary MCL, or the presence of total coliform in groundwater samples during 2021, and the notification to the DDW.

## 2.3 Laboratory Certifications and Test Methods

Water quality samples collected for the recycled water recharge program are analyzed by either the IEUA or Eurofins Eaton Analytical (EEA) laboratories. Both laboratories are DDW Environmental Laboratory Accreditation Program (ELAP) certified, pursuant to the California Environmental Laboratory Improvement Act. The IEUA laboratory certification is valid through October 2022 and the EEA laboratory certification is valid through January 2023.

To ensure the quality and reliability of test measurements and results, specific programs and procedures have been developed by both the IEUA and EEA. The 2021 Annual Laboratory QA/QC Data Summary Report was also submitted to the Regional Board as an attachment in IEUA's 2021 Annual NPDES Report.

## 2.4 Calibration Summary

The field parameters of temperature, pH, conductivity, dissolved oxygen, oxidation/reduction potential were recorded during monitoring well sampling using an AquaTroll 500 Multiparameter Meter. This instrument utilizes a flow-cell to allow water to flow through the meter chamber without exposure to the atmosphere. Field analytical instruments used throughout this project were maintained and calibrated each day of use. Calibration was conducted according to instructions provided by the instrument manufacturer.

## 2.5 Violations, Suspensions, and Corrective Actions

There were no exceedances for the parameters analyzed during 2021 in the following categories: primary MCLs for inorganic chemicals; volatile organic compounds (VOCs), *with the exception of 1,2,3-Trichloropropane (1,2,3-TCP)*; non-volatile synthetic organic chemicals (SOCs); radionuclides; disinfection byproducts; action levels for lead and copper; notification level chemicals (NLs), *with the exception of Perfluorooctanoic acid (PFOA)*; secondary MCLs for required constituents; and oil and grease. 1,2,3-TCP and PFOA exceedances are described.

### 1,2,3-TCP

In September 2019, 1,2,3-TCP was detected above the MCL of 0.005 µg/L at both the RW Blend and 001B Effluent recycled water locations and accelerated weekly sampling for 1,2,3-TCP continued through 2Q20 until 1,2,3-TCP was found to be below the MCL. During 2Q21, 1,2,3-TCP was detected again above the MCL at both the RW Blend and 001B Effluent. A confirmation sample was collected within 72 hours of notification of the first results, and in

accordance with the following requirements of §60320.112(d)(2), weekly sampling began on 06/18/21.

- §60320.112(d)(2), “the GRRP shall initiate weekly monitoring for the contaminant until the running four-week average no longer exceeds the contaminant’s MCL.”
- §60320.112(d)(2)(A) states that “If the running four-week average exceeds the contaminant’s MCL, a project sponsor shall describe the reason(s) for the exceedance and provide a schedule for completion of corrective actions in a report submitted to the Department and Regional Board no later than 45 days following the quarter in which the exceedance occurred.”

During a meeting with the DDW and Regional Board on July 15, 2021, Faraz Asad (DDW) requested that a revised corrective action report (from the one submitted to the DDW and Regional Board on February 13, 2020) be prepared and submitted. The recycled water continues to exceed the MCL for 1,2,3-TCP after accelerated monitoring was implemented. On August 12, 2021, the 1,2,3-TCP corrective action report was submitted to the DDW and Regional Board.

IEUA has been actively executing the proposed corrective actions, which includes evaluations of monitoring wells, lysimeters, source controls, and analysis methods and an investigation of disinfection byproduct. IEUA has contracted with Trussell Technologies on October 5, 2021 to assist with the investigation of 1,2,3-TCP and possible mitigation measures. As of January 2022, the project team has identified potential strategies to carry out the 1,2,3-TCP investigation.

The 1,2,3-TCP results from 2Q21 through 4Q21 are listed below:

Sample	Date	RW Blend (µg/L)	4-sample avg (µg/L)	Sample	Date	001B Eff (µg/L)	4-sample avg (µg/L)
Original	06/01/21	0.013	--	Original	06/01/21	0.015	--
Confirmation	06/09/21	0.012	--	Confirmation	06/09/21	0.018	--
Week 1	06/18/21	0.006	--	Week 1	06/18/21	0.008	--
Week 2	06/23/21	0.011	--	Week 2	06/23/21	0.010	--
Week 3	06/29/21	0.011	--	Week 3	06/29/21	0.015	--
Week 4	07/06/21	<0.005	0.007	Week 4	07/06/21	0.008	0.010
Week 5	07/13/21	0.011	0.008	Week 5	07/13/21	0.014	0.012
Week 6	07/20/21	<0.005	0.006	Week 6	07/20/21	0.016	0.014
Week 7	07/27/21	0.016	0.007	Week 7	07/27/21	0.018	0.014
Week 8	08/03/21	0.006	0.008	Week 8	08/03/21	0.017	0.016
Week 9	08/10/21	<0.005	0.005	Week 9	08/10/21	<0.005	0.013
Week 10	08/17/21	0.009	0.008	Week 10	08/17/21	0.014	0.012
Week 11	08/24/21	0.010	0.006	Week 11	08/24/21	0.015	0.011
Week 12	08/31/21	0.010	0.007	Week 12	08/31/21	0.018	0.012
Week 13	09/07/21	0.010	0.010	Week 13	09/07/21	0.015	0.015
Week 14	09/14/21	0.012	0.010	Week 14	09/14/21	0.017	0.016
Week 15	09/21/21	0.013	0.011	Week 15	09/21/21	0.018	0.017
Week 16	09/28/21	0.018	0.013	Week 16	09/28/21	0.018	0.017
Week 17	10/05/21	0.016	0.015	Week 17	10/05/21	0.022	0.018

Sample	Date	RW Blend (µg/L)	4-sample avg (µg/L)
Week 18	10/12/21	<0.005	0.012
Week 19	10/19/21	<0.005	0.008
Week 20	10/26/21	0.007	0.006
Week 21	11/02/21	0.010	0.004
Week 22	11/09/21	0.014	0.008
Week 23	11/16/21	0.006	0.009
Week 24	11/23/21	0.005	0.009
Week 25	11/30/21	0.007	0.008
Week 26	12/07/21	0.010	0.007
Week 27	12/14/21	0.014	0.009
Week 28	12/21/21	0.015	0.012
Week 29	12/28/21	0.028	0.017

Sample	Date	001B Eff (µg/L)	4-sample avg (µg/L)
Week 18	10/12/21	<0.005	0.014
Week 19	10/19/21	0.005	0.011
Week 20	10/26/21	0.006	0.008
Week 21	11/02/21	0.011	0.006
Week 22	11/09/21	0.011	0.008
Week 23	11/16/21	0.011	0.010
Week 24	11/23/21	<0.005	0.008
Week 25	11/30/21	0.006	0.007
Week 26	12/07/21	0.009	0.006
Week 27	12/14/21	0.011	0.006
Week 28	12/21/21	0.013	0.010
Week 29	12/28/21	0.014	0.012

### PFOA

In August 2019, the NL for PFOA was lowered from 14 ng/L to 5.1 ng/L and the NL for Perfluorooctanesulfonic acid (PFOS) was lowered from 13 ng/L to 6.5 ng/L. PFOS concentrations have never exceeded the NL in the recycled water. However, since the NLs were lowered during 3Q19, PFOA concentrations in the recycled water have exceeded the NL at both the RW Blend and 001B Effluent sample locations. No confirmation sample was collected within 72 hours of notification of the first results in exceedance, and in accordance with §60320.120(b) weekly sampling began on 10/24/19.

- §60320.120(b)(1) states that “If the running four-week average exceeds the contaminant’s NL, a project sponsor shall describe the reason(s) for the exceedance and provide a schedule for completion of corrective actions in a report submitted to the Regional Board no later than 45 days following the quarter in which the exceedance occurred, with a copy concurrently provided to the Department.”

IEUA continued to exceed the four-week average after implementing accelerated monitoring. The corrective actions report was submitted to the DDW and Regional Board on February 13, 2020.

IEUA completed the sixteen consecutive weeks of sampling the RW Blend and 001B Effluent per §60320.120(b)(2) during 1Q20 and notified the DDW and the Regional Board after the final results were received. Notifications of exceedance were emailed to the Regional Board and DDW on February 25, 2020 for the RW Blend and on March 5, 2020 for the 001B Effluent.

In a March 5, 2020 email, DDW stated that IEUA needs to continue with weekly samples for PFOA in the recycled water. Weekly sampling was reinitiated during the third week of March 2020. At time of reporting, IEUA is awaiting the reevaluation of the request to reduce the PFOA monitoring frequency from weekly to monthly. During an August 5, 2021 meeting, the DDW and the Regional Board requested additional information and a revised PFOA corrective action report, which was submitted to both regulatory agencies on November 3, 2021.

The PFOA results from 1Q21 to 4Q21 are listed below:

Sample	Date	RW Blend (ng/L)	4-sample avg (ng/L)
Continued	01/05/21	12	14
Continued	01/12/21	9.4	13
Continued	01/26/21	14	14
Continued	02/02/21	14	12
Continued	02/09/21	16	13
Continued	02/16/21	15	15
Continued	02/23/21	12	14
Continued	03/02/21	14	14
Continued	03/09/21	12	13
Continued	03/16/21	13	13
Continued	04/06/21	12	11
Continued	04/20/21	14	11
Continued	04/13/21	8.1	11
Continued	04/27/21	11	11
Continued	05/03/21	11	11
Continued	05/11/21	10	10
Continued	05/18/21	12	11
Continued	05/25/21	12	11
Continued	06/01/21	13	12
Continued	06/08/21	7.4	11
Continued	06/15/21	13	11
Continued	06/22/21	11	11
Continued	06/29/21	11	11
Continued	07/06/21	12	12
Continued	07/13/21	14	12
Continued	07/20/21	7.4	11
Continued	07/27/21	10	11
Continued	08/03/21	8.0	10
Continued	08/10/21	9.1	8.6
Continued	08/17/21	9.5	9.2
Continued	08/24/21	10	9.2
Continued	08/31/21	9.5	10
Continued	09/07/21	7.9	9.2
Continued	09/14/21	12	10
Continued	09/21/21	10	10
Continued	09/28/21	7.4	9.3
Continued	10/05/21	7.3	9.2
Continued	10/12/21	7.8	8.1
Continued	10/19/21	10	8.1

Sample	Date	001B Eff (ng/L)	4-sample avg (ng/L)
Continued	01/12/21	5.5	7.0
Continued	01/26/21	7.1	7.1
Continued	02/02/21	6.4	6.4
Continued	02/09/21	8.2	6.8
Continued	02/16/21	8.5	7.6
Continued	02/23/21	7.2	7.6
Continued	03/02/21	6.1	7.5
Continued	03/09/21	7.6	7.4
Continued	03/16/21	7.4	7.1
Continued	03/23/21	7.3	7.1
Continued	04/06/21	7.8	7.5
Continued	04/20/21	8.8	7.8
Continued	04/13/21	8.1	8.0
Continued	04/27/21	7.3	8.0
Continued	05/03/21	8.0	8.1
Continued	05/11/21	7.9	7.8
Continued	05/18/21	8.6	8.0
Continued	05/25/21	8.2	8.2
Continued	06/01/21	7.5	8.1
Continued	06/08/21	7.6	8.0
Continued	06/15/21	8.3	7.9
Continued	06/22/21	8.4	8.0
Continued	06/29/21	8.2	8.1
Continued	07/06/21	7.4	8.1
Continued	07/13/21	7.5	7.9
Continued	07/20/21	6.5	7.4
Continued	07/27/21	8.1	7.4
Continued	08/03/21	7.6	7.4
Continued	08/10/21	8.6	7.7
Continued	08/17/21	7.0	7.8
Continued	08/24/21	6.2	7.4
Continued	08/31/21	6.8	7.2
Continued	09/07/21	6.4	6.6
Continued	09/14/21	7.9	6.8
Continued	09/21/21	7.0	7.0
Continued	09/28/21	7.2	7.1
Continued	10/05/21	7.2	7.3
Continued	10/12/21	7.0	7.1
Continued	10/19/21	7.6	7.3



Sample	Date	RW Blend (ng/L)	4-sample avg (ng/L)	Sample	Date	001B Eff (ng/L)	4-sample avg (ng/L)
Continued	10/26/21	12	9.3	Continued	10/26/21	7.8	7.4
Continued	11/02/21	8.1	9.5	Continued	11/02/21	7.1	7.4
Continued	11/09/21	7.5	9.4	Continued	11/09/21	6.9	7.4
Continued	11/17/21	6.7	8.6	Continued	11/17/21	7.1	7.2
Continued	11/23/21	9.5	8.0	Continued	11/23/21	6.8	7.0
Continued	11/30/21	9.3	8.3	Continued	11/30/21	6.4	6.8
Continued	12/07/21	6.1	7.9	Continued	12/07/21	5.6	6.5
Continued	12/14/21	11	9.0	Continued	12/14/21	5.5	6.1
Continued	12/21/21	11	9.4	Continued	12/21/21	5.7	5.8
Continued	12/28/21	11	9.8	Continued	12/28/21	6.9	5.9

During 2021, there were exceedances of limits for constituents sampled at groundwater monitoring wells adjacent to recharge basins receiving recycled water. These exceedances were primarily for secondary MCLs, and some for primary MCLs, and total coliform presence. The DDW is notified within 48 hours of receiving the results for primary MCL exceedances or coliform presence at active municipal drinking water wells. Exceedances of primary MCLs and coliform presence at non-drinking water monitoring wells and all secondary MCL exceedances are reported in the quarterly reports.

As required in MRP R8-2007-0039 Section V.2 the DDW were notified when necessary. The following describes the exceedances that were detected during 2021 quarterly groundwater sampling, and any DDW notifications (no DDW notifications were made during 2021):

- Turbidity exceeding the secondary MCL of 5 NTU was observed at several wells, namely: ALCOA MW1, 8TH-1/1, 8TH-1/2, 8TH-2/2, BRK-2/1, RP3-1/1, SSV-2, and T-2/1.
- The secondary MCL of 15 units for color was exceeded at 8TH-1/1, 8TH-1/2, BRK-2/1, and T-2/1.
- The primary MCL and secondary MCL, 1000 µg/L and 200 µg/L, respectively, for aluminum were exceeded at T-2/1. The secondary MCL for aluminum of 200 µg/L was exceeded at SSV-2.
- The secondary MCL of 300 µg/L for iron at RP3-1/1, SSV-2, and T-2/1.
- The secondary MCL of 50 µg/L for manganese at 8TH-1/1, RP3-1/1, and DCZ-1/1.
- TDS and electrical conductivity (EC) were higher than their secondary MCLs of 500 mg/L and 900 µmhos/cm, respectively, in the RP3 Basin area wells - Alcoa MW1, Alcoa MW3 and Southridge JHS. Ely Basin area wells - Ely MW2 and Bishop of San Bernardino Corporation – and DCZ-1/1 exceeded the TDS secondary MCL only. The wells south of the Ely Basins and near the RP3 Basins are in areas where the TDS and EC concentrations in groundwater are historically elevated. The distribution of TDS concentrations observed at wells in the Chino Basin is summarized in CBWM's State of the Basin Reports.



- Some monitoring wells, including potable supply wells, in the Banana-Hickory, RP3, Brooks, and Ely Basins monitoring networks have NO<sub>3</sub>-N concentrations above the primary MCL of 10 mg/L. These higher levels are characteristic of groundwater quality in the local area where historically the NO<sub>3</sub>-N concentrations range from 10-30 mg/L. The distribution of NO<sub>3</sub>-N concentrations observed at wells in the Chino Basin are summarized in CBWM's State of the Basin Reports. No notifications were made to the DDW as these high NO<sub>3</sub>-N concentrations are comparable to the ambient NO<sub>3</sub>-N concentration in groundwater for each monitoring well's respective groundwater management zone within the Chino Basin.
- Total coliform was detected at various wells during 2021. In accordance with the MRP, notification to the DDW of coliform presence in active municipal drinking water wells must be made within 48 hours of receiving the results. There were no notifications made to the DDW for coliform presence 2021, as none of wells that showed coliform presence were active municipal drinking water wells.

Groundwater quality samples are collected and tested annually for constituents specified in the Phase II Findings of Fact, Attachment A in the permit (Bullet 27 in the Conditions Section). The annual groundwater monitoring well sampling occurred during 3Q21. The groundwater constituents analyzed from the monitoring wells during annual monitoring are presented in Table 2-9c of the 3Q21 report.

During the annual sampling event, the primary MCL for nickel of 100 µg/L was exceeded at 8TH-1/1, 8TH-2/2, and RP3-1/1. The secondary MCL for manganese of 50 µg/L was exceeded at 8TH-1/1 and RP3-1/1. Additionally, the perchlorate concentration at BRK-1/2 was above the primary MCL of 6 µg/L and the 1,2,3-TCP concentrations at BRK-1/2 & BRK-2/2 were above the primary MCL of 0.005 µg/L. Perchlorate concentrations at BRK-1/2 & BRK-2/2 have always been at levels slightly above the MCL since sampling at this well began in in early 2007 prior to initiation of recycled water groundwater recharge at Brooks Basin in September 2008. The perchlorate and 1,2,3-TCP concentrations are consistent with historical background groundwater concentration founds at nearby wells in the Pomona area. The perchlorate concentrations in these areas are reported in the Watermaster's State of the Basin reports. The next annual well monitoring will take place in 4Q22.

## 2.6 Unit Process Changes and Anticipated Impact on Water Quality

No unit process changes occurred during the 2021 calendar year, therefore there was no impact on water quality.

## 2.7 Summary of Chemical Usage

A summary of treatment chemicals used on a monthly basis at RP-1 and RP-4 during the 2021 calendar year is presented in Table 2-1.

### 3 GROUNDWATER RECHARGE MONITORING

#### 3.1 Summary of Recharge Operations

Groundwater recharge using recycled water has been initiated in 8<sup>th</sup> Street, Banana, Brooks, Declez, Ely, Hickory, RP3, Turner, San Sevaine, and Victoria Basins. During 2021, IEUA's recycled water recharge totaled 14,759.2 AF. The table below summarizes the volume of recycled water recharged during 2021 at each basin, and the percent of the total recycled water recharged in the year. The table shows the distribution of recharge amongst the recharge sites.

Basin	2021 Recycled Water Recharge (AF)	Percent of 2021 Recycled Water Recharge
8 <sup>TH</sup>	1,190.0	8%
Banana	777.1	5%
Brooks	911.4	6%
Declez	795.8	5%
Ely	908.3	6%
Hickory	586.3	4%
RP3	5,474.1	37%
San Sevaine	2,851.4	20%
Turner 1&2	1.0	0%
Turner 3&4	651.3	5%
Victoria	612.2	4%
Total	14,759.2	100%

The 2021 calendar year include annual program recharge of 25,209.5 acre-feet (AF), which includes 10,075.8 AF of storm water and dry weather flows (including well pump to waste recharge); 14,759.2 AF of recycled water; and 374.5 AF of imported water. Appendix A of this report contains the monthly groundwater recharge summaries for all sites in the recycled water groundwater recharge program. Monthly recharge volumes, including diluent and recycled water volumes are presented in the quarterly monitoring reports (IEUA, 2021a, 2021b, 2021c, and 2022), but are repeated in this section's discussion of RWC (recycled water contribution) management plans. Delivered recharge volumes have been reduced from the metered volume by an evaporation losses factor calculated by CBWM on all supplemental water recharge (imported water and recycled water).

#### 3.2 In-Aquifer Blending of Recycled Water

Section VI.B.3.b of the MRP requires the annual report include:

[A mass balance to ensure that blending is occurring in the aquifer at each recharge basin.](#)

In-aquifer blending of recycled water recharge is shown two ways. The first is the mass balance of relative volumes of the recharge water sources - recycled water and diluent water, including storm water / local runoff, groundwater underflow, and imported water - presented in the RWC

Management Plans. The second is by comparison of relative concentrations of water quality parameters that have distinct concentrations in both the background (or baseline) groundwater and the recycled water used for recharge, such as EC, TDS, and chloride.

While both these methods are appropriate, they should be used together as evidence of in-aquifer blending. They are appropriate as the velocity of the horizontal groundwater flow away from the recharge site is slower than the velocity of the vertical recharge percolation. This velocity difference results in the development of the groundwater mound of recharged water beneath a recharge site. In-aquifer blending occurs as the accumulating water sources comprising the mound dissipate away from the basin. As discussed in section 3.2.2, blending is evidenced by water quality concentration changes in the monitoring wells located down gradient from the recharge sites. Location maps for wells monitored for the recharge program are presented on Figures 2-1 through 2-7. As discussed in section 3.2.1, the volume-based percentage of recycled water recharged expresses the reasonably anticipated blending as recharge moves towards distant monitoring wells. Actual blending, however, will likely be greater (expressed as a lower percentage of recycled water) as the recharged water blends with groundwater.

### 3.2.1 Evidence of Blending Based on Volume

Each basin's 120-month running average RWC (a volume-based percentage) expresses a reasonably expected long-term blend as all recharged waters sources move and mix towards distant monitoring wells. The 2021 monthly recharge volumes by water type are presented in Appendix A and in the historical recharge column of the RWC Management Plans (Appendix B). RWC management plans and calculation of a 120-month running average RWC are discussed in more detail in Section 3.3. The running average RWC calculation is equal to:

$$\text{Recycled Water 120-Month Total Volume} / (\text{Recycled Water} + \text{Diluent Water 120-Month Total Volume})$$

As documented in Appendix B, the (volume-based) running average RWC at the end of December 2021 for basins having initiated recycled water recharge are listed below:

Basin	RWC Limit	120-Mo. Running Avg. RWC
8 <sup>th</sup> Street	50%	24%
Banana	50%	34%
Brooks	50%	14%
Ely	50%	25%
Declez	20%	8%
Hickory	50%	19%
RP3	50%	22%
San Sevaine	50%	12%
Turner 1&2	24%	23%
Turner 3&4	45%	26%
Victoria	50%	27%

Recycled water and diluent water are typically recharged in distinct batches. However, there can be blending of local runoff with recycled water as it is delivered to the basins, or as storm water enters a basin already containing some recycled water. Variations in the delivery period of diluent water and recycled water provide for level of blending. Dilution with groundwater is accounted for by the utilization of groundwater underflow in the calculation of running average RWC.

To be conservative, the start of including groundwater underflow as a diluent water source in the RWC calculation is either 1) October 2009 (the date the permit amendment was adopted allowing for its use) or 2) the first month of a basin's recycled water recharge (if after October 2009). The underflow estimation method was documented in Appendix G of the 2009 Annual Report for the Recycled Water Groundwater Recharge Program (IEUA and CBWM, 2010a). Underflow for each basin was calculated using the Darcy flow equation with input parameters originating from CBWM's calibrated groundwater flow model. For basins that share the flow path of groundwater underflow, the underflow volume is used for both basins as the travel time between these basins exceeds that required for drinking water wells, and thus any upstream blend has become groundwater again upon reaching the downstream basin. Conservatively, the underflow calculation was made using only the upper-most sediments (upper model layer), and thus does not include potential mixing of recycled water recharge with groundwater in the deeper sediments (lower model layer). Modeled Chino Basin groundwater flow vectors from 2014 were reviewed and support the underflow estimates made using 2009 flow vectors.

In a letter dated June 18, 2015, the DDW approved the request to increase the maximum average RWC limit to 50% at all the basins except for Turner Basins and San Sevaine Basin 5. The determination for Turner Basin was based upon EC and chloride data at the mound monitoring well that suggested only the recent arrival of recycled water at the mound monitoring well in the latter half of 2014 and would require additional data to confirm that evidence of blending has occurred. For San Sevaine Basin 5, recycled water arrival at the mound monitoring well (SS-1) based on EC and chloride data were inconclusive for determining its arrival during the 2011 to 2014 operational period. Recycled water recharge at San Sevaine 5 was suspended in 2014 due to poor infiltration rates and resulting maintenance issues. However, in August 2020, recycled water recharge resumed at the San Sevaine site at San Sevaine 2. Based on the 2020/21 Start-Up Period performance (IEUA and CBWM, 2022), an RWC limit of 50% was determined for San Sevaine 1, 2, and 3, and superseded the 29% limit initially determined for San Sevaine 5.

### **3.2.2 Evidence of Blending Based on Water Quality**

Time-series graphs of EC, TDS, and chloride were prepared for monitoring wells adjacent to the recharge sites to help identify occurrence of blending within the aquifer. The graphs depicting trends in EC, TDS, and chloride are presented in Appendix C. The graphed data are tabulated in prior quarterly monitoring reports. The method is employed as a simple approximate mass balance method as an illustration that blending is occurring. It is not intended to provide a precise blend, but to show changes occurring. The method includes an assumption that the recharge of stormwater and the imported water are of similar EC and chloride as the groundwater. In general, background (or baseline) groundwater concentrations of EC, TDS, and chloride are much lower than recycled water used for recharge. That blending occurs can be gauged based on how these concentrations change with time and for how long the change persists. The degree of blending

can be estimated based on the proportional relationship of the recycled water EC (and chloride) and the background groundwater EC (and chloride).

In the following recharge site discussion, Table 3-1 provides the estimated 2021 ranges of peak percent blend of recycled water observed at wells showing EC and chloride increases associated with recycled water recharge. For these wells, the mass-balance blends in Table 3-1 are estimated by taking the concentration difference between the annual peak monitoring well groundwater concentration and the groundwater background (or baseline) then dividing by the difference between the recycled water concentration and the groundwater background (or baseline). The background groundwater EC data in Table 3-1 are the approximate well water concentration prior to recycled water recharge. The recycled water date in Table 3-1 is the current calendar year average concentration of the blended RP-1 and RP-4 recycled water. The ranges discussed in the paragraph come from Table 3-1 and are presented as the percent based on EC to the percent based on chloride, respectively.

### **8<sup>th</sup> Street Basin Area**

For the 8th Street Basin Area, in the shallower monitoring well (8TH-1/1) there was an increase in chloride concentrations from mid 2009 to late 2015 supporting the arrival or recycled water recharged in 2007. This initial arrival represents an approximate 22-month travel time for recharge in the north portion of 8th Street Basin to percolate to the water table and travel to 8TH-1/1. In 2015, the 8TH-1/1 monitoring well groundwater EC, TDS, and chloride concentrations were the highest since the initiation of recycled water recharge at the 8<sup>th</sup> Street Basin. The highest historical percent blend of recycled water in the groundwater mound at 8TH-1/1 during 2015 was approximately 79% to 98% based on EC and chloride concentrations. In 2021, the highest recycled water blend at the well 8th-1/1 was between 41% and 63%.

In the deeper casing (8TH-1/2), there were slight increases in the EC, TDS, and chloride concentrations from mid-2011 to 2021 after trending downward from when the well was constructed in 2007 through 2011. The 2011 increases suggest recycled water recharge after the start up in 2007 and 2008 may have started to arrive in the deeper casing after a travel time of roughly 46 months. From 2011 through 2021, 8TH-1/2 groundwater EC, TDS, and chloride concentrations continued a gradual rise, suggesting that the movement of recycled water downward at this location may be blending with underflow at a generally steady rate. As the TDS and EC data are within historical, pre-recycled water recharge concentrations, continued monitoring of these two water quality parameters at the deeper casing is needed to identify with certainty the arrival and blending of recycled water at this depth. The highest chloride concentration in 2021 at 8TH-1/2 was 68 mg/L which was greater than the lowest background concentration of 13 mg/L. However, recycled water arrival would be confirmed should EC and TDS continue to rise significantly above the 2011 baseline concentrations (460  $\mu$ mhos/cm and 300 mg/L, respectively) at this location and depth. The highest percent blend of recycled water in the groundwater mound at 8TH-1/2 during 2021 if confirmed would be approximately 48% to 56%.

Between 2007 and 2018, the shallower casing of monitoring well 8TH-2 (8TH-2/1) shows cyclical seasonal variations and a trend of decreasing EC, TDS, and chloride concentrations that make the arrival of recycled water somewhat difficult to evaluate. 8TH-2 is located approximately 2,500 feet south and downgradient of 8TH-1. Arrival of recycled water at 8TH-2/1 would likely be observed as a longer-term increase in the cyclical annual peaks of EC, TDS, and chloride. EC

and TDS show slight increases in 2016-2017 but returned to within their background ranges in 2018. In 2020 through 2021, Chloride concentrations increased by 10 mg/L above background. Continued observation of these water quality trends is warranted prior for further assessment of recycled water arrival time at 8TH-2/1

Between 2007 and 2018, there was insufficient indication from 8TH-2/2 data to identify a recycled Monitoring of the deeper well casing of 8TH-2 was suspended in the third quarter of 2015 and resumed in the second quarter of 2017. In 2019, chloride concentrations trended upwards to a historical high (62 mg/L) but has since gradually decreased to 52 mg/L in 2021. The 2019-2021 increased chloride may suggest the arrival of recycled water after 123 months. The EC and TDS trends would also be expected to increase with the arrival of recycled water. EC concentrations illustrate an increasing trend in 2019-2021 timed with the upward chloride trend but has not exceed background levels. The highest percent blend of recycled water in the groundwater at 8TH-2/2 during 2021 if confirmed later by EC would be approximately 20% to 37%.

### **Banana & Hickory Basins Area**

Beginning in early 2008 and plateauing in mid-2009, the deeper casing of monitoring well BH-1 (BH-1/2) located adjacent to Hickory Basin demonstrated significant changes in EC, TDS, and chloride (a 110-mg/L difference in TDS). These changes are attributed to the initiation and continued recharge of recycled water at Hickory and Banana Basins. In 2010 through 2014, generally consistent EC, TDS, and chloride concentrations of the groundwater at BH-1/2 were observed and suggest a stabilized RWC with historical operations at Hickory and Banana Basins. Through 2015 and into 2016, EC, TDS, and chloride data again increased to historically high levels (another 130 mg/L increase in TDS). In 2020, concentrations remained stable but slightly lower than the peak of 2016. In 2021, concentrations began a gradual decrease. In 2021, the highest percent blend of recycled water the groundwater mound at BH-1/2 reached approximately 36% to 54%.

Since initiation of recycled water recharge in 2005, the California Speedway Infield Well, south of Banana Basin, showed gradual increases in EC, TDS, and chloride concentrations through 2018 (194-mg/L TDS and 48 mg/L chloride differences). The gradual increase is to be expected with gradual blending as groundwater moves away from the basin (compare with the slightly higher TDS variation at the basin area mound of BH-1). Minimum travel time from Banana Basin to the California Speedway Infield Well based on Infield Well data is approximately 29 months. In 2021, the highest percent blend of recycled water in the groundwater at the California Speedway Infield Well reached approximately 65 to 33%.

For downgradient well California Speedway No. 2, EC, TDS, and chloride concentrations generally remained the same from 2005 through mid-2012. In April 2012, a slight increasing trend in concentration trend began and continued through 2021. While small, the change supports a recycled water arrived at this well in April 2012, an approximately 6.5-year travel time. In 2021, the highest percent blend of recycled water in the groundwater at the California Speedway Well No. 2 reached approximately 48 to 19%.

For downgradient well Reliant East, the EC, TDS, and chloride data do not suggest a definitive arrival of recycled water recharge despite slight increases in the monitored parameters observed in 2015 and 2016. Continued observation of the Reliant well would be needed to evaluate whether it is being impacted by recycled water recharge. Unfortunately, in 2018 the NRG facility closed



and the well is no longer operational. Should a new owner maintain the well, sampling would be continued. IEUA is developing a project to site and install a replacement monitoring in the 2022/23 fiscal year.

Ontario Well No. 20 was taken out of service in 2015 and is no longer monitored. Fontana Water Company 37A (located 2,240 feet up gradient of Banana basin) was taken out of service in 2016 and in 2018 was replaced for monitoring with Fontana Water Company 7A. Due to its location up gradient of Banana Basin, neither well is not expected to show a recycled water component. However, EC and TDS concentrations had gradually increased in well 37A between 2005 and 2017. Well 7A has had stable chloride, EC, and TDS trends since monitoring began in 2018.

### **Brooks Basin Area**

For the Brooks Basin area, monitoring wells are located at the basin (BRK-1) and down gradient of the basin (BRK-2). Water quality monitoring of the deeper casing (BRK-1/2 and BRK-2/2) was suspended in the second quarter of 2015 and resumed in second quarter 2017. Monitoring was resumed at these deeper wells to track a peak change in the parameters being sampled.

Brooks Basin recycled water recharge began in September 2008. EC, TDS, and chloride concentrations at BRK-1/1 show seasonal increases and decreases through its history, likely related to recharge activity. From 2013 to 2017, concentration increases of 150 mg/L for TDS and 60 mg/L for chloride were observed and attributed to the presence of recycled water at BRK-1/1. the highest percent blend of recycled water in the groundwater mound at the recharge basin during 2021 was approximately 53% to 55% at BRK-1/1. The historical data shows that blending occurs in the aquifer beneath Brooks Basin. In the deeper casing (BRK-1/2), a notable yet gradual increases in EC, TDS, and chloride began in January 2010 and continued through 2017 and have been stable from 2018-2021. Concentration increases of 108 mg/L for TDS and 10 mg/L for chloride have been observed and are attributed to the presence of recycled water at BRK-1/2. In 2021, the percent blend of recycled water at BRK-1/2 is approximately 44% to 10%.

The chloride concentrations at BRK-2/1 show a 35-mg/L stepped increase in 2011 that returned to background levels in 2013. In 2015, chloride concentrations in BRK-2/1 increased sharply to historical highs (approximately 20 mg/L higher than the prior high in 2012) and remained just above 80 mg/L through 2018. Chloride concentrations returned to background levels in 2019 before sharply increasing again in 2020, then remained stable through 2021. These chloride pulses mimic similar chloride increase at mound well BRK-1/1 but delayed. These pulses are interpreted to indicate the arrival of recycled water at BRK-2/1.

For downgradient well BRK-2/2, the EC, TDS, and chloride data are relatively stable from 2007 to 2018 and begin a slight increase in 2019, then became relatedly stable through 2021. While these trends do not definitively suggest an arrival of recycled water recharge, continued observation of the BRK-2/2 is needed to evaluate whether recycled water recharge is impacting it.

### **Ely Basin Area**

Groundwater in the area directly south of Ely Basin (south of the 60 Freeway) is on the northern perimeter of a portion of the Chino Groundwater Basin with high TDS and nitrate concentrations. Groundwater in this area has TDS concentrations between 500 and 1,000 mg/L, as is typical of the Chino Basin areas with a long irrigation history (CBWM & IEUA, 2003). Recycled water has



been recharged at Ely Basin since 1999. Quarterly sampling of the Ely area monitoring wells began in 2007, when the site was incorporated in the program's recharge permit.

For Ely Basin, monitoring wells are located at the basin (Philadelphia well) and downgradient (Walnut well and Riverside well). Historical recycled water recharge is estimated to have traveled to and beyond the three monitoring wells directly downgradient of Ely basin due to the basin's recharge history and the wells proximity to the basin (0.0 miles, 0.5 mile and 1.0 mile for the Philadelphia, Walnut, and Riverside wells, respectively).

The late 2014 sample results at the Philadelphia well show EC and chloride at historical high levels nearly equal to that of recycled water. Due to drought conditions in 2014, recycled water was the predominant recharge source water at Ely basin, nearly 2,000 AF more than the volume recharged in 2013. From 2015 to 2018, the EC, TDS and chloride concentrations at the Philadelphia well decreased slightly but remained well above pre-2014 levels. During 2018, the highest percent blend of recycled water in the recharge mound groundwater at the Philadelphia well reached approximately 85% to 100%. In 2019, the Philadelphia well remained out of service. In 2020, an evaluation indicated the well casing is damaged, thus requiring a new well to be installed. IEUA has budgeted to install a new well in 2022.

At the downgradient Walnut and Riverside wells, the high background concentrations of EC, TDS, and chloride make it difficult to identify the arrival of lower concentration storm water and recycled water. The EC, TDS, and chloride concentrations at the Walnut well have historically been at 1.5 to 2 times the concentrations found in recycled water. It is thus difficult to attribute variations in concentration with recharge activity at Ely Basin. A more definitive indicator of the arrival of recycled water to the Walnut well that could help estimate travel time would be similar trends of EC, TDS, and chloride concentrations observed at the Philadelphia well in 2014 to 2018. As of 2021, such a trend has not been observed.

Further down gradient of the Walnut well, the EC, TDS, and chloride of groundwater at the Riverside well are relatively stable but exhibited a gradual increase in concentration between 2007 and 2014 followed by a slight decrease in 2015. These concentrations have been fairly stable from 2016 to 2021. The results do not indicate any direct seasonal changes from recycled water or diluent water recharge at Ely Basin.

### **Turner Basin Area**

The Turner Basin area monitoring well T-1/2 (at Turner 1) has historical and temporal variations in EC, TDS, and chloride (100 to 200 mg/L for TDS) that can be attributed to cycles of recycled water recharge. For the 5 years after the Turner 1 recycled water start-up period (2006-2007), recycled water deliveries had been limited, and thus EC, TDS, and chloride concentrations decreased towards background levels. However, with the drought conditions of 2014-2018, a larger volume of recycled water was delivered in this period than prior years. The rapid fluctuations in TDS, EC, and chloride concentrations at T-1 indicate recharge water moves quickly away from the Turner 1 basin. Recycled water recharge at Turner 1 has been insignificant in 2019 through 2021 as recharge is following the sites RWC management plan. During 2021, EC and chloride were declining towards background levels and the highest percent blend of recycled water in the groundwater mound at Turner 1 monitoring well T-1/2 was approximately 29% to 16%.

At monitoring well T-2/2 (at Turner 4), the EC, TDS, and chloride concentrations arrivals due to recharge are delayed several months. The slower and smaller relative concentration changes (compared to Turner 1's monitoring well T-1/2) suggests that recharge from Turner 4 is more laterally distributed when it reaches the groundwater table. This is consistent with the slower recharge rates observed at Turner 4. In 2019, concentrations of EC, TDS, and chloride concentration increased at the deeper well casing T-2/2 at Turner 4 following recharge in late-2018. During 2021 the highest percent blend of recycled water in the groundwater mound at the Turner 4 basin was approximately 48% to 63%. The T-1/2 and T-2/2 EC, TDS, and chloride data periodically indicate blend ratios of near 100% when recharge is near 100% recycled water. At other times of less recycled water recharge, the data show recycled water beneath the Turner Basins is blending in the aquifer with groundwater and other recharge source waters.

Downgradient from the Turner Basins, Ontario Well No. 25 showed a slight increase in EC (75  $\mu\text{mhos/cm}$ ), TDS (40 mg/L), and chloride (10 mg/L) above background levels that suggest recycled water arrival in July 2010. From mid-2010 through 2016, the EC, TDS and chloride concentrations in Ontario Well No. 25 have remained relatively constant. Declines towards background concentrations were observed by the end of 2017 and 2018. Estimated travel time based on these water quality data is approximately 48 months. As of 2019, Ontario Well No. 25 has been classified by DDW as inactive.

Downgradient Ontario Well No. 29 in January 2009 through 2010 showed a slight stepped increase in TDS and chloride concentration similar in magnitude to the gradual rise at Ontario Well No. 25. However, the increases at Ontario Well No. 29 are within the range of background data. These changes are not definitive changes that would correlate with groundwater recharge using recycled water. Ontario Well No. 29 was not sampled from October 2010 to October 2012 because the well was out of commission. The 2013 through 2021 Well No. 29's concentration data are lower than the wells' peak values in 2010 and are within background concentrations. Additional data from future monitoring are required to assess the arrival and occurrence of recycled water at Ontario Well No. 29.

### **RP3 Basin Area**

For the RP3 Basins area, the initiation of recycled water recharge occurred in June 2009. The 2009 through 2012 variations in water quality concentrations from the RP3-1 monitoring wells were difficult to draw conclusions from regarding the percent recycled water. The variations were likely due to purging of higher TDS and chloride water from the soil and groundwater beneath the basin. Following a good storm season of diluent water and after taking the basin offline for cleaning, the summer-2012 EC, TDS, and chloride concentrations for RP3-1 reached historical lows. Use of the 2012 low concentrations as the baseline conditions has since been used to estimate the blend of recycled water beneath the RP3 basins. During 2021, the percent blend of recycled water in the groundwater at well RP3-1/1 was 100% and 100% (EC and chloride based).

Downgradient well ALCOA MW-3 has higher EC, TDS, and chloride concentrations than ALCOA MW-1. ALCOA MW-3 and -1 are approximately 4,600 feet and 9,200 feet distant from RP3 Basins, respectively. In 2021, ALCOA MW-3 groundwater continued to show fluctuating EC, TDS, and chloride concentrations, though these fluctuations were generally smoother and of smaller magnitude than previous years. This behavior continues to suggest higher salt content water moving past the well site. From 2017 through 2021, the peaks of the EC, TDS, and chloride

appear to have stepped above the prior range of variation. These higher concentrations exceed that of recycled water and is thus not an indication of the arrival of recycled water at this location. More data is required to evaluate the arrival of recycled water at ALCOA MW-3.

Downgradient well ALCOA MW-1 shows seasonal (summer through early fall) spikes in EC, TDS, and chloride from 2011 through 2021. These spikes of high concentrations are greater in magnitude than their respective concentrations in recycled water, and thus are likely due to higher salt content water moving past the well. EC, TDS, and chloride concentrations show an acute increase to historical highs during the summer and early fall of 2020. Though concentrations fell during two subsequent samplings, levels remain well above historical background values. Determining the source of this spike will require further observation. The background concentrations at ALCOA MW-1 are similar to that of recycled water. More data is required to correlate the arrival of recycled water recharge at ALCOA MW-1.

The Southridge Junior JHS well is located approximately 5,200 feet down gradient of the RP3 Basins. The Southridge JHS well water quality data showed a slight but gradual decrease in EC, TDS, and chloride concentrations since quarterly sampling began in 2009 through 2013 and then relatively stable values through 2020. The TDS, EC, and chloride background concentrations (2009 through 2013 data) at the Southridge JHS well are slightly higher than that of recycled water. As such, recharge mixing of groundwater, recycled water, stormwater and imported water arriving at this well location would appear as a lowering of concentrations. Alternatively, it could increase as higher salinity upgradient groundwater moves southward. The slight variations in the water quality data do not suggest that a blend of recycled water recharge has reached the downgradient Southridge JHS well from the RP3 recharge site.

### **Declez Basin Area**

Recycled water recharge at Declez Basin began in December 2015 and was voluntarily suspended in September 2016 after its Start-Up Period. Recycled water recharge resumed in April 2018 after completion of a downgradient monitoring well DCZ-2. The spiked nature of the DCZ-1/1 data appear to be similar to the fluctuations observed at the upstream ALCOA monitoring wells and not like the smooth data trends of the Southridge JHS well. Regardless, the DCZ-1/1 groundwater EC, TDS, and chloride concentrations are significantly lower than these upstream monitoring wells. In December 2017, increased TDS, EC, and chloride concentrations at DCZ-1/1 are preliminarily interpreted as arrival of recycled water at DCZ-1/1 (a 23-month travel time). The resumption of recycled water recharge in April 2018 allowed confirmation of the travel time based on a second correlation of increased EC and chloride in November 2019. The 2019 confirmation resulted in a 21-month travel time. The 21- and 23-months travel times are within the precision of quarterly sampling. To be conservative from a compliance perspective, 21 months will be considered the travel time. During 2021, the highest percent blend of recycled water in the groundwater at DCZ-1/1 was estimated at approximately 42% to 62%.

### **San Sevaine Basin Area**

Monitoring of San Sevaine Basin area wells began in late 2009. Initiation of recycled water recharge began at San Sevaine 5 in July 2010 and was suspended voluntarily in September 2014 to develop plans to mitigate poor infiltration rates and midgefly control. The solution was to build a pipeline to the San Sevaine 1, 2, and 3 basins, which facilitated the resumption of recycled

water delivery in August 2020. A pump station was also constructed to pump stormwater captured in Basin 5 through the recycled water pipeline to the Basins 1, 2, and 3.

A modified start-up protocol was prepared to repeat the San Sevaine Start-up Period testing using Basin 2 and representative of Basins 1, 2, and 3. The modified start-up period of recycled water recharge in San Sevaine 2 occurred from August 2020 through September 2021. A new monitoring well (SSV-2) was installed at Basin 2. Monitoring well SS-1 at Basin 5 and the well Unitex 91090 were used as the nearest down gradient monitoring wells.

Since the initiation and end of recycled water recharge in San Sevaine 5 (2010-2014), EC and chloride concentrations declined gradually through 2015, stabilized through 2019, gradually increased above background concentrations through 2020, and declined towards background concentrations in 2021. These increases occurred prior to resumed recycled water recharge at San Sevaine 2 in August 2021 and are therefore unrelated to 2021 recharge. It is possible that these increases may be related to the initial recharge of recycled water at Basin 5. If so, this would suggest an approximate 9-year travel time from Basin 5 to groundwater at monitoring well SS-1.

The San Sevaine Modified Recycled Water Recharge Start-Up Protocol used a new mound monitoring well (SSV-2) that was installed in mid-2018 at San Sevaine 2. For SSV-2, the initial EC, TDS, and chloride concentrations measured since Fall 2018 are generally stable and in line with baseline values measured at Unitex 91090, though exhibit minor fluctuation over the 2018-2020 sampling window. A sharp increase in EC, TDS, and chloride concentrations were observed in SSV-2 in January 2021 and indicates the arrival of recycled water at the monitoring well after 4.9 months of travel time (IEUA & CBWM, 2022). During 2021, the highest percent blend of recycled water in the groundwater at SSV-2 was estimated at approximately 98% to 100%.

In 2021, the Unitex 91090 monitoring well continues to show relatively stable concentrations of EC, TDS, and chloride, indicating that recycled water has yet to arrive at the Unitex monitoring well.

### **Victoria Basins Area**

Monitoring of Victoria Basin area wells began in February 2010 and initiation of recycled water recharge began at Victoria Basin in September 2010. Victoria Basin mound monitoring well VCT-1/1 showed a steady increase in EC, TDS, and chloride concentrations beginning in May 2011 that continued into early 2016. These values stabilize in mid to late 2016 at values typical of recycled water. Parameters followed a declining trend through mid-2019 and then experienced a brief rebound in mid-2020 before continuing to decline to mid-2019 levels. Mound monitoring well VCT-1/1 water quality data support a travel time of approximately 7.5 months. During 2021, the percent blend of recycled water in the groundwater mound at Victoria Basin was approximately 43% to 51% at VCT-1/1. Downgradient wells VCT-2 and CVWD No. 39 have not shown any EC, TDS, or chloride variations that would indicate arrival of recycled water.

### **3.3 RWC Management Plan**

The RWC Management Plan is a necessary tool to demonstrate how IEUA and CBWM will meet the maximum RWC limits established during the start-up period of a recharge site. A basin's volume based RWC must be in compliance with its RWC limit. Volume-based RWC is a calculation of the percent recycled water infiltrated compared to all recharge and is based on a

120-month rolling average. Appendix B contains the RWC Management Plans for 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, RP3, San Sevaine, Turner Basin 1&2, Turner Basin 3&4, Victoria, and Declez Basins. While the plans contain calculations for up to 120 months of historical data, the tabulated and graphed RWC Management Plans (Appendix B) show only the previous 5 years (60 months) of historical recharge and 10 years (120 months) of forecast (planned) data. Historical data not contained in the current report appendices are contained in prior annual reports.

The RWC Management Plans include two parts. Part 1 displays the historical operation of the basin for the previous 5 years. Part 2 is the planned optimal operation for the next 10 years (120 months). The historical portion of a basin's RWC Management Plan shows actual diluent water (storm water and imported water) and actual recycled water recharge volumes. The planned section includes projections of average stormwater diluent water recharge and maximized recycled water recharge deliveries. Storm water projections are updated annually and represent a basin's historical monthly stormwater recharge average. For a conservative approach to the RWC forecast, future recharge of imported water is not used in the RWC Plan.

In 2009, IEUA and CBWM received a permit amendment from the RWQCB Order No. R8-2009-0057 that allowed a change from a 60-month to a 120-month RWC averaging period and for the inclusion of a fraction of groundwater underflow as a diluent water source in the RWC calculation. The RWC Management Plans included underflow beginning in October 2009 for basins that had already receiving recycled water at the time the permit amendment was issued allowing accounting of underflow. For basins that started recycled water recharge after the 2009 permit amendment, the use of underflow in the RWC calculation begins upon the month of recycled water recharge initiation. IEUA reviewed 2019 groundwater flow data, similar to that reviewed in 2009 when the underflow estimates were made and determined the underflow estimates are still valid. For basins that share the flow path of groundwater underflow, the underflow volume is used for both basins as the travel time between these basins exceeds that required for drinking water wells, and thus any upstream blend has become groundwater again upon reaching the downstream basin. Victoria and San Sevaine Basins share a common underflow as do RP3 and Declez Basins.

Forecasts for recycled water are made by determining a basin's optimal monthly capacity and then subtracting the average monthly stormwater. Thus, the RWC Plan includes the maximum possible recharge and is thus a conservatively high estimate of future RWC. The conservative calculations do not include months of no recharge during future basin maintenance. Should the forecasted recycled water volume cause a basin RWC prediction to exceed its RWC limit, the basin capacity number is sequentially reduced until the RWC limit is no longer exceeded. Turner 1, Turner 4, Declez, and San Sevaine are basins whose RWC Plans include a recycled water recharge capacity less than the basin's maximum capacity. These basins each have an RWC limit of less than 50%. No basins are forecasted to exceed their RWC limit with the forecasted estimates of average diluent water.



Table 3-2 lists the most recent 10 years of annual end of year data for volume based RWC calculation for each recharge site. The recharge sites are all in compliance with their maximum RWC limits. Based on future projections of diluent recharge, the RWC Management Plans show that recycled water deliveries for each basin can continue to be made and remain in compliance with their RWC limits.

### 3.4 Buffer Zone/Travel Time Compliance

Section VI.B.3.e of the M&RP requires the annual report to include the following:

*A summary discussion on whether domestic drinking water wells extracted water within the buffer zone defined by the area less than 500 feet and 6 months underground travel time from the recharge basins, including the actions/measures that were undertaken to prevent reoccurrence. If there were none, a statement to that effect shall be written.*

As stated in the cover letters of the 2021 quarterly monitoring reports, CBWM has certified that there was no reported pumping of groundwater in 2021 for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, RP3, San Sevaïne, Turner, and Victoria Basins. In fact, there are no domestic or municipal production wells in the buffer zones of these recharge sites.

#### 3.4.1 Recharge Water Arrival Times

As documented in prior annual reports and the basin start-up period reports, sufficient data exist to estimate arrival times of recycled water at monitoring wells: 8TH-1/1 and 8TH-1/2 for 8<sup>th</sup> Street Basin; BRK-1/1, BRK-1/2, and BRK-2/1 for Brooks Basin; BH-1/2 for Hickory Basin; California Speedway Infield Well for Banana Basin; T-1/2 and T-2/2 for Turner 1 and Turner 4 Basins, respectively; Ontario Well No. 25 for Turner 4 Basin; SSV-2 at San Sevaïne Basin, VCT-1/1 for Victoria Basin, RP3-1/1 and RP3-1/2 for RP3 Basins, and DCZ-1/1 for Declez Basin. The evaluations of arrival time are based on the water chemistry data presented in Appendix C and basin operations data. Arrival times can be determined from notable increases in EC, TDS, and/or chloride concentrations above background, excluding variations in these parameter concentrations unrelated to recharge.

#### 8<sup>th</sup> Street Basin Area

Travel time from 8<sup>th</sup> Street Basin through the vadose zone and along groundwater flow paths to monitoring well 8TH-1/1 is estimated by steadily increasing concentrations of EC, TDS, and chloride beginning in July 2009 and continuing through 2016. Recharge of recycled water began at 8<sup>th</sup> Street Basin on September 7, 2007; thus, the travel-time estimate for 8TH-1/1 is approximately 660 days (22 months). Downgradient monitoring well 8TH-2 does not yet show conclusive indication of recycled water arrival. Water quality sampling of the deeper casing of 8TH-2 (8TH-2/2) was suspended in mid-2015 but added back into the program in second quarter of 2017. Sampling of 8TH-2/2 will continue until a long-term trend of influence from recharge activity is identified. From 2018 through 2019, chloride concentrations increased to greater than background concentrations before beginning a slight decline in late-2019. This increase in chloride coincided with a slight increase in EC levels, though there was no discernible increase in TDS. It is still too early to determine whether recycled water has arrived, but it is worth highlighting

that there is a minimum ten-year travel time to this well. Parameters at this well will continue to be monitored in 2022.

### **Banana & Hickory Basins Area**

Travel time from Hickory Basin through the vadose zone and along groundwater flow paths to monitoring well BH-1/2 was documented in the 2008 Annual Report at approximately 59 days. (IEUA and CBWM, 2009). The California Speedway Infield Well began a gradual increase in EC, TDS, and chloride in late 2007. The travel time to the California Speedway Infield Well from Banana Basin is estimated as 890 days (29 months) based on a stepped increase in EC, TDS, and Chloride concentrations between October 9, 2007 and January 7, 2008. The modeled travel time to the California Speedway Infield Well estimated in the first Title 22 Engineering Report was 682 days (22 months) (CH2MHill, 2003).

Travel time from the Banana & Hickory Basins to California Speedway No. 2 is estimated at 83 months (6.9 years) based on a gradual increased trend in EC, TDS, and chloride concentrations that began in July 2012 and has continued through 2021. As presented in the 2015 Annual Report, these parameters were relatively stable from 2006 to 2012 (IEUA and CBWM, 2016). Speedway No. 2 is located about one half mile south of Hickory Basin. Based on the groundwater flow direction, the increased trend in EC, TDS, and chloride concentrations was due to the arrival of recharged recycled water from Banana Basin. A travel time estimate was not modeled for Speedway No. 2 in the Phase I Title 22 Engineering report (CH2MHill, 2003). The upgradient monitoring well FWC-37A (removed from service in 2017) showed a gradual increasing trend in chloride (10 mg/L), EC, and TDS (40 mg/L) from 2006 through mid-2014, which leveled off through mid-2017. As an upgradient well, these increases are a local trend not associated with recycled water recharge activities at Banana & Hickory Basins. The trend at Speedway No. 2 is however interpreted as a recycled water arrival due to its relatively stable concentrations during that period of 2006 to 2012. When taken out of service in 2017, the downgradient monitoring well, Reliant East, had not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water. The Reliant East well owner closed their power generating station and the well is no longer available for sampling. The fate of the well will be evaluated by a future site owner. IEUA is currently planning to replace this downgradient monitoring well in FY2022/23.

### **Brooks Basin Area**

Travel time from Brooks Basin through the vadose zone to the shallow casing of mound monitoring well BRK-1/1 located at the basin is approximately 150 days (5 months) based on trends in EC, TDS, and chloride data documented from 2009 data (IEUA and CBWM, 2010b) The chloride increased from background concentration to over 80 mg/L in January, February, and March 2009 are indicative of the arrival of recycled water. Evaluation of 2010 through 2015 EC, TDS, and chloride data indicate recycled water arrived at the deeper casing (BRK-1/2) in January 2010 for a travel time of approximately 526 days (17 months).

At the downgradient monitoring well BRK-2, an increase in chloride concentration at BRK-2/1 was observed from 2011 through 2012, again in 2015 through 2018, and once more in 2020 through 2021. Similar peak increases in chloride concentration were observed in BRK-1/1 are similar to increases in chloride concentration in BRK-2/1 18 months later. The BRK-1/1 chloride trend is



added to the BRK-2/1 trend for comparison (Appendix C). The initial peak increase in chloride concentration at BRK-2/2 suggested a recycled water travel time of 28 months (2.3 years), yet later arrivals are several months sooner. Chloride, EC, and TDS data at BRK-2/2 continue to be within the range of the background concentration.

### **Ely Basin Area**

Groundwater in the Ely Basin area has high background TDS and nitrate concentrations from a history of irrigation. Due to the variations of TDS, EC, and chloride concentrations at the Philadelphia, Walnut, and Riverside Wells unrelated to recharge, arrival times are difficult to determine. Recycled water recharge began in 1999 and thus it is estimated that recycled water has already arrived and traveled beyond these wells. For the Philadelphia Well, peak EC, TDS, and chloride concentrations observed in late 2014 correlate with peak recycled water deliveries to Ely basin 13 months prior and thus indicated a 13-month travel time to the Philadelphia well. In 2019, the well pump became stuck in the well and was not operational. In 2020, an evaluation indicated the well casing is damaged, thus requiring a new well to be installed. IEUA is on schedule to have a new Ely mound monitoring well installed during the 2022 calendar year.

### **Turner Basin Area**

Travel time from Turner Basins through the vadose zone to the groundwater is approximately 10 to 12 months for both the Turner 1 (T-1/2) and Turner 4 (T-2/2) well sites. The initial rise in EC, TDS, and chloride concentrations at T-1/2 suggested a 3-month travel time; however, the decline in EC, TDS, and chloride concentration during the summer of 2008 following a suspension in recycled water recharge in the Turner Basins suggested a longer travel time of approximately 10 months. At T-2/2, the EC, TDS, and chloride concentrations increased significantly from background concentrations in the summer of 2007 and indicated an (initial) 11-month travel time. Both monitoring wells have two casings, with the shallower being designated /1 and the deeper being designated /2. T-1/1 is not currently sampled as it was constructed above the water table for future mound sampling needs, T-2-1 sampling was suspended in 2015 due to sampling results similar to T-2-2. Original modeling (CH2MHill, 2003) for the Turner recharge site predicted a 109-day (9-month) travel time to each of these wells. Decrease in EC, TDS, and chloride concentrations at T-1/2 indicate that recycled water recharged during the start-up period migrated away from this location after the high-volume recharge start-up period ended in 2007.

The travel time from Turner Basins to downgradient Ontario Well No. 25 is approximately 1,475 days (48 months) (IEUA and CBWM, 2011). Downgradient monitoring well, Ontario Well No. 29, has not yet shown variations in EC, TDS, and chloride that could signal arrival of recycled water at these well sites. Data collected in 2020 from Well 29 are consistent with the prior data interpretations. No data was obtained from Well 25 due to it being inactive since mid-2019.

## **RP3 Basin Area**

Travel time from RP3 Basin (cell 1) through the vadose zone to the shallower casing of mound monitoring well RP3-1/1 (located at on the west side of cell 1) was initially interpreted in the 2009 Annual Report (IEUA and CBWM, 2010a) to be approximately 14 days based on observation of EC changes. However, 2009 through 2010 data and RP3 Basin Start-Up Period Report (IEUA & CBWM, 2010d) findings indicate the earlier data did not represent the arrival of recycled water but was instead evidence of vadose zone flushing (IEUA and CBWM, 2010c). The EC and water level trends support a travel time estimate of approximately 99 days. While the background EC prior to recycled water recharge was 1,000 to 1,100  $\mu\text{mhos/cm}$ , initiation of storm water recharge operations at cell 1 in February 2009 appears to have pushed the higher EC water from the vadose zone raising the well water EC to 1,400  $\mu\text{mhos/cm}$ . Recycled water recharge began on June 2, 2009 and a 400- $\mu\text{mhos/cm}$  decrease in EC was observed in this mound monitoring well by August 25, 2009. The approximately 99-day travel time to the well is corroborated by the hydrograph of well casing RP3-1/1 (Appendix D), which shows an approximately +90-day delay between the mid-September 2010 recharge low and the mid-December 2010 water level low. Arrival of recycled water was also observed as chloride concentration increased in both the shallow (RP3-1/1) and the deep (RP3-1/2) casings in the summer of 2010, approximately 12 months after initiation of the recycled water recharge in the basin. The longer time to observe a chloride response is likely due to the purged of the vadose zone.

With the exception of ALCOA MW-1, data collected in 2021 are consistent with the prior data interpretations for the RP3 region monitoring wells. The water quality data from downgradient monitoring well ALCOA MW-1 (about 9,200 feet from RP3) illustrates a prominent increase in EC, TDS, and chloride concentrations from historical highs during the summer and early fall of 2020. Though concentrations fell during two subsequent samplings, levels remained above historical background values. As the chloride concentration peaked 260 mg/L greater than that of recycled water chloride, further observation and investigation may be required to better determine the source of this spike and arrival of recycled water. ALCOA MW-3 (about 4,600 feet from RP3) show gradual increasing trends in chloride concentrations. These increases in chloride concentrations are not indicators of recycled water arrival at both wells, as they are located at different distances and flow directions from RP3. The Southridge well water quality data have been on a downward trend throughout its entire sampling history from 2009 through 2021, and do not indicate arrival of recycled water recharge.

## **Declez Area**

Travel time to the Declez basin mound monitoring well is approximately 23 months as evidenced by a stepped increase in EC, TDS, and chloride above historical background levels beginning in approximately December 2017 following initial recycled water deliveries in January 2016. Downgradient monitoring well DCZ-2 shows a slight increase in EC, TDS, and chloride concentration beginning in February 2020, but remains similar to background concentrations. Continued observation of DeCZ-2 should include additional sampling data prior to confirmation of recycled water arrival.

## **San Sevaine & Victoria Basins Area**

San Sevaine Basins lie directly upgradient of Victoria Basin, and thus these two sites are considered together. Travel time from recharge at San Sevaine 5 to the water table is complicated

by recharge activities at the other San Sevaine basins. The hydrograph of SS-1 is complimented with recharge of both basin 5 (storm water and previously recycled water) and the combined basins 1, 2, and 3 (recycled water, stormwater, and imported water). The basins within the San Sevaine site appear to have different impacts on the timing on changes in SS-1 well water levels (varying from 2 to 4 months), making the timing of water quality impacts from San Sevaine recharge complicated and warranting further data collection.

The San Sevaine 5 mound monitoring well showed a spike in chloride in the second half of 2019, which dropped in subsequent sampling in 2021 but remained above baseline levels. This spike coincided with a more sustained increase in EC and, to a lesser extent, TDS. These trends will continue to be monitored in 2022 to see if their duration matches the limited historical recycled water deliver to basin 5. Due to operational and maintenance limitations, recharge of recycled water was discontinued in San Sevaine 5 in 2014. San Sevaine 5 remains an active basin for stormwater capture and recharge, however, the basin is used largely to store water prior to transferring to other basins.

A modified Start-Up Period for San Sevaine Basins began with recycled water deliveries in August 2020. A new mound monitoring well, SSV-2, was previously installed adjacent San Sevaine 2 basin as part of the Modified Start-Up Protocol and has been sampled quarterly since September 2018 and monthly since August 2020. Background water quality data collected prior to and during the start-up period from SSV-2 were generally stable and similar to those observed at nearby well Unitex 91090. In December 2020 through 2021 sampling events, notable increases in EC, TDS, and chloride concentrations at SSV-2 were detected. Though this rise represents the arrival of recycled water at the mound monitoring well, more observation is needed to identify the peak concentrations possible. To allow the modified San Sevaine Start-Up Period to occur, on June 1, 2019 the nearby cross-gradient well Unitex 91090 was removed temporarily from potable service pending results of monthly monitoring for arrival of recycled water indicators. Recycled water indicators were not detected at the well Unitex 91090 through 2021 indicting a minimal travel time greater than 16 months.

For Victoria Basin, mound monitoring well VCT-1/1 water quality data (EC, TDS, and chloride) support a travel time of approximately 7.5 months. The time is based on the initiation of recycled water recharge on September 2, 2010 and the beginning of a steady rise in EC, TDS, and chloride (starting with the May 19, 2011 sample) through 2016. As of 2021, there is no convincing observation of recycled water arrival at wells VCT-2 and CVWD-39.

### **3.4.2 *Leading Edge of Recycled Water in Aquifer***

The leading edges of groundwater containing a component of recycled water were evaluated for the various recharge sites using monitoring well data. Such data include groundwater elevations changes and changes in EC, TDS, and/or chloride concentrations. Water quality data were discussed in Section 3.2 and Section 3.4.1. Appendix D contains basin-specific water level hydrographs, with discussion in Section 3.5.2 of water level mounding due to recycled water recharge. Location maps for wells monitored for the recharge program are presented in Figures 2-1 through 2-7. Evaluation of basin-specific water chemistry and water level data indicate recycled water recharge has passed the first monitoring wells of 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, Turner Basins, San Sevaine, Victoria, and RP3 Basins. Several production wells used for monitoring near the recharge basins show water quality changes from background

concentrations that would be associated with recycled water recharge, specifically, California Speedway Infield Well and Speedway 2 for Banana & Hickory Basins and Ontario Well No. 25 for Turner 4. CBWM certifies on a quarterly basis that no pumping for drinking water purposes took place in the buffer zones extending 500 feet laterally and 6 months of underground travel time from each of the recharge sites using recycled water and further specifies there are no domestic or municipal production wells in the buffer zones of these recharge sites.

### 3.4.3 Tracer Test Results

No tracer tests were conducted in 2021, nor are any planned for the current program.

## 3.5 Groundwater Elevations

Section VI.B.3.b of the M&RP requires the annual report to include a discussion of groundwater elevations and flow paths:

Recharge water groundwater flow paths shall be determined annually from groundwater elevation contours and compared to the flow and transport model's flow paths, travel of recharge waters, including leading edge of the recharged water plume, any anticipated changes. The flow and transport model shall be updated to match as closely as possible the actual flow patterns observed within the aquifer if the flow paths have significantly changed.

### 3.5.1 Current Groundwater Elevations

Groundwater elevations from the recharge program monitoring wells and many other wells are used by CBWM to periodically prepare groundwater elevation contours of the Chino groundwater basin. Groundwater contour maps were prepared for 1997, 2000, 2003, 2006, 2008, 2010, 2012, 2014, 2016, and 2018. These groundwater elevation maps from the CBWM's *Biennial State of the Basin Reports* are presented in Appendix E. The Spring 2018 elevation contour map will be used for discussion in this report. At the time of this report preparation, a spring 2020 map was not available from CBWM for discussion within this report.

A comparison of the pre-recharge elevation contour map (Fall 2003) with the most recent post program start-up groundwater contour map (Spring 2020) indicates several things. First, regional changes in groundwater elevation near the recharge basins are present, but trends from enhanced recharge (apart from 8<sup>th</sup> and Turner basins) are not generally evident using the 25-foot contour interval of the maps, indicating that the recharge program has not significantly impacted regional groundwater flow directions. A significant difference in groundwater flow direction between the 2003 and 2018 maps are the mound at 8<sup>th</sup> Street, which between 2012 and 2018 had a more westward direction as opposed to a south-southwest direction in 2013. This difference may indicate the 8<sup>th</sup> Street Basin downgradient monitoring well location (8TH-2) is not appropriately located to characterize downgradient recharge water quality. Recharge mounds at basins (such as that around the Turner basin) are evident on the regional map and by well hydrographs of monitoring wells (Appendix D). In general, these seasonal mounds are within the 25-foot contour interval of the maps. Since 2008, a deeper and larger area pumping depression has developed around the Chino Desalter (hydraulic control) well field as noted by the 550-foot elevation contour wrapping to the west to indicate recharge flow from the Santa Ana River. Also, during this time, the regional pumping depression in the Pomona area west of Brooks Basin has become smaller and narrower. There are some changes in the contouring style/methodology between the 2003 and 2020 maps. For example, the groundwater contours in the area north of

Victoria and San Sevaine Basins were interpreted for the 2003 map but were not interpreted for the 2010 through 2020 maps.

### **3.5.2 Water Level Trends in Monitoring Wells**

Appendix D contains groundwater elevation hydrographs for wells constructed for the monitoring program. Location maps for wells monitored for the recharge program are presented on Figures 2-1 through 2-7. Plotted on each hydrograph is the daily volume of water captured at the nearest recharge site. These hydrographs can be used to identify local increases in groundwater elevations and their correlation with local recharge. Generally, the hydrographs are from mound monitoring wells at recharge basins or the closest monitoring well downgradient of the recharge basin.

#### **8<sup>th</sup> Street Basin Area**

The hydrographs of the 8<sup>th</sup> Street Basin mound monitoring well (8TH-1) show relatively stable long-term groundwater elevations from 2008 through 2020 that seasonally fluctuate between 635 to 680 feet above mean sea level (MSL). In 2021, 8TH-1/2 water levels declined about 7 feet and reached 635 feet MSL, the lowest elevation since 2009. There is an approximate 4-month delay and strong correlation between basin recharge and groundwater elevations in both 8TH-1/1 and 8TH-1/2, indicating relatively rapid recharge of surface water to the underlying aquifer. The hydrograph for downgradient well 8TH-2 shows about a 10-foot increasing water level trend between 2008 and 2013, which then stabilizes at approximately 635 feet MSL between 2014 and 2020. In 2021, 8TH-2 water levels also decline to near prior low levels of 2009. Short duration downward water level spikes of the 8TH-2 hydrograph are indicative of nearby groundwater pumping activities.

#### **Brooks Basin Area**

BRK-1/1 water levels have remained within a 30-foot range through their history, ranging from 607 and 632 feet MSL. The hydrographs for the Brooks Basin mound monitoring well (BRK-1/1) show relatively small (no more than 2-foot) seasonal water level fluctuations and broader more annual trends. Groundwater levels at the mound well generally decreased from 2008 through 2009, stabilized from 2010 through 2013, decreased from 2014 through mid-2016, stabilized from mid-2016 through 2021. The downward trends are perhaps due to brief drought conditions and a decrease in stormwater recharge or other nearby groundwater stresses.

At the deeper casing, BRK-1/2 groundwater elevations typically follow the long-term trend of BRK-1/1 but 20-feet lower and with increased seasonal fluctuations from nearby pumping. BRK-1/2 water levels range between 585 and 615 feet MSL.

The hydrographs of downgradient (intermediate) monitoring well BRK-2 show similar groundwater elevation trends as BRK-1/2, suggesting water levels of these two casings are influenced more by regional groundwater changes than by Brooks basin recharge. BRK-2 casings have larger seasonal fluctuations and pumping influences than BRK-1/2, as BRK-2 is closer to the pumping centers in the City of Pomona.



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## **Banana & Hickory Basins Area**

The hydrograph for the Banana & Hickory Basins mound monitoring well (BH-1) shows seasonal water level fluctuations between approximately 680 and 690 feet MSL and generally stable through the 15 years of data shown. From 2008 through 2019, the BH-1/2 hydrograph shows relatively stable water levels with 5 to 10-foot seasonal fluctuations. However, from 2020 to 2021, the hydrograph shows a gradual decrease in water levels to 5 feet below its prior historic low. The peak and trough seasonal fluctuations appear delayed between 3 and 4 months from peak recharge activities. Impacts on water elevations due to recharge at Hickory and Banana Basins are muted and delayed due to the over 400-foot depth to the water table at this location.

## **Ely Basin Area**

Ely Basin has received recycled water recharge since 1999, 6 years prior to the currently permitted regional recharge program. In 2011, IEUA installed a transducer in MW-1 (aka the Philadelphia well) and began recording water levels. Since 2011, the long-term water-level trend near Ely Basins is stable but fluctuates +/- 5 to 20 feet in response to recharge. In January 2015, the water level transducer malfunctioned and several months of water level data were lost. In late 2018, the well was discovered to be irretrievably damaged and is permanently out of service. A new well is planned to be constructed at the base in fiscal year 2022/23 and will be equipped with a level sensor.

## **Turner Basin Area**

The hydrographs for the two Turner Basin monitoring wells, T-1/2 and T-2/2, show general long term 40-foot increase in water levels between 2008 and 2017 followed by a long term 30-foot decline from 2018 to 2021. For these two sites, the annual winter highs and summer lows show 10 to 20-foot differences, suggesting recharge at Turner Basins has a positive local impact on regional water levels. The peak water levels are delayed about 1 to 2 months from periods of higher volume recharge.

## **RP3 Basin Area**

The hydrographs of the RP3 Basin mound monitoring well, RP3-1, shows a good correlation with recharge activity at the basin. In 2008 and 2009, the water elevation varied by no more than 2 to 3 feet with recharge activity. However, recharge volume started to increase in June 2009 at RP3 basins when recycled water and storm water were delivered from Jurupa Basin to RP3 Basins. From 2009 through 2011, water levels at RP3-1 rose approximately 20 feet. A similarly dramatic decrease in groundwater elevation occurred in late 2012 when the RP3 basin was offline for maintenance. In 2013, water levels rebounded 5 to 10 feet upwards with renewed recharge. Water levels at RP3 fell about 12 feet through most of 2014 due in part to the low rainfall and stormwater recharge in that year. In mid-2015, IEUA completed the Wineville pipeline extension to RP3 and began delivering recycled water at an increased rate to all cells at the RP3 site. This resulted in water levels in both the shallow and deep RP3-1 casings rising and falling up to 15 feet as recharge activity increased and decreased. In 2018, water levels remained about 10 feet higher than pre-recycled water recharge. The groundwater level fluctuations in 2019 can be attributed to the suspension of basin recharge for basin maintenance purposes, and the dramatic rise in water levels through 2020 and 2021 correspond to the resumption of normal recharge operations at the basin.



## **Declez Basin Area**

The long-term water level trend at the Declez recharge mound well site has been relatively stable between 2008 and 2020, fluctuating between 698 and 722 feet MSL. The data generally shows 10 to 15 feet seasonal variations, with the water level responding within days of stormwater recharge. Recycled water recharge was initiated at Declez basin during its start-up period of December 2015 through September 2016. With that initiation, the seasonal water level highs increased by about 5 feet. Recycled water delivery to Declez Basin stopped in September 2016 and resumed in April 2018 upon completion of downgradient monitoring well DCZ-2. The DCZ-2 hydrograph does not yet have sufficient water level data to estimate the influence of Declez basin recharge at that well site.

## **San Sevaine Basins Area**

Monitoring well SS-1 was installed in spring 2010 for monitoring recycled water recharge at San Sevaine 5. The recharge history of San Sevaine 5 alone does not correlate well with SS-1 water levels. However, imported water recharge in San Sevaine Basins 1 and 2 during 2011 and 2017 does appear to correlate with SS-1 water level changes beneath San Sevaine 5. The hydrograph for San Sevaine 5 includes recharge for both San Sevaine 5 and the combined basins San Sevaine 1, 2, and 3. For data between 2010 and April 2011, the hydrograph for the San Sevaine 5 basin mound monitoring well (SS-1) shows a water level decrease of 5 feet, and a steep recovery in July 2011 approximately 2 months after the initiation of imported water recharge in San Sevaine 1 and 2 in May 2011. Thus, it appears to be an approximately 2-month delay to the well for recharge at San Sevaine 1 and 2 and an approximately 4-month delay for recharge at San Sevaine 5. Similarly, between 2013 and mid-2017, the SS-1 water levels showed a steady decline, due in part to the low rainfall and low stormwater recharge in the 2015 winter. A small upward change in water level began in June 2017 following imported water recharge in late 2016. A similar water level increase continued through mid-2018 following the 2017 imported water charge in San Sevaine 1 and 2. Recycled water recharge at San Sevaine 5 has not occurred since May 2014 due to low basin infiltration rates and operating constraints.

Recycled Water recharge resumed at the upper three San Sevaine basins in August 2020 and appear to have sustained water levels in SS-1 between 2020 and 2021. The operation of the San Sevaine 5 pump station for delivery of stormwater to the upper most San Sevaine basins should also have a positive influence on water levels at SS-1.

Monitoring well SSV-2 was installed in late 2018 at San Sevaine 2 basin and its initial hydrography is included in this annual report. The level sensor for this well failed and data were lost from January 2019 through April 2022. The short water elevation history shows a downward trend during a pause in recharge activity.

## **Victoria Basin Area**

The hydrograph for the Victoria Basin mound monitoring well (VCT-1/1) shows seasonal variations of up to 30 feet between the summer low levels and the winter high levels. Longer-term (2014 through 2021) water level fluctuations trend upward when looking at the summer and winter extremes. The water level peaks are generally 6 to 9 months delayed from times of higher volume recharge.

The hydrograph for the Victoria Basin downgradient (intermediate) monitoring well (VCT-2/2) shows relative stable water elevations from 2010 through 2019 within the elevations 750 to 765 feet MSL. From 2020 through 2021, the well's water elevations declined to historic lows in the low 740s. Seasonally, the hydrograph shows 5- to 8-foot water level fluctuations. The existing water level data set does not correlate definitively with recharge activities at the Victoria Basin. While water level and recharge volumes rise and fall annually, comparison of a longer duration data set is required to determine their correlation with certainty. Water level data for 2014 and early 2015 were not available due to Caltrans construction activities at the wellsite, which resulted in the ground and the well casing being lowered. Data collection resumed in November 2015. The transducer failed in mid-2016 and was replaced.

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- Wildermuth Environmental, 1999, Optimum Basin Management Program, Draft Phase I Report.

## TABLES

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**Table 2-1**  
**Summary of Treatment Chemical Usage at RP-1 and RP-4**

	RP-1 (Flow)		RP-1 (Tertiary)		RP-4		
	Ferric Chloride	Sodium Hypochlorite	Aluminum Sulfate	Sodium Hypochlorite	Ferric Chloride	Aluminum Sulfate	Sodium Hypochlorite
	Gal.	Gal.	lbs.	Gal.	Gal.	Gal.	Gal.
<b>Month</b>							
<b>Jan-21</b>	29,400	0	10,400	135,000	0	1,744	26,063
<b>Feb-21</b>	26,400	0	5,500	111,600	0	1,159	23,890
<b>Mar-21</b>	24,600	400	6,200	116,200	1,446	1,263	27,978
<b>Apr-21</b>	21,000	0	8,800	118,100	0	1,223	27,398
<b>May-21</b>	21,400	0	7,400	110,700	0	1,286	27,473
<b>Jun-21</b>	21,300	0	6,000	114,600	2,052	1,285	27,733
<b>Jul-21</b>	21,800	0	7,550	121,100	3,946	1,343	29,275
<b>Aug-21</b>	22,800	0	7,450	119,100	5,109	1,362	28,993
<b>Sep-21</b>	19,900	0	7,100	109,059	5,653	1,271	28,804
<b>Oct-21</b>	22,600	0	6,900	107,224	3,870	1,277	26,158
<b>Nov-21</b>	20,900	0	8,650	123,106	2,794	1,230	26,975
<b>Dec-21</b>	22,500	0	6,400	120,945	2,454	1,378	28,716
<b>Total</b>	274,600	400	88,350	1,406,734	27,324	15,820	329,457

**Table 3-1**  
**Evidence of Recycled Water Blending Based on Water Quality at**  
**Monitoring Wells Based on EC and Chloride in 2021**

Basin	Well	Well Position	2021 Recycled Water EC (µmhos/cm)	Groundwater Background EC (µmhos/cm)	Peak EC at Well (µmhos/cm)	Mass-Balance Blend (max) (% Recycled Water)	2021 Recycled Water Cl (mg/L)	Groundwater Background Cl (mg/L)	Peak Cl at Well (mg/L)	Mass-Balance Blend (max) (% Recycled Water)
8th Street	8TH-1/1	Mound	786	200	439	41%	112	9	74	63%
	8TH-1/2	Mound	786	255	509	48%	112	13	68	56%
	8TH-2/1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	8TH-2/2	Downgradient	786	400	478	20%	112	20	54	37%
Banana & Hickory	BH-1/2	Mound	786	360	514	36%	112	10	65	54%
	California Speedway Infield	Downgradient	786	440	629	55%	112	10	44	33%
	California Speedway No. 2	Downgradient	786	365	567	48%	112	10	29	19%
	Reliant East Well	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	Fontana Water Co. 37A and 7A	Upgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	Ontario No. 20	Downgradient	In 2015, Well went out of service and is no longer monitored.				In 2015, Well went out of service and is no longer monitored.			
Brooks	BRK-1/1	Mound	786	367	590	53%	112	11	67	55%
	BRK-1/2	Mound	786	535	645	44%	112	16	26	10%
	BRK-2/1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	BRK-2/2	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
Ely	Philadelphia Well	Mound	732	245	not sampled	--	112	34	not sampled	--
	Walnut Well	Downgradient	Well impacted by regionally high TDS concentration				Well impacted by regionally high TDS concentration			
	Riverside Well	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
Turner	T-1/2	Mound	786	390	505	29%	112	21	36	16%
	T-2/2	Downgradient	732	350	533	48%	112	9	74	63%
	Ontario No. 25	Downgradient	786	380	not sampled	--	112	11	not sampled	--
	Ontario No. 29	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
RP-3	RP3-1/1	Mound	786	475	835	100%	112	20	120	100%
	Alcoa MW3	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	Alcoa MW1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	IEUA Southridge JHS	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
San Seavine & Victoria	SS-1	Mound	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	SSV-2	Mound	786	303	776	98%	112	38	118	100%
	Unitex 91090	Cross gradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	VCT-1/1	Mound	786	330	526	43%	112	38	76	51%
	VCT-2/2	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	CVWD No. 39	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
Dedez	DCZ-1	Mound	786	400	562	42%	112	22	78	62%
	DCZ-2	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	JCSD Well No. 13	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	JCSD Well No. 19	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			



**Table 3-2**  
**Volume-Based RWC Actuals by Basin**  
**(10-Year History)**

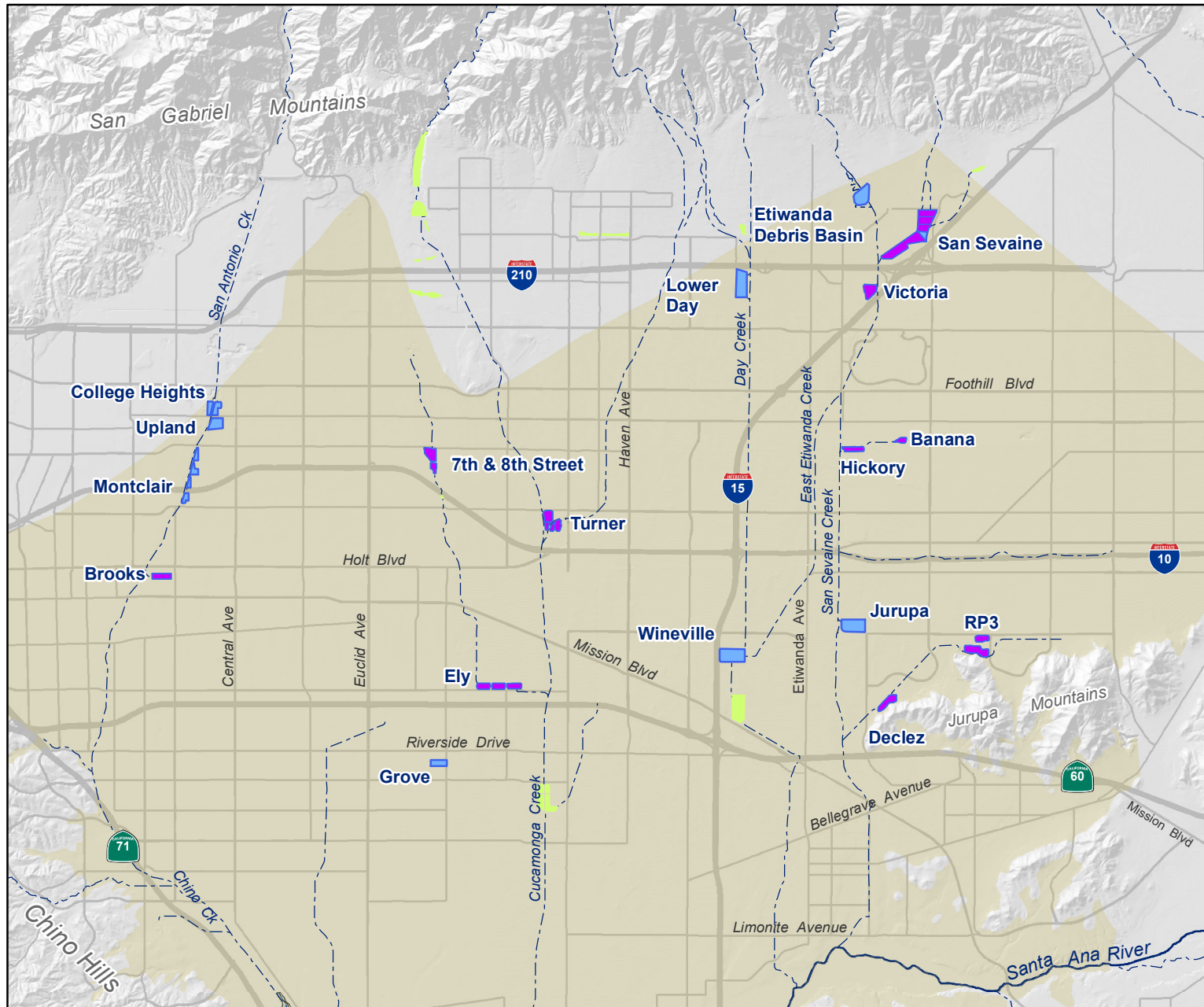
Basin	Owner	RW Start Up	Start-Up Limit	Approved Limit <sup>(1)</sup>	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
8th Street	SBCFCD	2007-10	28%	50%	21%	21%	24%	22%	21%	23%	22%	22%	23%	23%	24%
Banana	SBCFCD	2005	36%	50%	32%	34%	34%	34%	37%	36%	36%	36%	35%	35%	34%
Brooks	CBWCD	2008-09	42%	50%	18%	16%	18%	18%	17%	18%	18%	17%	15%	14%	14%
Declez	SBCFCD	2015-16	20%	20%	0%	1%	1%	1%	2%	10%	7%	7%	7%	8%	8%
Ely	CBWCD	2006	29%	50%	11%	11%	19%	21%	22%	22%	22%	23%	22%	25%	25%
Hickory	SBCFCD	2005	36%	50%	22%	22%	23%	26%	27%	24%	22%	22%	19%	19%	19%
RP3	IEUA	2009-10	50%	50%	12%	12%	14%	13%	14%	17%	17%	16%	17%	20%	22%
San Sevaine	SBCFCD	2020-21 <sup>(2)</sup>	50%	50%	3%	4%	5%	5%	6%	8%	7%	6%	5%	7%	12%
Turner 1&2	SBCFCD	2006-07	24%	24%	7%	6%	7%	11%	15%	19%	22%	23%	23%	24%	23%
Turner 3&4	SBCFCD	2006-07	45%	45%	21%	22%	23%	25%	28%	24%	23%	25%	24%	25%	26%
Victoria	SBCFCD	2010-11	50%	50%	19%	24%	23%	28%	30%	29%	30%	28%	27%	28%	27%

(1) In a letter dated June 18, 2015, the DDW approved IEUA's request to increase the maximum average RWC limit to 50% at all the basins except for Turner Basins and San Sevaine Basin which DDW stated required additional data for consideration of approval.

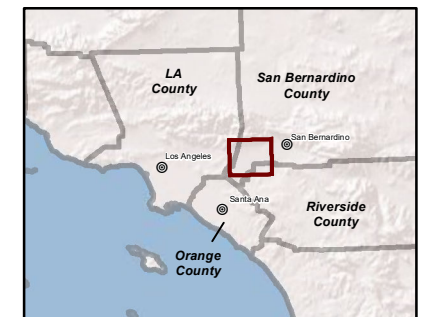
(2) A modified San Sevaine Start-up was completed in 2021 for the upper basins (San Sevaine 1, 2, an 3) resulting in an RWC limit of 50%. The limit replaces the initial 29% limit for San Sevaine 5 basin which is no longer used for recycled water recharge.

## FIGURES

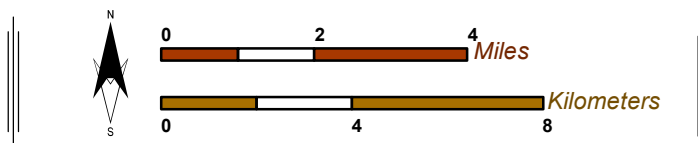
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- Recharge Basins in the Recycled Water Groundwater Recharge Program
- Recharge Basins in the Recycled Water Groundwater Recharge Program (Active Recycled Water Recharge)
- Non-Program Basins
- Chino Groundwater Basin
- Rivers and Streams

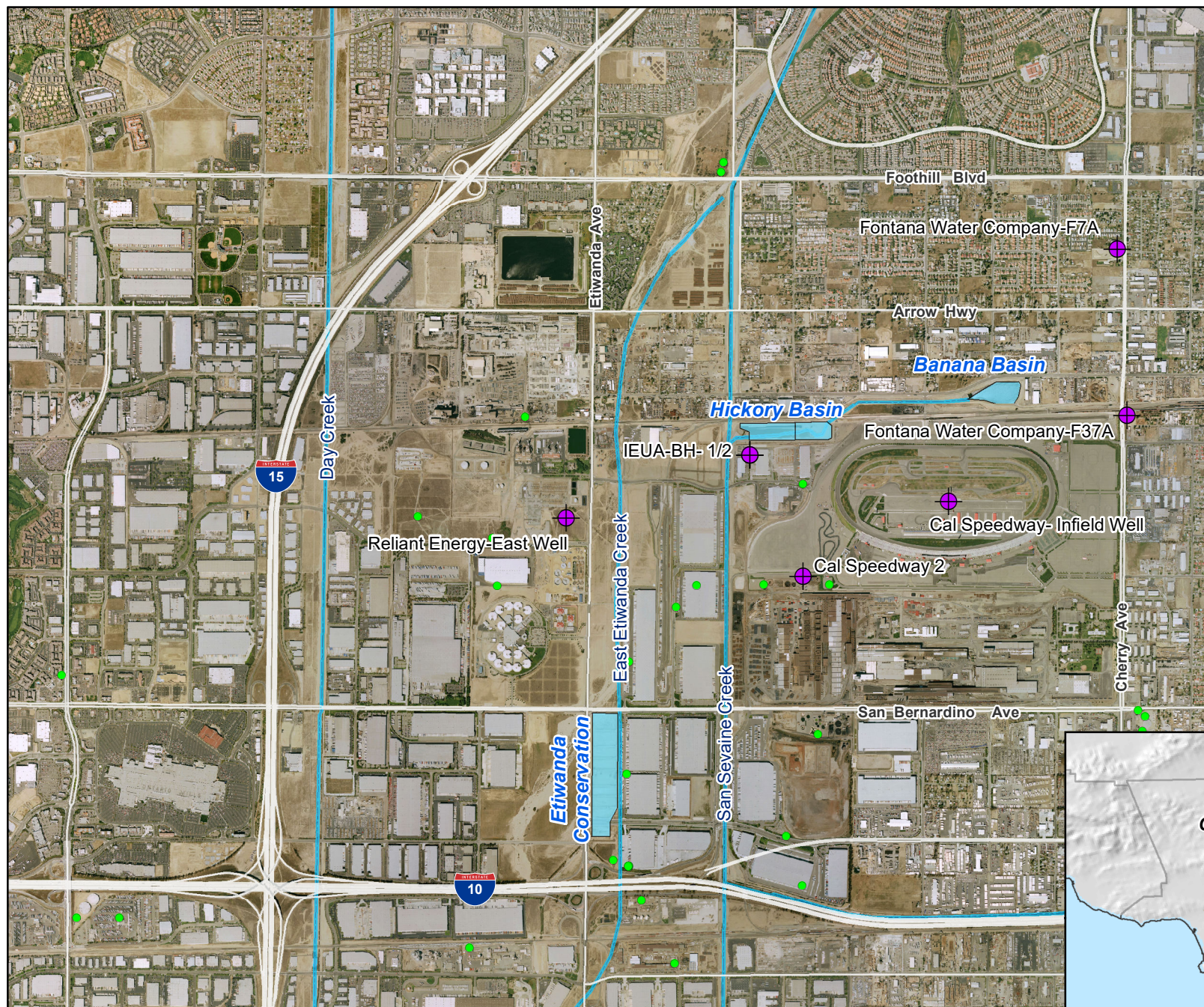


**Chino Basin Recycled Water Groundwater Recharge Program**  
*Basin Locations*







**Figure 1-1**





## Main Map Features

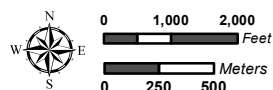
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-  Rivers/Streams/Creeks
-  Recharge Basins



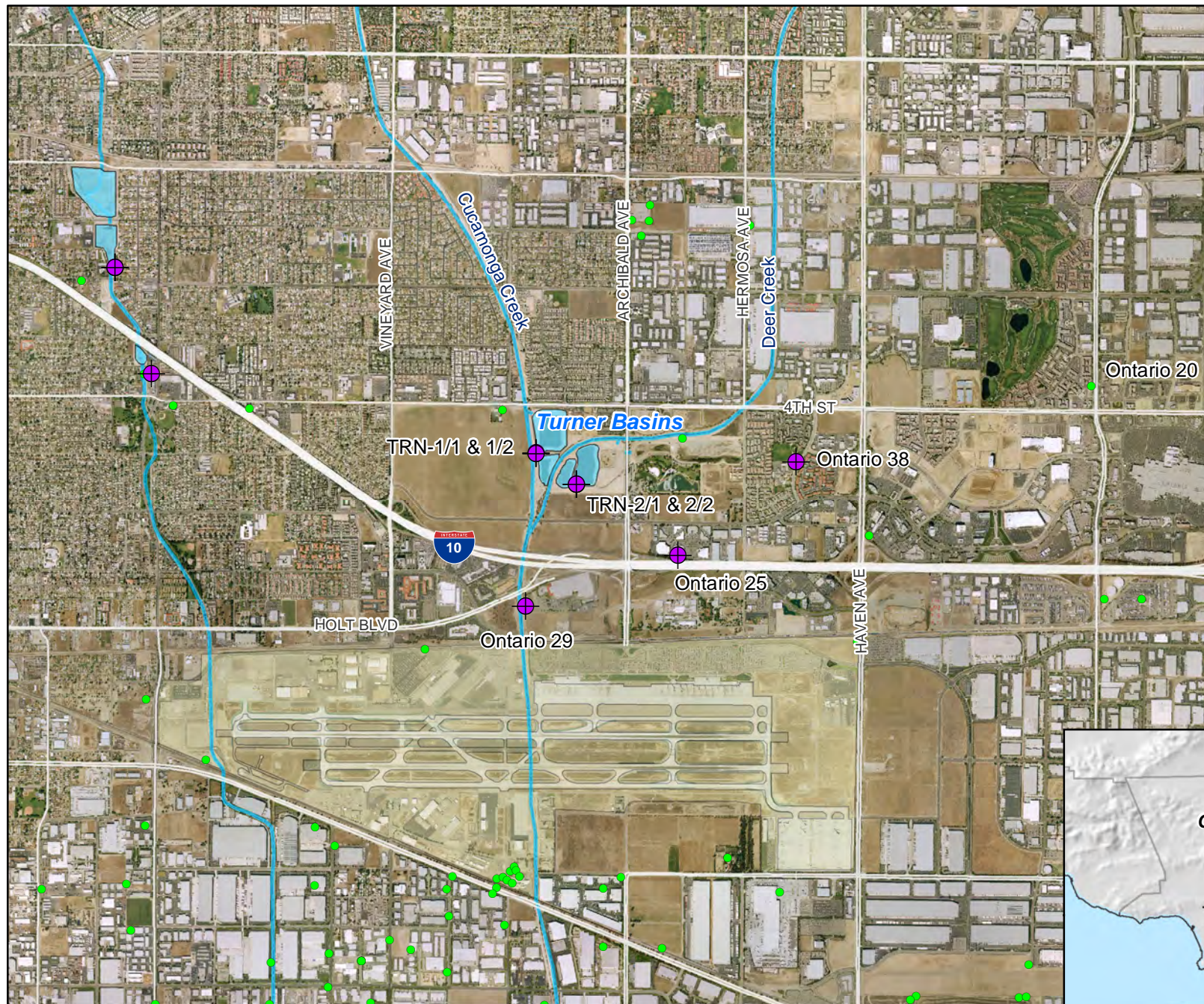
## Monitoring Well Network Hickory and Banana Basins

**Figure 2-1**





Recycled Water Recharge Program







## Main Map Features

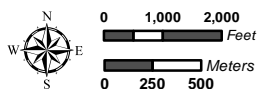
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-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins



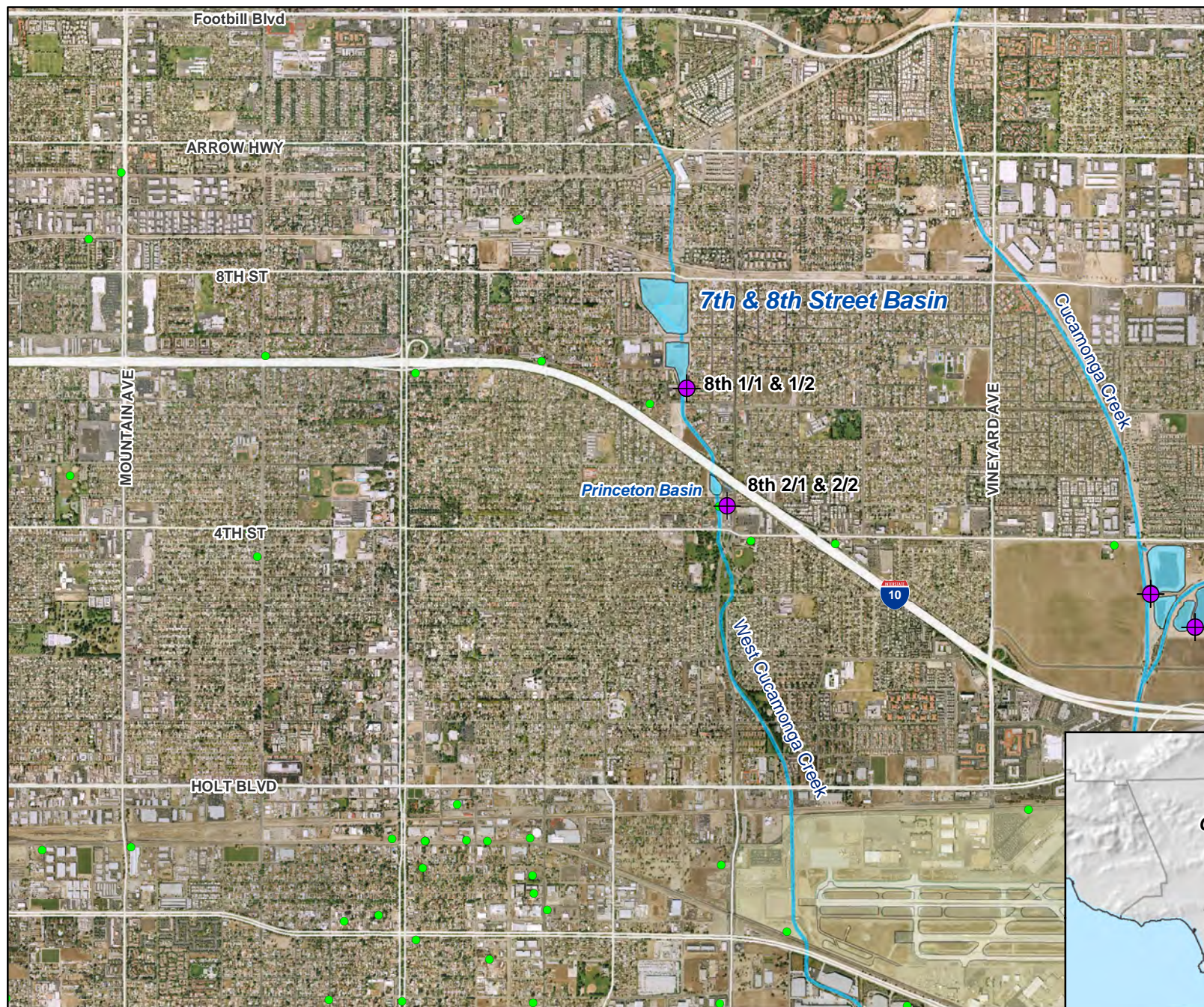
**Monitoring Well Network**  
Turner Basins

**Figure 2-2**





Recycled Water Recharge Program







## Main Map Features

-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

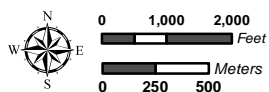


## Monitoring Well Network

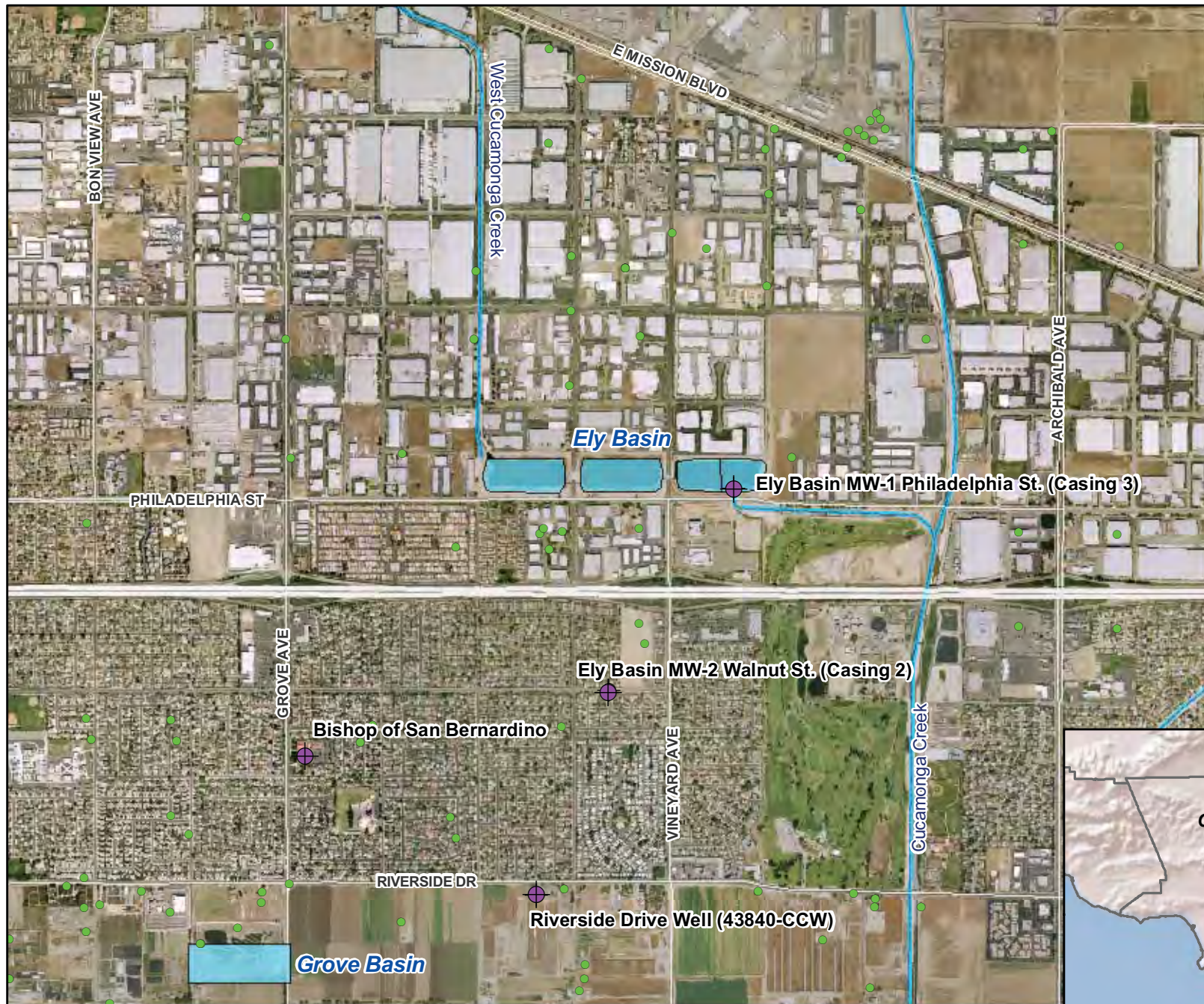
7th and 8th Street Basin

**Figure 2-3**





Recycled Water Recharge Program







### Main Map Features

-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

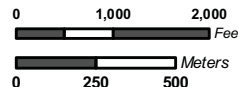


Monitoring Well Network

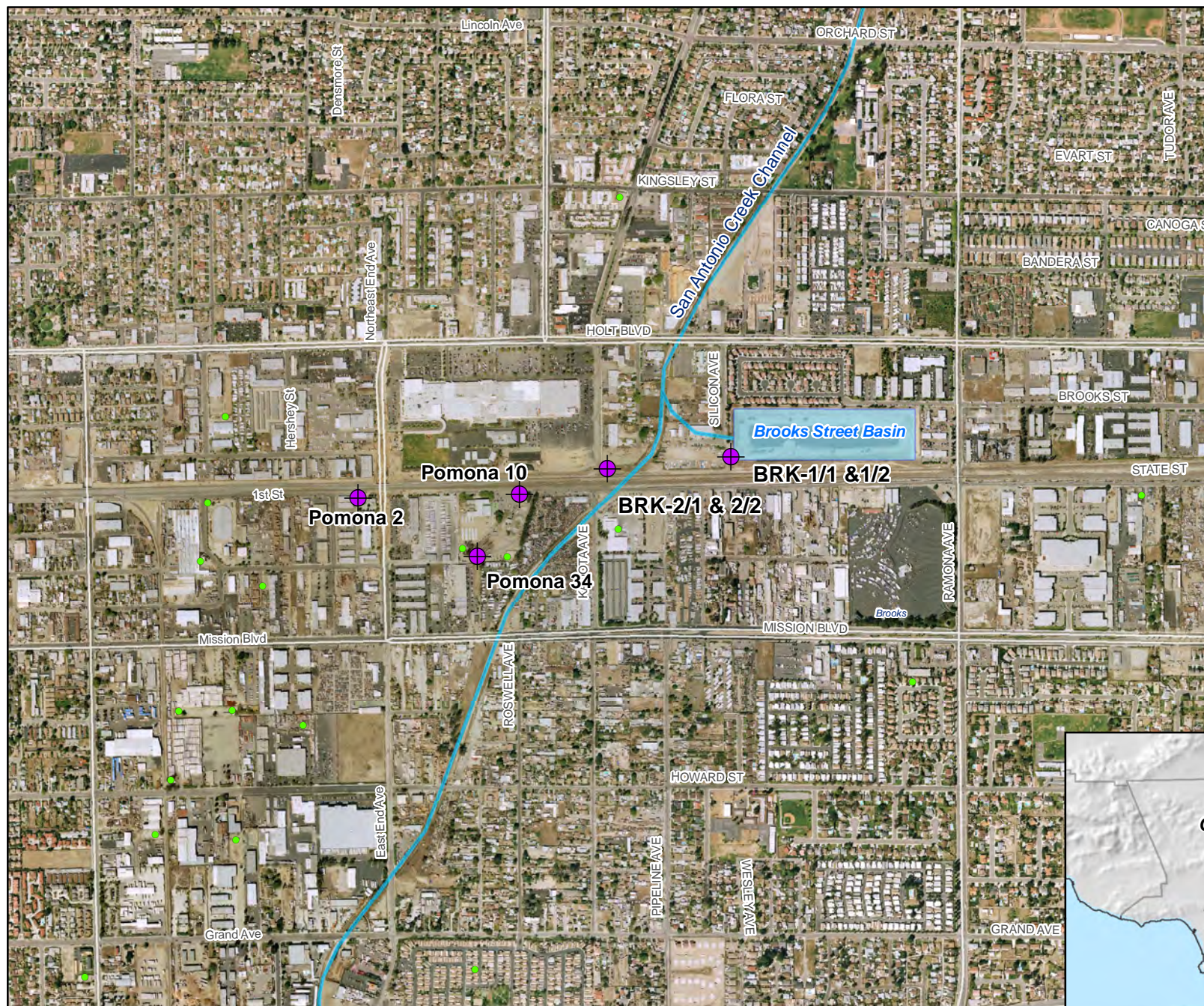
*Ely Basins*

**Figure 2-4**





Recycled Water Recharge Program







## Main Map Features

-  Existing Monitoring Well
-  "Other" Wells
-  Rivers/Streams/Creeks
-  Recharge Basins



## Monitoring Well Network

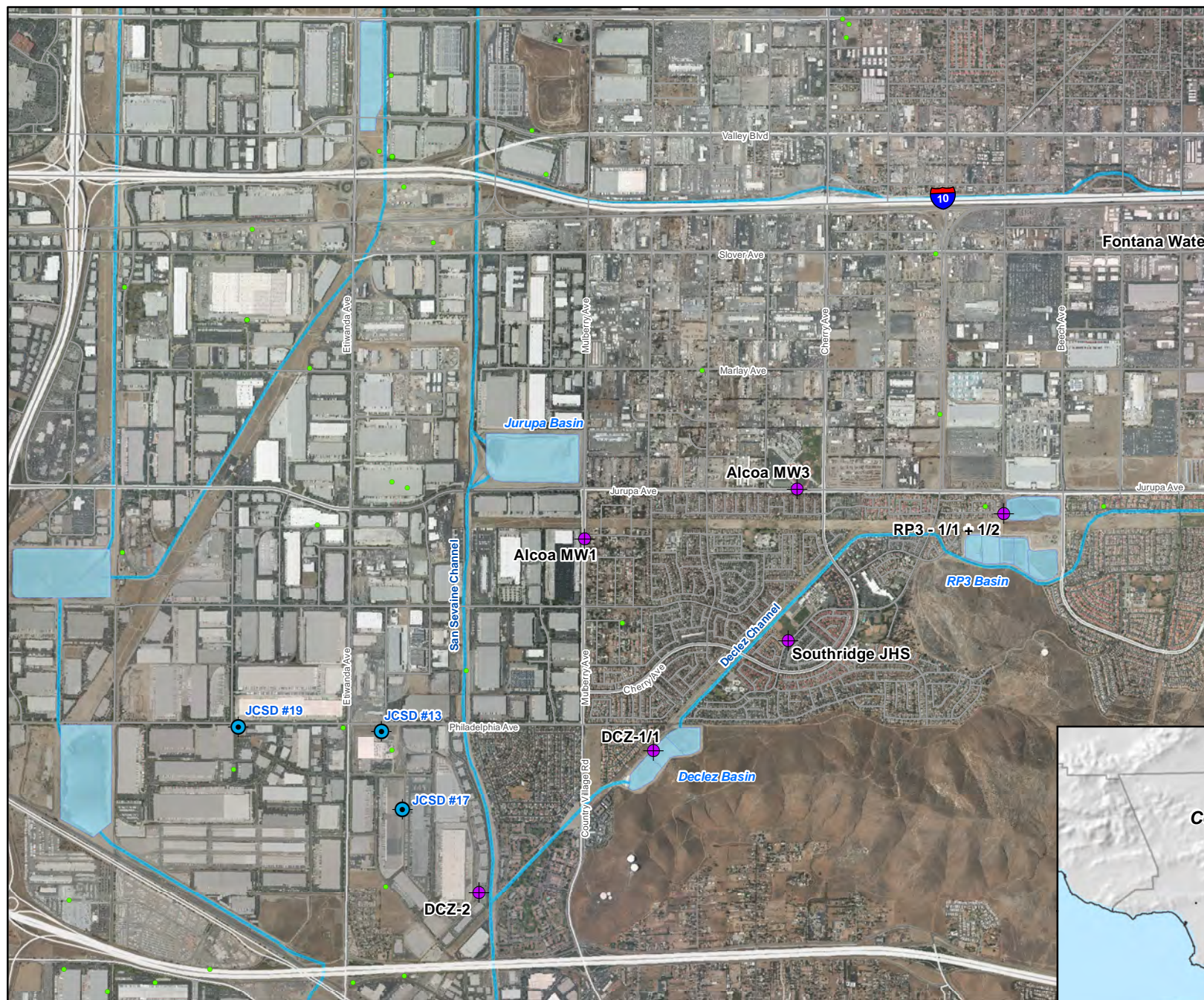
Brooks Street Basin

**Figure 2-5**






Recycled Water Recharge Program







## Main Map Features

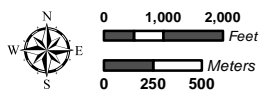
-  JCSD Wells
-  "Other Wells"
-  Existing Monitoring Well
-  Rivers/Streams/Creeks
-  Recharge Basins



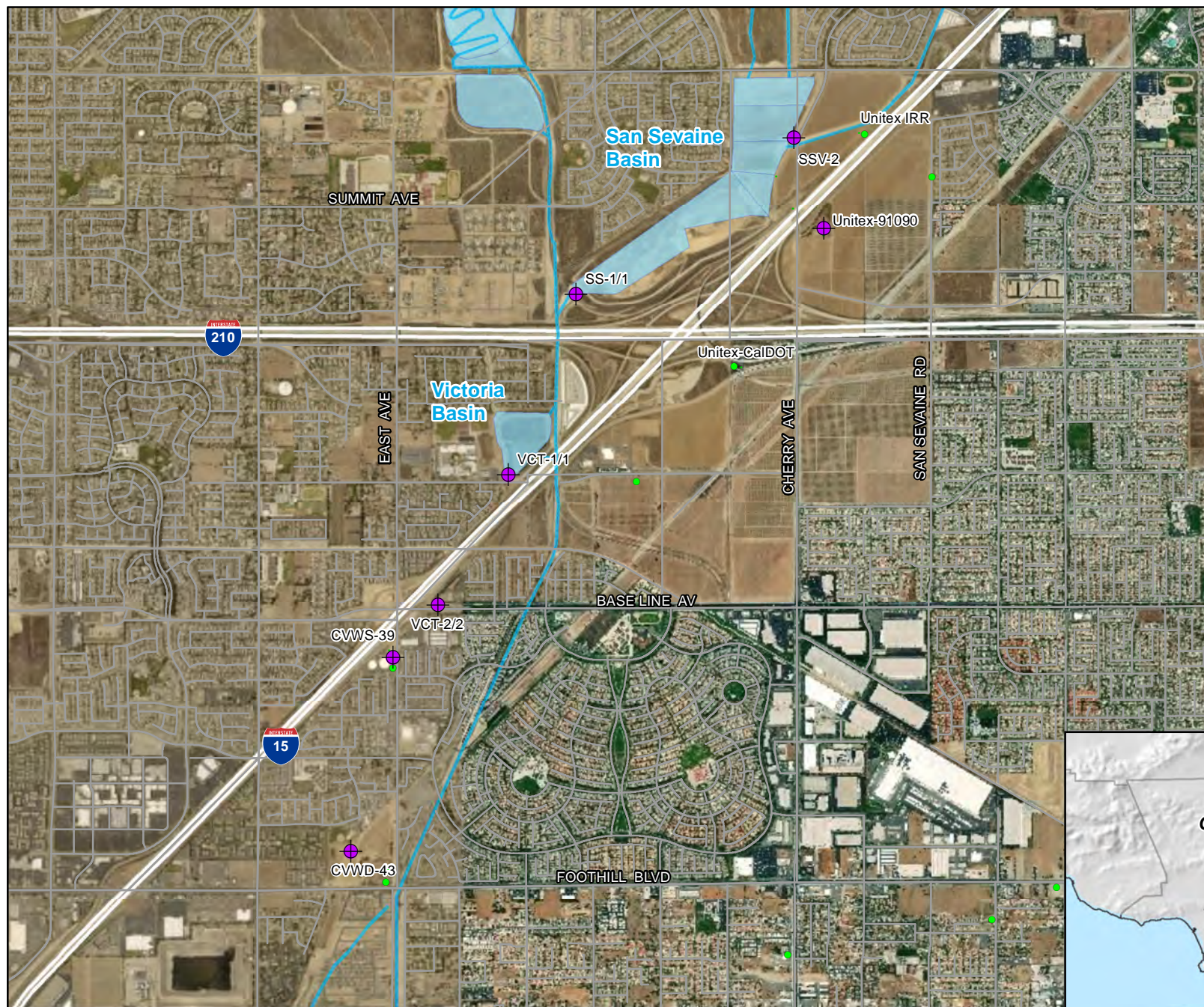
**Monitoring Well Network**  
Declez and RP3 Basins

**Figure 2-6**

Recycled Water Recharge Program







## Main Map Features

- "Other Wells"
- ⊗ Existing Monitoring Well
- Rivers/Streams/Creeks
- Recharge Basins

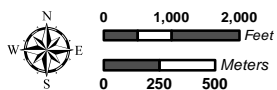


## Monitoring Well Network

San Sevaïne and Victoria Basin

**Figure 2-7**

Recycled Water Recharge Program



## APPENDIX A

### MONTHLY GROUNDWATER RECHARGE SUMMARIES

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# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - January 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 410.5 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	43.2	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	98.6	0.0	0.0	N	N	
Brooks	56.8	0.0	0.0	82.9	( 1.2)	
West Cucamonga Channel Drainage System						MZ-2 1,219.9 AF***
8th Street	82.1	0.0	0.0	0.0	0.0	
7th Street	55.2	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	301.3	0.0	0.0	44.5	( 0.7)	
Minor Drainage						
Grove	72.8	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	188.6	25.1	( 0.4)	0.0	0.0	
Turner 3 & 4	106.6	0.0	0.0	45.2	( 0.7)	
Day Creek Channel Drainage System						
Lower Day	36.6	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	58.5	0.0	0.0	32.3	( 0.5)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	84.7	0.0	0.0	135.3	( 2.0)	
San Sevaine 5	57.9	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	34.8	0.0	0.0	0.0	0.0	
Banana	87.7	0.0	0.0	38.3	( 0.6)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	89.6	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	118.7	0.0	0.0	376.3	( 5.6)	
RP3 Cell 2	52.4	0.0	0.0	111.9	( 1.7)	
Declez	152.2	0.0	0.0	1.1	0.0	
Non-Replenishment Recharge**						
MZ1: Upland (Montclair)	(1.4)					
MZ1: Upland (Upland)	(5.7)					
MZ2: Ontario (Ely)	(13.3)					
MZ3: None						
Month Total = 2,637.4 AF	1,757.9	25.1	( 0.4)	867.8	( 13.0)	January
		24.7		854.8		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	3,208.4	2,187.1	(36.2)	10,579.1	(332.5)	Fiscal Year to Date
Since July 1, 2020 = 15,605.9 AF		2,150.9		10,246.6		
Calendar Year Delivery (with evaporation)	1,757.9	25.1	(0.4)	867.8	(13.0)	Calendar Year to Date
Since January 1, 2021 = 2,637.4 AF		24.7		854.8		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.



# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - February 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 118.0 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	6.6	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	3.5	0.0	0.0	N	N	
Brooks	4.7	0.0	0.0	75.9	( 1.1)	
West Cucamonga Channel Drainage System						MZ-2 554.4 AF***
8th Street	8.9	0.0	0.0	0.0	0.0	
7th Street	20.8	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	37.8	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	12.4	76.4	( 1.1)	0.0	0.0	
Turner 3 & 4	12.0	0.0	0.0	88.0	( 1.3)	
Day Creek Channel Drainage System						
Lower Day	1.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	6.0	0.0	0.0	84.5	( 1.3)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	10.9	0.0	0.0	224.3	( 3.4)	
San Sevaine 5	13.4	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	0.0	0.0	0.0	0.0	0.0	
Banana	1.0	0.0	0.0	37.9	( 0.6)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	82.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.8	0.0	0.0	188.1	( 2.8)	
RP3 Cell 2	8.8	0.0	0.0	191.9	( 2.9)	
Declez	2.8	0.0	0.0	0.0	0.0	
Non-Replenishment Recharge**						
MZ1: Upland (Montclair)	(1.3)					
MZ1: Upland (Upland)	(5.2)					
MZ2: None						
MZ3: None						

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - March 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 286.8 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	36.7	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	73.2	0.0	0.0	N	N	
Brooks	40.6	0.0	0.0	24.6	( 0.4)	
West Cucamonga Channel Drainage System						MZ-2 857.8 AF***
8th Street	72.5	0.0	0.0	25.5	( 0.4)	
7th Street	21.7	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	114.4	0.0	0.0	105.8	( 1.6)	
Minor Drainage						
Grove	29.6	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	102.9	0.0	0.0	0.0	0.0	
Turner 3 & 4	67.9	0.0	0.0	54.8	( 0.8)	
Day Creek Channel Drainage System						
Lower Day	23.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	7.4	0.0	0.0	35.6	( 0.5)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	33.9	0.0	0.0	204.9	( 3.1)	
San Sevaine 5	27.4	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	56.2	0.0	0.0	0.0	0.0	
Banana	52.4	0.0	0.0	37.6	( 0.6)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	70.2	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	64.7	0.0	0.0	184.2	( 2.8)	
RP3 Cell 2	38.5	0.0	0.0	172.9	( 2.6)	
Declez	137.2	0.0	0.0	2.8	0.0	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	(1.3)					
MZ1: Upland (Upland)	(5.9)					
MZ2: None						
MZ3: None						
Month Total = 1,899.1 AF	1,063.2	0.0	0.0	848.7	( 12.8)	March
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	4,498.5	2,263.5	(37.3)	12,318.4	(358.7)	Fiscal Year to Date
Since July 1, 2020 = 18,684.4 AF		2,226.2		11,959.7		
Calendar Year Delivery (with evaporation)	3,048.0	101.5	(1.5)	2,607.1	(39.2)	Calendar Year to Date
Since January 1, 2021 = 5,715.9 AF		100.0		2,567.9		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - April 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 270.5 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.4	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	1.2	0.0	0.0	N	N	
Brooks	0.0	0.0	0.0	171.0	( 7.2)	
West Cucamonga Channel Drainage System						MZ-2 448.9 AF***
8th Street	6.1	0.0	0.0	58.2	( 2.4)	
7th Street	5.0	0.0	0.0	41.5	( 1.7)	
Ely 1, 2, & 3	51.4	0.0	0.0	111.7	( 4.7)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	23.6	0.0	0.0	0.0	0.0	
Turner 3 & 4	3.6	0.0	0.0	29.0	( 1.2)	
Day Creek Channel Drainage System						
Lower Day	0.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.0	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	286.9	( 12.0)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	0.0	0.0	0.0	0.0	0.0	
Banana	2.4	0.0	0.0	126.6	( 5.3)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	16.5	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	11.8	0.0	0.0	345.4	( 14.5)	
RP3 Cell 2	5.2	0.0	0.0	146.7	( 6.2)	
Declez	6.8	0.0	0.0	32.5	( 1.4)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 1.2)					
MZ1: Upland (Upland)	( 5.4)					
MZ2: Ely (Ontario)	( 39.4)					
MZ3: None						

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - May 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 62.7 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.6	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	1.0	0.0	0.0	N	N	
Brooks	0.0	0.0	0.0	55.5	( 2.3)	
West Cucamonga Channel Drainage System						MZ-2 504.8 AF***
8th Street	0.0	0.0	0.0	0.0	0.0	
7th Street	9.5	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	127.2	0.0	0.0	136.9	( 5.7)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	61.7	0.0	0.0	0.0	0.0	
Turner 3 & 4	5.4	0.0	0.0	49.4	( 2.1)	
Day Creek Channel Drainage System						
Lower Day	0.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.0	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	257.6	( 10.8)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	0.0	0.0	0.0	0.0	0.0	
Banana	0.0	0.0	0.0	101.6	( 4.3)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	17.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	12.8	0.0	0.0	181.5	( 7.6)	
RP3 Cell 2	10.2	0.0	0.0	339.2	( 14.2)	
Declez	5.3	0.0	0.0	152.7	( 6.4)	
Non-Replenishment Recharge**, Basin (Discharger)						
MZ1: Montclair (Upland)	( 1.0)					
MZ1: Upland (Upland)	( 5.6)					
MZ2: Ely (Ontario)	(114.8)					
MZ3: none						
Month Total = 1,355.3 AF	134.3	0.0	0.0	1,274.4	( 53.4)	May
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	4,725.8	2,263.5	(37.3)	14,942.3	(468.7)	Fiscal Year to Date
Since July 1, 2020 = 21,425.6 AF		2,226.2		14,473.6		
Calendar Year Delivery (with evaporation)	3,275.3	101.5	(1.5)	5,231.0	(149.2)	Calendar Year to Date
Since January 1, 2021 = 8,457.1 AF		100.0		5,081.8		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements).

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - June 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 61.8 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.4	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	3.5	0.0	0.0	N	N	
Brooks	0.0	0.0	0.0	55.5	( 2.3)	
West Cucamonga Channel Drainage System						MZ-2 654.1 AF***
8th Street	0.0	0.0	0.0	0.0	0.0	
7th Street	6.0	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	153.3	0.0	0.0	189.8	( 8.0)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	136.2	2.0	( 0.1)	0.0	0.0	
Turner 3 & 4	0.0	0.0	0.0	3.6	( 0.2)	
Day Creek Channel Drainage System						
Lower Day	0.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.0	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	339.0	( 14.2)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	0.0	0.0	0.0	0.0	0.0	
Banana	0.0	0.0	0.0	98.0	( 4.1)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	19.2	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	274.6	( 11.5)	
RP3 Cell 2	9.2	0.0	0.0	197.4	( 8.3)	
Declez	5.8	0.0	0.0	152.6	( 6.4)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 0.9)	round round round round				
MZ1: Upland (Upland)	( 5.4)					
MZ2: Ely (Ontario)	( 147.3)					
MZ3: none						
Month Total = 1,442.4 AF	185.0	2.0	( 0.1)	1,310.5	( 55.0)	June
		1.9		1,255.5		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)		2,265.5	(37.4)	16,252.8	(523.7)	Fiscal Year to Date
Since July 1, 2020 = 22,868.0 AF	4,910.8	2,228.1		15,729.1		
Calendar Year Delivery (with evaporation)		103.5	(1.6)	6,541.5	(204.2)	Calendar Year to Date
Since January 1, 2021 = 9,899.5 AF	3,460.3	101.9		6,337.3		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - July 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 136.9 AF***
College Heights	0.00	0.0	0.0	N	N	
Upland	5.70	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	2.00	0.0	0.0	N	N	
Brooks	5.00	0.0	0.0	126.3	( 5.3)	
West Cucamonga Channel Drainage System						MZ-2 681.0 AF***
8th Street	9.30	0.0	0.0	0.0	0.0	
7th Street	0.00	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	22.70	0.0	0.0	194.8	( 8.2)	
Minor Drainage						
Grove	4.20	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	37.70	108.0	( 4.5)	0.0	0.0	
Turner 3 & 4	2.80	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	0.00	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.00	0.0	0.0	X	0.0	
Victoria	2.40	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	5.40	0.0	0.0	329.4	( 13.8)	
San Sevaine 5	0.10	0.0	0.0	X	X	
West Fontana Channel System						MZ-3 658.5 AF***
Hickory	0.00	0.0	0.0	0.0	0.0	
Banana	9.30	0.0	0.0	89.2	( 3.7)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	21.80	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	24.40	0.0	0.0	264.2	( 11.1)	
RP3 Cell 2	15.70	0.0	0.0	131.0	( 5.5)	
Declez	52.20	0.0	0.0	74.1	( 3.1)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.5)					
MZ1: Upland (Upland)	( 0.6)					
MZ2: None						
MZ3: None						
		108.0	( 4.5)	1,209.0	( 50.7)	July
Month Total = 1,476.4 AF	214.60	103.5		1,158.3		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	214.6	108.0	(4.5)	1,209.0	(50.7)	Fiscal Year to Date
Since July 1, 2021 = 1,476.4 AF		103.5		1,158.3		
Calendar Year Delivery (with evaporation)	3,674.9	211.5	(6.1)	7,750.5	(254.9)	Calendar Year to Date
Since January 1, 2021 = 11,375.9 AF		205.4		7,495.6		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - August 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 107.5 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.4	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	5.1	0.0	0.0	N	N	
Brooks	0.0	0.0	0.0	104.8	( 4.4)	
West Cucamonga Channel Drainage System						MZ-2 650.3 AF***
8th Street	6.2	0.0	0.0	0.9	0.0	
7th Street	0.0	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	50.5	0.0	0.0	6.3	( 0.3)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	20.2	69.1	( 2.9)	0.0	0.0	
Turner 3 & 4	0.0	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	0.0	0.1	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	1.2	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	343.4	( 14.4)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	17.4	0.0	0.0	217.8	( 9.1)	
Banana	0.0	0.0	0.0	79.0	( 3.3)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	2.6	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	347.8	( 14.6)	
RP3 Cell 2	7.5	0.0	0.0	172.9	( 7.3)	
Declez	1.8	0.0	0.0	113.9	( 4.8)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.4)					
MZ1: Upland (Upland)	( 5.1)					
MZ2: Ontario (Ely)	( 49.0)					
MZ3: None						
Month Total = 1,453.3 AF	58.4	69.2	( 2.9)	1,386.8	( 58.2)	August
		66.3		1,328.6		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	273.0	177.2	(7.4)	2,595.8	(108.9)	Fiscal Year to Date
Since July 1, 2021 = 2,929.7 AF		169.8		2,486.9		
Calendar Year Delivery (with evaporation)	3,733.3	280.7	(9.0)	9,137.3	(313.1)	Calendar Year to Date
Since January 1, 2021 = 12,829.2 AF		271.7		8,824.2		

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\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.



# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) September 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 400.0 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.2	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	3.2	0.0	0.0	N	N	
Brooks	0.0	0.0	0.0	101.2	( 4.3)	
West Cucamonga Channel Drainage System						MZ-2 621.8 AF***
8th Street	18.1	0.0	0.0	286.0	( 12.0)	
7th Street	0.2	0.0	0.0	13.8	( 0.6)	
Ely 1, 2, & 3	9.0	0.0	0.0	44.0	( 1.8)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	50.5	32.9	( 1.4)	1.0	0.0	
Turner 3 & 4	2.6	0.0	0.0	19.1	( 0.8)	
Day Creek Channel Drainage System						
Lower Day	0.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	1.9	0.0	0.0	26.0	( 1.1)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	147.2	( 6.2)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	13.3	0.0	0.0	298.1	( 12.5)	
Banana	0.0	0.0	0.0	96.7	( 4.1)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	0.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	428.6	( 18.0)	
RP3 Cell 2	3.5	0.0	0.0	186.0	( 7.8)	
Declez	2.6	0.0	0.0	143.5	( 6.0)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.2)					
MZ1: Upland (Upland)	( 3.2)					
MZ1: 8th St (Upland)	( 2.4)					
MZ2 & MZ3: None						

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - October 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 406.2 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.5	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	5.0	0.0	0.0	N	N	
Brooks	14.0	0.0	0.0	75.2	( 3.2)	
West Cucamonga Channel Drainage System						MZ-2 943.0 AF***
8th Street	31.2	0.0	0.0	289.3	( 12.2)	
7th Street	0.2	0.0	0.0	9.5	( 0.4)	
Ely 1, 2, & 3	10.4	0.0	0.0	106.0	( 4.5)	
Minor Drainage						
Grove	0.4	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	30.3	27.4	( 1.2)	0.0	0.0	
Turner 3 & 4	8.7	0.0	0.0	210.9	( 8.9)	
Day Creek Channel Drainage System						
Lower Day	1.3	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	1.9	0.0	0.0	254.8	( 10.7)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	3.8	0.0	0.0	261.2	( 11.0)	
San Sevaine 5	2.9	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	10.6	0.0	0.0	50.8	( 2.1)	
Banana	4.9	0.0	0.0	51.5	( 2.2)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	0.9	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	404.4	( 17.0)	
RP3 Cell 2	9.1	0.0	0.0	160.7	( 6.7)	
Declez	24.0	0.0	0.0	104.6	( 4.4)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.5)					
MZ1: 8th (Upland)	( 2.4)					
MZ2: None						
MZ3: None						
Month Total = 2,079.0 AF	157.2	27.4	( 1.2)	1,978.9	( 83.3)	October
		26.2		1,895.6		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	529.5	237.5	(10.0)	6,365.9	(267.4)	Fiscal Year to Date
Since July 1, 2021 = 6,855.5 AF		227.5		6,098.5		
Calendar Year Delivery (with evaporation)	3,989.8	341.0	(11.6)	12,907.4	(471.6)	Calendar Year to Date
Since January 1, 2021 = 16,755.0 AF		329.4		12,435.8		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

X : Turnouts not available - to be installed during future projects.

N : No turnout planned for installation.

\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - November 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 448.0 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	5.5	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	8.1	0.0	0.0	N	N	
Brooks	4.7	0.0	0.0	44.3	( 0.7)	
West Cucamonga Channel Drainage System						MZ-2 639.4 AF***
8th Street	6.0	0.0	0.0	399.7	( 6.0)	
7th Street	0.0	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	1.5	0.0	0.0	4.1	( 0.1)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	28.2	33.1	( 0.5)	0.0	0.0	
Turner 3 & 4	16.7	0.0	0.0	136.8	( 2.1)	
Day Creek Channel Drainage System						
Lower Day	0.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.0	0.0	0.0	99.7	( 1.5)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	286.3	( 4.3)	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	5.7	0.0	0.0	36.3	( 0.5)	
Banana	0.0	0.0	0.0	48.3	( 0.7)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	0.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	440.3	( 6.6)	
RP3 Cell 2	4.6	0.0	0.0	126.4	( 1.9)	
Declez	7.4	0.0	0.0	51.0	( 0.8)	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.5)					
MZ1: Upland (Upland)	( 8.1)					
MZ2: None						
MZ3: None						
Month Total = 1,755.4 AF	74.8	33.1	( 0.5)	1,673.2	( 25.2)	November
		32.6		1,648.0		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	604.3	270.6	(10.5)	8,039.1	(292.6)	Fiscal Year to Date
Since July 1, 2021 = 8,610.9 AF		260.1		7,746.5		
Calendar Year Delivery (with evaporation)	4,064.6	374.1	(12.1)	14,580.6	(496.8)	Calendar Year to Date
Since January 1, 2021 = 18,510.4 AF		362.0		14,083.8		

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\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - December 2021

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,627.4 AF***
College Heights	25.9	0.0	0.0	N	N	
Upland	239.7	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	659.0	0.0	0.0	N	N	
Brooks	134.1	0.0	0.0	27.0	( 0.4)	
West Cucamonga Channel Drainage System						MZ-2 3,683.6 AF***
8th Street	339.6	0.0	0.0	102.9	( 1.5)	
7th Street	118.6	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	1,072.6	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	144.5	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	382.8	12.7	( 0.2)	0.0	0.0	
Turner 3 & 4	242.3	0.0	0.0	33.1	( 0.5)	
Day Creek Channel Drainage System						
Lower Day	230.6	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	139.4	0.0	0.0	X	0.0	
Victoria	313.6	0.0	0.0	96.3	( 1.4)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	496.2	0.0	0.0	133.1	( 2.0)	
San Sevaine 5	235.5	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	147.3	0.0	0.0	7.8	( 0.1)	
Banana	108.8	0.0	0.0	1.9	0.0	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	166.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	73.1	0.0	0.0	170.9	( 2.6)	
RP3 Cell 2	81.4	0.0	0.0	112.3	( 1.7)	
Declez	207.2	0.0	0.0	0.3	0.0	
Non-Replenishment Recharge**						
MZ1: Montclair (Upland)	( 5.5)					
MZ1: Upland (Upland)	( 12.0)					
MZ2: None						
MZ3: None						
		12.7	( 0.2)	685.6	( 10.2)	December
Month Total = 6,228.6 AF	5,540.7	12.5		675.4		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)		283.3	(10.7)	8,724.7	(302.8)	Fiscal Year to Date
Since July 1, 2021 = 14,839.5 AF	6,145.0	272.6		8,421.9		
Calendar Year Delivery (with evaporation)		386.8	(12.3)	15,266.2	(507.0)	Calendar Year to Date
Since January 1, 2021 = 24,739.0 AF	9,605.3	374.5		14,759.2		

SW : Storm Water, LR : Local Runoff (& reported Pump-to-Waste\*\*), IW : Imported Water (MWD or other), RW : Recycled Water

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\* : Water volume delivered to a recharge basin. Data are preliminary based on the data available at the time of this report preparation.

\*\* : Evaporation losses applied per Watermaster (4.2% April through October and 1.5% November through March).

\*\*\* : Management Zone Subtotals have deducted from them evaporation and any Non-Replenishment Recharge (recharge originating from well water pumped to waste discharges and water recharged for storage agreements.

## APPENDIX B

### RWC MANAGEMENT PLANS

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# RWC Management Plan for 8th Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	106	4	0	310	314	36,599	259	10,446	47,045	22%
	Aug '16	107	8	0	310	318	36,911	268	10,714	47,625	22%
	Sep '16	108	5	0	310	315	37,204	248	10,962	48,166	23%
	Oct '16	109	35	0	310	345	37,509	285	11,247	48,756	23%
	Nov '16	110	82	0	310	392	37,859	228	11,475	49,334	23%
	Dec '16	111	363	0	310	673	38,453	121	11,596	50,049	23%
	Jan '17	112	323	0	310	633	39,027	0	11,596	50,623	23%
	Feb '17	113	100	0	310	410	39,270	34	11,630	50,900	23%
	Mar '17	114	22	0	310	332	39,564	176	11,806	51,370	23%
	Apr '17	115	57	0	310	367	39,842	280	12,086	51,928	23%
	May '17	116	16	0	310	326	40,126	184	12,270	52,396	23%
	Jun '17	117	19	18	310	347	40,431	198	12,468	52,900	24%
2017/18	Jul '17	118	105	0	310	415	40,831	1	12,469	53,300	23%
	Aug '17	119	20	584	310	914	41,729	196	12,665	54,394	23%
	Sep '17	120	3	287	310	600	42,312	131	12,668	54,980	23%
	Oct '17	121	51	200	310	561	42,831	204	12,763	55,594	23%
	Nov '17	122	3	0	310	313	43,063	100	12,702	55,765	23%
	Dec '17	123	3	0	310	313	43,153	212	12,913	56,066	23%
	Jan '18	124	121	0	310	432	43,249	99	13,011	56,260	23%
	Feb '18	125	85	0	310	395	43,546	81	12,935	56,481	23%
	Mar '18	126	142	0	310	453	43,978	9	12,779	56,757	23%
	Apr '18	127	12	0	310	322	44,289	0	12,689	56,978	22%
	May '18	128	7	0	310	317	44,516	6	12,538	57,054	22%
	Jun '18	129	6	59	310	375	44,876	0	12,452	57,328	22%
2018/2019	Jul '18	130	6	58	310	374	45,222	93	12,321	57,543	21%
	Aug '18	131	6	0	310	316	45,523	147	12,340	57,863	21%
	Sep '18	132	6	0	310	316	45,824	249	12,589	58,413	22%
	Oct '18	133	68	0	310	378	46,187	188	12,777	58,963	22%
	Nov '18	134	115	0	310	426	46,475	283	13,060	59,535	22%
	Dec '18	135	164	0	310	474	46,597	251	13,311	59,908	22%
	Jan '19	136	280	0	310	590	47,152	245	13,556	60,708	22%
	Feb '19	137	319	0	310	629	47,324	0	13,556	60,879	22%
	Mar '19	138	275	0	310	585	47,888	277	13,833	61,721	22%
	Apr '19	139	11	0	310	321	48,194	364	14,197	62,391	23%
	May '19	140	135	0	310	445	48,623	333	14,530	63,153	23%
	Jun '19	141	6	0	310	316	48,940	434	14,963	63,903	23%
2019/20	Jul '19	142	6	0	310	316	49,237	280	15,243	64,480	24%
	Aug '19	143	4	0	310	314	49,518	71	15,290	64,808	24%
	Sep '19	144	3	572	310	886	50,386	128	15,418	65,803	23%
	Oct '19	145	3	250	310	563	50,565	58	15,476	66,040	23%
	Nov '19	146	111	126	310	547	50,709	54	15,396	66,105	23%
	Dec '19	147	180	0	310	490	50,586	0	15,303	65,889	23%
	Jan '20	148	5	0	310	315	50,204	68	15,269	65,472	23%
	Feb '20	149	19	0	310	329	49,745	64	15,333	65,078	24%
	Mar '20	150	160	0	310	470	49,833	0	15,219	65,051	23%
	Apr '20	151	120	0	310	430	49,746	11	15,129	64,876	23%
	May '20	152	9	0	310	320	49,722	84	15,014	64,736	23%
	Jun '20	153	3	0	310	313	49,692	162	14,874	64,565	23%
2020/21	Jul '20	154	3	0	310	313	49,665	186	14,841	64,506	23%
	Aug '20	155	3	0	310	313	49,640	113	14,849	64,488	23%
	Sep '20	156	3	0	310	313	49,607	135	14,806	64,413	23%
	Oct '20	157	8	0	310	318	49,526	114	14,632	64,158	23%
	Nov '20	158	45	0	310	355	49,383	70	14,539	63,922	23%
	Dec '20	159	58	0	310	368	48,942	0	14,519	63,461	23%
	Jan '21	160	137	0	310	448	48,970	0	14,352	63,321	23%
	Feb '21	161	30	0.0	310	340	48,723	0	14,269	62,992	23%
	Mar '21	162	94	0.0	310	404	48,568	25	14,271	62,838	23%
	Apr '21	163	11	0.0	310	321	48,555	96	14,185	62,740	23%
	May '21	164	10	0.0	310	320	48,313	0	13,942	62,256	22%
	Jun '21	165	6	0	310	316	47,973	0	13,740	61,713	22%

HISTORICAL

ACTUAL



# RWC Management Plan for 8th Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/2022	Jul '21	166	9	0	310	320	47,782	0	13,652	61,434	22%
	Aug '21	167	6	0	310	316	47,555	1	13,607	61,163	22%
	Sep '21	168	18	0	310	329	47,406	287	13,893	61,298	23%
	Oct '21	169	31	0	310	342	47,394	286	14,179	61,573	23%
	Nov '21	170	6	0	310	316	47,262	394	14,572	61,834	24%
	Dec '21	171	458	0	310	768	47,644	101	14,674	62,318	24%
	Jan '22	172	31	0	310	341	47,618	273	14,920	62,537	24%
	Feb '22	173	36	0	310	346	47,500	270	15,190	62,690	24%
	Mar '22	174	129		310	439	47,348	120	15,310	62,658	24%
	Apr '22	175	73		310	383	47,198	180	15,456	62,654	25%
	May '22	176	42		310	352	47,215	210	15,410	62,625	25%
2022/2023	Jun '22	177	15		310	325	47,209	240	15,462	62,671	25%
	Jul '22	178	21		310	331	47,210	230	15,555	62,765	25%
	Aug '22	179	12		310	322	47,201	240	15,795	62,996	25%
	Sep '22	180	20		310	330	47,188	230	15,901	63,089	25%
	Oct '22	181	44		310	354	47,203	210	15,802	63,005	25%
	Nov '22	182	81		310	391	47,218	170	15,724	62,942	25%
	Dec '22	183	211		310	521	47,151	40	15,661	62,812	25%
	Jan '23	184	144		310	454	47,225	110	15,541	62,766	25%
	Feb '23	185	161		310	471	47,296	90	15,405	62,701	25%
	Mar '23	186	129		310	439	47,360	120	15,285	62,645	24%
	Apr '23	187	73		310	383	47,409	180	15,313	62,722	24%
	May '23	188	42		310	352	47,408	210	15,302	62,710	24%
	Jun '23	189	15		310	325	47,411	240	15,271	62,682	24%
	Jul '23	190	21		310	331	47,419	230	15,315	62,734	24%
	Aug '23	191	12		310	322	47,418	240	15,437	62,855	25%
	Sep '23	192	20		310	330	47,427	230	15,517	62,944	25%
2023/2024	Oct '23	193	44		310	354	47,423	210	15,488	62,911	25%
	Nov '23	194	81		310	391	47,455	170	15,409	62,864	25%
	Dec '23	195	211		310	521	47,620	40	15,328	62,948	24%
	Jan '24	196	144		310	454	47,737	110	15,330	63,067	24%
	Feb '24	197	161		310	471	47,839	90	15,332	63,171	24%
	Mar '24	198	129		310	439	47,917	120	15,426	63,343	24%
	Apr '24	199	73		310	383	47,911	180	15,585	63,496	25%
	May '24	200	42		310	352	47,927	210	15,730	63,657	25%
	Jun '24	201	15		310	325	47,918	240	15,918	63,836	25%
	Jul '24	202	21		310	331	47,914	230	16,140	64,054	25%
	Aug '24	203	12		310	322	47,911	240	16,372	64,283	25%
	Sep '24	204	20		310	330	47,917	230	16,570	64,487	26%
	Oct '24	205	44		310	354	47,961	210	16,780	64,741	26%
	Nov '24	206	81		310	391	47,896	170	16,950	64,846	26%
	Dec '24	207	211		310	521	47,754	40	16,990	64,744	26%
2024/2025	Jan '25	208	144		310	454	47,788	110	17,100	64,888	26%
	Feb '25	209	161		310	471	47,907	90	17,190	65,097	26%
	Mar '25	210	129		310	439	47,994	120	17,310	65,304	27%
	Apr '25	211	73		310	383	48,042	180	17,490	65,532	27%
	May '25	212	42		310	352	48,027	210	17,700	65,727	27%
	Jun '25	213	15		310	325	48,030	240	17,940	65,970	27%
	Jul '25	214	21		310	331	48,007	230	18,170	66,177	27%
	Aug '25	215	12		310	322	48,015	240	18,387	66,402	28%
	Sep '25	216	20		310	330	47,959	230	18,557	66,516	28%
	Oct '25	217	44		310	354	47,964	210	18,754	66,718	28%
	Nov '25	218	81		310	391	48,026	170	18,829	66,855	28%
	Dec '25	219	211		310	521	48,151	40	18,710	66,861	28%
	Jan '26	220	144		310	454	48,046	110	18,761	66,807	28%
	Feb '26	221	161		310	471	48,114	90	18,645	66,759	28%
	Mar '26	222	129		310	439	48,043	120	18,605	66,648	28%
	Apr '26	223	73		310	383	48,082	180	18,590	66,672	28%
2025/26	May '26	224	42		310	352	48,052	210	18,596	66,648	28%
	Jun '26	225	15		310	325	48,062	240	18,540	66,602	28%





# RWC Management Plan for 8th Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	226	21		310	331	48,079	230	18,511	66,590	28%
	Aug '26	227	12		310	322	48,083	240	18,483	66,566	28%
	Sep '26	228	20		310	330	48,098	230	18,465	66,563	28%
	Oct '26	229	44		310	354	48,107	210	18,390	66,497	28%
	Nov '26	230	81		310	391	48,106	170	18,332	66,438	28%
	Dec '26	231	211		310	521	47,954	40	18,251	66,205	28%
	Jan '27	232	144		310	454	47,775	110	18,361	66,136	28%
	Feb '27	233	161		310	471	47,836	90	18,417	66,253	28%
	Mar '27	234	129		310	439	47,943	120	18,361	66,304	28%
	Apr '27	235	73		310	383	47,959	180	18,261	66,220	28%
	May '27	236	42		310	352	47,985	210	18,287	66,272	28%
	Jun '27	237	15		310	325	47,962	240	18,329	66,291	28%
2027/28	Jul '27	238	21		310	331	47,878	230	18,558	66,436	28%
	Aug '27	239	12		310	322	47,287	240	18,602	65,889	28%
	Sep '27	240	20		310	330	47,017	230	18,701	65,718	28%
	Oct '27	241	44		310	354	46,810	210	18,707	65,517	29%
	Nov '27	242	81		310	391	46,888	170	18,777	65,665	29%
	Dec '27	243	211		310	521	47,096	40	18,606	65,701	28%
	Jan '28	244	144		310	454	47,118	110	18,617	65,735	28%
	Feb '28	245	161		310	471	47,194	90	18,626	65,821	28%
	Mar '28	246	129		310	439	47,181	120	18,738	65,919	28%
	Apr '28	247	73		310	383	47,242	180	18,918	66,160	29%
	May '28	248	42		310	352	47,277	210	19,121	66,398	29%
	Jun '28	249	15		310	325	47,227	240	19,361	66,588	29%
2028/29	Jul '28	250	21		310	331	47,184	230	19,498	66,682	29%
	Aug '28	251	12		310	322	47,190	240	19,591	66,781	29%
	Sep '28	252	20		310	330	47,204	230	19,572	66,776	29%
	Oct '28	253	44		310	354	47,180	210	19,594	66,774	29%
	Nov '28	254	81		310	391	47,145	170	19,481	66,626	29%
	Dec '28	255	211		310	521	47,192	40	19,270	66,463	29%
	Jan '29	256	144		310	454	47,056	110	19,135	66,192	29%
	Feb '29	257	161		310	471	46,898	90	19,225	66,124	29%
	Mar '29	258	129		310	439	46,752	120	19,068	65,820	29%
	Apr '29	259	73		310	383	46,814	180	18,884	65,698	29%
	May '29	260	42		310	352	46,721	210	18,761	65,483	29%
	Jun '29	261	15		310	325	46,730	240	18,568	65,298	28%
2029/30	Jul '29	262	21		310	331	46,745	230	18,518	65,263	28%
	Aug '29	263	12		310	322	46,753	240	18,687	65,440	29%
	Sep '29	264	20		310	330	46,198	230	18,790	64,987	29%
	Oct '29	265	44		310	354	45,989	210	18,941	64,930	29%
	Nov '29	266	81		310	391	45,833	170	19,058	64,890	29%
	Dec '29	267	211		310	521	45,864	40	19,098	64,962	29%
	Jan '30	268	144		310	454	46,003	110	19,140	65,143	29%
	Feb '30	269	161		310	471	46,145	90	19,167	65,312	29%
	Mar '30	270	129		310	439	46,114	120	19,287	65,400	29%
	Apr '30	271	73		310	383	46,067	180	19,456	65,523	30%
	May '30	272	42		310	352	46,100	210	19,582	65,681	30%
	Jun '30	273	15		310	325	47,836	240	19,660	67,496	29%
2030/31	Jul '30	274	21		310	331	46,130	230	19,705	65,834	30%
	Aug '30	275	12		310	322	46,139	240	19,831	65,970	30%
	Sep '30	276	20		310	330	46,156	230	19,927	66,082	30%
	Oct '30	277	44		310	354	46,192	210	20,023	66,215	30%
	Nov '30	278	81		310	391	46,228	170	20,123	66,351	30%
	Dec '30	279	211		310	521	46,381	40	20,163	66,544	30%
	Jan '31	280	144		310	454	46,388	110	20,273	66,661	30%
	Feb '31	281	161		310	471	46,519	90	20,363	66,882	30%
	Mar '31	282	129		310	439	46,554	120	20,458	67,012	31%
	Apr '31	283	73		310	383	46,616	180	20,543	67,158	31%
	May '31	284	42		310	352	46,648	210	20,753	67,401	31%
	Jun '31	285	15		310	325	47,194	240	20,993	68,187	31%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

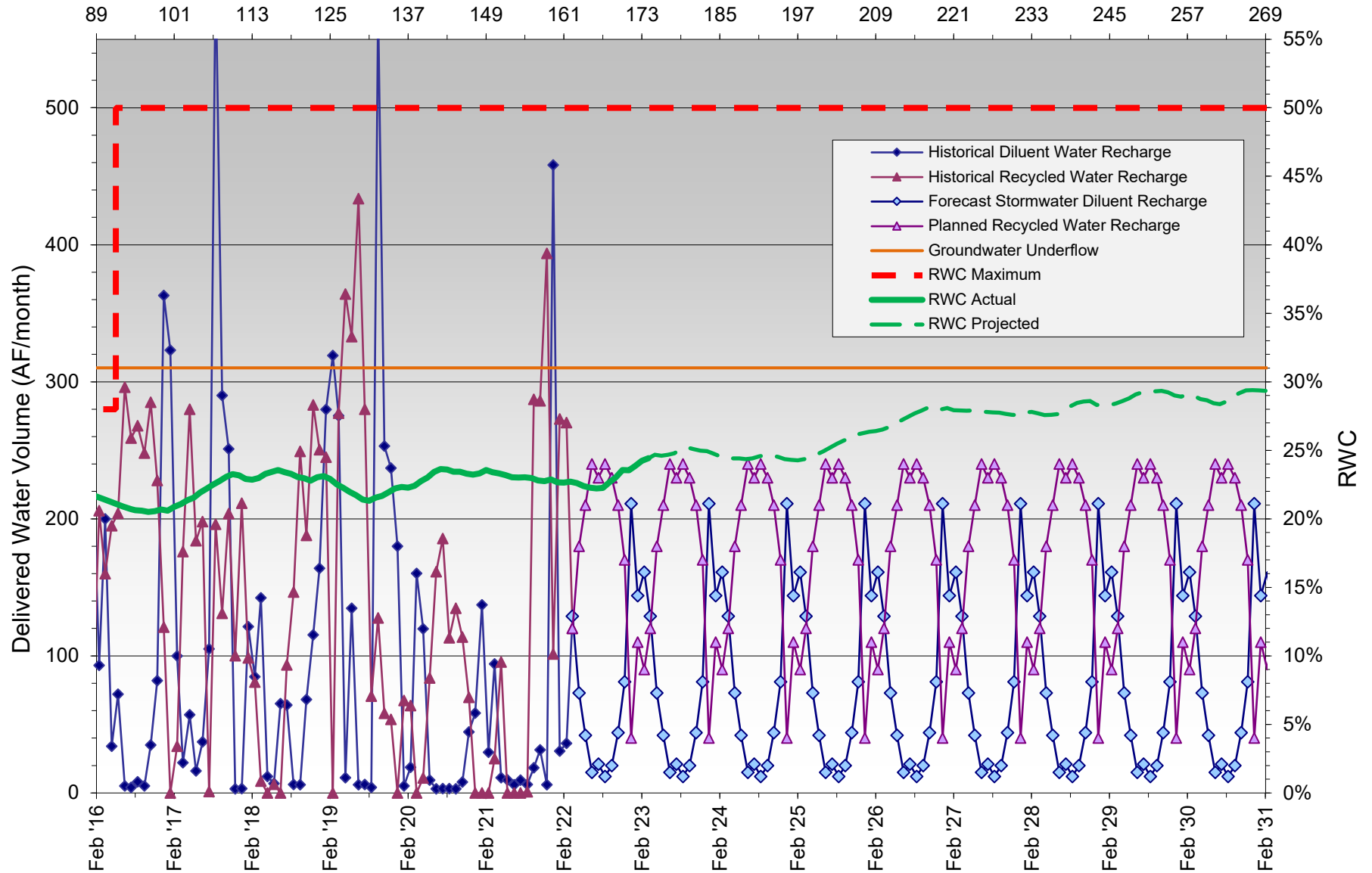
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - 8th Street Basins

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for Banana Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/2017	Jul '16	132	0	0	151	151	15,661	183	9,034	24,695	37%
	Aug '16	133	0	0	151	151	15,812	49	8,998	24,810	36%
	Sep '16	134	0	0	151	151	15,963	97	8,717	24,681	35%
	Oct '16	135	6	0	151	157	16,046	115	8,783	24,829	35%
	Nov '16	136	21	0	151	172	15,984	55	8,831	24,815	36%
	Dec '16	137	71	0	151	222	16,005	1	8,782	24,787	35%
	Jan '17	138	50	0	151	201	15,875	0	8,782	24,657	36%
	Feb '17	139	18	0	151	169	15,971	0	8,782	24,753	35%
	Mar '17	140	0	0	151	151	16,069	0	8,782	24,851	35%
	Apr '17	141	0	0	151	151	16,191	0	8,778	24,969	35%
	May '17	142	0	0	151	151	16,306	0	8,772	25,078	35%
	Jun '17	143	0	0	151	151	16,457	0	8,772	25,229	35%
2017/2018	Jul '17	144	0	0	151	151	16,608	0	8,772	25,380	35%
	Aug '17	145	2	0	151	153	16,761	131	8,903	25,664	35%
	Sep '17	146	2	134	151	287	17,045	161	9,064	26,109	35%
	Oct '17	147	3	121	151	274	17,318	241	9,305	26,623	35%
	Nov '17	148	0	0	151	151	17,434	463	9,768	27,202	36%
	Dec '17	149	2	138	151	291	17,703	252	10,020	27,723	36%
	Jan '18	150	115	93	151	359	17,932	126	10,146	28,079	36%
	Feb '18	151	11	0	151	163	18,020	206	10,352	28,372	36%
	Mar '18	152	60	0	151	212	18,232	88	10,440	28,671	36%
	Apr '18	153	0	0	151	151	18,383	172	10,565	28,948	36%
	May '18	154	0	0	151	152	18,532	161	10,688	29,220	37%
	Jun '18	155	0	0	151	151	18,675	129	10,746	29,420	37%
2018/2019	Jul '18	156	2	0	151	154	18,798	147	10,892	29,690	37%
	Aug '18	157	0	0	151	151	18,904	16	10,908	29,812	37%
	Sep '18	158	0	0	151	151	19,021	91	10,999	30,020	37%
	Oct '18	159	12	0	151	163	19,148	0	10,999	30,147	36%
	Nov '18	160	23	0	151	174	19,272	30	11,029	30,302	36%
	Dec '18	161	12	0	151	164	19,349	0	11,029	30,378	36%
	Jan '19	162	27	0	151	179	19,523	13	11,003	30,525	36%
	Feb '19	163	42	0	151	194	19,621	0	11,003	30,624	36%
	Mar '19	164	14	0	151	165	19,786	0	11,003	30,789	36%
	Apr '19	165	0	0	151	151	19,937	0	11,003	30,940	36%
	May '19	166	0	0	151	151	20,089	1	11,003	31,092	35%
	Jun '19	167	0	0	151	151	20,240	0	11,003	31,243	35%
2019/2020	Jul '19	168	0	0	151	151	20,391	33	11,036	31,428	35%
	Aug '19	169	0	0	151	151	20,543	100	11,137	31,679	35%
	Sep '19	170	0	0	151	151	20,694	227	11,364	32,057	35%
	Oct '19	171	0	0	151	151	20,679	242	11,476	32,155	36%
	Nov '19	172	53	0	151	204	20,732	92	11,387	32,119	35%
	Dec '19	173	57	0	151	208	20,713	24	11,344	32,057	35%
	Jan '20	174	0	0	151	151	20,613	45	11,314	31,927	35%
	Feb '20	175	0	0	151	151	20,470	24	11,338	31,808	36%
	Mar '20	176	81	0	151	232	20,534	38	11,376	31,910	36%
	Apr '20	177	57	0	151	209	20,525	17	11,253	31,779	35%
	May '20	178	0	0	151	151	20,525	35	11,111	31,637	35%
	Jun '20	179	0	0	151	151	20,525	0	10,982	31,508	35%
2020/2021	Jul '20	180	0	0	151	151	20,525	0	10,905	31,431	35%
	Aug '20	181	0	0	151	151	20,525	0	10,851	31,377	35%
	Sep '20	182	0	0	151	151	20,525	0	10,792	31,318	34%
	Oct '20	183	0	0	151	151	20,520	166	10,910	31,431	35%
	Nov '20	184	12	0	151	163	20,516	137	11,019	31,535	35%
	Dec '20	185	63	0	151	214	20,528	115	11,134	31,661	35%
	Jan '21	186	88	0	151	239	20,605	38	11,171	31,777	35%
	Feb '21	187	1	0	151	152	20,580	37	11,209	31,789	35%
	Mar '21	188	52	0	151	204	20,633	37	11,246	31,878	35%
	Apr '21	189	2	0	151	154	20,635	121	11,367	32,002	36%
	May '21	190	0	0	151	151	20,635	97	11,464	32,099	36%
	Jun '21	191	0	0	151	151	20,635	94	11,558	32,193	36%

HISTORICAL

ACTUAL



## RWC Management Plan for Banana Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date		No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120- Month Total (AF)	RW (AF)	RW 120- Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/2022	Jul '21	192	9	0	151	161	20,613	86	11,644	32,257	36%	
	Aug '21	193	0	0	151	151	20,613	76	11,584	32,198	36%	
	Sep '21	194	0	0	151	151	20,613	93	11,282	31,895	35%	
	Oct '21	195	5	0	151	156	20,598	49	10,927	31,525	35%	
	Nov '21	196	0	0	151	151	20,568	48	10,814	31,382	34%	
	Dec '21	197	109	0	151	260	20,659	2	10,571	31,230	34%	
	Jan '22	198	2	0	151	153	20,613	25	10,435	31,047	34%	
	Feb '22	199	5	0	151	156	20,597	43	10,310	30,907	33%	
	Mar '22	200	25		151	176	20,578	100	10,338	30,916	33%	
	Apr '22	201	14		151	165	20,557	110	10,397	30,954	34%	
	May '22	202	7		151	158	20,564	120	10,472	31,036	34%	
2022/2023	Jun '22	203	1		151	152	20,565	120	10,513	31,078	34%	
	Jul '22	204	4		151	155	20,569	120	10,592	31,161	34%	
	Aug '22	205	3		151	154	20,572	120	10,710	31,282	34%	
	Sep '22	206	5		151	156	20,577	120	10,642	31,219	34%	
	Oct '22	207	15		151	166	20,581	110	10,649	31,230	34%	
	Nov '22	208	18		151	169	20,594	110	10,639	31,233	34%	
	Dec '22	209	51		151	202	20,596	70	10,694	31,290	34%	
	Jan '23	210	43		151	194	20,621	80	10,746	31,367	34%	
	Feb '23	211	36		151	187	20,637	90	10,834	31,471	34%	
	Mar '23	212	25		151	176	20,654	100	10,892	31,546	35%	
	Apr '23	213	14		151	165	20,668	110	10,947	31,615	35%	
	May '23	214	7		151	158	20,672	120	11,028	31,700	35%	
	Jun '23	215	1		151	152	20,673	120	11,113	31,786	35%	
2023/2024	Jul '23	216	4		151	155	20,677	120	11,218	31,895	35%	P L A N N E D
	Aug '23	217	3		151	154	20,680	120	11,326	32,006	35%	
	Sep '23	218	5		151	156	20,685	120	11,446	32,131	36%	
	Oct '23	219	15		151	166	20,700	110	11,171	31,871	35%	
	Nov '23	220	18		151	169	20,696	110	11,179	31,875	35%	
	Dec '23	221	51		151	202	20,741	70	11,249	31,990	35%	
	Jan '24	222	43		151	194	20,766	80	11,329	32,095	35%	
	Feb '24	223	36		151	187	20,747	90	11,419	32,166	35%	
	Mar '24	224	25		151	176	20,763	100	11,434	32,197	36%	
	Apr '24	225	14		151	165	20,775	110	11,456	32,231	36%	
	May '24	226	7		151	158	20,782	120	11,382	32,164	35%	
	Jun '24	227	1		151	152	20,783	120	11,312	32,095	35%	
2024/2025	Jul '24	228	4		151	155	20,787	120	11,432	32,219	35%	
	Aug '24	229	3		151	154	20,790	120	11,470	32,260	36%	
	Sep '24	230	5		151	156	20,795	120	11,518	32,313	36%	
	Oct '24	231	15		151	166	20,810	110	11,422	32,232	35%	
	Nov '24	232	18		151	169	20,821	110	11,359	32,180	35%	
	Dec '24	233	51		151	202	20,727	70	11,362	32,089	35%	
	Jan '25	234	43		151	194	20,746	80	11,298	32,044	35%	
	Feb '25	235	36		151	187	20,766	90	11,341	32,107	35%	
	Mar '25	236	25		151	176	20,789	100	11,361	32,150	35%	
	Apr '25	237	14		151	165	20,800	110	11,381	32,181	35%	
	May '25	238	7		151	158	20,807	120	11,340	32,147	35%	
	Jun '25	239	1		151	152	20,808	120	11,434	32,242	35%	
2025/2026	Jul '25	240	4		151	155	20,812	120	11,500	32,312	36%	
	Aug '25	241	3		151	154	20,815	120	11,464	32,279	36%	
	Sep '25	242	5		151	156	20,780	120	11,208	31,988	35%	
	Oct '25	243	15		151	166	20,690	110	10,969	31,659	35%	
	Nov '25	244	18		151	169	20,678	110	10,817	31,495	34%	
	Dec '25	245	51		151	202	20,670	70	10,604	31,274	34%	
	Jan '26	246	43		151	194	20,642	80	10,609	31,251	34%	
	Feb '26	247	36		151	187	20,671	90	10,589	31,260	34%	
	Mar '26	248	25		151	176	20,658	100	10,615	31,273	34%	
	Apr '26	249	14		151	165	20,672	110	10,628	31,300	34%	
	May '26	250	7		151	158	20,664	120	10,635	31,299	34%	
	Jun '26	251	1		151	152	20,665	120	10,598	31,263	34%	





## RWC Management Plan for Banana Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/2027	Jul '26	252	4		151	155	20,669	120	10,535	31,204	34%
	Aug '26	253	3		151	154	20,672	120	10,606	31,278	34%
	Sep '26	254	5		151	156	20,677	120	10,629	31,306	34%
	Oct '26	255	15		151	166	20,686	110	10,624	31,310	34%
	Nov '26	256	18		151	169	20,683	110	10,679	31,362	34%
	Dec '26	257	51		151	202	20,663	70	10,748	31,411	34%
	Jan '27	258	43		151	194	20,656	80	10,828	31,484	34%
	Feb '27	259	36		151	187	20,674	90	10,918	31,592	35%
	Mar '27	260	25		151	176	20,699	100	11,018	31,717	35%
	Apr '27	261	14		151	165	20,713	110	11,128	31,841	35%
2027/28	May '27	262	7		151	158	20,720	120	11,248	31,968	35%
	Jun '27	263	1		151	152	20,721	120	11,368	32,089	35%
	Jul '27	264	3		151	154	20,724	120	11,488	32,212	36%
	Aug '27	265	5		151	156	20,727	120	11,477	32,204	36%
	Sep '27	266	15		151	166	20,607	120	11,436	32,043	36%
	Oct '27	267	18		151	169	20,502	110	11,305	31,807	36%
	Nov '27	268	51		151	202	20,553	110	10,952	31,505	35%
	Dec '27	269	43		151	194	20,456	70	10,770	31,226	34%
	Jan '28	270	36		151	187	20,284	80	10,724	31,008	35%
	Feb '28	271	25		151	176	20,298	90	10,608	30,906	34%
2028/29	Mar '28	272	14		151	165	20,251	100	10,621	30,872	34%
	Apr '28	273	7		151	158	20,258	110	10,558	30,817	34%
	May '28	274	1		151	152	20,259	120	10,517	30,776	34%
	Jun '28	275	3		151	154	20,262	120	10,508	30,769	34%
	Jul '28	276	3		151	154	20,263	120	10,481	30,744	34%
	Aug '28	277	5		151	156	20,268	120	10,585	30,852	34%
	Sep '28	278	15		151	166	20,283	120	10,614	30,897	34%
	Oct '28	279	18		151	169	20,289	110	10,724	31,013	35%
	Nov '28	280	51		151	202	20,317	110	10,804	31,121	35%
	Dec '28	281	43		151	194	20,348	70	10,874	31,222	35%
2029/30	Jan '29	282	36		151	187	20,356	80	10,941	31,297	35%
	Feb '29	283	25		151	176	20,339	90	11,031	31,370	35%
	Mar '29	284	14		151	165	20,340	100	11,131	31,470	35%
	Apr '29	285	7		151	158	20,347	110	11,241	31,587	36%
	May '29	286	1		151	152	20,348	120	11,360	31,707	36%
	Jun '29	287	3		151	154	20,351	120	11,480	31,830	36%
	Jul '29	288	3		151	154	20,354	120	11,567	31,920	36%
	Aug '29	289	5		151	156	20,359	120	11,587	31,945	36%
	Sep '29	290	15		151	166	20,374	120	11,480	31,853	36%
	Oct '29	291	18		151	169	20,392	110	11,348	31,739	36%
2030/31	Nov '29	292	51		151	202	20,390	110	11,366	31,756	36%
	Dec '29	293	43		151	194	20,376	70	11,412	31,788	36%
	Jan '30	294	36		151	187	20,412	80	11,447	31,859	36%
	Feb '30	295	25		151	176	20,437	90	11,514	31,951	36%
	Mar '30	296	14		151	165	20,370	100	11,575	31,945	36%
	Apr '30	297	7		151	158	20,320	110	11,668	31,988	36%
	May '30	298	1		151	152	20,321	120	11,753	32,074	37%
	Jun '30	299	3		151	154	20,324	120	11,873	32,197	37%
	Jul '30	300	3		151	154	20,327	120	11,993	32,320	37%
	Aug '30	301	5		151	156	20,332	120	12,113	32,445	37%
2030/31	Sep '30	302	15		151	166	20,347	120	12,233	32,580	38%
	Oct '30	303	18		151	169	20,365	110	12,177	32,542	37%
	Nov '30	304	51		151	202	20,404	110	12,150	32,554	37%
	Dec '30	305	43		151	194	20,385	70	12,105	32,489	37%
	Jan '31	306	36		151	187	20,333	80	12,147	32,480	37%
	Feb '31	307	25		151	176	20,357	90	12,200	32,557	37%
	Mar '31	308	14		151	165	20,319	100	12,263	32,581	38%
	Apr '31	309	7		151	158	20,323	110	12,251	32,575	38%
	May '31	310	1		151	152	20,324	120	12,274	32,598	38%
	Jun '31	311	3		151	154	20,327	120	12,300	32,627	38%

### Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

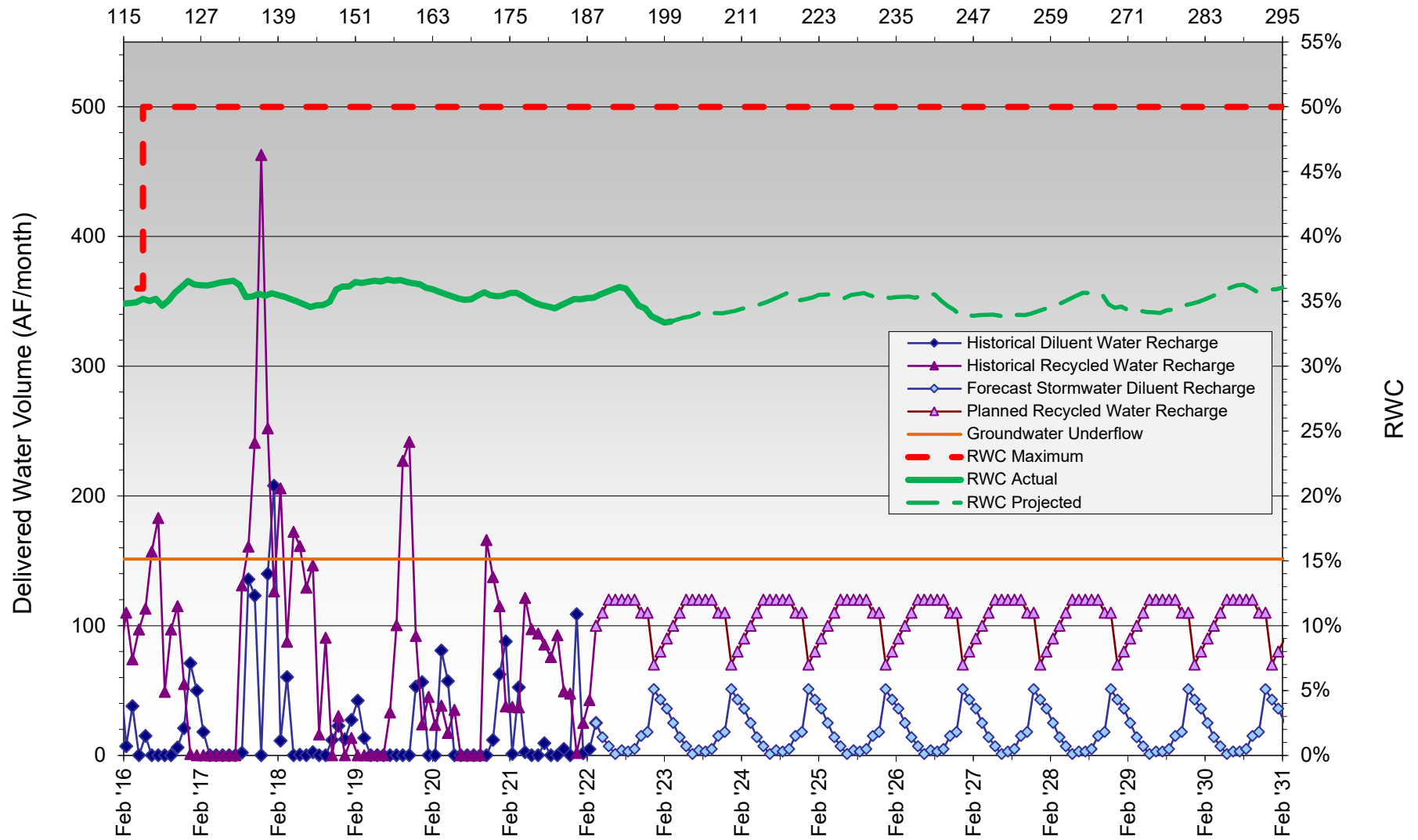
RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period

P L A N N E D



# RWC Management Plan for Banana Basin

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for Brooks Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	95	0	0	509	509	47,607	0	10,548	58,155	18%
	Aug '16	96	0	0	509	509	47,965	0	10,548	58,513	18%
	Sep '16	97	31	0	509	540	48,163	145	10,693	58,856	18%
	Oct '16	98	17	170	509	696	48,552	19	10,712	59,264	18%
	Nov '16	99	39	0	509	548	48,813	116	10,828	59,641	18%
	Dec '16	100	196	0	509	705	49,256	13	10,841	60,097	18%
	Jan '17	101	254	0	509	763	49,907	0	10,841	60,748	18%
	Feb '17	102	142	0	509	651	50,429	0	10,841	61,270	18%
	Mar '17	103	1	0	509	510	50,936	16	10,857	61,793	18%
	Apr '17	104	0	16	509	525	51,359	8	10,865	62,224	17%
	May '17	105	1	0	509	510	51,865	38	10,903	62,768	17%
	Jun '17	106	0	2	509	511	52,374	30	10,933	63,307	17%
2017/18	Jul '17	107	0	94	509	603	52,977	228	11,161	64,138	17%
	Aug '17	108	0	96	509	605	53,582	55	11,216	64,798	17%
	Sep '17	109	1	3	509	513	54,070	169	11,385	65,455	17%
	Oct '17	110	1	0	509	510	54,546	99	11,484	66,030	17%
	Nov '17	111	3	0	509	512	55,034	151	11,636	66,670	17%
	Dec '17	112	1	0	509	510	55,502	122	11,758	67,260	17%
	Jan '18	113	28	5	509	542	55,762	95	11,852	67,614	18%
	Feb '18	114	9	0	509	518	56,230	106	11,958	68,188	18%
	Mar '18	115	43	0	509	552	56,774	13	11,971	68,744	17%
	Apr '18	116	2	0	509	511	57,281	36	12,007	69,288	17%
	May '18	117	3	0	509	513	57,751	85	12,092	69,843	17%
	Jun '18	118	2	0	509	511	58,259	109	12,201	70,459	17%
2018/19	Jul '18	119	0	0	509	509	58,765	45	12,246	71,011	17%
	Aug '18	120	0	0	509	509	59,258	18	12,147	71,405	17%
	Sep '18	121	0	0	509	509	59,767	0	12,061	71,828	17%
	Oct '18	122	3	0	509	512	60,280	0	11,895	72,175	16%
	Nov '18	123	22	0	509	531	60,788	183	11,975	72,763	16%
	Dec '18	124	43	0	509	552	61,178	257	12,144	73,322	17%
	Jan '19	125	260	0	509	769	61,922	66	11,933	73,855	16%
	Feb '19	126	283	0	509	792	62,506	0	11,913	74,419	16%
	Mar '19	127	149	0	509	658	63,134	77	11,831	74,965	16%
	Apr '19	128	3	0	509	512	63,645	254	11,789	75,434	16%
	May '19	129	61	0	509	571	64,199	189	11,864	76,062	16%
	Jun '19	130	0	0	509	509	64,708	291	11,976	76,684	16%
2019/20	Jul '19	131	0	111	509	621	65,328	177	12,147	77,474	16%
	Aug '19	132	0	39	509	548	65,876	56	12,195	78,071	16%
	Sep '19	133	1	0	509	510	66,386	36	12,231	78,617	16%
	Oct '19	134	0	0	509	509	66,373	176	12,223	78,596	16%
	Nov '19	135	70	0	509	579	66,439	64	12,042	78,481	15%
	Dec '19	136	160	0	509	669	66,470	31	11,928	78,398	15%
	Jan '20	137	4	0	509	513	66,222	5	11,860	78,082	15%
	Feb '20	138	0	0	509	509	66,007	53	11,859	77,867	15%
	Mar '20	139	159	0	509	668	66,139	68	11,747	77,887	15%
	Apr '20	140	167	0	509	676	66,283	15	11,527	77,810	15%
	May '20	141	8	0	509	517	66,289	114	11,285	77,574	15%
	Jun '20	142	0	0	509	509	66,288	102	11,179	77,468	14%
2020/21	Jul '20	143	0	0	509	509	66,287	150	11,182	77,469	14%
	Aug '20	144	0	0	509	509	66,269	121	11,028	77,297	14%
	Sep '20	145	2	0	509	512	66,271	126	11,013	77,283	14%
	Oct '20	146	2	0	509	512	66,249	85	10,968	77,217	14%
	Nov '20	147	11	0	509	520	66,216	0	10,881	77,097	14%
	Dec '20	148	43	0	509	552	65,977	0	10,847	76,824	14%
	Jan '21	149	57	0	509	566	65,921	82	10,929	76,850	14%
	Feb '21	150	5	0	509	514	65,762	75	11,004	76,766	14%
	Mar '21	151	41	0	509	550	65,661	24	11,028	76,689	14%
	Apr '21	152	0	0	509	509	65,660	164	11,018	76,677	14%
	May '21	153	0	0	509	509	65,650	53	10,909	76,559	14%
	Jun '21	154	0	0	509	509	65,649	53	10,739	76,388	14%

HISTORICAL

ACTUAL



# RWC Management Plan for Brooks Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	155	5	0	509	514	65,416	121	10,860	76,276	14%
	Aug '21	156	0	0	509	509	65,231	100	10,960	76,191	14%
	Sep '21	157	0	0	509	509	65,077	97	11,057	76,135	15%
	Oct '21	158	14	0	509	523	65,073	72	11,049	76,123	15%
	Nov '21	159	5	0	509	514	65,028	44	11,057	76,085	15%
	Dec '21	160	134	0	509	643	65,146	27	10,986	76,132	14%
	Jan '22	161	4	0	509	513	65,105	3	10,846	75,951	14%
	Feb '22	162	7	0	509	517	65,062	67	10,837	75,899	14%
	Mar '22	163	66		509	575	65,025	80	10,832	75,857	14%
	Apr '22	164	35		509	544	64,996	120	10,920	75,916	14%
2022/23	May '22	165	13		509	522	65,008	140	10,935	75,943	14%
	Jun '22	166	2		509	511	65,010	150	10,924	75,934	14%
	Jul '22	167	3		509	512	65,012	150	11,041	76,053	15%
	Aug '22	168	4		509	513	65,014	150	11,152	76,166	15%
	Sep '22	169	7		509	516	65,019	140	11,241	76,260	15%
	Oct '22	170	10		509	519	65,029	140	11,381	76,410	15%
	Nov '22	171	25		509	534	65,054	130	11,511	76,565	15%
	Dec '22	172	81		509	590	65,135	70	11,581	76,716	15%
	Jan '23	173	86		509	595	65,186	60	11,299	76,485	15%
	Feb '23	174	91		509	600	65,251	60	11,060	76,311	14%
2023/24	Mar '23	175	66		509	575	65,285	80	10,902	76,187	14%
	Apr '23	176	35		509	544	65,320	120	10,791	76,111	14%
	May '23	177	13		509	522	65,316	140	10,779	76,095	14%
	Jun '23	178	2		509	511	65,317	150	10,809	76,126	14%
	Jul '23	179	3		509	512	65,319	150	10,790	76,109	14%
	Aug '23	180	4		509	513	65,322	150	10,743	76,065	14%
	Sep '23	181	7		509	516	65,301	140	10,701	76,002	14%
	Oct '23	182	10		509	519	65,288	140	10,733	76,021	14%
	Nov '23	183	25		509	534	65,309	130	10,769	76,078	14%
	Dec '23	184	81		509	590	65,382	70	10,735	76,117	14%
2024/25	Jan '24	185	86		509	595	65,465	60	10,686	76,151	14%
	Feb '24	186	91		509	600	65,509	60	10,644	76,153	14%
	Mar '24	187	66		509	575	65,563	80	10,594	76,157	14%
	Apr '24	188	35		509	544	65,584	120	10,649	76,233	14%
	May '24	189	13		509	522	65,597	140	10,789	76,386	14%
	Jun '24	190	2		509	511	65,580	150	10,891	76,471	14%
	Jul '24	191	3		509	512	65,576	150	10,969	76,545	14%
	Aug '24	192	4		509	513	65,579	150	10,978	76,557	14%
	Sep '24	193	7		509	516	65,585	140	10,961	76,546	14%
	Oct '24	194	10		509	519	65,589	140	11,045	76,634	14%
2025/26	Nov '24	195	25		509	534	65,586	130	11,138	76,724	15%
	Dec '24	196	81		509	590	65,572	70	11,208	76,780	15%
	Jan '25	197	86		509	595	65,639	60	11,258	76,897	15%
	Feb '25	198	91		509	600	65,703	60	11,226	76,929	15%
	Mar '25	199	66		509	575	65,756	80	11,237	76,993	15%
	Apr '25	200	35		509	544	65,781	120	11,256	77,037	15%
	May '25	201	13		509	522	65,773	140	11,276	77,049	15%
	Jun '25	202	2		509	511	65,775	150	11,270	77,045	15%
	Jul '25	203	3		509	512	65,778	150	11,357	77,135	15%
	Aug '25	204	4		509	513	65,782	150	11,507	77,289	15%
2026/27	Sep '25	205	7		509	516	65,788	140	11,647	77,435	15%
	Oct '25	206	10		509	519	65,798	140	11,787	77,585	15%
	Nov '25	207	25		509	534	65,822	130	11,917	77,739	15%
	Dec '25	208	81		509	590	65,903	70	11,886	77,789	15%
	Jan '26	209	86		509	595	65,935	60	11,692	77,627	15%
	Feb '26	210	91		509	600	65,935	60	11,636	77,571	15%
	Mar '26	211	66		509	575	65,910	80	11,505	77,415	15%
	Apr '26	212	35		509	544	65,932	120	11,433	77,365	15%
	May '26	213	13		509	522	65,944	140	11,295	77,239	15%
	Jun '26	214	2		509	511	65,946	150	11,445	77,391	15%

P L A N N E D





# RWC Management Plan for Brooks Street Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	215	3		509	512	65,949	150	11,595	77,544	15%
	Aug '26	216	4		509	513	65,953	150	11,745	77,698	15%
	Sep '26	217	7		509	516	65,929	140	11,740	77,669	15%
	Oct '26	218	10		509	519	65,752	140	11,861	77,613	15%
	Nov '26	219	25		509	534	65,738	130	11,875	77,613	15%
	Dec '26	220	81		509	590	65,623	70	11,932	77,555	15%
	Jan '27	221	86		509	595	65,455	60	11,992	77,447	15%
	Feb '27	222	91		509	600	65,404	60	12,052	77,456	16%
	Mar '27	223	66		509	575	65,469	80	12,116	77,585	16%
	Apr '27	224	35		509	544	65,488	120	12,228	77,716	16%
	May '27	225	13		509	522	65,500	140	12,330	77,830	16%
	Jun '27	226	2		509	511	65,500	150	12,450	77,950	16%
2027/28	Jul '27	227	3		509	512	65,410	150	12,372	77,781	16%
	Aug '27	228	4		509	513	65,318	150	12,467	77,785	16%
	Sep '27	229	7		509	516	65,321	140	12,438	77,759	16%
	Oct '27	230	10		509	519	65,330	140	12,478	77,808	16%
	Nov '27	231	25		509	534	65,352	130	12,457	77,809	16%
	Dec '27	232	81		509	590	65,432	70	12,405	77,837	16%
	Jan '28	233	86		509	595	65,485	60	12,370	77,855	16%
	Feb '28	234	91		509	600	65,567	60	12,325	77,892	16%
	Mar '28	235	66		509	575	65,590	80	12,392	77,982	16%
	Apr '28	236	35		509	544	65,623	120	12,476	78,098	16%
	May '28	237	13		509	522	65,632	140	12,531	78,163	16%
	Jun '28	238	2		509	511	65,633	150	12,572	78,205	16%
2028/29	Jul '28	239	3		509	512	65,636	150	12,677	78,312	16%
	Aug '28	240	4		509	513	65,640	150	12,808	78,448	16%
	Sep '28	241	7		509	516	65,647	140	12,948	78,595	16%
	Oct '28	242	10		509	519	65,654	140	13,088	78,742	17%
	Nov '28	243	25		509	534	65,656	130	13,035	78,692	17%
	Dec '28	244	81		509	590	65,695	70	12,848	78,543	16%
	Jan '29	245	86		509	595	65,521	60	12,842	78,364	16%
	Feb '29	246	91		509	600	65,329	60	12,902	78,232	16%
	Mar '29	247	66		509	575	65,246	80	12,906	78,152	17%
	Apr '29	248	35		509	544	65,278	120	12,771	78,050	16%
	May '29	249	13		509	522	65,230	140	12,722	77,952	16%
	Jun '29	250	2		509	511	65,232	150	12,581	77,813	16%
2029/30	Jul '29	251	3		509	512	65,124	150	12,555	77,678	16%
	Aug '29	252	4		509	513	65,088	150	12,649	77,737	16%
	Sep '29	253	7		509	516	65,095	140	12,752	77,847	16%
	Oct '29	254	10		509	519	65,105	140	12,716	77,821	16%
	Nov '29	255	25		509	534	65,060	130	12,782	77,842	16%
	Dec '29	256	81		509	590	64,981	70	12,821	77,802	16%
	Jan '30	257	86		509	595	65,063	60	12,876	77,939	17%
	Feb '30	258	91		509	600	65,154	60	12,882	78,037	17%
	Mar '30	259	66		509	575	65,061	80	12,894	77,956	17%
	Apr '30	260	35		509	544	64,929	120	12,999	77,929	17%
	May '30	261	13		509	522	64,934	140	13,026	77,960	17%
	Jun '30	262	2		509	511	64,936	150	13,073	78,010	17%
2030/31	Jul '30	263	3		509	512	64,939	150	13,074	78,013	17%
	Aug '30	264	4		509	513	64,943	150	13,103	78,046	17%
	Sep '30	265	7		509	516	64,948	140	13,117	78,065	17%
	Oct '30	266	10		509	519	64,956	140	13,172	78,127	17%
	Nov '30	267	25		509	534	64,970	130	13,302	78,271	17%
	Dec '30	268	81		509	590	65,008	70	13,371	78,379	17%
	Jan '31	269	86		509	595	65,037	60	13,350	78,387	17%
	Feb '31	270	91		509	600	65,124	60	13,335	78,458	17%
	Mar '31	271	66		509	575	65,149	80	13,391	78,540	17%
	Apr '31	272	35		509	544	65,184	120	13,347	78,531	17%
	May '31	273	13		509	522	65,197	140	13,434	78,631	17%
	Jun '31	274	2		509	511	65,199	150	13,531	78,729	17%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

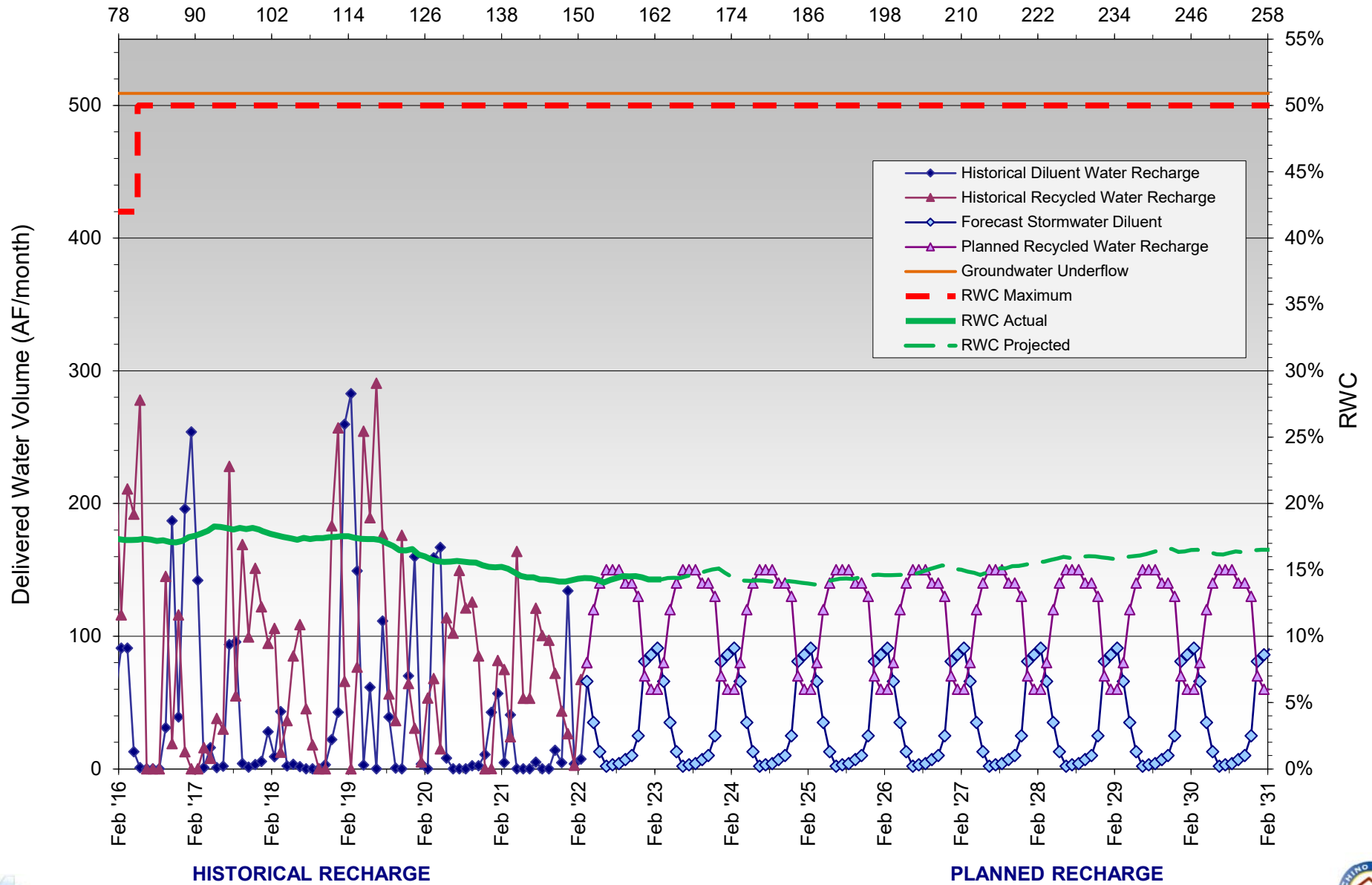
RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period

P L A N N E D



# RWC Management Plan - Brooks Street Basin

Months Since Initial Recycled Water Delivery



# RWC Management Plan for Declez Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	7	0	0	904	904	14,300	201	1,235	15,535	8%
	Aug '16	8	0	0	904	904	15,184	261	1,496	16,680	9%
	Sep '16	9	1	0	904	905	16,071	52	1,548	17,619	9%
	Oct '16	10	47	0	904	951	16,988	0	1,548	18,536	8%
	Nov '16	11	55	0	904	959	17,915	0	1,548	19,463	8%
	Dec '16	12	217	0	904	1,121	18,946	0	1,548	20,494	8%
	Jan '17	13	167	0	904	1,071	19,934	0	1,548	21,482	7%
	Feb '17	14	70	0	904	974	20,761	0	1,548	22,309	7%
	Mar '17	15	20	0	904	924	21,663	0	1,548	23,211	7%
	Apr '17	16	3	0	904	907	22,482	0	1,548	24,030	6%
2017/18	May '17	17	24	0	904	928	23,392	0	1,548	24,940	6%
	Jun '17	18	3	99	904	1,006	24,398	0	1,548	25,946	6%
	Jul '17	19	7	45	904	956	25,353	0	1,548	26,901	6%
	Aug '17	20	70	0	904	974	26,321	0	1,548	27,869	6%
	Sep '17	21	6	20	904	930	27,218	0	1,548	28,766	5%
	Oct '17	22	6	66	904	976	28,180	0	1,548	29,728	5%
	Nov '17	23	6	0	904	910	28,982	0	1,548	30,530	5%
	Dec '17	24	6	0	904	910	29,815	0	1,548	31,363	5%
	Jan '18	25	136	0	904	1,040	30,599	0	1,548	32,147	5%
	Feb '18	26	49	0	904	952	31,405	0	1,548	32,953	5%
2018/19	Mar '18	27	223	0	904	1,127	32,505	0	1,548	34,053	5%
	Apr '18	28	18	0	904	922	33,414	56	1,604	35,018	5%
	May '18	29	30	0	904	933	34,311	294	1,898	36,209	5%
	Jun '18	30	17	0	904	921	35,218	238	2,136	37,354	6%
	Jul '18	31	11	0	904	915	36,114	266	2,402	38,516	6%
	Aug '18	32	9	0	904	913	37,023	275	2,677	39,700	7%
	Sep '18	33	11	0	904	915	37,931	258	2,935	40,866	7%
	Oct '18	34	61	0	904	964	38,881	167	3,102	41,983	7%
	Nov '18	35	170	0	904	1,074	39,882	57	3,160	43,042	7%
	Dec '18	36	61	0	904	965	40,640	104	3,263	43,903	7%
2019/20	Jan '19	37	113	0	904	1,016	41,630	46	3,309	44,939	7%
	Feb '19	38	131	0	904	1,035	42,441	0	3,309	45,750	7%
	Mar '19	39	75	0	904	978	43,368	74	3,383	46,751	7%
	Apr '19	40	22	0	904	925	44,288	101	3,484	47,773	7%
	May '19	41	63	0	904	967	45,249	97	3,581	48,831	7%
	Jun '19	42	18	0	904	922	46,151	174	3,755	49,906	8%
	Jul '19	43	16	0	904	920	47,050	97	3,852	50,901	8%
	Aug '19	44	11	0	904	915	47,947	28	3,880	51,827	7%
	Sep '19	45	12	0	904	916	48,857	25	3,905	52,762	7%
	Oct '19	46	9	0	904	913	49,755	157	4,062	53,817	8%
2020/21	Nov '19	47	136	0	904	1,040	50,757	86	4,147	54,904	8%
	Dec '19	48	151	0	904	1,055	51,638	0	4,147	55,786	7%
	Jan '20	49	9	0	904	913	52,478	71	4,218	56,696	7%
	Feb '20	50	19	0	904	922	53,159	48	4,266	57,426	7%
	Mar '20	51	163	0	904	1,067	54,172	26	4,293	58,464	7%
	Apr '20	52	95	0	904	999	55,048	37	4,330	59,378	7%
	May '20	53	12	0	904	915	55,958	76	4,405	60,363	7%
	Jun '20	54	11	0	904	915	56,866	115	4,520	61,387	7%
	Jul '20	55	4	0	904	908	57,771	116	4,636	62,407	7%
	Aug '20	56	4	0	904	908	58,671	85	4,721	63,392	7%
2020/21	Sep '20	57	3	0	904	907	59,575	114	4,835	64,411	8%
	Oct '20	58	3	0	904	907	60,437	143	4,979	65,416	8%
	Nov '20	59	47	0	904	951	61,293	100	5,079	66,372	8%
	Dec '20	60	155	0	904	1,059	62,039	38	5,117	67,156	8%
	Jan '21	61	152	0	904	1,056	63,043	1	5,118	68,161	8%
	Feb '21	62	3	0	904	907	63,753	0	5,118	68,871	7%
	Mar '21	63	137	0	904	1,041	64,656	3	5,121	69,777	7%
	Apr '21	64	7	0	904	911	65,565	31	5,152	70,717	7%
	May '21	65	5	0	904	909	66,460	146	5,298	71,758	7%
	Jun '21	66	6	0	904	910	67,360	146	5,445	72,805	7%

HISTORICAL

ACTUAL



# RWC Management Plan for Declez Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	67	52	0	904	956	68,235	71	5,516	73,751	7%
	Aug '21	68	2	0	904	906	69,138	109	5,625	74,763	8%
	Sep '21	69	3	0	904	906	70,038	138	5,762	75,800	8%
	Oct '21	70	24	0	904	928	70,892	100	5,862	76,754	8%
	Nov '21	71	7	0	904	911	71,683	50	5,913	77,596	8%
	Dec '21	72	207	0	904	1,111	72,738	0	5,913	78,651	8%
	Jan '22	73	4	0	904	907	73,559	4	5,852	79,411	7%
	Feb '22	74	10	0	904	913	74,426	53	5,905	80,331	7%
	Mar '22	75	81		904	985	75,227	100	6,005	81,232	7%
	Apr '22	76	58		904	962	76,055	130	6,135	82,190	7%
	May '22	77	24		904	928	76,976	170	6,305	83,281	8%
	Jun '22	78	7		904	911	77,886	180	6,485	84,371	8%
2022/23	Jul '22	79	17		904	921	78,806	180	6,665	85,471	8%
	Aug '22	80	13		904	917	79,713	170	6,835	86,548	8%
	Sep '22	81	25		904	929	80,626	170	7,005	87,631	8%
	Oct '22	82	46		904	949	81,442	150	7,155	88,596	8%
	Nov '22	83	61		904	964	82,385	130	7,285	89,670	8%
	Dec '22	84	147		904	1,050	83,268	70	7,355	90,622	8%
	Jan '23	85	86		904	990	84,210	90	7,445	91,654	8%
	Feb '23	86	117		904	1,021	85,172	90	7,535	92,707	8%
	Mar '23	87	81		904	985	86,096	100	7,635	93,731	8%
	Apr '23	88	58		904	962	87,054	130	7,765	94,818	8%
	May '23	89	24		904	928	87,975	170	7,935	95,910	8%
	Jun '23	90	7		904	911	88,882	180	8,115	96,997	8%
2023/24	Jul '23	91	17		904	921	89,797	180	8,295	98,092	8%
	Aug '23	92	13		904	917	90,711	170	8,465	99,176	9%
	Sep '23	93	25		904	929	91,637	170	8,635	100,272	9%
	Oct '23	94	46		904	949	92,569	150	8,785	101,354	9%
	Nov '23	95	61		904	964	93,481	130	8,915	102,396	9%
	Dec '23	96	147		904	1,050	94,466	70	8,985	103,451	9%
	Jan '24	97	86		904	990	95,354	90	9,075	104,429	9%
	Feb '24	98	117		904	1,021	96,199	90	9,165	105,364	9%
	Mar '24	99	81		904	985	97,011	100	9,265	106,276	9%
	Apr '24	100	58		904	962	97,857	130	9,395	107,252	9%
	May '24	101	24		904	928	98,784	170	9,565	108,349	9%
	Jun '24	102	7		904	911	99,693	180	9,745	109,438	9%
2024/25	Jul '24	103	17		904	921	100,612	180	9,925	110,537	9%
	Aug '24	104	13		904	917	101,457	170	10,095	111,551	9%
	Sep '24	105	25		904	929	102,355	170	10,265	112,620	9%
	Oct '24	106	46		904	949	103,302	150	10,415	113,716	9%
	Nov '24	107	61		904	964	104,166	130	10,545	114,711	9%
	Dec '24	108	147		904	1,050	104,902	70	10,615	115,516	9%
	Jan '25	109	86		904	990	105,845	90	10,705	116,549	9%
	Feb '25	110	117		904	1,021	106,759	90	10,795	117,554	9%
	Mar '25	111	81		904	985	107,729	100	10,895	118,624	9%
	Apr '25	112	58		904	962	108,650	130	11,025	119,674	9%
	May '25	113	24		904	928	109,478	170	11,195	120,673	9%
	Jun '25	114	7		904	911	110,386	180	11,375	121,761	9%
2025/26	Jul '25	115	17		904	921	111,258	180	11,555	122,813	9%
	Aug '25	116	13		904	917	112,172	170	11,725	123,897	9%
	Sep '25	117	25		904	929	112,953	170	11,895	124,848	10%
	Oct '25	118	46		904	949	113,867	150	12,045	125,912	10%
	Nov '25	119	61		904	964	114,827	130	12,175	127,002	10%
	Dec '25	120	147		904	1,050	114,925	70	12,195	127,120	10%
	Jan '26	121	86		904	990	114,853	90	12,207	127,060	10%
	Feb '26	122	117		904	1,021	114,936	90	12,144	127,080	10%
	Mar '26	123	81		904	985	114,925	100	12,118	127,043	10%
	Apr '26	124	58		904	962	114,963	130	12,115	127,078	10%
	May '26	125	24		904	928	114,975	170	12,057	127,032	9%
	Jun '26	126	7		904	911	114,979	180	12,036	127,015	9%

P L A N N E D





# RWC Management Plan for Declez Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	127	17		904	921	114,996	180	12,015	127,011	9%
	Aug '26	128	13		904	917	115,009	170	11,924	126,933	9%
	Sep '26	129	25		904	929	115,033	170	12,042	127,075	9%
	Oct '26	130	46		904	949	115,032	150	12,192	127,223	10%
	Nov '26	131	61		904	964	115,037	130	12,322	127,359	10%
	Dec '26	132	147		904	1,050	114,967	70	12,392	127,359	10%
	Jan '27	133	86		904	990	114,886	90	12,482	127,368	10%
	Feb '27	134	117		904	1,021	114,933	90	12,572	127,505	10%
	Mar '27	135	81		904	985	114,994	100	12,672	127,666	10%
	Apr '27	136	58		904	962	115,049	130	12,802	127,851	10%
2027/28	May '27	137	24		904	928	115,049	170	12,972	128,021	10%
	Jun '27	138	7		904	911	114,954	180	13,152	128,106	10%
	Jul '27	139	17		904	921	114,919	180	13,332	128,251	10%
	Aug '27	140	13		904	917	114,862	170	13,502	128,364	11%
	Sep '27	141	25		904	929	114,861	170	13,672	128,533	11%
	Oct '27	142	46		904	949	114,834	150	13,822	128,656	11%
	Nov '27	143	61		904	964	114,889	130	13,952	128,841	11%
	Dec '27	144	147		904	1,050	115,029	70	14,022	129,051	11%
	Jan '28	145	86		904	990	114,979	90	14,112	129,091	11%
	Feb '28	146	117		904	1,021	115,048	90	14,202	129,250	11%
2028/29	Mar '28	147	81		904	985	114,906	100	14,302	129,207	11%
	Apr '28	148	58		904	962	114,945	130	14,376	129,322	11%
	May '28	149	24		904	928	114,940	170	14,252	129,192	11%
	Jun '28	150	7		904	911	114,930	180	14,194	129,123	11%
	Jul '28	151	17		904	921	114,936	180	14,108	129,044	11%
	Aug '28	152	13		904	917	114,940	170	14,002	128,942	11%
	Sep '28	153	25		904	929	114,953	170	13,915	128,868	11%
	Oct '28	154	46		904	949	114,938	150	13,898	128,836	11%
	Nov '28	155	61		904	964	114,829	130	13,970	128,799	11%
	Dec '28	156	147		904	1,050	114,915	70	13,937	128,851	11%
2029/30	Jan '29	157	86		904	990	114,889	90	13,981	128,869	11%
	Feb '29	158	117		904	1,021	114,875	90	14,071	128,945	11%
	Mar '29	159	81		904	985	114,881	100	14,097	128,978	11%
	Apr '29	160	58		904	962	114,917	130	14,125	129,043	11%
	May '29	161	24		904	928	114,878	170	14,199	129,076	11%
	Jun '29	162	7		904	911	114,867	180	14,205	129,072	11%
	Jul '29	163	17		904	921	114,868	180	14,288	129,157	11%
	Aug '29	164	13		904	917	114,871	170	14,430	129,301	11%
	Sep '29	165	25		904	929	114,883	170	14,575	129,458	11%
	Oct '29	166	46		904	949	114,920	150	14,568	129,488	11%
2030/31	Nov '29	167	61		904	964	114,844	130	14,613	129,456	11%
	Dec '29	168	147		904	1,050	114,839	70	14,683	129,522	11%
	Jan '30	169	86		904	990	114,917	90	14,702	129,619	11%
	Feb '30	170	117		904	1,021	115,015	90	14,744	129,759	11%
	Mar '30	171	81		904	985	114,933	100	14,817	129,750	11%
	Apr '30	172	58		904	962	114,896	130	14,910	129,806	11%
	May '30	173	24		904	928	114,908	170	15,005	129,913	12%
	Jun '30	174	7		904	911	114,904	180	15,070	129,974	12%
	Jul '30	175	17		904	921	114,917	180	15,134	130,051	12%
	Aug '30	176	13		904	917	114,927	170	15,219	130,145	12%
2030/31	Sep '30	177	25		904	929	114,948	170	15,274	130,223	12%
	Oct '30	178	46		904	949	114,991	150	15,281	130,272	12%
	Nov '30	179	61		904	964	115,004	130	15,311	130,315	12%
	Dec '30	180	147		904	1,050	114,996	70	15,343	130,339	12%
	Jan '31	181	86		904	990	114,930	90	15,432	130,362	12%
	Feb '31	182	117		904	1,021	115,044	90	15,522	130,566	12%
	Mar '31	183	81		904	985	114,988	100	15,619	130,607	12%
	Apr '31	184	58		904	962	115,039	130	15,718	130,757	12%
	May '31	185	24		904	928	115,058	170	15,742	130,799	12%
	Jun '31	186	7		904	911	115,059	180	15,775	130,834	12%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

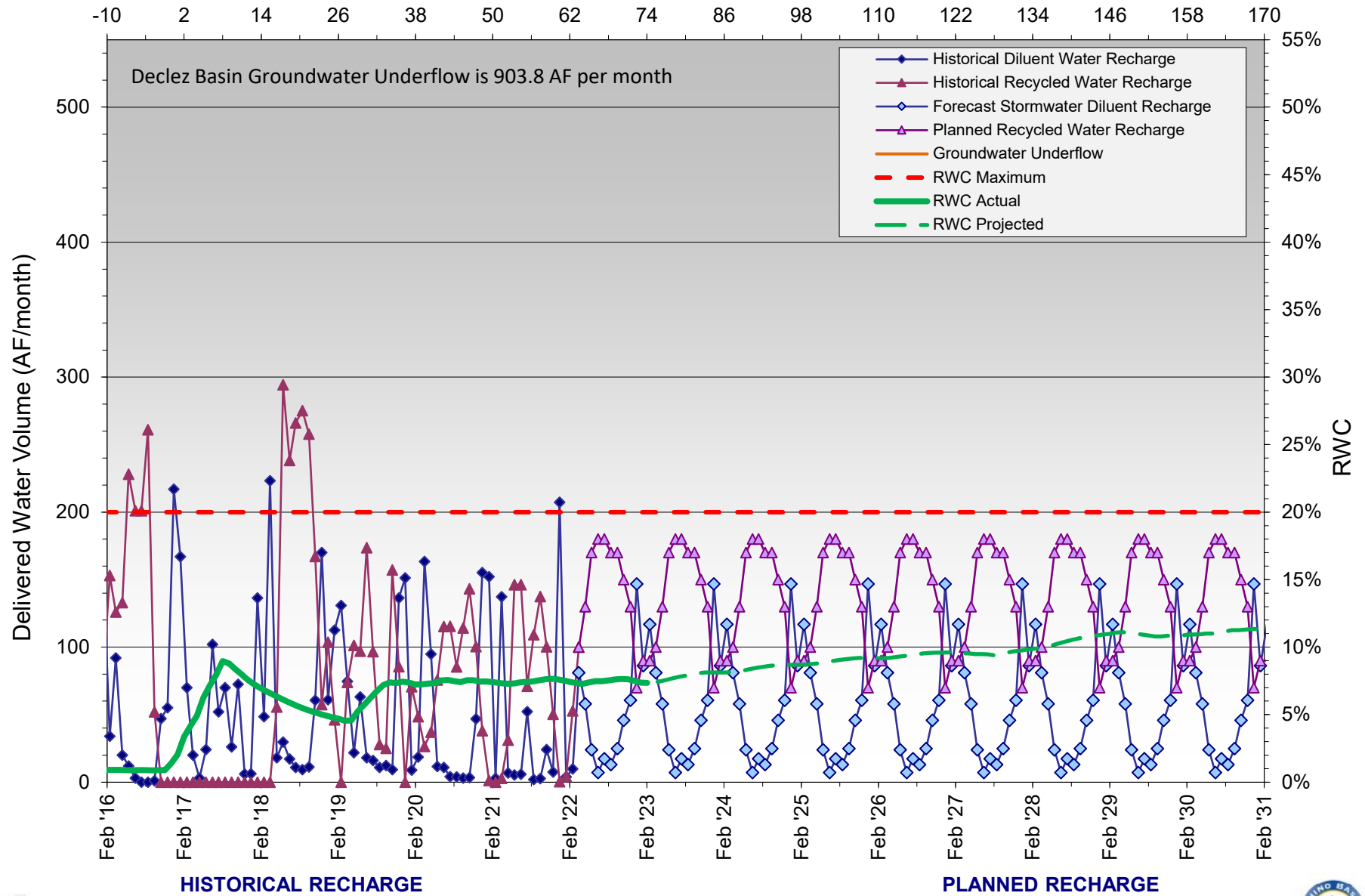
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - Declez Basin

Months Since Initial Recycled Water Delivery



**RWC Management Plan for Ely Basin**  
(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	202	2	0	286	288	36,157	113	10,299	46,456	22%
	Aug '16	203	0	0	286	286	36,433	89	10,382	46,815	22%
	Sep '16	204	3	0	286	289	36,682	232	10,531	47,213	22%
	Oct '16	205	47	0	286	333	36,961	233	10,733	47,694	23%
	Nov '16	206	86	0	286	372	37,270	112	10,795	48,065	22%
	Dec '16	207	523	0	286	809	37,994	0	10,753	48,747	22%
	Jan '17	208	317	0	286	603	38,502	0	10,696	49,197	22%
	Feb '17	209	338	0	286	624	38,976	0	10,673	49,649	21%
	Mar '17	210	16	0	286	302	39,261	123	10,751	50,012	21%
	Apr '17	211	9	0	286	295	39,498	190	10,900	50,398	22%
	May '17	212	37	0	286	323	39,807	250	11,110	50,917	22%
	Jun '17	213	0	0	286	286	40,075	149	11,252	51,327	22%
2017/18	Jul '17	214	37	0	286	323	40,372	34	11,286	51,658	22%
	Aug '17	215	126	0	286	412	40,755	27	11,313	52,068	22%
	Sep '17	216	0	0	286	286	41,007	216	11,529	52,536	22%
	Oct '17	217	48	9	286	343	41,316	87	11,616	52,932	22%
	Nov '17	218	0	0	286	286	41,436	36	11,566	53,002	22%
	Dec '17	219	0	0	286	286	41,465	218	11,731	53,197	22%
	Jan '18	220	255	0	286	541	41,214	30	11,762	52,975	22%
	Feb '18	221	91	0	286	377	41,357	181	11,943	53,300	22%
	Mar '18	222	266	0	286	552	41,889	0	11,827	53,716	22%
	Apr '18	223	19	0	286	305	42,164	154	11,865	54,029	22%
	May '18	224	0	0	286	286	42,420	300	12,078	54,498	22%
	Jun '18	225	0	0	286	286	42,688	226	12,201	54,889	22%
2018/19	Jul '18	226	0	0	286	286	42,958	209	12,343	55,301	22%
	Aug '18	227	0	0	286	286	43,236	253	12,596	55,832	23%
	Sep '18	228	0	0	286	286	43,517	336	12,932	56,449	23%
	Oct '18	229	35	0	286	322	43,821	156	12,952	56,774	23%
	Nov '18	230	202	0	286	488	44,196	256	13,121	57,316	23%
	Dec '18	231	222	0	286	508	44,417	26	13,146	57,563	23%
	Jan '19	232	295	0	286	582	44,961	109	13,216	58,177	23%
	Feb '19	233	288	0	286	574	45,125	0	13,207	58,332	23%
	Mar '19	234	68	0	286	354	45,432	0	13,207	58,639	23%
	Apr '19	235	74	0	286	360	45,657	0	13,192	58,849	22%
	May '19	236	70	0	286	356	45,945	44	13,225	59,170	22%
	Jun '19	237	1	0	286	287	46,208	0	13,225	59,433	22%
2019/20	Jul '19	238	0	0	286	286	46,494	0	13,225	59,719	22%
	Aug '19	239	22	0	286	308	46,781	0	13,225	60,006	22%
	Sep '19	240	0	88	286	375	46,954	127	13,328	60,282	22%
	Oct '19	241	3	11	286	300	46,781	242	13,468	60,249	22%
	Nov '19	242	268	0	286	554	46,766	183	13,532	60,298	22%
	Dec '19	243	443	0	286	729	46,967	0	13,532	60,499	22%
	Jan '20	244	5	0	286	291	46,654	113	13,644	60,298	23%
	Feb '20	245	3	0	286	289	46,436	272	13,917	60,352	23%
	Mar '20	246	582	0	286	868	46,914	106	14,022	60,936	23%
	Apr '20	247	395	0	286	681	46,914	135	14,157	61,071	23%
	May '20	248	38	0	286	324	46,854	469	14,626	61,480	24%
	Jun '20	249	0	0	286	286	46,854	415	15,041	61,895	24%
2020/21	Jul '20	250	0	0	286	286	46,854	227	15,268	62,122	25%
	Aug '20	251	65	0	286	351	46,919	23	15,290	62,209	25%
	Sep '20	252	3	0	286	289	46,922	1	15,291	62,213	25%
	Oct '20	253	59	0	286	345	46,952	154	15,331	62,283	25%
	Nov '20	254	87	0	286	373	46,912	58	15,269	62,180	25%
	Dec '20	255	69	0	286	355	46,408	159	15,416	61,824	25%
	Jan '21	256	301	0	286	587	46,605	44	15,459	62,065	25%
	Feb '21	257	38	0	286	324	46,320	0	15,416	61,737	25%
	Mar '21	258	114	0	286	401	46,199	104	15,521	61,719	25%
	Apr '21	259	51	0	286	338	46,247	107	15,521	61,768	25%
	May '21	260	127	0	286	413	46,361	131	15,497	61,858	25%
	Jun '21	261	153	0	286	439	46,424	182	15,473	61,896	25%

HISTORICAL

ACTUAL



# RWC Management Plan for Ely Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	262	23	0	286	309	46,143	187	15,483	61,627	25%
	Aug '21	263	51	0	286	337	45,903	6	15,348	61,251	25%
	Sep '21	264	9	0	286	295	45,568	42	15,384	60,952	25%
	Oct '21	265	10	0	286	297	45,363	102	15,486	60,849	25%
	Nov '21	266	2	0	286	288	45,154	4	15,490	60,644	26%
	Dec '21	267	1,073	0	286	1,359	46,190	0	15,490	61,680	25%
	Jan '22	268	70	0	286	356	46,171	45	15,471	61,642	25%
2022/23	Feb '22	269	73	0	286	359	46,149	94	15,559	61,708	25%
	Mar '22	270	177		286	463	46,079	40	15,599	61,678	25%
	Apr '22	271	157		286	443	46,101	60	15,659	61,760	25%
	May '22	272	93		286	379	46,191	130	15,789	61,980	25%
2022/23	Jun '22	273	31		286	317	46,210	190	15,979	62,189	26%
	Jul '22	274	38		286	324	46,241	180	16,159	62,400	26%
	Aug '22	275	34		286	320	46,268	180	16,339	62,607	26%
	Sep '22	276	48		286	334	46,311	170	16,509	62,820	26%
	Oct '22	277	80		286	366	46,386	140	16,649	63,035	26%
	Nov '22	278	138		286	424	46,515	80	16,649	63,164	26%
	Dec '22	279	253		286	539	46,433	0	16,582	63,015	26%
	Jan '23	280	202		286	488	46,563	20	16,457	63,020	26%
	Feb '23	281	209		286	495	46,735	10	16,242	62,977	26%
	Mar '23	282	177		286	463	46,849	40	15,968	62,817	25%
	Apr '23	283	157		286	443	47,005	60	15,949	62,954	25%
	May '23	284	93		286	379	47,075	130	15,820	62,895	25%
	Jun '23	285	31		286	317	47,102	190	15,801	62,903	25%
	Jul '23	286	38		286	324	47,134	180	15,824	62,958	25%
	Aug '23	287	34		286	320	47,164	180	15,670	62,834	25%
2023/24	Sep '23	288	48		286	334	47,206	170	15,383	62,589	25%
	Oct '23	289	80		286	366	47,286	140	15,165	62,451	24%
	Nov '23	290	138		286	424	47,403	80	14,824	62,227	24%
	Dec '23	291	253		286	539	47,632	0	14,411	62,043	23%
	Jan '24	292	202		286	488	47,826	20	14,220	62,046	23%
	Feb '24	293	209		286	495	47,741	10	14,036	61,777	23%
	Mar '24	294	177		286	463	47,855	40	13,968	61,823	23%
	Apr '24	295	157		286	443	47,929	60	13,810	61,739	22%
	May '24	296	93		286	379	48,013	130	13,699	61,712	22%
	Jun '24	297	31		286	317	48,029	190	13,703	61,732	22%
	Jul '24	298	38		286	324	48,051	180	13,782	61,833	22%
	Aug '24	299	34		286	320	48,069	180	13,954	62,023	22%
	Sep '24	300	48		286	334	48,102	170	14,003	62,105	23%
	Oct '24	301	80		286	366	48,166	140	13,857	62,023	22%
	Nov '24	302	138		286	424	48,134	80	13,867	62,001	22%
2024/25	Dec '24	303	253		286	539	47,995	0	13,862	61,857	22%
	Jan '25	304	202		286	488	48,153	20	13,699	61,852	22%
	Feb '25	305	209		286	495	48,290	10	13,487	61,777	22%
	Mar '25	306	177		286	463	48,452	40	13,370	61,822	22%
	Apr '25	307	157		286	443	48,509	60	13,265	61,774	21%
	May '25	308	93		286	379	48,371	130	13,235	61,606	21%
	Jun '25	309	31		286	317	48,402	190	13,152	61,554	21%
	Jul '25	310	38		286	324	48,155	180	13,230	61,385	22%
	Aug '25	311	34		286	320	48,186	180	13,409	61,595	22%
	Sep '25	312	48		286	334	48,019	170	13,548	61,567	22%
	Oct '25	313	80		286	366	48,024	140	13,612	61,636	22%
	Nov '25	314	138		286	424	48,121	80	13,671	61,792	22%
	Dec '25	315	253		286	539	48,282	0	13,543	61,825	22%
	Jan '26	316	202		286	488	48,147	20	13,502	61,649	22%
	Feb '26	317	209		286	495	48,297	10	13,423	61,720	22%
2025/26	Mar '26	318	177		286	463	48,297	40	13,416	61,713	22%
	Apr '26	319	157		286	443	48,430	60	13,349	61,779	22%
	May '26	320	93		286	379	48,326	130	13,360	61,686	22%
	Jun '26	321	31		286	317	48,356	190	13,340	61,696	22%

P L A N N E D





# **RWC Management Plan for Ely Basin** (120-month averaging period)

**Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries**

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	322	38		286	324	48,392	180	13,407	61,799	22%
	Aug '26	323	34		286	320	48,426	180	13,498	61,924	22%
	Sep '26	324	48		286	334	48,471	170	13,436	61,907	22%
	Oct '26	325	80		286	366	48,504	140	13,343	61,847	22%
	Nov '26	326	138		286	424	48,556	80	13,311	61,867	22%
	Dec '26	327	253		286	539	48,286	0	13,311	61,597	22%
	Jan '27	328	202		286	488	48,171	20	13,331	61,502	22%
	Feb '27	329	209		286	495	48,042	10	13,341	61,383	22%
	Mar '27	330	177		286	463	48,203	40	13,258	61,461	22%
	Apr '27	331	157		286	443	48,351	60	13,128	61,479	21%
	May '27	332	93		286	379	48,407	130	13,008	61,415	21%
	Jun '27	333	31		286	317	48,438	190	13,049	61,487	21%
2027/28	Jul '27	334	38		286	324	48,297	180	13,416	61,713	22%
	Aug '27	335	34		286	320	48,430	180	13,349	61,779	22%
	Sep '27	336	48		286	334	48,326	170	13,360	61,686	22%
	Oct '27	337	80		286	366	48,356	140	13,340	61,696	22%
	Nov '27	338	138		286	424	48,392	80	13,407	61,799	22%
	Dec '27	339	253		286	539	48,426	0	13,498	61,924	22%
	Jan '28	340	202		286	488	48,471	20	13,436	61,907	22%
	Feb '28	341	209		286	495	48,504	10	13,343	61,847	22%
	Mar '28	342	177		286	463	48,556	40	13,311	61,867	22%
	Apr '28	343	157		286	443	48,286	60	13,311	61,597	22%
	May '28	344	93		286	379	48,171	130	13,331	61,502	22%
	Jun '28	345	31		286	317	48,042	190	13,341	61,383	22%
2028/29	Jul '28	346	38		286	324	48,203	180	13,258	61,461	22%
	Aug '28	347	34		286	320	48,351	180	13,128	61,479	21%
	Sep '28	348	48		286	334	48,407	170	13,008	61,415	21%
	Oct '28	349	80		286	366	48,438	140	13,049	61,487	21%
	Nov '28	350	138		286	424	48,439	80	13,195	61,713	21%
	Dec '28	351	253		286	539	48,347	0	13,348	61,779	22%
	Jan '29	352	202		286	488	48,395	20	13,302	61,686	22%
	Feb '29	353	209		286	495	48,419	10	13,355	61,696	22%
	Mar '29	354	177		286	463	48,557	40	13,399	61,799	22%
	Apr '29	355	157		286	443	48,810	60	13,180	61,924	21%
	May '29	356	93		286	379	48,757	130	13,170	61,907	21%
	Jun '29	357	31		286	317	48,875	190	12,999	61,847	21%
2029/30	Jul '29	358	38		286	324	48,787	180	13,039	61,867	21%
	Aug '29	359	34		286	320	48,925	180	12,944	61,597	21%
	Sep '29	360	48		286	334	49,018	170	12,774	61,502	21%
	Oct '29	361	80		286	366	49,049	140	12,738	61,383	21%
	Nov '29	362	138		286	424	49,087	80	12,709	61,461	21%
	Dec '29	363	253		286	539	49,121	0	12,636	61,479	21%
	Jan '30	364	202		286	488	49,169	20	12,471	61,415	20%
	Feb '30	365	209		286	495	49,213	10	12,455	61,487	20%
	Mar '30	366	177		286	463	49,149	40	12,279	61,634	20%
	Apr '30	367	157		286	443	49,180	60	12,253	61,695	20%
	May '30	368	93		286	379	49,087	130	12,164	61,697	20%
	Jun '30	369	31		286	317	49,008	190	12,174	61,774	20%
2030/31	Jul '30	370	38		286	324	49,117	180	12,214	61,955	20%
	Aug '30	371	34		286	320	49,200	180	12,274	61,990	20%
	Sep '30	372	48		286	334	49,223	170	12,360	61,926	20%
	Oct '30	373	80		286	366	49,253	140	12,550	61,874	20%
	Nov '30	374	138		286	424	49,291	80	12,730	61,825	21%
	Dec '30	375	253		286	539	49,303	0	12,910	61,869	21%
	Jan '31	376	202		286	488	49,263	20	12,953	61,792	21%
	Feb '31	377	209		286	495	49,329	10	12,851	61,787	21%
	Mar '31	378	177		286	463	49,199	40	12,748	61,796	21%
	Apr '31	379	157		286	443	49,009	60	12,748	61,757	21%
	May '31	380	93		286	379	49,206	130	12,655	61,639	21%
	Jun '31	381	31		286	317	49,412	190	12,393	61,668	20%

**Notes:**

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

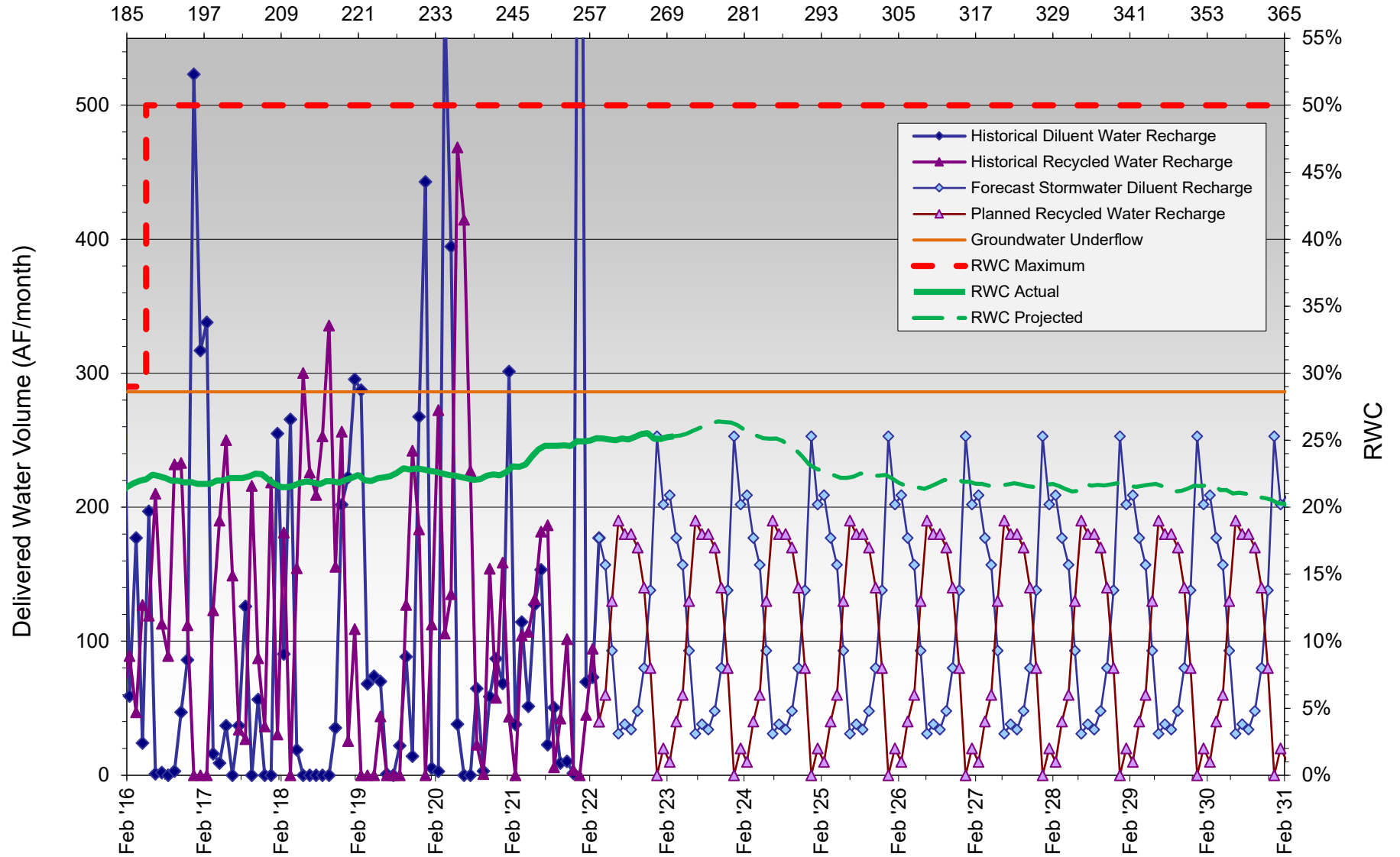
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan for Ely Basin

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for Hickory Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/2017	Jul '16	130	0	0	267	267	26,284	0	8,895	35,179	25%
	Aug '16	131	0	0	267	267	26,504	49	8,764	35,268	25%
	Sep '16	132	0	0	267	267	26,681	29	8,793	35,474	25%
	Oct '16	133	25	0	267	292	26,930	55	8,704	35,634	24%
	Nov '16	134	9	0	267	276	27,147	3	8,672	35,819	24%
	Dec '16	135	85	0	267	352	27,414	0	8,672	36,086	24%
	Jan '17	136	19	0	267	286	27,683	0	8,672	36,355	24%
	Feb '17	137	4	0	267	271	27,914	0	8,630	36,544	24%
	Mar '17	138	0	0	267	267	28,146	0	8,630	36,776	23%
	Apr '17	139	0	0	267	267	28,362	0	8,567	36,929	23%
	May '17	140	0	0	267	267	28,571	0	8,567	37,138	23%
	Jun '17	141	0	0	267	267	28,748	0	8,567	37,314	23%
2017/2018	Jul '17	142	0	527	267	794	29,448	168	8,594	38,042	23%
	Aug '17	143	0	420	267	687	30,042	20	8,536	38,578	22%
	Sep '17	144	10	263	267	540	30,490	119	8,640	39,130	22%
	Oct '17	145	10	154	267	430	30,847	171	8,788	39,635	22%
	Nov '17	146	15	0	267	282	31,026	170	8,860	39,886	22%
	Dec '17	147	8	68	267	343	31,267	106	8,965	40,232	22%
	Jan '18	148	85	40	267	391	31,533	85	9,050	40,583	22%
	Feb '18	149	16	0	267	283	31,718	134	9,145	40,863	22%
	Mar '18	150	59	0	267	326	32,000	16	9,081	41,081	22%
	Apr '18	151	10	0	267	277	32,212	185	9,260	41,472	22%
	May '18	152	0	0	267	267	32,440	133	9,306	41,746	22%
	Jun '18	153	2	0	267	269	32,685	92	9,399	42,083	22%
2018/2019	Jul '18	154	3	0	267	270	32,936	18	9,416	42,353	22%
	Aug '18	155	2	0	267	268	33,199	122	9,538	42,737	22%
	Sep '18	156	3	0	267	270	33,465	15	9,553	43,018	22%
	Oct '18	157	4	0	267	271	33,733	0	9,553	43,286	22%
	Nov '18	158	37	0	267	303	34,034	10	9,564	43,597	22%
	Dec '18	159	60	0	267	326	34,325	8	9,571	43,896	22%
	Jan '19	160	44	0	267	310	34,635	8	9,579	44,214	22%
	Feb '19	161	91	0	267	357	34,929	0	9,556	44,485	21%
	Mar '19	162	28	0	267	295	35,193	0	9,533	44,726	21%
	Apr '19	163	0	0	267	267	35,451	0	9,533	44,984	21%
	May '19	164	0	0	267	267	35,700	0	9,533	45,233	21%
	Jun '19	165	0	0	267	267	35,964	0	9,533	45,497	21%
2019/2020	Jul '19	166	1	60	267	328	36,283	0	9,533	45,816	21%
	Aug '19	167	6	350	267	623	36,902	64	9,597	46,499	21%
	Sep '19	168	6	344	267	617	37,516	20	9,583	47,099	20%
	Oct '19	169	2	194	267	462	37,681	23	9,417	47,097	20%
	Nov '19	170	14	102	267	383	37,771	11	9,184	46,955	20%
	Dec '19	171	52	3	267	321	37,667	30	9,121	46,788	19%
	Jan '20	172	1	3	267	271	37,457	36	9,137	46,595	20%
	Feb '20	173	1	0	267	268	37,258	15	9,152	46,411	20%
	Mar '20	174	40	0	267	307	37,283	73	9,164	46,447	20%
	Apr '20	175	61	0	267	328	37,298	19	9,127	46,424	20%
	May '20	176	1	0	267	268	37,299	72	9,088	46,386	20%
	Jun '20	177	0	0	267	267	37,299	122	9,160	46,459	20%
2020/2021	Jul '20	178	1	0	267	267	37,299	54	9,193	46,493	20%
	Aug '20	179	2	0	267	268	37,301	74	9,239	46,540	20%
	Sep '20	180	0	0	267	267	37,289	81	9,035	46,324	20%
	Oct '20	181	0	0	267	267	37,276	26	8,967	46,243	19%
	Nov '20	182	1	0	267	268	37,241	0	8,916	46,157	19%
	Dec '20	183	55	0	267	322	37,148	0	8,916	46,064	19%
	Jan '21	184	35	0	267	301	37,171	0	8,866	46,036	19%
	Feb '21	185	0	0	267	267	37,092	0	8,829	45,920	19%
	Mar '21	186	56	0	267	323	37,078	0	8,829	45,907	19%
	Apr '21	187	0	0	267	267	37,078	0	8,777	45,855	19%
	May '21	188	0	0	267	267	37,076	0	8,693	45,769	19%
	Jun '21	189	0	0	267	267	37,068	0	8,619	45,687	19%

H I S T O R I C A L

A C T U A L



# RWC Management Plan for Hickory Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/2022	Jul '21	190	0	0	267	267	37,068	0	8,605	45,673	19%
	Aug '21	191	17	0	267	284	37,013	209	8,814	45,827	19%
	Sep '21	192	13	0	267	280	36,547	286	9,079	45,626	20%
	Oct '21	193	11	0	267	277	36,541	49	9,093	45,634	20%
	Nov '21	194	6	0	267	272	36,535	36	8,927	45,462	20%
	Dec '21	195	147	0	267	414	36,682	8	8,708	45,390	19%
	Jan '22	196	0	0	267	267	36,633	23	8,715	45,348	19%
	Feb '22	197	0	0	267	267	36,574	78	8,710	45,284	19%
	Mar '22	198	31		267	298	36,552	120	8,751	45,303	19%
	Apr '22	199	22		267	289	36,544	130	8,815	45,359	19%
	May '22	200	15		267	282	36,559	140	8,915	45,474	20%
	Jun '22	201	10		267	277	36,567	140	9,053	45,620	20%
2022/2023	Jul '22	202	18		267	285	36,563	130	9,126	45,689	20%
	Aug '22	203	18		267	285	36,531	130	9,212	45,743	20%
	Sep '22	204	21		267	288	36,523	130	9,342	45,865	20%
	Oct '22	205	18		267	285	36,490	130	9,472	45,962	21%
	Nov '22	206	22		267	289	36,499	130	9,425	45,924	21%
	Dec '22	207	69		267	336	36,562	80	9,361	45,923	20%
	Jan '23	208	39		267	306	36,601	110	9,356	45,957	20%
	Feb '23	209	45		267	312	36,638	110	9,463	46,101	21%
	Mar '23	210	31		267	298	36,656	120	9,436	46,092	20%
	Apr '23	211	22		267	289	36,678	130	9,495	46,173	21%
	May '23	212	15		267	282	36,687	140	9,635	46,322	21%
	Jun '23	213	10		267	277	36,696	140	9,659	46,355	21%
2023/2024	Jul '23	214	18		267	285	36,710	130	9,588	46,298	21%
	Aug '23	215	18		267	285	36,728	130	9,707	46,435	21%
	Sep '23	216	21		267	288	36,749	130	9,837	46,586	21%
	Oct '23	217	18		267	285	36,766	130	9,966	46,732	21%
	Nov '23	218	22		267	289	36,729	130	9,757	46,486	21%
	Dec '23	219	69		267	336	36,790	80	9,729	46,519	21%
	Jan '24	220	39		267	306	36,817	110	9,753	46,571	21%
	Feb '24	221	45		267	312	36,842	110	9,796	46,639	21%
	Mar '24	222	31		267	298	36,860	120	9,692	46,553	21%
	Apr '24	223	22		267	289	36,850	130	9,443	46,293	20%
	May '24	224	15		267	282	36,832	140	9,291	46,123	20%
	Jun '24	225	10		267	277	36,840	140	9,219	46,059	20%
2024/2025	Jul '24	226	18		267	285	36,858	130	9,231	46,089	20%
	Aug '24	227	18		267	285	36,876	130	9,279	46,155	20%
	Sep '24	228	21		267	288	36,897	130	9,173	46,070	20%
	Oct '24	229	18		267	285	36,915	130	9,077	45,992	20%
	Nov '24	230	22		267	289	36,937	130	8,935	45,872	19%
	Dec '24	231	69		267	336	36,821	80	8,969	45,790	20%
	Jan '25	232	39		267	306	36,852	110	8,885	45,737	19%
	Feb '25	233	45		267	312	36,850	110	8,815	45,665	19%
	Mar '25	234	31		267	298	36,881	120	8,820	45,701	19%
	Apr '25	235	22		267	289	36,903	130	8,721	45,624	19%
	May '25	236	15		267	282	36,915	140	8,722	45,637	19%
	Jun '25	237	10		267	277	36,925	140	8,665	45,590	19%
2025/26	Jul '25	238	18		267	285	36,943	130	8,756	45,699	19%
	Aug '25	239	18		267	285	36,961	130	8,830	45,791	19%
	Sep '25	240	21		267	288	36,973	130	8,853	45,826	19%
	Oct '25	241	18		267	285	36,977	130	8,910	45,887	19%
	Nov '25	242	22		267	289	36,985	130	8,956	45,941	19%
	Dec '25	243	69		267	336	36,990	80	8,983	45,973	20%
	Jan '26	244	39		267	306	36,994	110	9,070	46,064	20%
	Feb '26	245	45		267	312	37,034	110	9,153	46,187	20%
	Mar '26	246	31		267	298	37,043	120	9,273	46,316	20%
	Apr '26	247	22		267	289	37,044	130	9,360	46,404	20%
	May '26	248	15		267	282	37,059	140	9,448	46,507	20%
	Jun '26	249	10		267	277	37,069	140	9,570	46,639	21%

P L A N N E D





# RWC Management Plan for Hickory Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	250	18		267	285	37,087	130	9,700	46,787	21%
	Aug '26	251	18		267	285	37,105	130	9,781	46,886	21%
	Sep '26	252	21		267	288	37,126	130	9,882	47,008	21%
	Oct '26	253	18		267	285	37,119	130	9,957	47,076	21%
	Nov '26	254	22		267	289	37,132	130	10,084	47,216	21%
	Dec '26	255	69		267	336	37,116	80	10,164	47,280	21%
	Jan '27	256	39		267	306	37,136	110	10,274	47,410	22%
	Feb '27	257	45		267	312	37,177	110	10,384	47,561	22%
	Mar '27	258	31		267	298	37,208	120	10,504	47,712	22%
	Apr '27	259	22		267	289	37,230	130	10,634	47,864	22%
	May '27	260	15		267	282	37,245	140	10,774	48,019	22%
	Jun '27	261	10		267	277	37,255	140	10,914	48,169	23%
2027/28	Jul '27	262	18		267	285	36,746	130	10,876	47,622	23%
	Aug '27	263	18		267	285	36,343	130	10,986	47,330	23%
	Sep '27	264	21		267	288	36,091	130	10,997	47,089	23%
	Oct '27	265	18		267	285	35,946	130	10,957	46,902	23%
	Nov '27	266	22		267	289	35,953	130	10,917	46,870	23%
	Dec '27	267	69		267	336	35,946	80	10,891	46,837	23%
	Jan '28	268	39		267	306	35,860	110	10,916	46,776	23%
	Feb '28	269	45		267	312	35,889	110	10,892	46,781	23%
	Mar '28	270	31		267	298	35,861	120	10,996	46,857	23%
	Apr '28	271	22		267	289	35,873	130	10,941	46,814	23%
	May '28	272	15		267	282	35,888	140	10,948	46,836	23%
	Jun '28	273	10		267	277	35,896	140	10,996	46,892	23%
2028/29	Jul '28	274	18		267	285	35,911	130	11,108	47,019	24%
	Aug '28	275	18		267	285	35,927	130	11,116	47,043	24%
	Sep '28	276	21		267	288	35,945	130	11,231	47,176	24%
	Oct '28	277	18		267	285	35,959	130	11,361	47,320	24%
	Nov '28	278	22		267	289	35,944	130	11,481	47,425	24%
	Dec '28	279	69		267	336	35,953	80	11,553	47,507	24%
	Jan '29	280	39		267	306	35,949	110	11,655	47,604	24%
	Feb '29	281	45		267	312	35,903	110	11,765	47,669	25%
	Mar '29	282	31		267	298	35,906	120	11,885	47,792	25%
	Apr '29	283	22		267	289	35,928	130	12,015	47,944	25%
	May '29	284	15		267	282	35,943	140	12,155	48,099	25%
	Jun '29	285	10		267	277	35,953	140	12,295	48,249	25%
2029/30	Jul '29	286	18		267	285	35,909	130	12,425	48,335	26%
	Aug '29	287	18		267	285	35,571	130	12,491	48,062	26%
	Sep '29	288	21		267	288	35,242	130	12,601	47,843	26%
	Oct '29	289	18		267	285	35,064	130	12,709	47,773	27%
	Nov '29	290	22		267	289	34,970	130	12,828	47,798	27%
	Dec '29	291	69		267	336	34,985	80	12,879	47,863	27%
	Jan '30	292	39		267	306	35,019	110	12,953	47,972	27%
	Feb '30	293	45		267	312	35,063	110	13,048	48,111	27%
	Mar '30	294	31		267	298	35,054	120	13,095	48,149	27%
	Apr '30	295	22		267	289	35,015	130	13,207	48,222	27%
	May '30	296	15		267	282	35,029	140	13,275	48,304	27%
	Jun '30	297	10		267	277	35,039	140	13,292	48,331	28%
2030/31	Jul '30	298	18		267	285	35,056	130	13,368	48,424	28%
	Aug '30	299	18		267	285	35,073	130	13,424	48,497	28%
	Sep '30	300	21		267	288	35,094	130	13,473	48,567	28%
	Oct '30	301	18		267	285	35,112	130	13,578	48,689	28%
	Nov '30	302	22		267	289	35,132	130	13,708	48,840	28%
	Dec '30	303	69		267	336	35,146	80	13,788	48,933	28%
	Jan '31	304	39		267	306	35,150	110	13,898	49,048	28%
	Feb '31	305	45		267	312	35,195	110	14,008	49,203	28%
	Mar '31	306	45		267	312	35,184	120	14,128	49,311	29%
	Apr '31	307	45		267	312	35,229	130	14,258	49,486	29%
	May '31	308	45		267	312	35,274	140	14,398	49,671	29%
	Jun '31	309	45		267	312	35,319	140	14,538	49,856	29%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

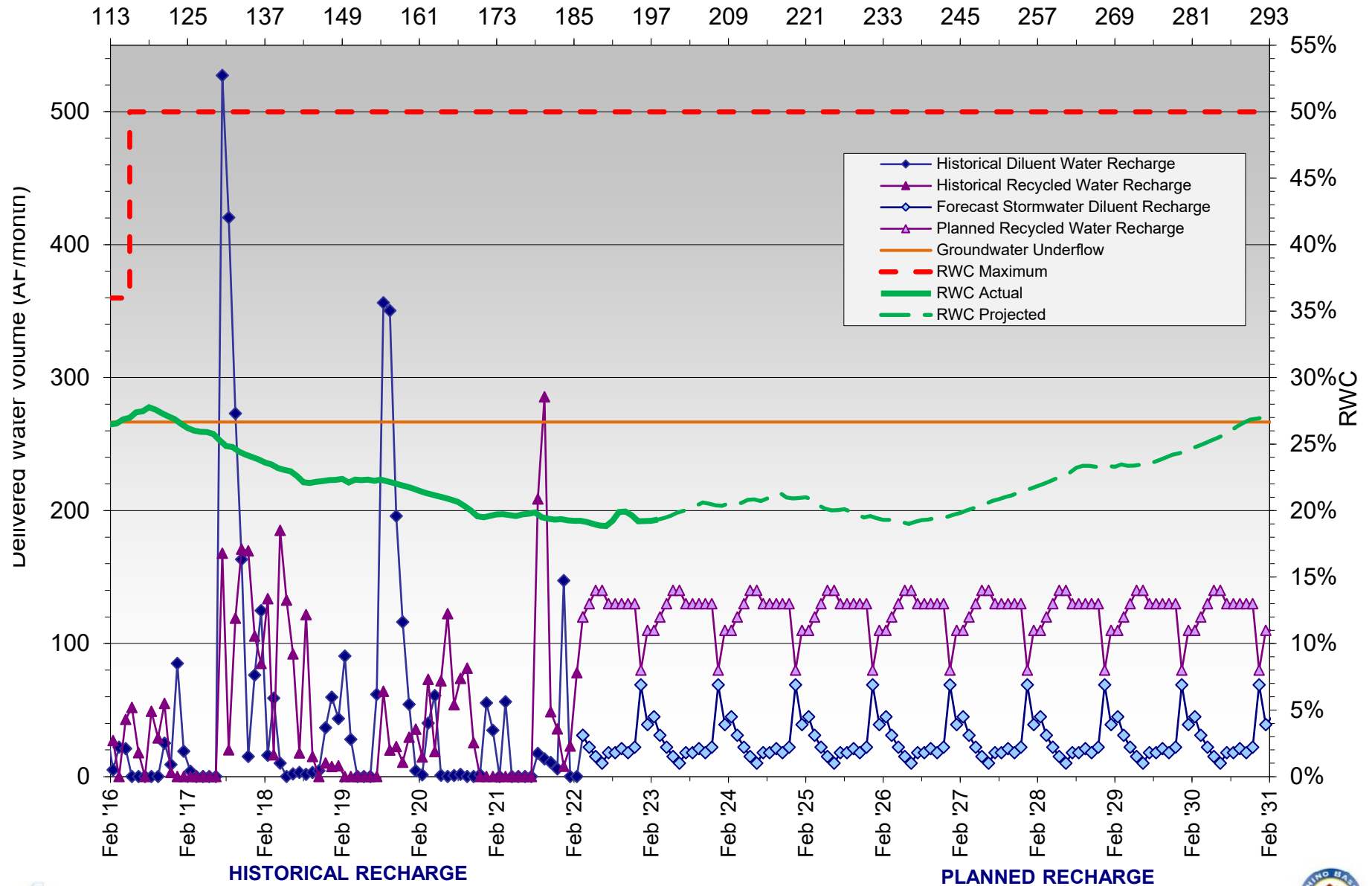
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan for Hickory Basin

Months Since Initial Recycled Water Delivery



# RWC Management Plan for RP3 Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date		No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120- Month Total (AF)	RW (AF)	RW 120- Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	85	18	0	904	922	87,904	99	15,647	103,551	15%	HISTORICAL
	Aug '16	86	32	0	904	936	88,804	289	15,936	104,740	15%	
	Sep '16	87	9	0	904	913	89,682	551	16,487	106,169	16%	
	Oct '16	88	105	0	904	1,009	90,657	392	16,879	107,536	16%	
	Nov '16	89	65	0	904	969	91,590	688	17,567	109,157	16%	
	Dec '16	90	336	0	904	1,240	92,804	548	18,115	110,919	16%	
	Jan '17	91	588	0	904	1,492	94,274	431	18,546	112,820	16%	
	Feb '17	92	235	0	904	1,139	95,394	381	18,927	114,321	17%	
	Mar '17	93	11	0	904	915	96,301	760	19,687	115,988	17%	
	Apr '17	94	24	0	904	928	97,225	513	20,200	117,425	17%	
May '17	95	5	0	904	909	98,132	655	20,855	118,987	18%		
Jun '17	96	9	386	904	1,299	99,428	463	21,318	120,746	18%		
2017/18	Jul '17	97	5	246	904	1,154	100,583	225	21,543	122,126	18%	
	Aug '17	98	15	418	904	1,337	101,917	208	21,751	123,668	18%	
	Sep '17	99	15	201	904	1,119	103,033	223	21,974	125,007	18%	
	Oct '17	100	4	31	904	938	103,962	54	22,028	125,990	17%	
	Nov '17	101	0	0	904	904	104,819	31	22,058	126,877	17%	
	Dec '17	102	1	0	904	905	105,616	67	22,125	127,741	17%	
	Jan '18	103	92	0	904	995	106,446	67	22,192	128,638	17%	
	Feb '18	104	19	0	904	923	107,239	12	22,204	129,443	17%	
	Mar '18	105	104	0	904	1,007	108,242	10	22,214	130,455	17%	
	Apr '18	106	30	0	904	933	109,172	72	22,286	131,458	17%	
May '18	107	15	0	904	919	110,057	70	22,356	132,413	17%		
Jun '18	108	1	0	904	904	110,957	49	22,405	133,362	17%		
2018/19	Jul '18	109	41	0	904	944	111,901	155	22,560	134,461	17%	
	Aug '18	110	9	0	904	913	112,798	158	22,718	135,516	17%	
	Sep '18	111	7	0	904	911	113,693	198	22,916	136,609	17%	
	Oct '18	112	12	0	904	916	114,596	158	23,075	137,670	17%	
	Nov '18	113	4	0	904	908	115,477	188	23,262	138,739	17%	
	Dec '18	114	44	0	904	948	116,269	169	23,431	139,700	17%	
	Jan '19	115	97	0	904	1,001	117,258	69	23,499	140,757	17%	
	Feb '19	116	125	0	904	1,029	118,013	0	23,499	141,513	17%	
	Mar '19	117	37	0	904	941	118,907	0	23,499	142,406	17%	
	Apr '19	118	2	0	904	906	119,795	17	23,516	143,311	16%	
May '19	119	21	0	904	924	120,713	0	23,516	144,229	16%		
Jun '19	120	0	0	904	904	121,617	0	23,410	145,027	16%		
2019/20	Jul '19	121	3	0	904	907	122,501	330	23,656	146,157	16%	
	Aug '19	122	6	0	904	910	123,381	384	23,892	147,273	16%	
	Sep '19	123	6	0	904	910	124,255	426	24,098	148,353	16%	
	Oct '19	124	13	78	904	995	124,223	532	24,427	148,650	16%	
	Nov '19	125	69	148	904	1,120	124,340	671	24,811	149,151	17%	
	Dec '19	126	123	107	904	1,133	124,196	793	25,501	149,697	17%	
	Jan '20	127	7	46	904	957	123,723	365	25,790	149,513	17%	
	Feb '20	128	0	0	904	904	123,353	449	26,126	149,479	17%	
	Mar '20	129	193	0	904	1,096	123,442	613	26,527	149,968	18%	
	Apr '20	130	201	0	904	1,104	123,514	459	26,915	150,429	18%	
May '20	131	1	0	904	905	123,466	298	26,941	150,407	18%		
Jun '20	132	1	0	904	905	123,425	328	27,008	150,434	18%		
2020/21	Jul '20	133	3	0	904	906	123,421	354	27,133	150,554	18%	
	Aug '20	134	4	0	904	908	123,419	530	27,482	150,901	18%	
	Sep '20	135	7	0	904	910	123,401	732	28,166	151,566	19%	
	Oct '20	136	6	0	904	909	123,335	803	28,946	152,281	19%	
	Nov '20	137	8	0	904	911	123,197	801	29,554	152,751	19%	
	Dec '20	138	41	0	904	945	122,494	815	30,247	152,741	20%	
	Jan '21	139	171	0	904	1,075	122,430	481	30,625	153,055	20%	
	Feb '21	140	10	0	904	913	122,125	374	30,822	152,947	20%	
	Mar '21	141	103	0	904	1,007	121,814	352	31,048	152,862	20%	
	Apr '21	142	17	0	904	921	121,689	471	31,283	152,971	20%	
May '21	143	23	0	904	927	121,351	499	31,605	152,956	21%		
Jun '21	144	9	0	904	913	120,743	452	31,874	152,617	21%		



# RWC Management Plan for RP3 Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	145	40	0	904	944	119,916	379	31,999	151,915	21%
	Aug '21	146	8	0	904	911	119,606	499	32,483	152,089	21%
	Sep '21	147	4	0	904	907	118,995	589	33,042	152,037	22%
	Oct '21	148	9	0	904	913	118,783	541	33,401	152,184	22%
	Nov '21	149	5	0	904	908	118,666	558	33,862	152,528	22%
	Dec '21	150	155	0	904	1,058	118,742	279	33,977	152,720	22%
	Jan '22	151	11	0	904	915	118,649	387	34,273	152,922	22%
	Feb '22	152	10	0	904	913	118,483	301	34,414	152,897	23%
	Mar '22	153	117		904	1,021	118,378	450	34,770	153,148	23%
	Apr '22	154	68		904	972	118,226	500	35,123	153,349	23%
	May '22	155	34		904	938	118,199	540	35,288	153,487	23%
	Jun '22	156	16		904	920	118,155	550	35,657	153,812	23%
2022/23	Jul '22	157	31		904	935	118,136	540	36,185	154,321	23%
	Aug '22	158	21		904	925	118,145	550	36,735	154,880	24%
	Sep '22	159	29		904	933	118,170	540	37,275	155,445	24%
	Oct '22	160	47		904	951	118,199	520	37,795	155,994	24%
	Nov '22	161	60		904	964	118,158	510	38,151	156,309	24%
	Dec '22	162	193		904	1,097	117,990	380	38,311	156,301	25%
	Jan '23	163	154		904	1,058	117,997	420	38,378	156,375	25%
	Feb '23	164	126		904	1,030	118,010	440	38,521	156,531	25%
	Mar '23	165	117		904	1,021	118,049	450	38,696	156,745	25%
	Apr '23	166	68		904	972	118,077	500	38,810	156,887	25%
	May '23	167	34		904	938	118,057	540	39,088	157,145	25%
	Jun '23	168	16		904	920	118,030	550	39,399	157,429	25%
2023/24	Jul '23	169	31		904	935	117,989	540	39,865	157,854	25%
	Aug '23	170	21		904	925	117,942	550	40,199	158,141	25%
	Sep '23	171	29		904	933	117,913	540	40,386	158,299	26%
	Oct '23	172	47		904	951	117,907	520	40,742	158,649	26%
	Nov '23	173	60		904	964	117,907	510	41,248	159,155	26%
	Dec '23	174	193		904	1,097	118,028	380	41,377	159,405	26%
	Jan '24	175	154		904	1,058	118,053	420	41,725	159,778	26%
	Feb '24	176	126		904	1,030	117,981	440	42,165	160,146	26%
	Mar '24	177	117		904	1,021	117,835	450	42,615	160,450	27%
	Apr '24	178	68		904	972	117,818	500	43,066	160,884	27%
	May '24	179	34		904	938	117,849	540	43,606	161,455	27%
	Jun '24	180	16		904	920	117,859	550	43,984	161,843	27%
2024/25	Jul '24	181	31		904	935	117,881	540	44,340	162,221	27%
	Aug '24	182	21		904	925	117,879	550	44,698	162,577	27%
	Sep '24	183	29		904	933	117,868	540	44,995	162,863	28%
	Oct '24	184	47		904	951	117,890	520	45,180	163,070	28%
	Nov '24	185	60		904	964	117,838	510	45,440	163,278	28%
	Dec '24	186	193		904	1,097	117,612	380	45,814	163,426	28%
	Jan '25	187	154		904	1,058	117,634	420	46,205	163,839	28%
	Feb '25	188	126		904	1,030	117,665	440	46,402	164,067	28%
	Mar '25	189	117		904	1,021	117,713	450	46,527	164,240	28%
	Apr '25	190	68		904	972	117,740	500	46,745	164,485	28%
	May '25	191	34		904	938	117,653	540	46,937	164,590	29%
	Jun '25	192	16		904	920	117,657	550	46,956	164,613	29%
2025/26	Jul '25	193	31		904	935	117,554	540	47,228	164,782	29%
	Aug '25	194	21		904	925	117,544	550	47,637	165,181	29%
	Sep '25	195	29		904	933	117,450	540	47,958	165,408	29%
	Oct '25	196	47		904	951	117,411	520	48,115	165,526	29%
	Nov '25	197	60		904	964	117,417	510	48,397	165,814	29%
	Dec '25	198	193		904	1,097	117,422	380	48,503	165,925	29%
	Jan '26	199	154		904	1,058	117,337	420	48,533	166,870	29%
	Feb '26	200	126		904	1,030	117,409	440	48,615	166,024	29%
	Mar '26	201	117		904	1,021	117,318	450	48,891	166,209	29%
	Apr '26	202	68		904	972	117,336	500	49,144	166,480	30%
	May '26	203	34		904	938	117,322	540	49,309	166,631	30%
	Jun '26	204	16		904	920	117,327	550	49,614	166,941	30%

P L A N N E D



# RWC Management Plan for RP3 Basins

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	205	31		904	935	117,340	540	50,055	167,395	30%
	Aug '26	206	21		904	925	117,329	550	50,316	167,645	30%
	Sep '26	207	29		904	933	117,349	540	50,305	167,654	30%
	Oct '26	208	47		904	951	117,291	520	50,433	167,724	30%
	Nov '26	209	60		904	964	117,286	510	50,255	167,541	30%
	Dec '26	210	193		904	1,097	117,143	380	50,087	167,230	30%
	Jan '27	211	154		904	1,058	116,709	420	50,076	166,785	30%
	Feb '27	212	126		904	1,030	116,600	440	50,135	166,735	30%
	Mar '27	213	117		904	1,021	116,706	450	49,825	166,531	30%
	Apr '27	214	68		904	972	116,750	500	49,812	166,562	30%
	May '27	215	34		904	938	116,779	540	49,697	166,476	30%
	Jun '27	216	16		904	920	116,400	550	49,784	166,184	30%
2027/28	Jul '27	217	31		904	935	116,180	540	50,099	166,279	30%
	Aug '27	218	21		904	925	115,768	550	50,441	166,209	30%
	Sep '27	219	29		904	933	115,581	540	50,758	166,339	31%
	Oct '27	220	47		904	951	115,594	520	51,224	166,818	31%
	Nov '27	221	60		904	964	115,654	510	51,704	167,358	31%
	Dec '27	222	193		904	1,097	115,846	380	52,017	167,863	31%
	Jan '28	223	154		904	1,058	115,908	420	52,370	168,278	31%
	Feb '28	224	126		904	1,030	116,015	440	52,798	168,813	31%
	Mar '28	225	117		904	1,021	116,028	450	53,238	169,267	31%
	Apr '28	226	68		904	972	116,067	500	53,666	169,733	32%
	May '28	227	34		904	938	116,086	540	54,136	170,222	32%
	Jun '28	228	16		904	920	116,101	550	54,637	170,738	32%
2028/29	Jul '28	229	31		904	935	116,092	540	55,022	171,114	32%
	Aug '28	230	21		904	925	116,103	550	55,414	171,517	32%
	Sep '28	231	29		904	933	116,125	540	55,756	171,881	32%
	Oct '28	232	47		904	951	116,160	520	56,117	172,278	33%
	Nov '28	233	60		904	964	116,216	510	56,440	172,656	33%
	Dec '28	234	193		904	1,097	116,365	380	56,651	173,016	33%
	Jan '29	235	154		904	1,058	116,422	420	57,003	173,424	33%
	Feb '29	236	126		904	1,030	116,423	440	57,443	173,865	33%
	Mar '29	237	117		904	1,021	116,503	450	57,893	174,396	33%
	Apr '29	238	68		904	972	116,569	500	58,376	174,945	33%
	May '29	239	34		904	938	116,583	540	58,916	175,498	34%
	Jun '29	240	16		904	920	116,599	550	59,466	176,064	34%
2029/30	Jul '29	241	31		904	935	116,627	540	59,676	176,303	34%
	Aug '29	242	21		904	925	116,641	550	59,842	176,483	34%
	Sep '29	243	29		904	933	116,665	540	59,956	176,621	34%
	Oct '29	244	47		904	951	116,620	520	59,944	176,565	34%
	Nov '29	245	60		904	964	116,464	510	59,783	176,247	34%
	Dec '29	246	193		904	1,097	116,427	380	59,370	175,797	34%
	Jan '30	247	154		904	1,058	116,528	420	59,425	175,953	34%
	Feb '30	248	126		904	1,030	116,654	440	59,416	176,070	34%
	Mar '30	249	117		904	1,021	116,579	450	59,252	175,831	34%
	Apr '30	250	68		904	972	116,446	500	59,293	175,739	34%
	May '30	251	34		904	938	116,479	540	59,535	176,014	34%
	Jun '30	252	16		904	920	116,494	550	59,757	176,251	34%
2030/31	Jul '30	253	31		904	935	116,523	540	59,943	176,466	34%
	Aug '30	254	21		904	925	116,539	550	59,963	176,502	34%
	Sep '30	255	29		904	933	116,562	540	59,771	176,333	34%
	Oct '30	256	47		904	951	116,603	520	59,488	176,091	34%
	Nov '30	257	60		904	964	116,655	510	59,197	175,852	34%
	Dec '30	258	193		904	1,097	116,807	380	58,762	175,569	33%
	Jan '31	259	154		904	1,058	116,790	420	58,701	175,491	33%
	Feb '31	260	126		904	1,030	116,907	440	58,767	175,673	33%
	Mar '31	261	117		904	1,021	116,921	450	58,865	175,785	33%
	Apr '31	262	68		904	972	116,972	500	58,893	175,865	33%
	May '31	263	34		904	938	116,983	540	58,935	175,917	34%
	Jun '31	264	16		904	920	116,989	550	59,032	176,022	34%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

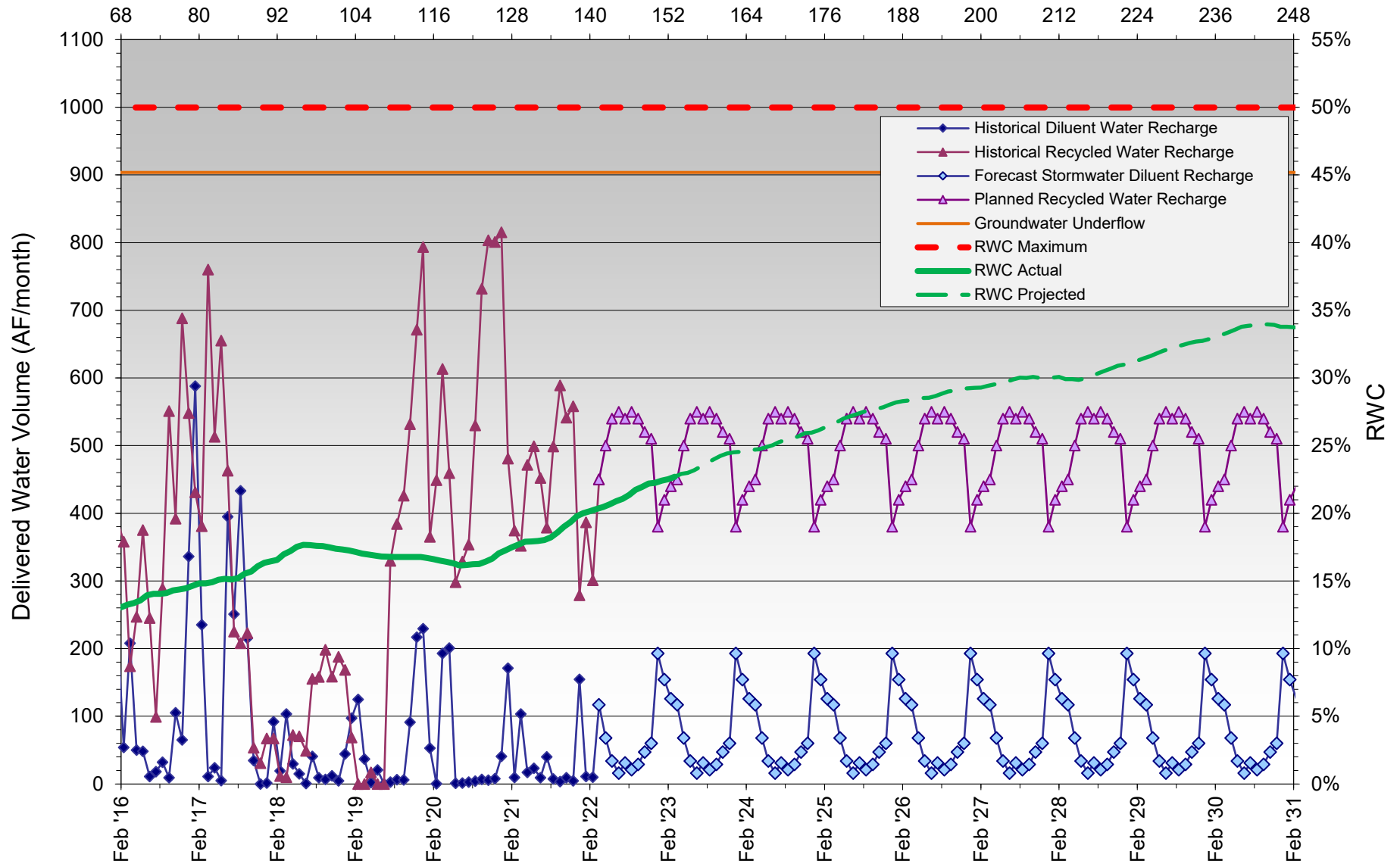
RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period





# RWC Management Plan - RP3 Basin

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	72	0	0	139	139	23,171	0	1,759	24,930	7%
	Aug '16	73	0	0	139	139	22,280	0	1,759	24,039	7%
	Sep '16	74	0	0	139	139	21,413	0	1,759	23,172	8%
	Oct '16	75	16	0	139	155	20,557	0	1,759	22,316	8%
	Nov '16	76	12	14	139	165	20,157	0	1,759	21,916	8%
	Dec '16	77	156	0	139	295	19,433	0	1,759	21,192	8%
	Jan '17	78	488	0	139	627	19,123	0	1,759	20,882	8%
	Feb '17	79	93	0	278	371	19,152	0	1,759	20,911	8%
	Mar '17	80	3	0	278	281	19,428	0	1,759	21,187	8%
	Apr '17	81	1	0	278	279	19,704	0	1,759	21,463	8%
	May '17	82	16	0	278	294	19,967	0	1,759	21,726	8%
	Jun '17	83	0	526	278	804	20,741	0	1,759	22,500	8%
2017/18	Jul '17	84	0	567	278	845	21,585	0	1,759	23,344	8%
	Aug '17	85	48	117	278	443	22,028	0	1,759	23,787	7%
	Sep '17	86	0	151	278	429	22,454	0	1,759	24,213	7%
	Oct '17	87	0	503	278	781	23,229	0	1,759	24,988	7%
	Nov '17	88	0	54	278	332	23,524	0	1,759	25,283	7%
	Dec '17	89	0	1,104	278	1,382	24,831	0	1,759	26,590	7%
	Jan '18	90	104	893	278	1,275	25,553	0	1,759	27,312	6%
	Feb '18	91	21	0	278	299	25,823	0	1,759	27,582	6%
	Mar '18	92	128	0	278	405	26,228	0	1,759	27,987	6%
	Apr '18	93	0	0	278	278	26,506	0	1,759	28,265	6%
	May '18	94	4	0	278	282	26,741	0	1,759	28,500	6%
	Jun '18	95	0	0	278	278	27,019	0	1,759	28,778	6%
2018/19	Jul '18	96	2	0	278	280	27,299	0	1,759	29,058	6%
	Aug '18	97	0	0	278	278	27,577	0	1,759	29,336	6%
	Sep '18	98	0	0	278	278	27,855	0	1,759	29,614	6%
	Oct '18	99	7	0	278	285	28,140	0	1,759	29,899	6%
	Nov '18	100	31	0	278	309	28,441	0	1,759	30,200	6%
	Dec '18	101	45	0	278	323	28,678	0	1,759	30,437	6%
	Jan '19	102	318	0	278	596	29,258	0	1,759	31,017	6%
	Feb '19	103	429	0	278	706	29,858	0	1,759	31,617	6%
	Mar '19	104	313	0	278	591	30,440	0	1,759	32,199	5%
	Apr '19	105	0	0	278	278	30,718	0	1,759	32,477	5%
	May '19	106	25	0	278	303	31,021	0	1,759	32,780	5%
	Jun '19	107	0	857	278	1,134	32,156	0	1,759	33,915	5%
2019/20	Jul '19	108	0	766	278	1,044	33,200	0	1,759	34,959	5%
	Aug '19	109	0	597	278	875	34,075	0	1,759	35,834	5%
	Sep '19	110	0	117	278	395	34,469	0	1,759	36,228	5%
	Oct '19	111	0	0	278	278	34,691	0	1,759	36,450	5%
	Nov '19	112	155	113	278	546	35,216	0	1,759	36,975	5%
	Dec '19	113	211	32	278	520	35,403	0	1,759	37,162	5%
	Jan '20	114	31	52	278	361	35,474	0	1,759	37,233	5%
	Feb '20	115	8	0	278	286	35,537	0	1,759	37,296	5%
	Mar '20	116	254	0	278	532	36,053	0	1,759	37,812	5%
	Apr '20	117	363	0	278	640	36,640	0	1,759	38,399	5%
	May '20	118	3	0	278	281	36,921	0	1,759	38,680	5%
	Jun '20	119	0	0	278	278	37,199	0	1,759	38,958	5%
2020/21	Jul '20	120	0	0	278	278	37,477	0	1,709	39,186	4%
	Aug '20	121	0	0	278	278	37,755	267	1,932	39,687	5%
	Sep '20	122	0	0	278	278	38,033	201	2,091	40,123	5%
	Oct '20	123	0	0	278	278	38,216	260	2,278	40,494	6%
	Nov '20	124	55	0	278	333	38,329	290	2,555	40,883	6%
	Dec '20	125	161	0	278	439	38,052	211	2,734	40,786	7%
	Jan '21	126	143	0	278	421	38,320	133	2,795	41,116	7%
	Feb '21	127	24	0	278	302	38,341	221	3,016	41,357	7%
	Mar '21	128	61	0	278	339	38,408	202	3,218	41,626	8%
	Apr '21	129	0	0	278	278	38,547	275	3,493	42,040	8%
	May '21	130	0	0	278	278	38,141	247	3,704	41,845	9%
	Jun '21	131	0	0	278	278	37,111	325	3,995	41,105	10%

HISTORICAL

ACTUAL



# RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	132	6	0	278	283	36,244	316	4,197	40,442	10%
	Aug '21	133	0	0	278	278	36,372	329	4,436	40,808	11%
	Sep '21	134	0	0	278	278	36,306	141	4,577	40,883	11%
	Oct '21	135	7	0	278	285	36,412	230	4,807	41,219	12%
	Nov '21	136	0	0	278	278	36,519	220	5,027	41,546	12%
	Dec '21	137	732	0	278	1,010	37,370	80	5,107	42,477	12%
	Jan '22	138	0	0	278	278	37,454	110	5,058	42,512	12%
	Feb '22	139	11	0	278	288	37,549	160	5,144	42,693	12%
	Mar '22	140	109		278	387	37,637	140	5,268	42,905	12%
	Apr '22	141	108		278	386	37,808	140	5,404	43,212	13%
	May '22	142	18		278	296	37,965	230	5,631	43,596	13%
	Jun '22	143	2		278	280	38,106	250	5,827	43,933	13%
2022/23	Jul '22	144	1		278	279	38,246	250	5,955	44,201	13%
	Aug '22	145	3		278	281	38,387	250	6,121	44,508	14%
	Sep '22	146	3		278	281	38,529	250	6,332	44,861	14%
	Oct '22	147	18		278	296	38,685	230	6,499	45,184	14%
	Nov '22	148	30		278	308	38,840	220	6,653	45,493	15%
	Dec '22	149	170		278	448	39,070	80	6,732	45,802	15%
	Jan '23	150	137		278	415	39,325	110	6,783	46,108	15%
	Feb '23	151	88		278	366	39,543	160	6,924	46,467	15%
	Mar '23	152	109		278	387	39,778	140	7,011	46,789	15%
	Apr '23	153	108		278	386	40,020	140	7,110	47,130	15%
	May '23	154	18		278	296	40,172	230	7,314	47,487	15%
	Jun '23	155	2		278	280	40,313	250	7,562	47,876	16%
2023/24	Jul '23	156	1		278	279	40,453	250	7,812	48,265	16%
	Aug '23	157	3		278	281	40,595	250	8,062	48,657	17%
	Sep '23	158	3		278	281	40,737	250	8,158	48,895	17%
	Oct '23	159	18		278	296	40,883	230	8,319	49,202	17%
	Nov '23	160	30		278	308	41,013	220	8,530	49,543	17%
	Dec '23	161	170		278	448	41,316	80	8,610	49,926	17%
	Jan '24	162	137		278	415	41,592	110	8,708	50,300	17%
	Feb '24	163	88		278	366	41,750	160	8,852	50,602	17%
	Mar '24	164	109		278	387	41,978	140	8,992	50,970	18%
	Apr '24	165	108		278	386	42,208	140	9,130	51,338	18%
	May '24	166	18		278	296	42,365	230	9,348	51,713	18%
	Jun '24	167	2		278	280	42,506	250	9,598	52,104	18%
2024/25	Jul '24	168	1		278	279	42,646	250	9,848	52,494	19%
	Aug '24	169	3		278	281	42,782	250	10,098	52,880	19%
	Sep '24	170	3		278	281	42,923	250	10,347	53,270	19%
	Oct '24	171	18		278	296	43,080	230	10,577	53,657	20%
	Nov '24	172	30		278	308	43,231	220	10,797	54,028	20%
	Dec '24	173	170		278	448	43,293	80	10,877	54,170	20%
	Jan '25	174	137		278	415	43,575	110	10,987	54,562	20%
	Feb '25	175	88		278	366	43,762	160	11,147	54,910	20%
	Mar '25	176	109		278	387	44,008	140	11,287	55,296	20%
	Apr '25	177	108		278	386	44,255	140	11,427	55,682	21%
	May '25	178	18		278	296	44,395	230	11,657	56,052	21%
	Jun '25	179	2		278	280	44,536	250	11,907	56,443	21%
2025/26	Jul '25	180	1		278	279	44,667	250	12,157	56,824	21%
	Aug '25	181	3		278	281	44,809	250	12,407	57,216	22%
	Sep '25	182	3		278	281	44,898	250	12,657	57,555	22%
	Oct '25	183	18		278	296	45,008	230	12,887	57,895	22%
	Nov '25	184	30		278	308	45,176	220	13,107	58,283	22%
	Dec '25	185	170		278	448	45,405	80	13,187	58,592	23%
	Jan '26	186	137		278	415	45,437	110	13,297	58,734	23%
	Feb '26	187	88		278	366	45,631	160	13,457	59,088	23%
	Mar '26	188	109		278	387	45,791	140	13,597	59,388	23%
	Apr '26	189	108		278	386	46,009	140	13,737	59,746	23%
	May '26	190	18		278	296	46,165	230	13,967	60,132	23%
	Jun '26	191	2		278	280	46,306	250	14,217	60,523	23%

P L A N N E D



# RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	192	1		278	279	46,446	250	14,467	60,913	24%
	Aug '26	193	3		278	281	46,588	250	14,717	61,305	24%
	Sep '26	194	3		278	281	46,730	250	14,967	61,697	24%
	Oct '26	195	18		278	296	46,871	230	15,197	62,068	24%
	Nov '26	196	30		278	308	47,013	220	15,417	62,431	25%
	Dec '26	197	170		278	448	47,166	80	15,497	62,664	25%
	Jan '27	198	137		278	415	46,954	110	15,607	62,561	25%
	Feb '27	199	88		278	366	46,949	160	15,767	62,716	25%
	Mar '27	200	109		278	387	47,055	140	15,907	62,962	25%
	Apr '27	201	108		278	386	47,162	140	16,047	63,209	25%
	May '27	202	18		278	296	47,164	230	16,277	63,441	26%
	Jun '27	203	2		278	280	46,640	250	16,527	63,167	26%
2027/28	Jul '27	204	1		278	279	46,074	250	16,777	62,852	27%
	Aug '27	205	3		278	281	45,913	250	17,027	62,940	27%
	Sep '27	206	3		278	281	45,765	250	17,277	63,042	27%
	Oct '27	207	18		278	296	45,280	230	17,507	62,788	28%
	Nov '27	208	30		278	308	45,256	220	17,727	62,983	28%
	Dec '27	209	170		278	448	44,322	80	17,807	62,129	29%
	Jan '28	210	137		278	415	43,462	110	17,917	61,379	29%
	Feb '28	211	88		278	366	43,529	160	18,077	61,606	29%
	Mar '28	212	109		278	387	43,511	140	18,217	61,728	30%
	Apr '28	213	108		278	386	43,619	140	18,357	61,976	30%
	May '28	214	18		278	296	43,632	230	18,587	62,219	30%
	Jun '28	215	2		278	280	43,634	250	18,837	62,471	30%
2028/29	Jul '28	216	1		278	279	43,634	250	19,087	62,721	30%
	Aug '28	217	3		278	281	43,637	250	19,337	62,974	31%
	Sep '28	218	3		278	281	43,640	250	19,587	63,227	31%
	Oct '28	219	18		278	296	43,650	230	19,817	63,468	31%
	Nov '28	220	30		278	308	43,649	220	20,037	63,687	31%
	Dec '28	221	170		278	448	43,774	80	20,117	63,891	31%
	Jan '29	222	137		278	415	43,593	110	20,227	63,820	32%
	Feb '29	223	88		278	366	43,252	160	20,387	63,639	32%
	Mar '29	224	109		278	387	43,049	140	20,527	63,576	32%
	Apr '29	225	108		278	386	43,157	140	20,667	63,824	32%
	May '29	226	18		278	296	43,149	230	20,897	64,046	33%
	Jun '29	227	2		278	280	42,295	250	21,147	63,442	33%
2029/30	Jul '29	228	1		278	279	41,530	250	21,397	62,927	34%
	Aug '29	229	3		278	281	40,936	250	21,647	62,583	35%
	Sep '29	230	3		278	281	40,822	250	21,897	62,719	35%
	Oct '29	231	18		278	296	40,840	230	22,127	62,967	35%
	Nov '29	232	30		278	308	40,602	220	22,347	62,949	36%
	Dec '29	233	170		278	448	40,529	80	22,427	62,956	36%
	Jan '30	234	137		278	415	40,583	110	22,537	63,120	36%
	Feb '30	235	88		278	366	40,662	160	22,697	63,359	36%
	Mar '30	236	109		278	387	40,518	140	22,837	63,355	36%
	Apr '30	237	108		278	386	40,263	140	22,977	63,240	36%
	May '30	238	18		278	296	40,278	230	23,207	63,485	37%
	Jun '30	239	2		278	280	40,280	250	23,457	63,737	37%
2030/31	Jul '30	240	1		278	279	40,281	250	23,707	63,988	37%
	Aug '30	241	3		278	281	40,284	250	23,691	63,975	37%
	Sep '30	242	3		278	281	40,287	250	23,740	64,027	37%
	Oct '30	243	18		278	296	40,305	230	23,709	64,014	37%
	Nov '30	244	30		278	308	40,280	220	23,640	63,920	37%
	Dec '30	245	170		278	448	40,289	80	23,508	63,797	37%
	Jan '31	246	137		278	415	40,283	110	23,485	63,768	37%
	Feb '31	247	88		278	366	40,347	160	23,424	63,771	37%
	Mar '31	248	109		278	387	40,395	140	23,362	63,757	37%
	Apr '31	249	108		278	386	40,503	140	23,227	63,730	36%
	May '31	250	18		278	296	40,521	230	23,210	63,731	36%
	Jun '31	251	2		278	280	40,523	250	23,136	63,658	36%

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

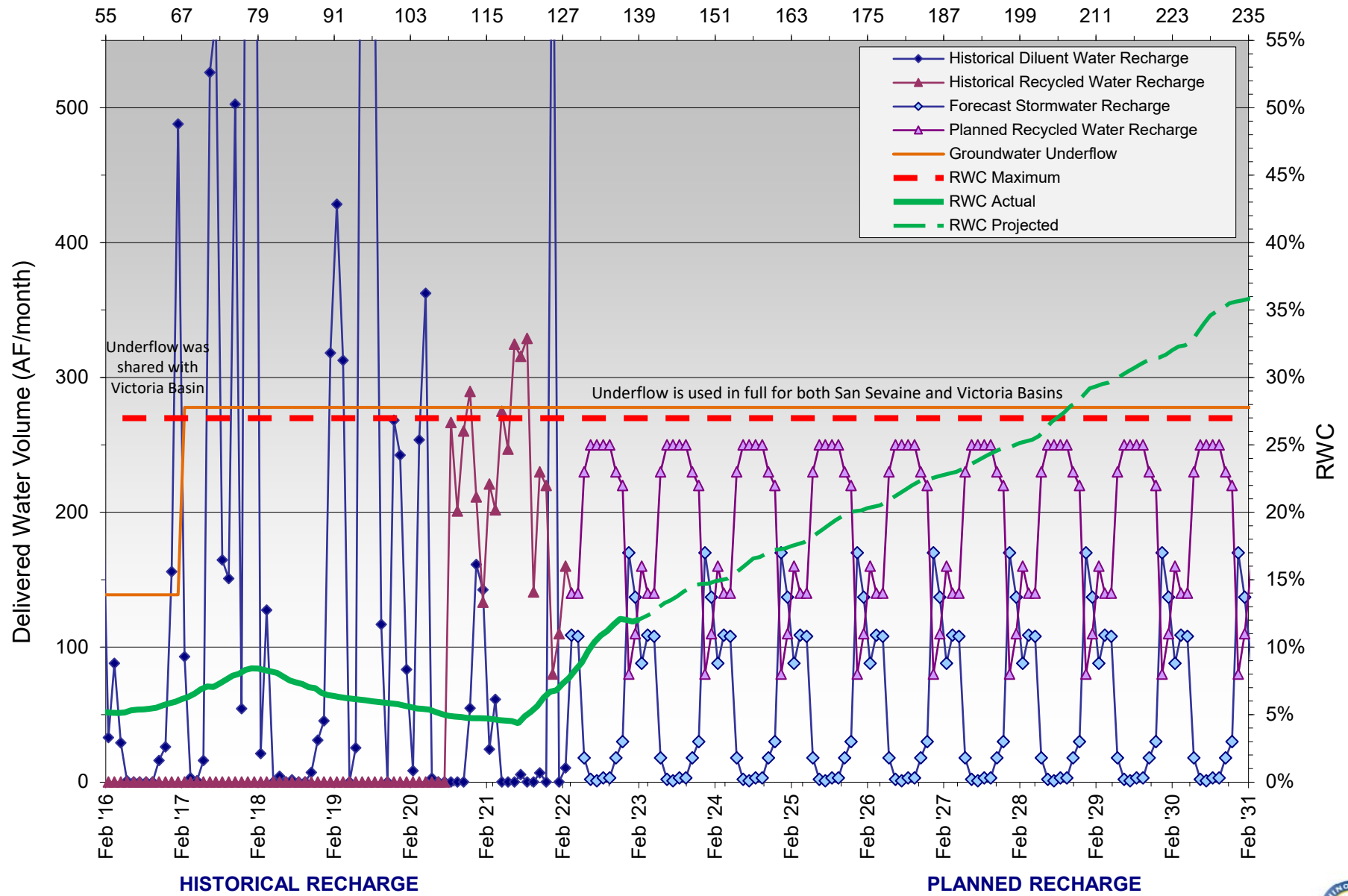
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - San Sevaine Basins 1 through 5

Months Since Initial Recycled Water Delivery





# RWC Management Plan for Turner Basin Cells 1 & 2

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	120	4	0	67	71	15,926	89	3,895	19,821	20%
	Aug '16	121	22	0	67	89	15,995	52	3,834	19,829	19%
	Sep '16	122	18	0	67	85	15,974	40	3,760	19,733	19%
	Oct '16	123	38	0	67	105	15,915	104	3,864	19,778	20%
	Nov '16	124	68	16	67	152	16,037	12	3,876	19,913	19%
	Dec '16	125	239	0	67	306	16,313	71	3,843	20,157	19%
	Jan '17	126	233	0	67	300	16,586	0	3,773	20,359	19%
	Feb '17	127	130	0	67	197	16,769	66	3,795	20,563	18%
	Mar '17	128	14	0	67	81	16,824	139	3,877	20,701	19%
	Apr '17	129	9	0	67	76	16,895	110	3,973	20,868	19%
	May '17	130	6	0	67	73	16,957	56	3,950	20,907	19%
	Jun '17	131	3	0	67	70	17,026	90	4,037	21,063	19%
2017/18	Jul '17	132	3	0	67	70	17,092	156	4,193	21,285	20%
	Aug '17	133	3	0	67	70	17,125	43	4,236	21,361	20%
	Sep '17	134	2	0	67	69	17,190	70	4,306	21,496	20%
	Oct '17	135	3	0	67	70	17,198	234	4,540	21,738	21%
	Nov '17	136	3	0	67	70	17,172	147	4,687	21,859	21%
	Dec '17	137	1	0	67	68	17,025	156	4,843	21,868	22%
	Jan '18	138	37	0	67	104	16,819	26	4,869	21,688	22%
	Feb '18	139	19	0	67	87	16,654	0	4,869	21,523	23%
	Mar '18	140	208	0	67	275	16,912	15	4,884	21,796	22%
	Apr '18	141	6	0	67	73	16,972	33	4,917	21,889	22%
	May '18	142	6	0	67	73	16,901	0	4,917	21,819	23%
	Jun '18	143	2	0	67	69	16,960	83	5,001	21,960	23%
2018/19	Jul '18	144	3	0	67	70	17,023	68	5,069	22,091	23%
	Aug '18	145	3	0	67	70	17,090	94	5,162	22,252	23%
	Sep '18	146	7	0	67	74	17,038	20	5,183	22,220	23%
	Oct '18	147	15	0	67	82	17,039	0	5,155	22,194	23%
	Nov '18	148	59	0	67	126	17,084	0	5,125	22,209	23%
	Dec '18	149	55	0	67	122	16,862	0	5,125	21,987	23%
	Jan '19	150	179	0	67	246	17,080	0	5,125	22,204	23%
	Feb '19	151	190	0	67	257	16,992	0	5,125	22,116	23%
	Mar '19	152	114	0	67	181	17,126	0	5,125	22,251	23%
	Apr '19	153	12	0	67	79	17,195	0	5,125	22,319	23%
	May '19	154	134	0	67	201	17,378	0	5,095	22,472	23%
	Jun '19	155	3	0	67	70	17,371	0	5,086	22,456	23%
2019/20	Jul '19	156	4	0	67	72	17,410	0	5,086	22,496	23%
	Aug '19	157	5	0	67	72	17,464	75	5,141	22,605	23%
	Sep '19	158	5	0	67	72	17,508	16	5,139	22,647	23%
	Oct '19	159	5	0	67	72	17,433	0	5,139	22,572	23%
	Nov '19	160	91	0	67	159	17,475	0	5,139	22,614	23%
	Dec '19	161	259	0	67	327	17,333	0	5,139	22,473	23%
	Jan '20	162	17	0	67	85	17,057	0	5,139	22,196	23%
	Feb '20	163	220	0	67	288	16,947	0	5,139	22,086	23%
	Mar '20	164	192	0	67	259	17,105	0	5,139	22,244	23%
	Apr '20	165	159	0	67	226	17,106	0	5,139	22,245	23%
	May '20	166	9	0	67	77	17,077	0	5,139	22,216	23%
	Jun '20	167	2	0	67	69	17,079	0	5,139	22,218	23%
2020/21	Jul '20	168	0	0	67	67	17,056	0	5,139	22,195	23%
	Aug '20	169	0	0	67	67	17,003	0	5,131	22,134	23%
	Sep '20	170	0	0	67	67	16,946	0	5,131	22,077	23%
	Oct '20	171	1	12	67	80	16,868	5	5,136	22,004	23%
	Nov '20	172	5	118	67	191	16,826	0	5,136	21,963	23%
	Dec '20	173	72	7	67	146	16,540	0	5,136	21,676	24%
	Jan '21	174	189	25	67	281	16,563	0	5,136	21,700	24%
	Feb '21	175	12	75	67	155	16,418	0	5,136	21,554	24%
	Mar '21	176	103	0.0	67	170	16,257	0	5,136	21,393	24%
	Apr '21	177	24	0.0	67	91	15,948	0	5,136	21,084	24%
	May '21	178	62	0.0	67	129	15,828	0	5,136	20,965	24%
	Jun '21	179	136	2	67	205	15,876	0	5,136	21,013	24%

HISTORICAL

ACTUAL



# RWC Management Plan for Turner Basin Cells 1 & 2

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	180	38	104	67	208	16,002	0	5,136	21,138	24%
	Aug '21	181	20	66	67	154	16,066	0	5,136	21,202	24%
	Sep '21	182	51	32	67	149	16,146	1	5,137	21,283	24%
	Oct '21	183	30	26	67	124	16,203	0	5,137	21,340	24%
	Nov '21	184	28	33	67	128	16,182	0	5,096	21,279	24%
	Dec '21	185	383	13	67	463	16,490	0	5,036	21,526	23%
	Jan '22	186	24	0	67	91	16,368	0	5,007	21,375	23%
	Feb '22	187	31	0	67	98	16,178	0	5,007	21,185	24%
	Mar '22	188	129		67	196	16,012	0	5,007	21,019	24%
	Apr '22	189	91		67	158	15,845	0	5,007	20,852	24%
	May '22	190	49		67	116	15,880	0	5,007	20,887	24%
	Jun '22	191	24		67	91	15,884	0	5,007	20,891	24%
	Jul '22	192	13		67	80	15,814	0	5,007	20,821	24%
	Aug '22	193	19		67	86	15,797	0	5,007	20,804	24%
2022/23	Sep '22	194	38		67	105	15,804	0	5,007	20,811	24%
	Oct '22	195	43		67	110	15,786	0	5,007	20,793	24%
	Nov '22	196	68		67	135	15,793	0	5,007	20,800	24%
	Dec '22	197	201		67	268	15,704	0	5,007	20,711	24%
	Jan '23	198	144		67	211	15,699	0	5,007	20,706	24%
	Feb '23	199	147		67	214	15,730	0	4,981	20,711	24%
	Mar '23	200	129		67	196	15,811	0	4,960	20,771	24%
	Apr '23	201	91		67	158	15,902	0	4,960	20,862	24%
	May '23	202	49		67	116	15,951	0	4,960	20,911	24%
	Jun '23	203	24		67	91	15,975	0	4,960	20,935	24%
	Jul '23	204	13		67	80	15,988	0	4,960	20,948	24%
	Aug '23	205	19		67	86	16,007	0	4,960	20,967	24%
	Sep '23	206	38		67	105	16,045	0	4,960	21,005	24%
	Oct '23	207	43		67	110	16,088	0	4,960	21,048	24%
2023/24	Nov '23	208	68		67	135	16,156	0	4,960	21,116	23%
	Dec '23	209	201		67	268	16,285	100	4,886	21,171	23%
	Jan '24	210	144		67	211	16,384	100	4,884	21,268	23%
	Feb '24	211	147		67	214	16,437	100	4,914	21,351	23%
	Mar '24	212	129		67	196	16,503	100	4,994	21,497	23%
	Apr '24	213	91		67	158	16,533	100	4,989	21,522	23%
	May '24	214	49		67	116	16,561	100	4,953	21,514	23%
	Jun '24	215	24		67	91	16,562	90	5,011	21,573	23%
2024/25	Jul '24	216	13		67	80	16,575	50	5,061	21,636	23%
	Aug '24	217	19		67	86	16,518	30	4,886	21,404	23%
	Sep '24	218	38		67	105	16,502	10	4,768	21,270	22%
	Oct '24	219	43		67	110	16,506	0	4,705	21,211	22%
	Nov '24	220	68		67	135	16,466	0	4,647	21,113	22%
	Dec '24	221	201		67	268	16,412	100	4,745	21,157	22%
	Jan '25	222	144		67	211	16,439	100	4,845	21,284	23%
	Feb '25	223	147		67	214	16,493	100	4,885	21,378	23%
	Mar '25	224	129		67	196	16,570	100	4,842	21,412	23%
	Apr '25	225	91		67	158	16,661	100	4,942	21,603	23%
	May '25	226	49		67	116	16,710	100	5,042	21,752	23%
	Jun '25	227	24		67	91	16,734	90	5,132	21,866	23%
	Jul '25	228	13		67	80	16,747	50	5,182	21,929	24%
	Aug '25	229	19		67	86	16,765	30	5,212	21,977	24%
2025/26	Sep '25	230	38		67	105	16,683	10	5,077	21,760	23%
	Oct '25	231	43		67	110	16,628	0	4,839	21,467	23%
	Nov '25	232	68		67	135	16,651	0	4,760	21,411	22%
	Dec '25	233	201		67	268	16,747	100	4,636	21,383	22%
	Jan '26	234	144		67	211	16,622	100	4,634	21,256	22%
	Feb '26	235	147		67	214	16,718	100	4,536	21,254	21%
	Mar '26	236	129		67	196	16,682	100	4,475	21,157	21%
	Apr '26	237	91		67	158	16,754	100	4,447	21,201	21%
	May '26	238	49		67	116	16,765	100	4,391	21,156	21%
	Jun '26	239	24		67	91	16,784	90	4,322	21,106	20%

P L A N N E D



# RWC Management Plan for Turner Basin Cells 1 & 2

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

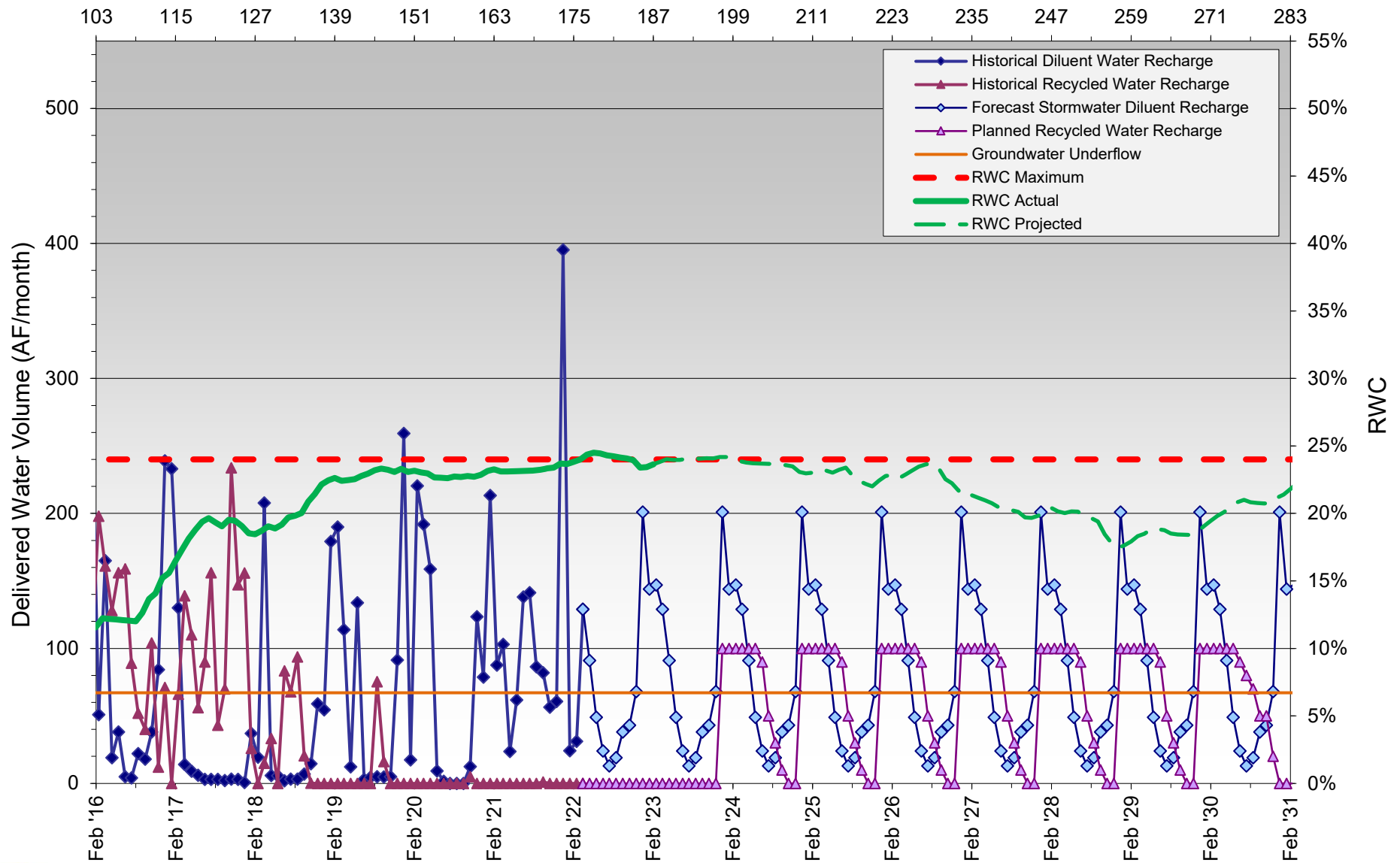
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	240	13		67	80	16,793	50	4,283	21,076	20%
	Aug '26	241	19		67	86	16,790	30	4,261	21,051	20%
	Sep '26	242	38		67	105	16,810	10	4,231	21,041	20%
	Oct '26	243	43		67	110	16,815	0	4,127	20,942	20%
	Nov '26	244	68		67	135	16,799	0	4,115	20,914	20%
	Dec '26	245	201		67	268	16,761	100	4,144	20,905	20%
	Jan '27	246	144		67	211	16,672	100	4,244	20,916	20%
	Feb '27	247	147		67	214	16,689	100	4,278	20,967	20%
	Mar '27	248	129		67	196	16,804	100	4,239	21,043	20%
	Apr '27	249	91		67	158	16,886	100	4,229	21,115	20%
	May '27	250	49		67	116	16,929	100	4,273	21,202	20%
	Jun '27	251	24		67	91	16,950	90	4,273	21,223	20%
2027/28	Jul '27	252	13		67	80	16,960	50	4,167	21,127	20%
	Aug '27	253	19		67	86	16,976	30	4,154	21,130	20%
	Sep '27	254	38		67	105	17,012	10	4,094	21,106	19%
	Oct '27	255	43		67	110	17,052	0	3,860	20,912	18%
	Nov '27	256	68		67	135	17,117	0	3,713	20,830	18%
	Dec '27	257	201		67	268	17,317	100	3,657	20,974	17%
	Jan '28	258	144		67	211	17,424	100	3,731	21,155	18%
	Feb '28	259	147		67	214	17,551	100	3,831	21,383	18%
	Mar '28	260	129		67	196	17,473	100	3,916	21,389	18%
	Apr '28	261	91		67	158	17,558	100	3,983	21,541	18%
	May '28	262	49		67	116	17,601	100	4,083	21,684	19%
	Jun '28	263	24		67	91	17,623	90	4,090	21,713	19%
2028/29	Jul '28	264	13		67	80	17,633	50	4,072	21,705	19%
	Aug '28	265	19		67	86	17,649	30	4,008	21,657	19%
	Sep '28	266	38		67	105	17,680	10	3,998	21,678	18%
	Oct '28	267	43		67	110	17,709	0	3,998	21,706	18%
	Nov '28	268	68		67	135	17,718	0	3,998	21,715	18%
	Dec '28	269	201		67	268	17,864	100	4,098	21,962	19%
	Jan '29	270	144		67	211	17,829	100	4,198	22,027	19%
	Feb '29	271	147		67	214	17,786	100	4,298	22,084	19%
	Mar '29	272	129		67	196	17,801	100	4,398	22,199	20%
	Apr '29	273	91		67	158	17,880	100	4,498	22,378	20%
	May '29	274	49		67	116	17,795	100	4,598	22,393	21%
	Jun '29	275	24		67	91	17,816	90	4,688	22,504	21%
2029/30	Jul '29	276	13		67	80	17,825	50	4,738	22,563	21%
	Aug '29	277	19		67	86	17,839	30	4,692	22,531	21%
	Sep '29	278	38		67	105	17,872	10	4,686	22,558	21%
	Oct '29	279	43		67	110	17,910	0	4,686	22,596	21%
	Nov '29	280	68		67	135	17,887	0	4,686	22,573	21%
	Dec '29	281	201		67	268	17,829	100	4,786	22,615	21%
	Jan '30	282	144		67	211	17,955	100	4,886	22,841	21%
	Feb '30	283	147		67	214	17,882	100	4,986	22,868	22%
	Mar '30	284	129		67	196	17,819	100	5,086	22,905	22%
	Apr '30	285	91		67	158	17,751	100	5,186	22,937	23%
	May '30	286	49		67	116	17,791	100	5,286	23,077	23%
	Jun '30	287	24		67	91	17,813	90	5,376	23,189	23%
2030/31	Jul '30	288	13		67	80	17,826	80	5,456	23,282	23%
	Aug '30	289	19		67	86	17,845	70	5,526	23,371	24%
	Sep '30	290	38		67	105	17,883	50	5,576	23,459	24%
	Oct '30	291	43		67	110	17,914	50	5,621	23,535	24%
	Nov '30	292	68		67	135	17,859	20	5,641	23,500	24%
	Dec '30	293	201		67	268	17,981	0	5,641	23,622	24%
	Jan '31	294	144		67	211	17,912	0	5,641	23,553	24%
	Feb '31	295	147		67	214	17,971	0	5,641	23,612	24%
	Mar '31	296	129		67	196	17,997	0	5,641	23,638	24%
	Apr '31	297	91		67	158	18,064	0	5,641	23,705	24%
	May '31	298	49		67	116	18,052	40	5,681	23,733	24%
	Jun '31	299	24		67	91	17,938	70	5,751	23,689	24%
<b>Notes:</b> DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow. RW = Recycled Water RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water. While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations. RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period											

P L A N N E D



# RWC Management Plan for Turner Basin Cells 1 & 2

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for Turner Basin Cells 3 & 4

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Calculation of Recycled Water Contribution (RWC) from Historical Discharge Water (DW) and Recycled Water (RW) Deliveries												Period
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC		
2016/17	Jul '16	120	15	0	60	75	9,699	0	3,568	13,266	27%	
	Aug '16	121	1	0	60	61	9,726	0	3,333	13,058	26%	
	Sep '16	122	0	0	60	60	9,763	0	3,293	13,056	25%	
	Oct '16	123	1	0	60	61	9,759	0	3,293	13,052	25%	
	Nov '16	124	0	0	60	60	9,803	0	3,293	13,096	25%	
	Dec '16	125	316	0	60	376	10,165	0	3,227	13,392	24%	
	Jan '17	126	298	0	60	358	10,513	0	3,196	13,709	23%	
	Feb '17	127	171	0	60	231	10,735	8	3,183	13,918	23%	
	Mar '17	128	34	0	60	94	10,824	165	3,332	14,156	24%	
	Apr '17	129	23	0	60	83	10,904	99	3,423	14,327	24%	
	May '17	130	16	0	60	76	10,972	125	3,491	14,463	24%	
	Jun '17	131	8	274	60	341	11,303	10	3,501	14,804	24%	
2017/18	Jul '17	132	10	220	60	290	11,592	0	3,501	15,093	23%	
	Aug '17	133	21	79	60	160	11,742	13	3,514	15,256	23%	
	Sep '17	134	16	0	60	76	11,806	51	3,565	15,371	23%	
	Oct '17	135	1	0	60	60	11,863	4	3,569	15,432	23%	
	Nov '17	136	4	0	60	64	11,861	0	3,569	15,430	23%	
	Dec '17	137	2	0	60	61	11,860	0	3,569	15,429	23%	
	Jan '18	138	116	0	60	175	11,893	0	3,569	15,462	23%	
	Feb '18	139	75	0	60	134	12,018	13	3,582	15,600	23%	
	Mar '18	140	107	0	60	167	12,185	38	3,621	15,806	23%	
	Apr '18	141	4	0	60	63	12,244	139	3,760	16,004	23%	
	May '18	142	35	0	60	95	12,301	164	3,924	16,225	24%	
	Jun '18	143	14	0	60	74	12,347	138	4,062	16,409	25%	
2018/19	Jul '18	144	13	0	60	73	12,415	25	4,087	16,503	25%	
	Aug '18	145	6	0	60	66	12,476	65	4,152	16,628	25%	
	Sep '18	146	9	0	60	69	12,531	88	4,240	16,771	25%	
	Oct '18	147	28	0	60	88	12,582	87	4,261	16,843	25%	
	Nov '18	148	31	0	60	91	12,637	59	4,312	16,949	25%	
	Dec '18	149	90	0	60	150	12,737	20	4,332	17,069	25%	
	Jan '19	150	154	0	60	214	12,941	0	4,332	17,273	25%	
	Feb '19	151	189	0	60	249	13,121	0	4,332	17,454	25%	
	Mar '19	152	51	0	60	111	13,222	0	4,332	17,555	25%	
	Apr '19	153	5	0	60	65	13,285	0	4,332	17,618	25%	
	May '19	154	12	0	60	71	13,355	0	4,332	17,688	24%	
	Jun '19	155	3	0	60	63	13,418	0	4,332	17,751	24%	
2019/2020	Jul '19	156	0	0	60	60	13,478	0	4,332	17,810	24%	
	Aug '19	157	0	0	60	60	13,538	32	4,364	17,902	24%	
	Sep '19	158	0	0	60	60	13,597	32	4,397	17,994	24%	
	Oct '19	159	0	0	60	60	13,597	0	4,397	17,994	24%	
	Nov '19	160	161	0	60	221	13,756	35	4,432	18,188	24%	
	Dec '19	161	63	0	60	122	13,720	0	4,369	18,089	24%	
	Jan '20	162	22	0	60	82	13,557	0	4,242	17,799	24%	
	Feb '20	163	32	0	60	92	13,414	0	4,242	17,656	24%	
	Mar '20	164	104	0	60	163	13,404	0	4,198	17,602	24%	
	Apr '20	165	85	0	60	145	13,406	0	4,183	17,589	24%	
	May '20	166	13	0	60	73	13,393	0	4,113	17,506	23%	
	Jun '20	167	0	0	60	60	13,318	0	4,073	17,391	23%	
2020/21	Jul '20	168	0	0	60	60	13,223	0	4,067	17,290	24%	
	Aug '20	169	0	0	60	60	13,139	0	4,045	17,184	24%	
	Sep '20	170	0	0	60	60	13,085	0	4,028	17,113	24%	
	Oct '20	171	1	0	60	60	13,030	6	4,034	17,064	24%	
	Nov '20	172	7	0	60	67	12,998	162	4,195	17,193	24%	
	Dec '20	173	35	0	60	95	12,872	129	4,324	17,196	25%	
	Jan '21	174	107	0	60	166	12,978	45	4,368	17,346	25%	
	Feb '21	175	12	0	60	72	12,940	87	4,455	17,395	26%	
	Mar '21	176	103	0	60	163	12,994	54	4,509	17,502	26%	
	Apr '21	177	4	0	60	63	12,997	28	4,537	17,534	26%	
	May '21	178	5	0	60	65	13,003	47	4,584	17,587	26%	
	Jun '21	179	0	0	60	60	13,003	3	4,587	17,590	26%	
HISTORICAL												ACTUAL





# RWC Management Plan for Turner Basin Cells 3 & 4

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	180	3	0	60	63	13,005	0	4,587	17,593	26%
	Aug '21	181	0	0	60	60	12,948	0	4,580	17,528	26%
	Sep '21	182	3	0	60	62	12,765	18	4,413	17,178	26%
	Oct '21	183	9	0	60	68	12,711	202	4,392	17,102	26%
	Nov '21	184	17	0	60	76	12,661	135	4,430	17,092	26%
	Dec '21	185	242	0	60	302	12,835	33	4,411	17,246	26%
	Jan '22	186	25	0	60	85	12,774	64	4,403	17,177	26%
	Feb '22	187	24	0	60	83	12,688	38	4,344	17,033	26%
	Mar '22	188	72		60	132	12,634	50	4,359	16,994	26%
	Apr '22	189	38		60	98	12,584	80	4,424	17,009	26%
	May '22	190	19		60	79	12,563	100	4,468	17,032	26%
	Jun '22	191	15		60	75	12,553	110	4,513	17,067	26%
	Jul '22	192	16		60	76	12,544	100	4,562	17,107	27%
	Aug '22	193	12		60	72	12,520	110	4,637	17,158	27%
2022/23	Sep '22	194	16		60	76	12,505	100	4,713	17,219	27%
	Oct '22	195	24		60	84	12,507	100	4,804	17,312	28%
	Nov '22	196	37		60	97	12,514	80	4,879	17,394	28%
	Dec '22	197	111		60	171	12,578	10	4,884	17,463	28%
	Jan '23	198	87		60	147	12,650	30	4,914	17,565	28%
	Feb '23	199	79		60	139	12,704	40	4,954	17,659	28%
	Mar '23	200	72		60	132	12,762	50	5,004	17,767	28%
	Apr '23	201	38		60	98	12,800	80	5,084	17,885	28%
	May '23	202	19		60	79	12,819	100	5,184	18,004	29%
	Jun '23	203	15		60	75	12,834	110	5,294	18,129	29%
	Jul '23	204	16		60	76	12,850	100	5,394	18,245	30%
	Aug '23	205	12		60	72	12,862	110	5,504	18,367	30%
	Sep '23	206	16		60	76	12,854	100	5,497	18,352	30%
	Oct '23	207	24		60	84	12,858	100	5,480	18,339	30%
2023/24	Nov '23	208	37		60	97	12,878	80	5,471	18,350	30%
	Dec '23	209	111		60	171	12,984	10	5,396	18,381	29%
	Jan '24	210	87		60	147	13,055	30	5,287	18,343	29%
	Feb '24	211	79		60	139	13,072	40	5,207	18,280	28%
	Mar '24	212	72		60	132	13,094	50	5,210	18,305	28%
	Apr '24	213	38		60	98	13,132	80	5,290	18,423	29%
	May '24	214	19		60	79	13,128	100	5,222	18,351	28%
	Jun '24	215	15		60	75	13,131	110	5,278	18,410	29%
	Jul '24	216	16		60	76	13,136	100	5,378	18,515	29%
	Aug '24	217	12		60	72	13,148	110	5,488	18,637	29%
	Sep '24	218	16		60	76	13,164	100	5,588	18,753	30%
	Oct '24	219	24		60	84	13,188	100	5,688	18,877	30%
	Nov '24	220	37		60	97	13,225	80	5,768	18,994	30%
	Dec '24	221	111		60	171	12,988	10	5,778	18,767	31%
2024/25	Jan '25	222	87		60	147	13,071	30	5,808	18,880	31%
	Feb '25	223	79		60	139	13,085	40	5,795	18,881	31%
	Mar '25	224	72		60	132	13,086	50	5,690	18,777	30%
	Apr '25	225	38		60	98	13,085	80	5,770	18,856	31%
	May '25	226	19		60	79	13,104	100	5,870	18,975	31%
	Jun '25	227	15		60	75	13,117	110	5,899	19,017	31%
	Jul '25	228	16		60	76	13,046	100	5,914	18,961	31%
2025/26	Aug '25	229	12		60	72	13,043	110	5,861	18,905	31%
	Sep '25	230	16		60	76	12,985	100	5,910	18,896	31%
	Oct '25	231	24		60	84	12,945	100	5,945	18,891	31%
	Nov '25	232	37		60	97	12,938	80	6,022	18,961	32%
	Dec '25	233	111		60	171	12,905	10	6,031	18,937	32%
	Jan '26	234	87		60	147	12,910	30	6,061	18,972	32%
	Feb '26	235	79		60	139	12,948	40	6,101	19,050	32%
	Mar '26	236	72		60	132	12,973	50	6,151	19,125	32%
	Apr '26	237	38		60	98	12,962	80	6,231	19,194	32%
	May '26	238	19		60	79	12,948	100	6,331	19,280	33%
	Jun '26	239	15		60	75	12,943	110	6,441	19,385	33%

P L A N N E D



# RWC Management Plan for Turner Basin Cells 3 & 4

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2026/27	Jul '26	240	16		60	76	12,944	100	6,541	19,486	34%
	Aug '26	241	12		60	72	12,955	110	6,651	19,607	34%
	Sep '26	242	16		60	76	12,971	100	6,751	19,723	34%
	Oct '26	243	24		60	84	12,994	100	6,851	19,846	35%
	Nov '26	244	37		60	97	13,031	80	6,931	19,963	35%
	Dec '26	245	111		60	171	12,826	10	6,941	19,768	35%
	Jan '27	246	87		60	147	12,615	30	6,971	19,587	36%
	Feb '27	247	79		60	139	12,523	40	7,003	19,527	36%
	Mar '27	248	72		60	132	12,561	50	6,888	19,450	35%
	Apr '27	249	38		60	98	12,576	80	6,869	19,446	35%
	May '27	250	19		60	79	12,579	100	6,844	19,424	35%
	Jun '27	251	15		60	75	12,313	110	6,944	19,257	36%
2027/28	Jul '27	252	16		60	76	12,099	100	7,044	19,143	37%
	Aug '27	253	12		60	72	12,011	110	7,141	19,152	37%
	Sep '27	254	16		60	76	12,011	100	7,190	19,201	37%
	Oct '27	255	24		60	84	12,034	100	7,286	19,320	38%
	Nov '27	256	37		60	97	12,067	80	7,366	19,433	38%
	Dec '27	257	111		60	171	12,176	10	7,376	19,552	38%
	Jan '28	258	87		60	147	12,148	30	7,406	19,554	38%
	Feb '28	259	79		60	139	12,152	40	7,433	19,585	38%
	Mar '28	260	72		60	132	12,117	50	7,445	19,561	38%
	Apr '28	261	38		60	98	12,151	80	7,385	19,536	38%
	May '28	262	19		60	79	12,135	100	7,321	19,456	38%
	Jun '28	263	15		60	75	12,136	110	7,293	19,429	38%
2028/29	Jul '28	264	16		60	76	12,139	100	7,368	19,507	38%
	Aug '28	265	12		60	72	12,145	110	7,413	19,558	38%
	Sep '28	266	16		60	76	12,152	100	7,425	19,577	38%
	Oct '28	267	24		60	84	12,148	100	7,438	19,586	38%
	Nov '28	268	37		60	97	12,154	80	7,459	19,613	38%
	Dec '28	269	111		60	171	12,174	10	7,449	19,623	38%
	Jan '29	270	87		60	147	12,107	30	7,479	19,586	38%
	Feb '29	271	79		60	139	11,998	40	7,519	19,516	39%
	Mar '29	272	72		60	132	12,018	50	7,569	19,587	39%
	Apr '29	273	38		60	98	12,051	80	7,649	19,700	39%
	May '29	274	19		60	79	12,059	100	7,749	19,808	39%
	Jun '29	275	15		60	75	12,071	110	7,859	19,930	39%
2029/30	Jul '29	276	16		60	76	12,087	100	7,959	20,046	40%
	Aug '29	277	12		60	72	12,099	110	8,037	20,136	40%
	Sep '29	278	16		60	76	12,115	100	8,105	20,219	40%
	Oct '29	279	24		60	84	12,139	100	8,205	20,343	40%
	Nov '29	280	37		60	97	12,014	80	8,249	20,264	41%
	Dec '29	281	111		60	171	12,063	10	8,259	20,322	41%
	Jan '30	282	87		60	147	12,128	30	8,289	20,417	41%
	Feb '30	283	79		60	139	12,175	40	8,329	20,504	41%
	Mar '30	284	72		60	132	12,143	50	8,379	20,523	41%
	Apr '30	285	38		60	98	12,096	80	8,459	20,555	41%
	May '30	286	19		60	79	12,102	100	8,559	20,661	41%
	Jun '30	287	15		60	75	12,117	110	8,669	20,786	42%
2030/31	Jul '30	288	16		60	76	12,133	100	8,769	20,902	42%
	Aug '30	289	12		60	72	12,145	110	8,879	21,024	42%
	Sep '30	290	16		60	76	12,161	100	8,979	21,140	42%
	Oct '30	291	24		60	84	12,184	100	9,074	21,258	43%
	Nov '30	292	37		60	97	12,214	80	8,992	21,206	42%
	Dec '30	293	111		60	171	12,290	10	8,874	21,164	42%
	Jan '31	294	87		60	147	12,270	30	8,859	21,130	42%
	Feb '31	295	79		60	139	12,337	40	8,812	21,150	42%
	Mar '31	296	72		60	132	12,307	50	8,808	21,115	42%
	Apr '31	297	38		60	98	12,341	80	8,861	21,202	42%
	May '31	298	19		60	79	12,355	100	8,913	21,268	42%
	Jun '31	299	15		60	75	12,370	110	9,020	21,389	42%

P L A N N E D

## Notes:

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.

RW = Recycled Water

RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.

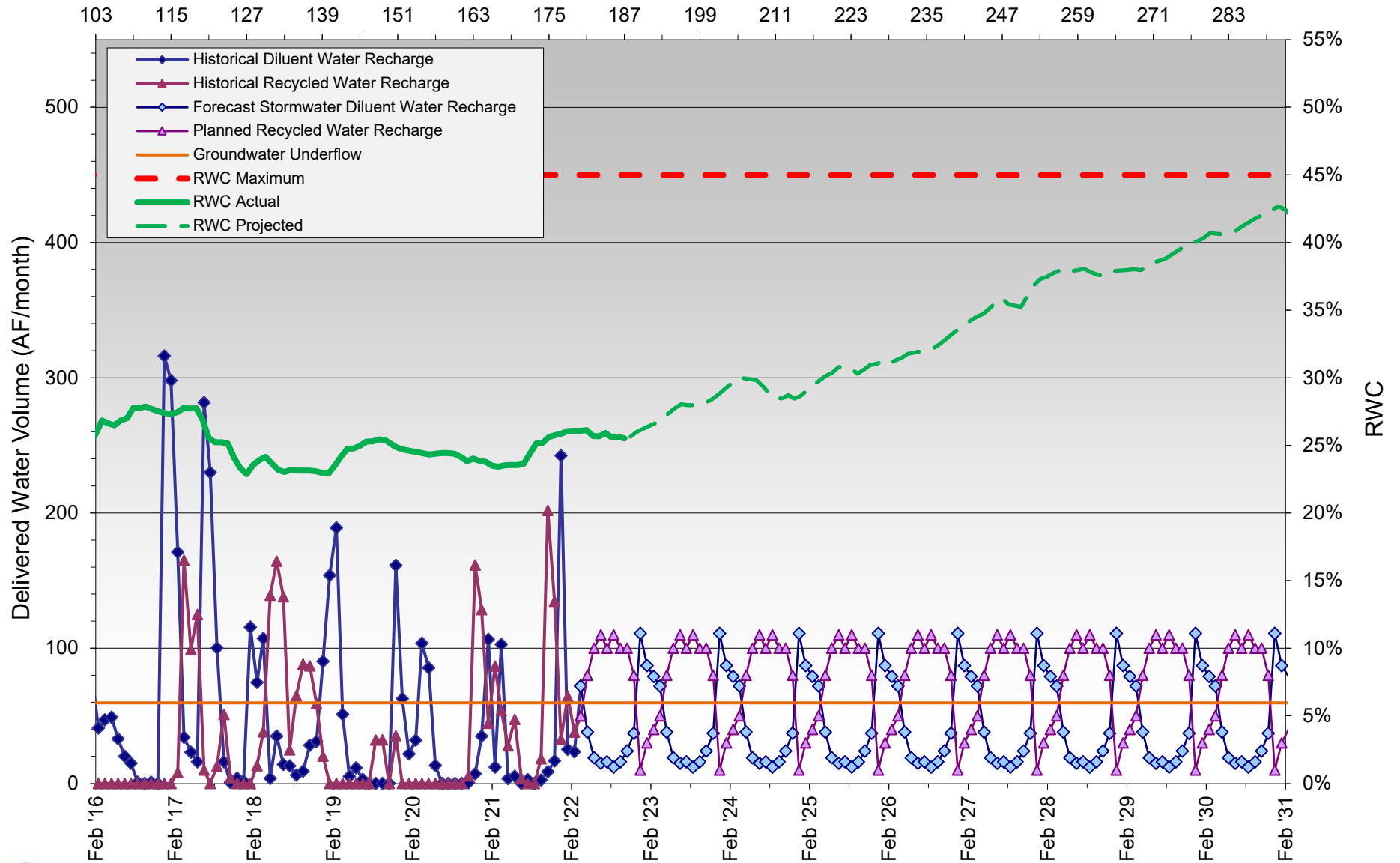
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - Turner Basin Cells 3 & 4

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



# RWC Management Plan for Victoria Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2016/17	Jul '16	70	0	0	139	139	13,119	0	5,225	18,344	28%
	Aug '16	71	0	0	139	139	13,255	0	5,225	18,480	28%
	Sep '16	72	0	0	139	139	13,391	53	5,278	18,669	28%
	Oct '16	73	10	0	139	149	13,532	142	5,420	18,952	29%
	Nov '16	74	24	7	139	170	13,698	218	5,638	19,336	29%
	Dec '16	75	185	0	139	324	13,933	106	5,744	19,677	29%
	Jan '17	76	327	0	278	605	14,523	0	5,744	20,267	28%
	Feb '17	77	65	0	278	343	14,796	53	5,797	20,593	28%
	Mar '17	78	18	0	278	296	15,084	219	6,016	21,100	29%
	Apr '17	79	0	0	278	278	15,327	317	6,333	21,660	29%
	May '17	80	13	0	278	291	15,611	312	6,645	22,256	30%
	Jun '17	81	0	121	278	399	16,001	201	6,846	22,847	30%
2017/18	Jul '17	82	0	235	278	513	16,515	140	6,986	23,501	30%
	Aug '17	83	4	20	278	302	16,817	239	7,225	24,042	30%
	Sep '17	84	0	130	278	408	17,220	167	7,392	24,612	30%
	Oct '17	85	0	150	278	428	17,639	44	7,436	25,075	30%
	Nov '17	86	0	0	278	278	17,868	40	7,476	25,344	29%
	Dec '17	87	0	4	278	282	18,084	99	7,575	25,659	30%
	Jan '18	88	57	36	278	370	18,275	7	7,581	25,856	29%
	Feb '18	89	9	0	278	287	18,500	33	7,614	26,115	29%
	Mar '18	90	9	0	278	287	18,785	25	7,639	26,424	29%
	Apr '18	91	40	0	278	318	19,096	0	7,639	26,735	29%
	May '18	92	3	0	278	281	19,331	0	7,639	26,970	28%
	Jun '18	93	0	0	278	278	19,606	0	7,639	27,245	28%
2018/19	Jul '18	94	0	0	278	278	19,881	159	7,799	27,679	28%
	Aug '18	95	0	0	278	278	20,156	191	7,989	28,145	28%
	Sep '18	96	0	0	278	278	20,432	159	8,149	28,580	29%
	Oct '18	97	44	0	278	322	20,749	104	8,253	29,003	28%
	Nov '18	98	33	0	278	311	21,025	83	8,336	29,361	28%
	Dec '18	99	46	0	278	324	21,275	98	8,435	29,709	28%
	Jan '19	100	252	0	278	530	21,790	91	8,525	30,315	28%
	Feb '19	101	372	0	278	650	22,345	9	8,534	30,879	28%
	Mar '19	102	223	0	278	501	22,833	76	8,610	31,444	27%
	Apr '19	103	1	0	278	279	23,109	298	8,908	32,017	28%
	May '19	104	46	0	278	324	23,430	251	9,159	32,589	28%
	Jun '19	105	0	0	278	278	23,708	319	9,478	33,186	29%
2019/20	Jul '19	106	0	0	278	278	23,985	160	9,638	33,623	29%
	Aug '19	107	0	344	278	622	24,607	142	9,780	34,387	28%
	Sep '19	108	0	501	278	779	25,386	49	9,829	35,215	28%
	Oct '19	109	0	177	278	455	25,802	116	9,946	35,748	28%
	Nov '19	110	63	63	278	403	26,187	75	10,020	36,207	28%
	Dec '19	111	117	0	278	395	26,492	27	10,047	36,539	27%
	Jan '20	112	0	0	278	278	26,617	35	10,082	36,699	27%
	Feb '20	113	0	0	278	278	26,721	68	10,150	36,871	28%
	Mar '20	114	78	0	278	356	27,077	85	10,235	37,313	27%
	Apr '20	115	91	0	278	369	27,426	92	10,327	37,753	27%
	May '20	116	3	0	278	281	27,708	66	10,393	38,100	27%
	Jun '20	117	0	0	278	278	27,985	136	10,528	38,513	27%
2020/21	Jul '20	118	0	0	278	278	28,260	188	10,716	38,976	27%
	Aug '20	119	0	0	278	278	28,536	169	10,885	39,421	28%
	Sep '20	120	0	0	278	278	28,812	176	10,994	39,806	28%
	Oct '20	121	0	0	278	278	28,936	183	11,024	39,960	28%
	Nov '20	122	32	0	278	310	29,073	105	11,012	40,085	27%
	Dec '20	123	44	0	278	322	29,014	37	11,007	40,021	28%
	Jan '21	124	59	0	278	337	29,193	32	10,953	40,146	27%
	Feb '21	125	6	0	278	284	29,266	83	10,969	40,235	27%
	Mar '21	126	7	0.0	278	285	29,354	35	10,965	40,319	27%
	Apr '21	127	0	0.0	278	278	29,488	0	10,965	40,453	27%
	May '21	128	0	0.0	278	278	29,552	0	10,824	40,376	27%
	Jun '21	129	0	0	278	278	29,688	0	10,763	40,451	27%

HISTORICAL

ACTUAL



# RWC Management Plan for Victoria Basin

(120-month averaging period)

Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2021/22	Jul '21	130	2	0	278	280	29,825	0	10,701	40,527	26%
	Aug '21	131	1	0	278	279	29,842	0	10,649	40,491	26%
	Sep '21	132	2	0	278	280	29,825	25	10,674	40,499	26%
	Oct '21	133	2	0	278	280	29,935	244	10,918	40,854	27%
	Nov '21	134	0	0	278	278	30,050	98	11,002	41,051	27%
	Dec '21	135	314	0	278	592	30,493	95	11,071	41,565	27%
	Jan '22	136	0	0	278	278	30,621	172	11,244	41,865	27%
	Feb '22	137	6	0	278	284	30,762	256	11,499	42,261	27%
	Mar '22	138	46		278	324	30,929	210	11,709	42,638	27%
	Apr '22	139	23		278	301	30,995	230	11,921	42,916	28%
	May '22	140	12		278	290	31,126	240	11,890	43,016	28%
2022/23	Jun '22	141	2		278	280	31,264	250	11,918	43,182	28%
	Jul '22	142	2		278	280	31,402	250	12,074	43,477	28%
	Aug '22	143	2		278	280	31,538	250	12,206	43,745	28%
	Sep '22	144	3		278	281	31,679	250	12,401	44,081	28%
	Oct '22	145	15		278	293	31,832	240	12,510	44,343	28%
	Nov '22	146	23		278	301	31,988	230	12,669	44,658	28%
	Dec '22	147	91		278	369	32,199	160	12,808	45,008	28%
	Jan '23	148	74		278	352	32,377	180	12,976	45,354	29%
	Feb '23	149	63		278	341	32,569	190	13,156	45,726	29%
	Mar '23	150	46		278	324	32,748	210	13,309	46,057	29%
	Apr '23	151	23		278	301	32,909	230	13,441	46,350	29%
	May '23	152	12		278	290	33,055	240	13,588	46,643	29%
	Jun '23	153	2		278	280	33,195	250	13,756	46,951	29%
	Jul '23	154	2		278	280	33,334	250	13,932	47,266	29%
	Aug '23	155	2		278	280	33,473	250	14,140	47,613	30%
	Sep '23	156	3		278	281	33,613	250	14,344	47,957	30%
	Oct '23	157	15		278	293	33,760	240	14,584	48,344	30%
	Nov '23	158	23		278	301	33,910	230	14,814	48,724	30%
	Dec '23	159	91		278	369	34,130	160	14,856	48,986	30%
	Jan '24	160	74		278	352	34,341	180	14,878	49,219	30%
	Feb '24	161	63		278	341	34,506	190	14,877	49,383	30%
	Mar '24	162	46		278	324	34,592	210	14,945	49,537	30%
	Apr '24	163	23		278	301	34,739	230	14,925	49,665	30%
	May '24	164	12		278	290	34,888	240	14,951	49,840	30%
	Jun '24	165	2		278	280	35,027	250	15,057	50,085	30%
	Jul '24	166	2		278	280	35,166	250	15,216	50,383	30%
	Aug '24	167	2		278	280	35,302	250	15,359	50,662	30%
	Sep '24	168	3		278	281	35,442	250	15,454	50,897	30%
	Oct '24	169	15		278	293	35,593	240	15,619	51,213	30%
	Nov '24	170	23		278	301	35,698	230	15,845	51,544	31%
	Dec '24	171	91		278	369	35,776	160	16,005	51,781	31%
	Jan '25	172	74		278	352	35,971	180	16,122	52,093	31%
	Feb '25	173	63		278	341	36,133	190	16,255	52,388	31%
	Mar '25	174	46		278	324	36,306	210	16,386	52,692	31%
	Apr '25	175	23		278	301	36,468	230	16,489	52,957	31%
	May '25	176	12		278	290	36,606	240	16,588	53,194	31%
	Jun '25	177	2		278	280	36,746	250	16,806	53,552	31%
	Jul '25	178	2		278	280	36,883	250	16,917	53,800	31%
	Aug '25	179	2		278	280	37,023	250	17,002	54,025	31%
	Sep '25	180	3		278	281	37,128	250	17,116	54,244	32%
	Oct '25	181	15		278	293	37,247	240	17,255	54,502	32%
	Nov '25	182	23		278	301	37,409	230	17,451	54,860	32%
	Dec '25	183	91		278	369	37,553	160	17,551	55,105	32%
	Jan '26	184	74		278	352	37,679	180	17,731	55,411	32%
	Feb '26	185	63		278	341	37,871	190	17,921	55,793	32%
	Mar '26	186	46		278	324	37,977	210	18,131	56,109	32%
	Apr '26	187	23		278	301	38,138	230	18,361	56,500	32%
	May '26	188	12		278	290	38,287	240	18,601	56,889	33%
	Jun '26	189	2		278	280	38,425	250	18,851	57,277	33%

P L A N N E D





## RWC Management Plan for Victoria Basin

(120-month averaging period)

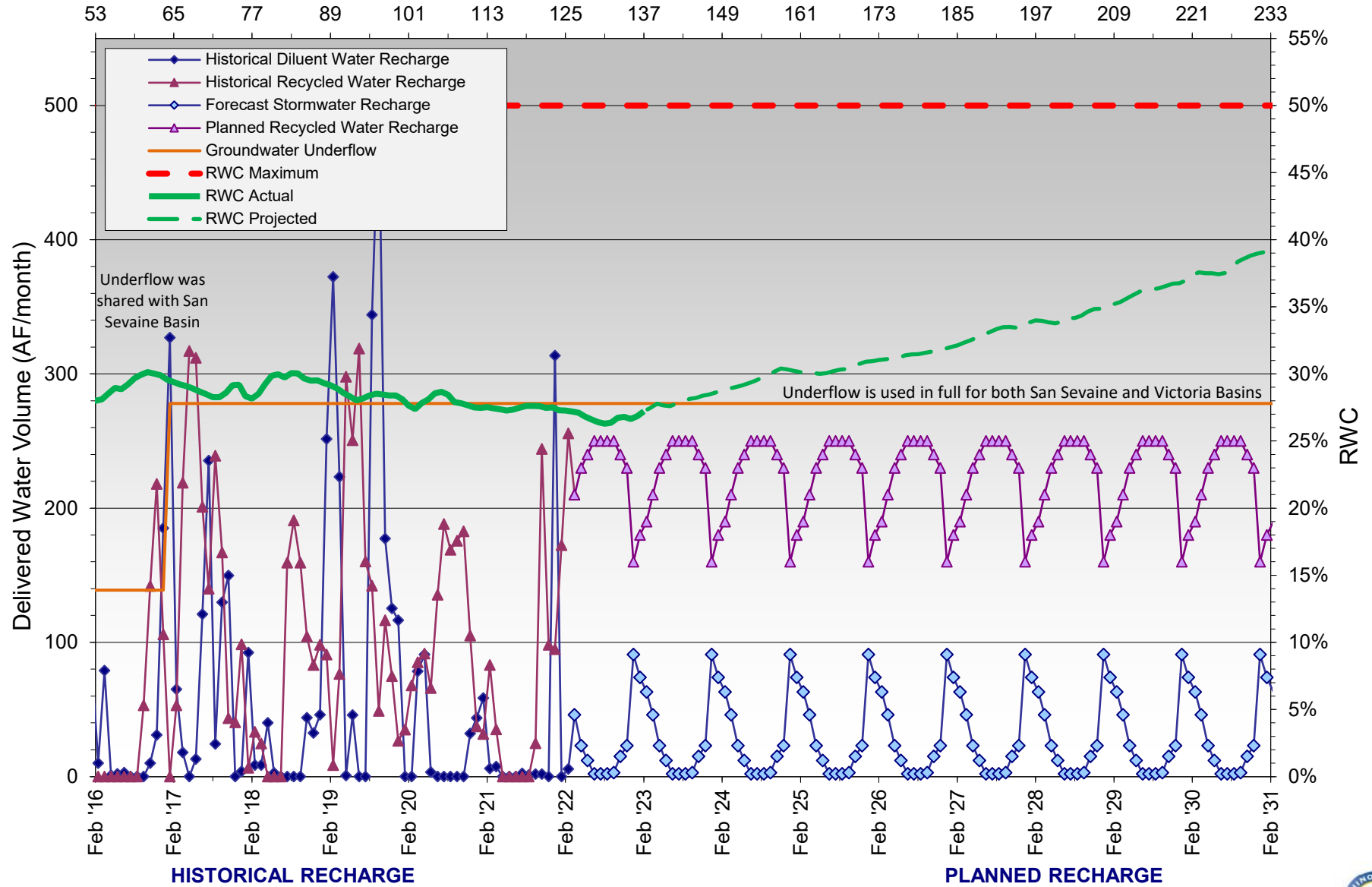
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

Calculation of Recycled Water Contribution (RWC) from historical Diluent Water (DW) and Recycled Water (RW) Deliveries												Period
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC		
2026/27	Jul '26	190	2		278	280	38,566	250	19,101	57,668	33%	
	Aug '26	191	2		278	280	38,708	250	19,351	58,059	33%	
	Sep '26	192	3		278	281	38,850	250	19,548	58,398	33%	
	Oct '26	193	15		278	293	38,994	240	19,646	58,640	34%	
	Nov '26	194	23		278	301	39,125	230	19,658	58,783	33%	
	Dec '26	195	91		278	369	39,170	160	19,712	58,882	33%	
	Jan '27	196	74		278	352	38,917	180	19,892	58,809	34%	
	Feb '27	197	63		278	341	38,915	190	20,029	58,944	34%	
	Mar '27	198	46		278	324	38,943	210	20,020	58,963	34%	
	Apr '27	199	23		278	301	38,966	230	19,933	58,899	34%	
	May '27	200	12		278	290	38,965	240	19,861	58,826	34%	
	Jun '27	201	2		278	280	38,846	250	19,910	58,756	34%	
2027/28	Jul '27	202	2		278	280	38,612	250	20,020	58,633	34%	
	Aug '27	203	2		278	280	38,590	250	20,031	58,621	34%	
	Sep '27	204	3		278	281	38,463	250	20,114	58,578	34%	
	Oct '27	205	15		278	293	38,328	240	20,311	58,639	35%	
	Nov '27	206	23		278	301	38,351	230	20,501	58,852	35%	
	Dec '27	207	91		278	369	38,439	160	20,562	59,000	35%	
	Jan '28	208	74		278	352	38,420	180	20,735	59,156	35%	
	Feb '28	209	63		278	341	38,475	190	20,892	59,367	35%	
	Mar '28	210	46		278	324	38,512	210	21,077	59,589	35%	
	Apr '28	211	23		278	301	38,495	230	21,307	59,802	36%	
	May '28	212	12		278	290	38,504	240	21,547	60,052	36%	
	Jun '28	213	2		278	280	38,506	250	21,797	60,304	36%	
2028/29	Jul '28	214	2		278	280	38,508	250	21,888	60,396	36%	
	Aug '28	215	2		278	280	38,510	250	21,947	60,457	36%	
	Sep '28	216	3		278	281	38,513	250	22,038	60,551	36%	
	Oct '28	217	15		278	293	38,484	240	22,173	60,658	37%	
	Nov '28	218	23		278	301	38,475	230	22,320	60,795	37%	
	Dec '28	219	91		278	369	38,520	160	22,382	60,902	37%	
	Jan '29	220	74		278	352	38,342	180	22,471	60,813	37%	
	Feb '29	221	63		278	341	38,033	190	22,652	60,685	37%	
	Mar '29	222	46		278	324	37,856	210	22,786	60,642	38%	
	Apr '29	223	23		278	301	37,878	230	22,718	60,596	37%	
	May '29	224	12		278	290	37,844	240	22,708	60,552	38%	
	Jun '29	225	2		278	280	37,846	250	22,639	60,485	37%	
2029/30	Jul '29	226	2		278	280	37,848	250	22,728	60,576	38%	
	Aug '29	227	2		278	280	37,506	250	22,836	60,342	38%	
	Sep '29	228	3		278	281	37,008	250	23,037	60,045	38%	
	Oct '29	229	15		278	293	36,846	240	23,161	60,007	39%	
	Nov '29	230	23		278	301	36,743	230	23,316	60,059	39%	
	Dec '29	231	91		278	369	36,718	160	23,449	60,167	39%	
	Jan '30	232	74		278	352	36,792	180	23,594	60,386	39%	
	Feb '30	233	63		278	341	36,855	190	23,717	60,571	39%	
	Mar '30	234	46		278	324	36,822	210	23,841	60,664	39%	
	Apr '30	235	23		278	301	36,754	230	23,980	60,734	39%	
	May '30	236	12		278	290	36,763	240	24,154	60,917	40%	
	Jun '30	237	2		278	280	36,765	250	24,268	61,033	40%	
2030/31	Jul '30	238	2		278	280	36,767	250	24,330	61,097	40%	
	Aug '30	239	2		278	280	36,769	250	24,411	61,180	40%	
	Sep '30	240	3		278	281	36,772	250	24,485	61,258	40%	
	Oct '30	241	15		278	293	36,787	240	24,543	61,330	40%	
	Nov '30	242	23		278	301	36,778	230	24,668	61,446	40%	
	Dec '30	243	91		278	369	36,826	160	24,790	61,616	40%	
	Jan '31	244	74		278	352	36,841	180	24,938	61,779	40%	
	Feb '31	245	63		278	341	36,898	190	25,045	61,943	40%	
	Mar '31	246	46		278	324	36,937	210	25,220	62,157	41%	
	Apr '31	247	23		278	301	36,960	230	25,450	62,410	41%	
	May '31	248	12		278	290	36,972	240	25,690	62,662	41%	
	Jun '31	249	2		278	280	36,974	250	25,940	62,914	41%	
<b>Notes:</b> DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow. RW = Recycled Water RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water. While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations. RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period												



# RWC Management Plan - Victoria Basin

Months Since Initial Recycled Water Delivery

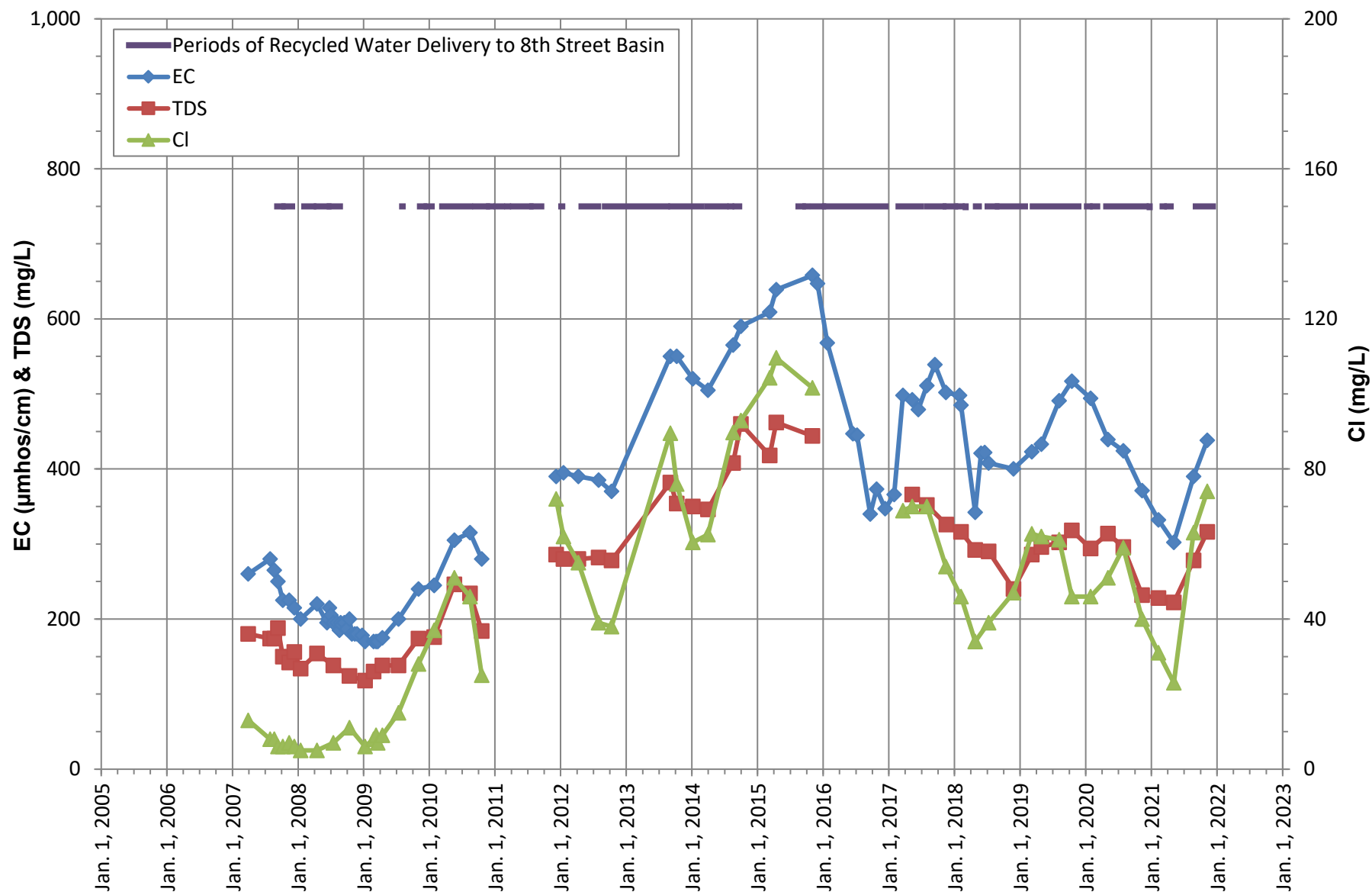


## APPENDIX C

### EVIDENCE FOR BLENDING:

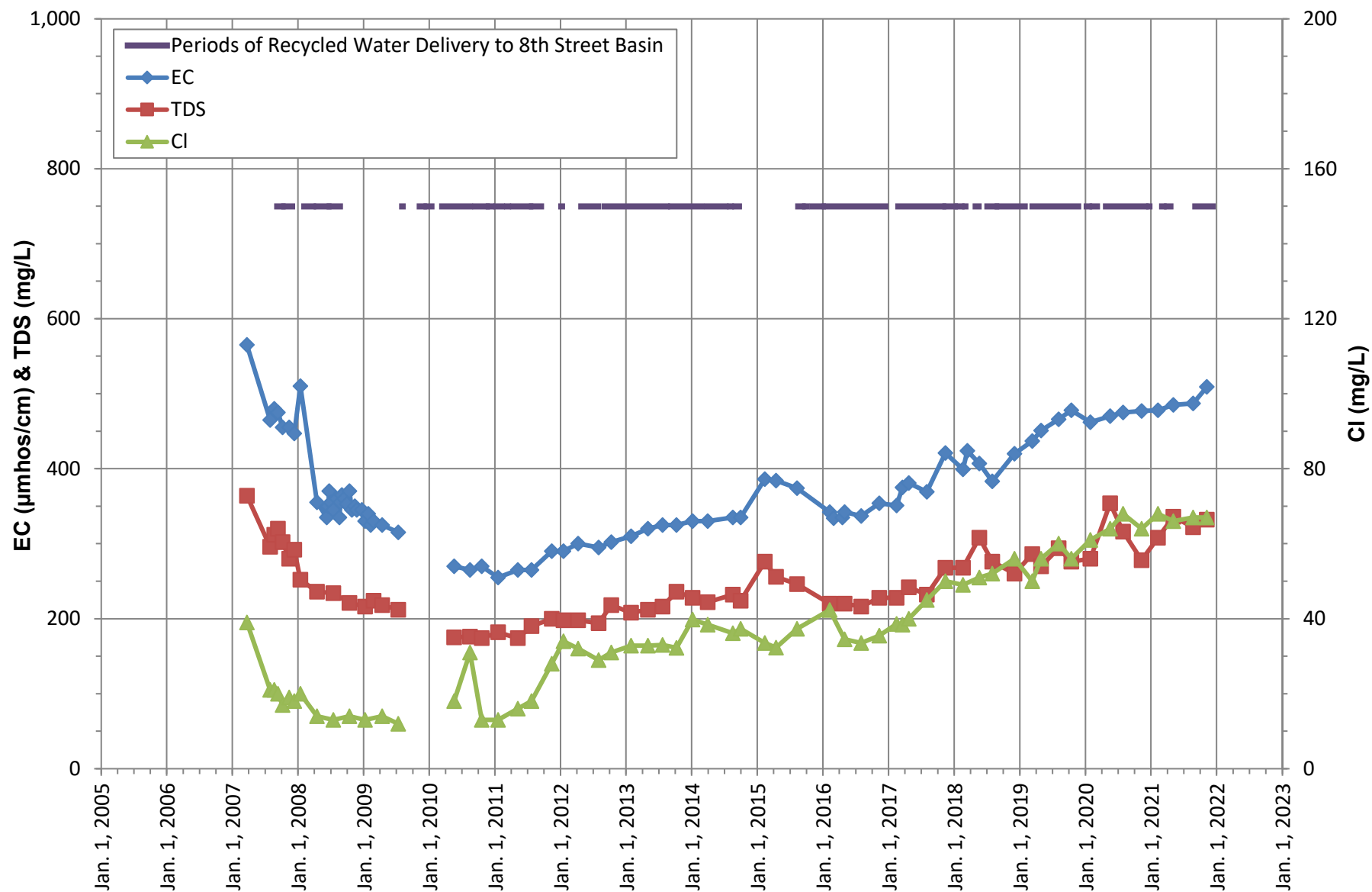
### EC, TDS, CHLORIDE TIME-SERIES GRAPHS

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**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-1/1**

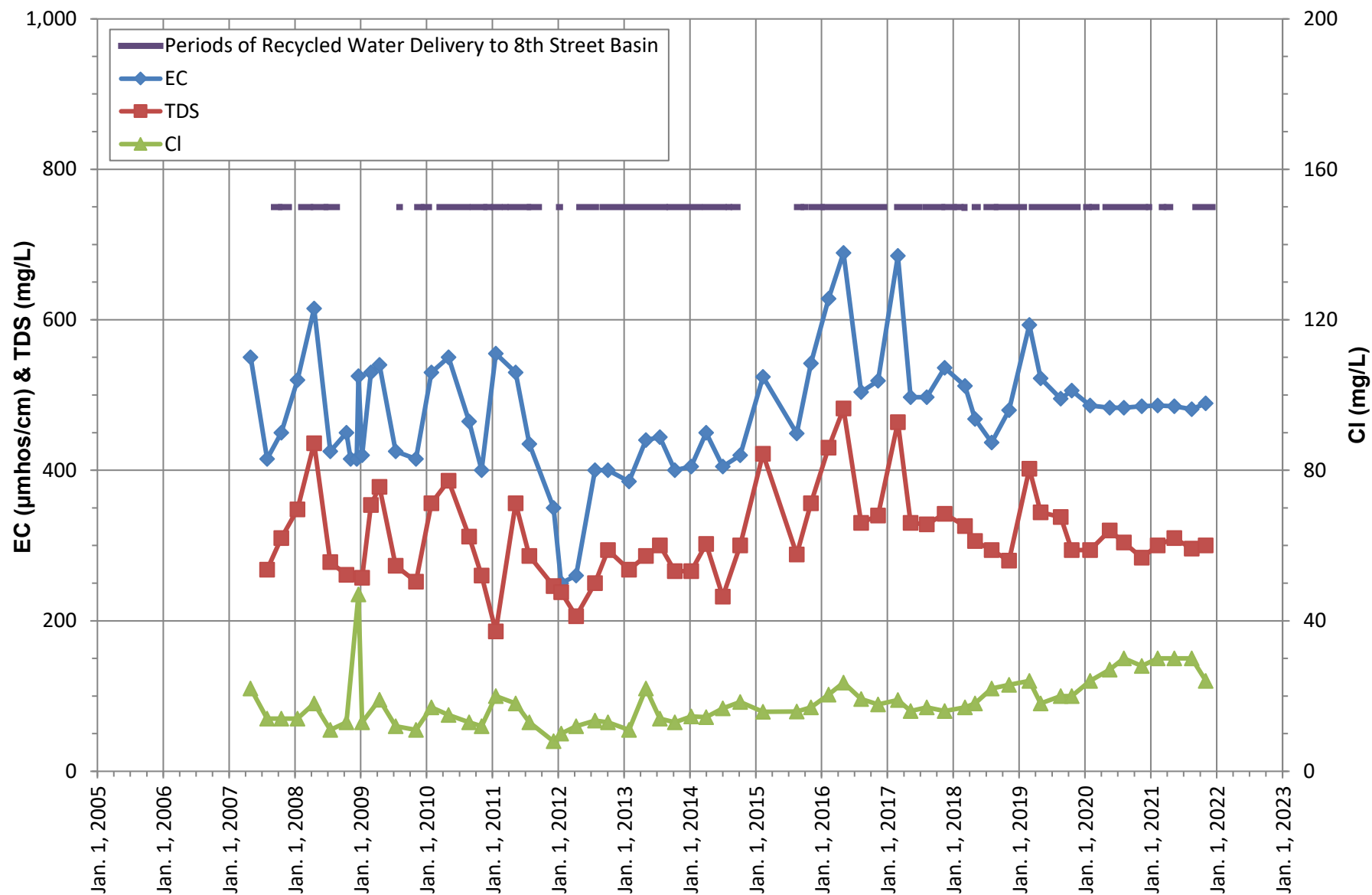




**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-1/2**

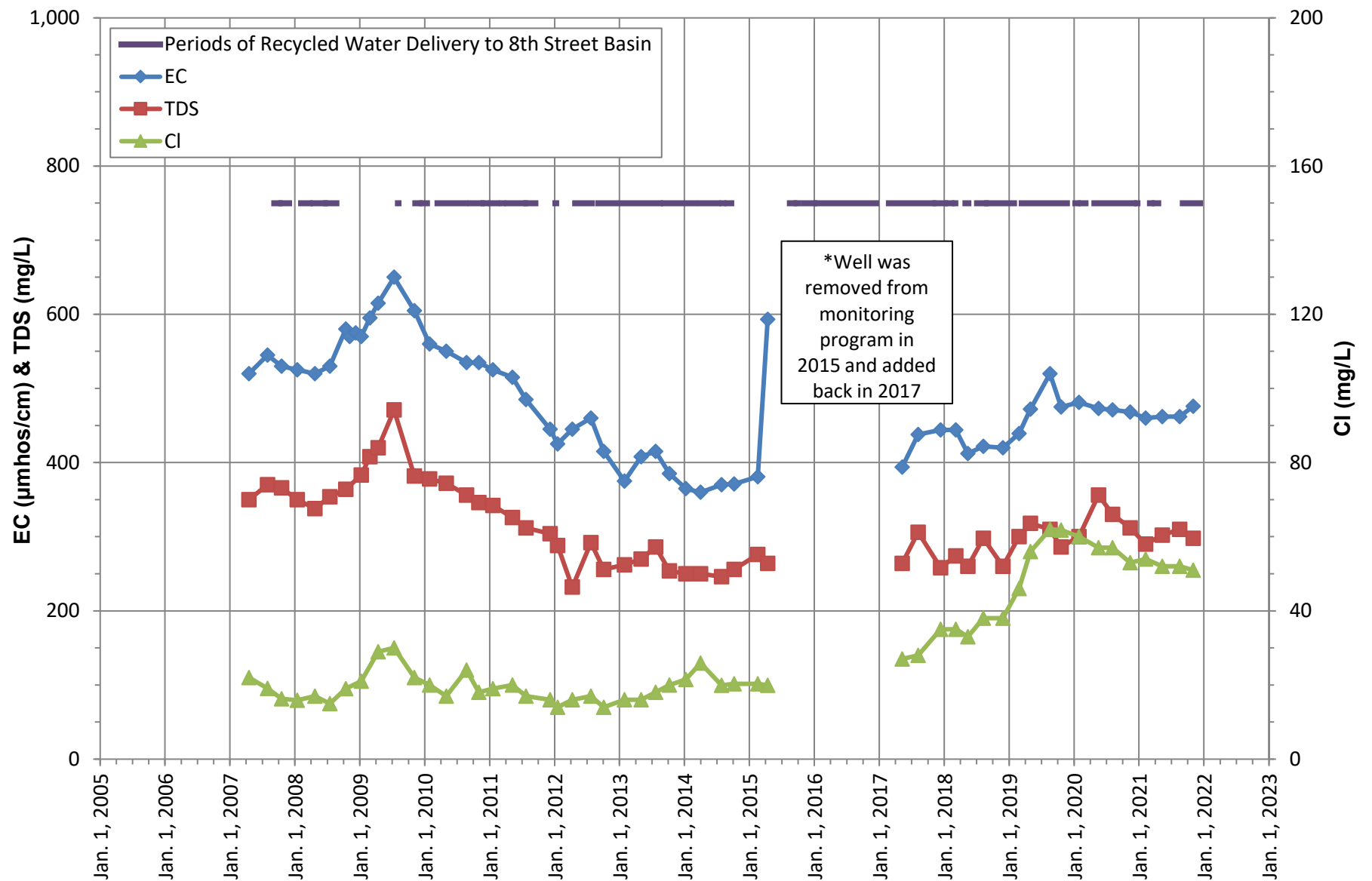






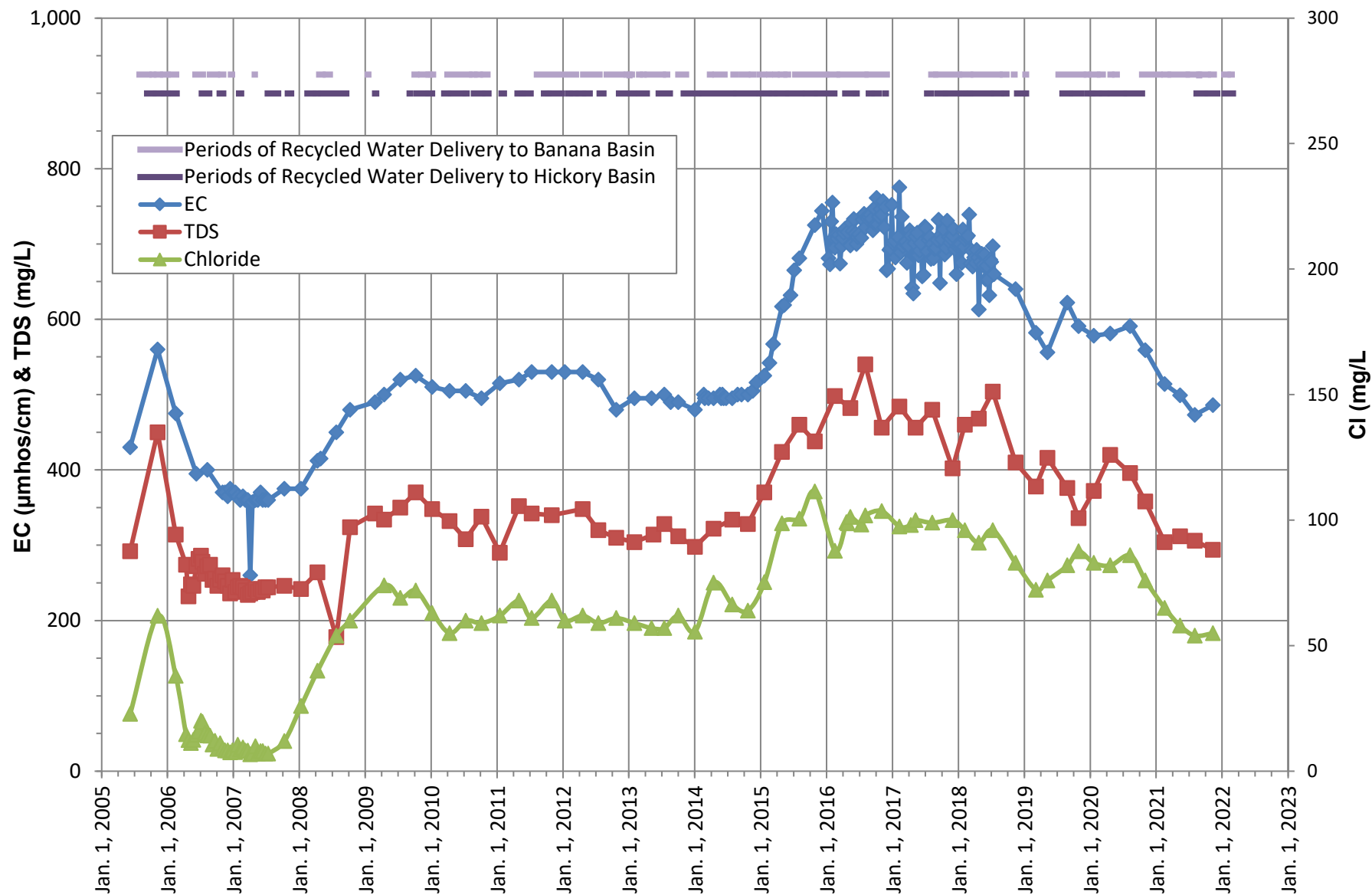
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-2/1**





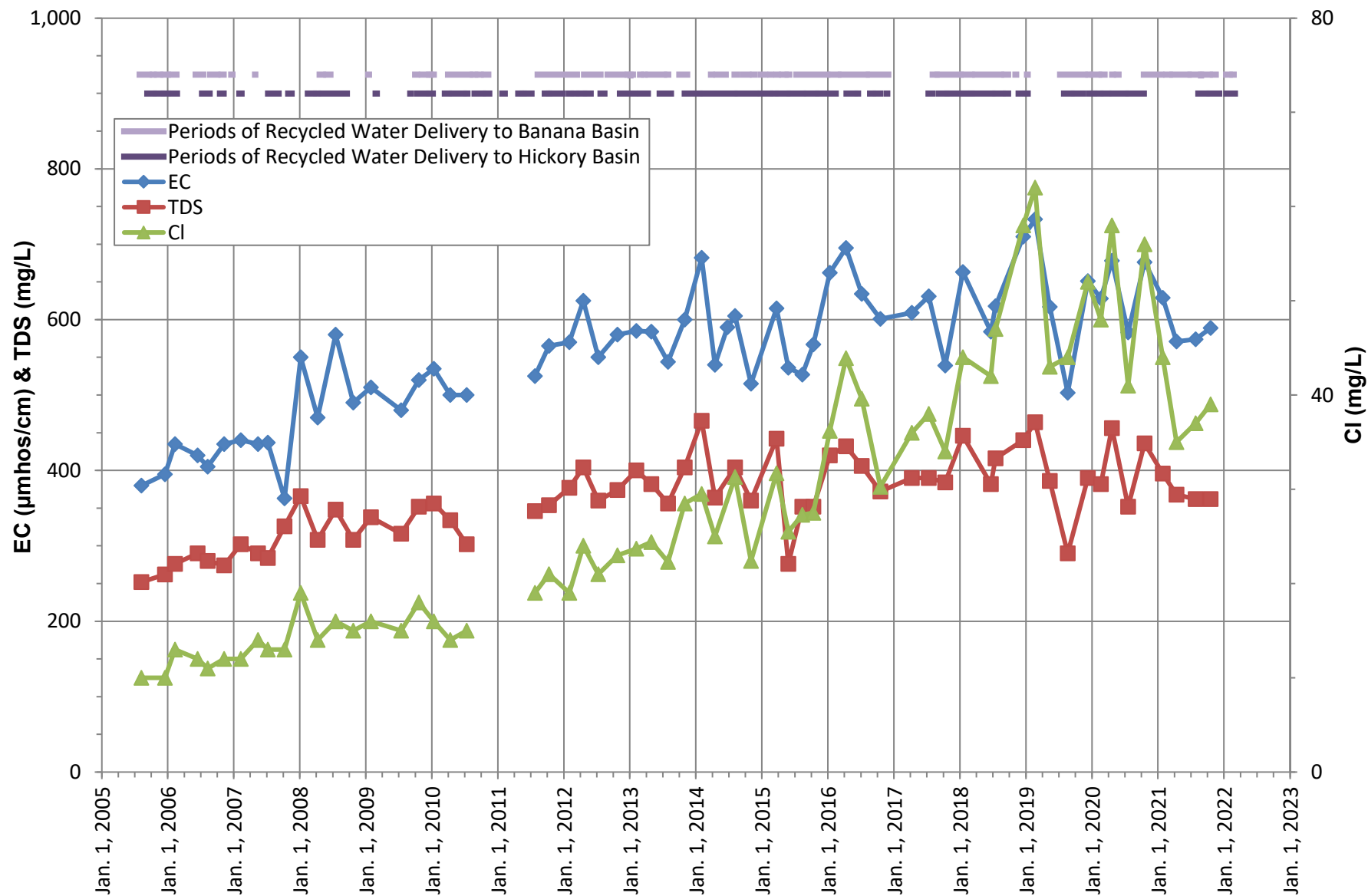
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-2/2**





**EC, TDS, CHLORIDE TRENDS  
HICKORY BANANA BASINS  
MW BH-1/2**





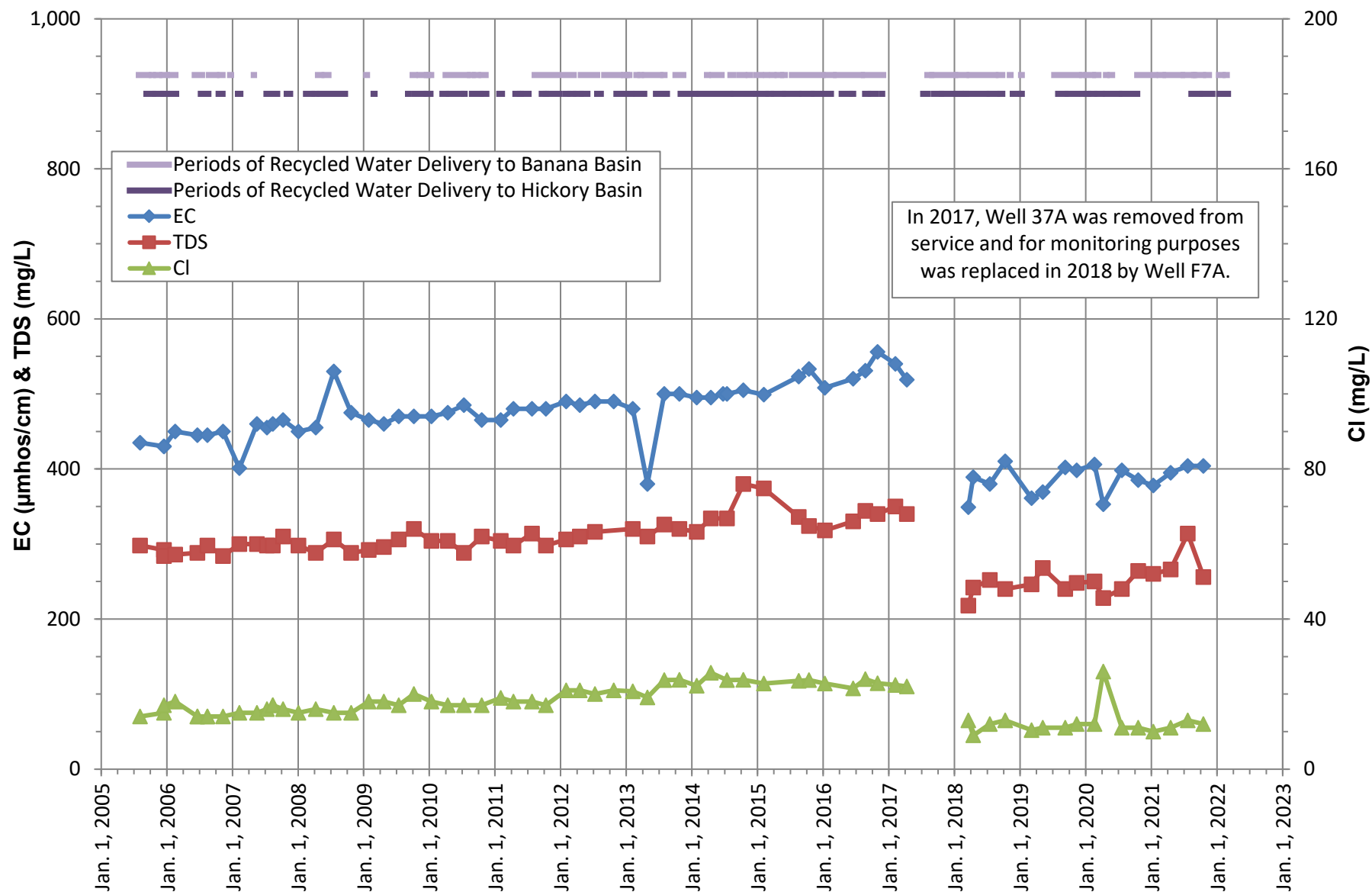
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BANANA-HICKORY BASINS  
CALIFORNIA SPEEDWAY INFIELD WELL**





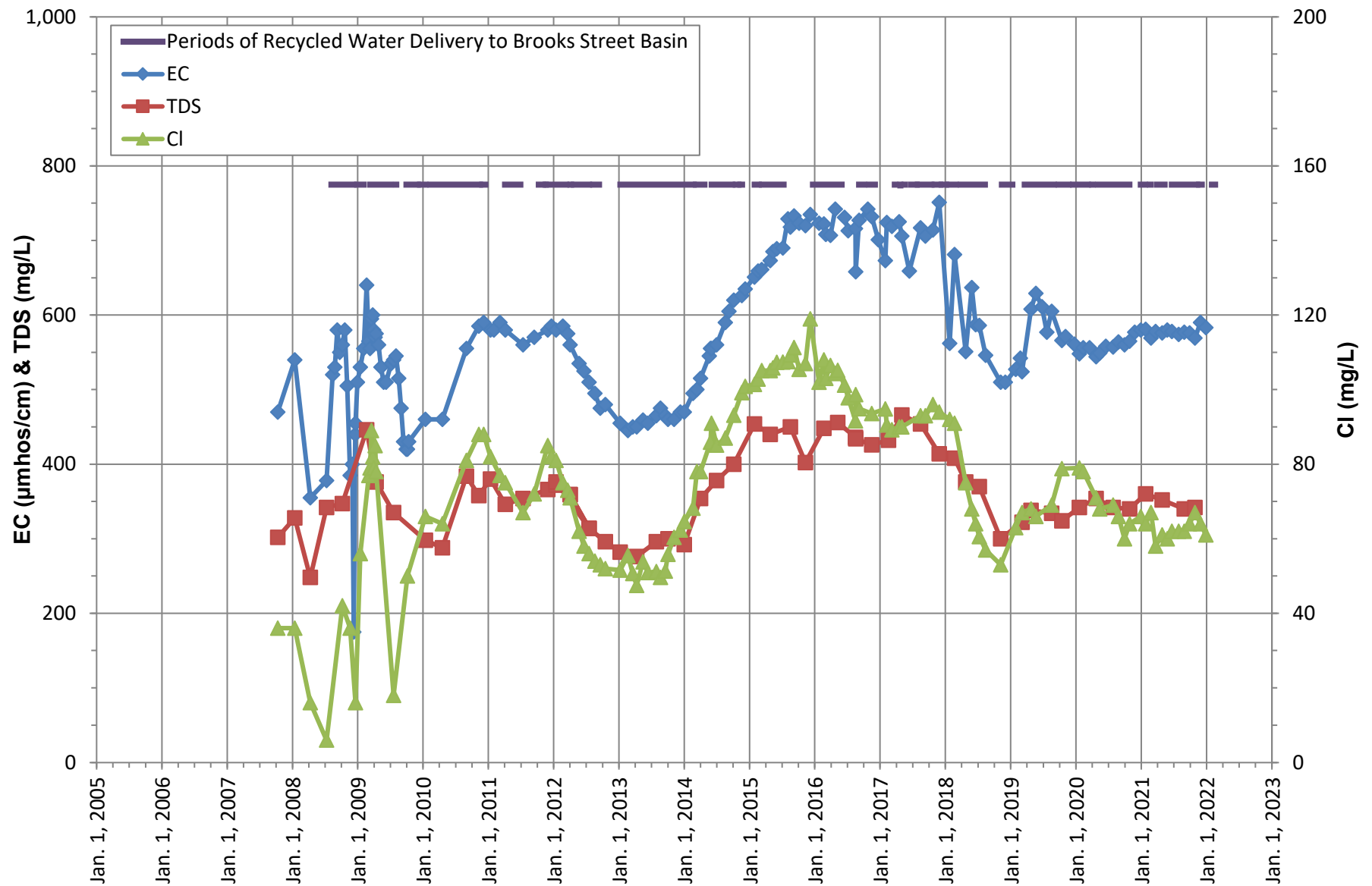






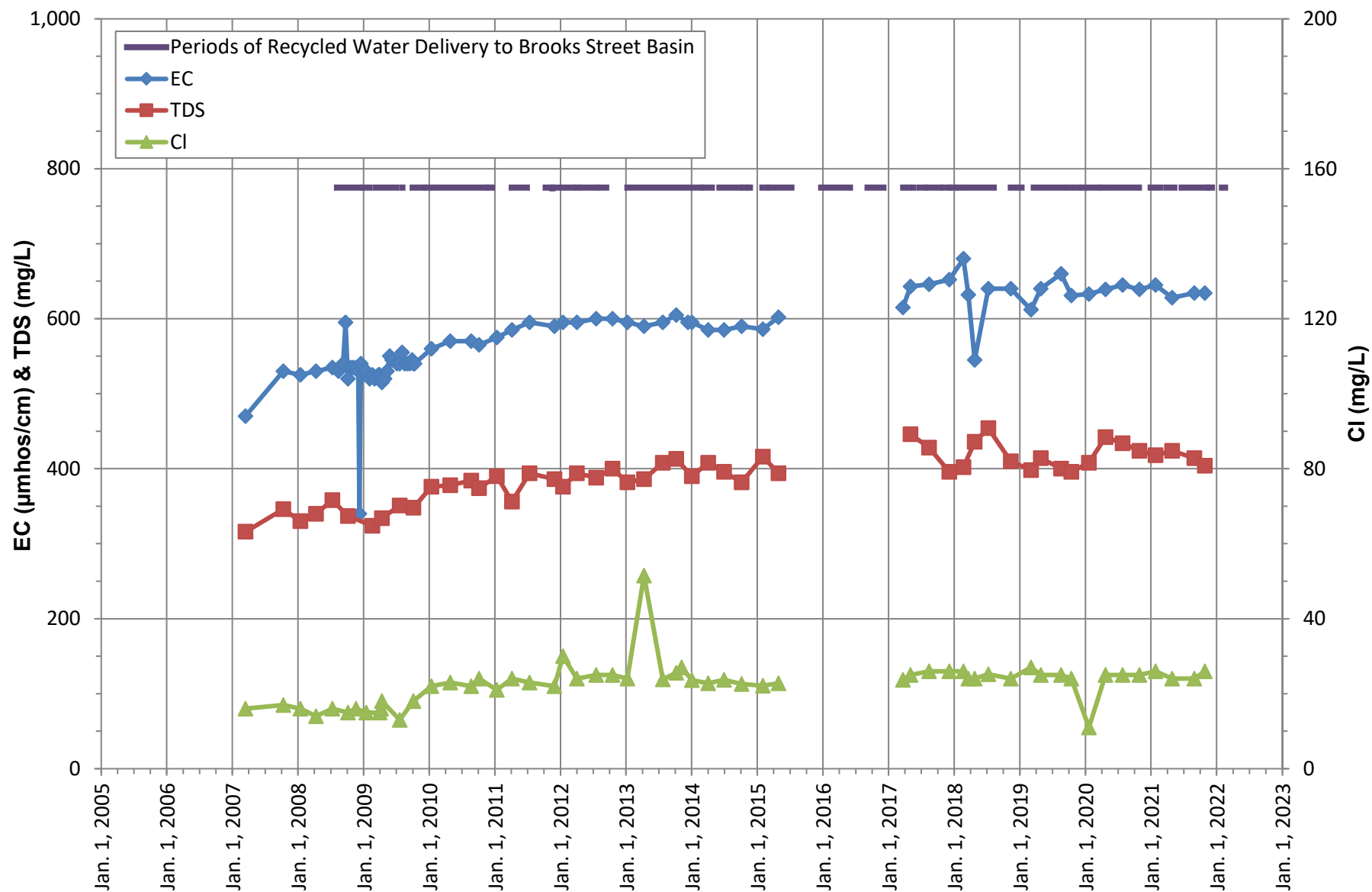
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BANANA-HICKORY BASINS  
FONTANA WATER CO. WELLS 7A AND 37A**





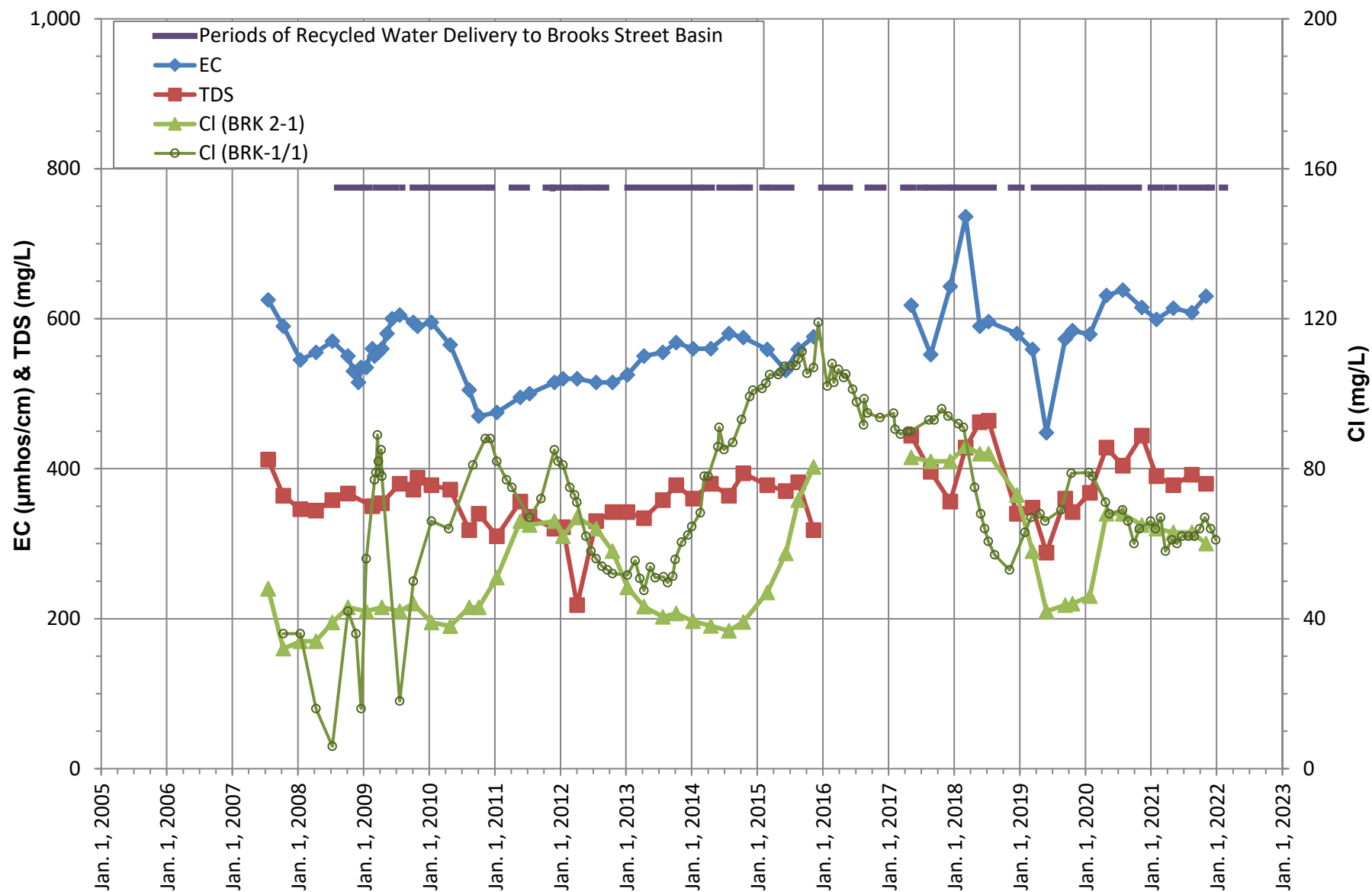
**EC, TDS, CHLORIDE TRENDS  
BROOKS STREET BASIN  
MW BRK-1/1**





**EC, TDS, CHLORIDE TRENDS  
BROOKS STREET BASIN  
MW BRK-1/2**

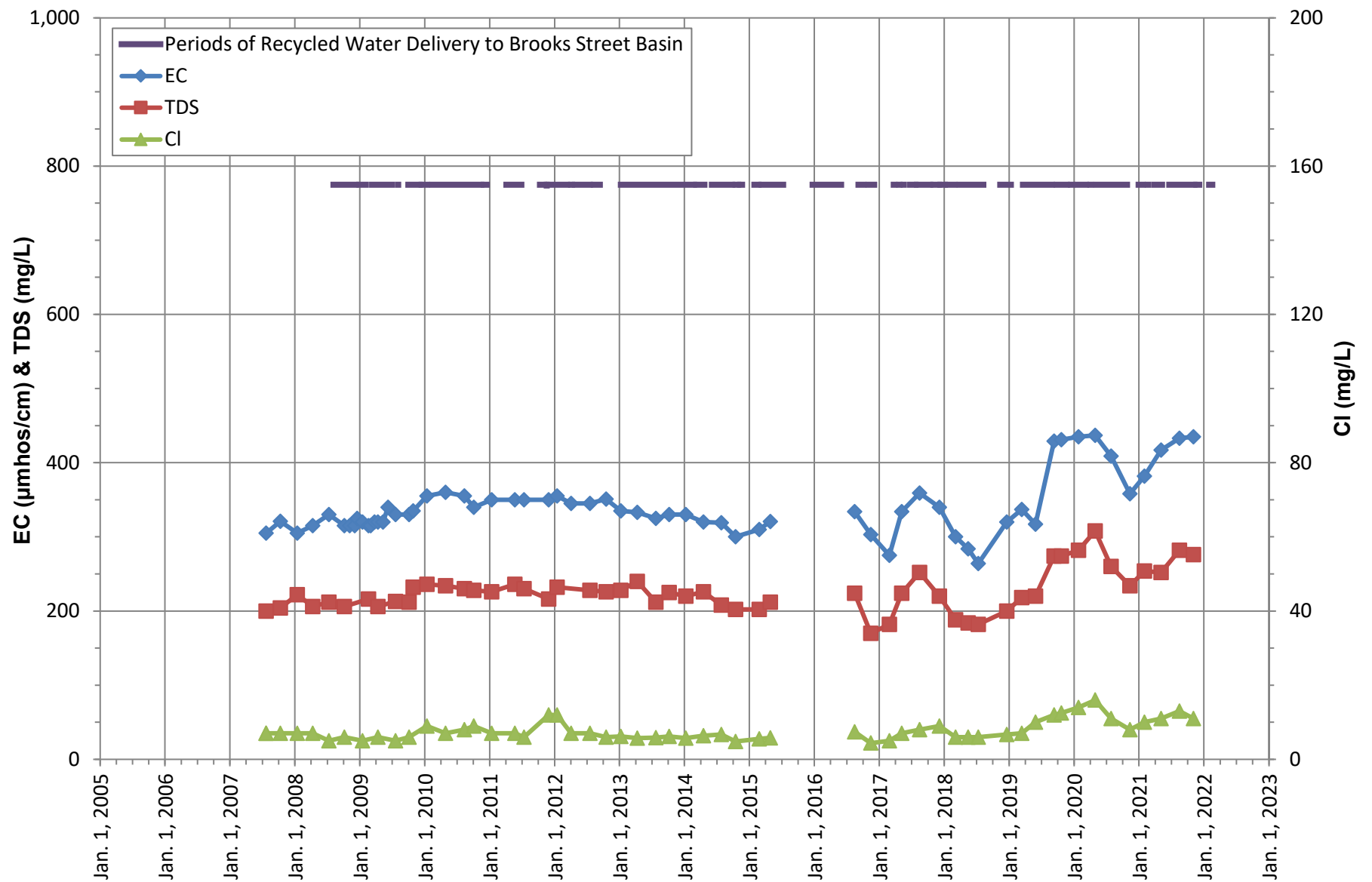




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BROOKS STREET BASIN  
MW BRK-2/1**

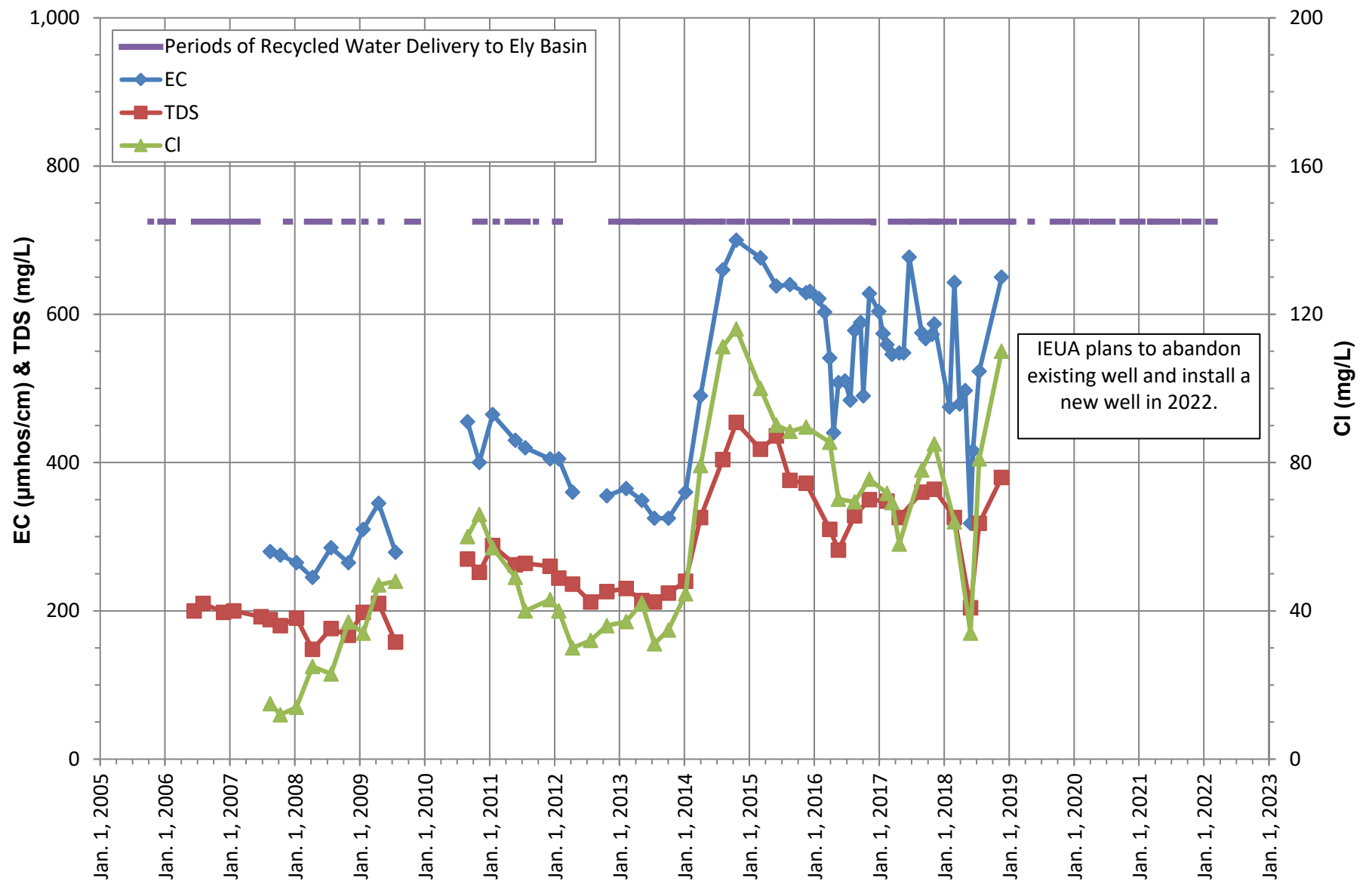






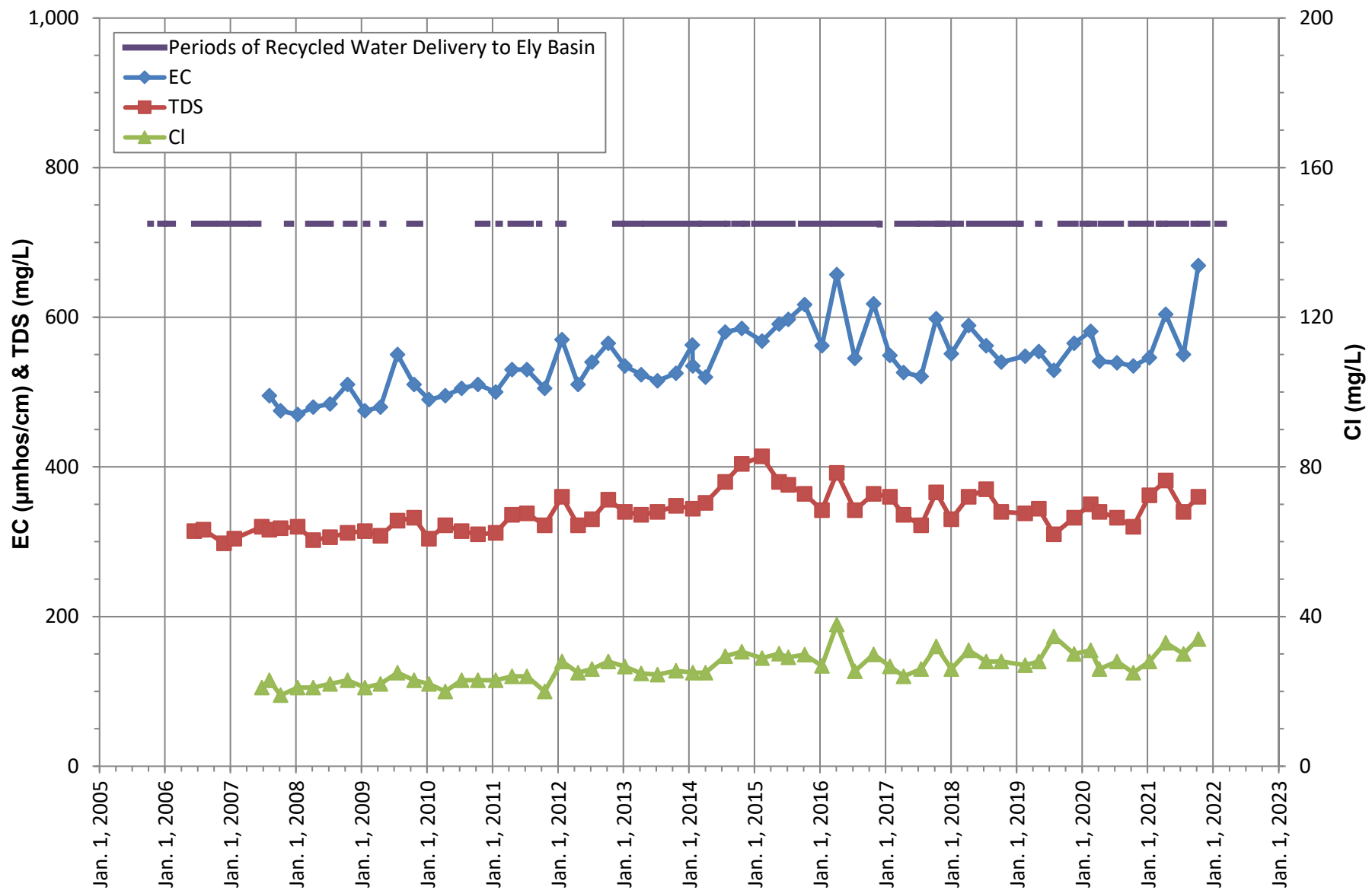
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BROOKS STREET BASIN  
MW BRK-2/2**





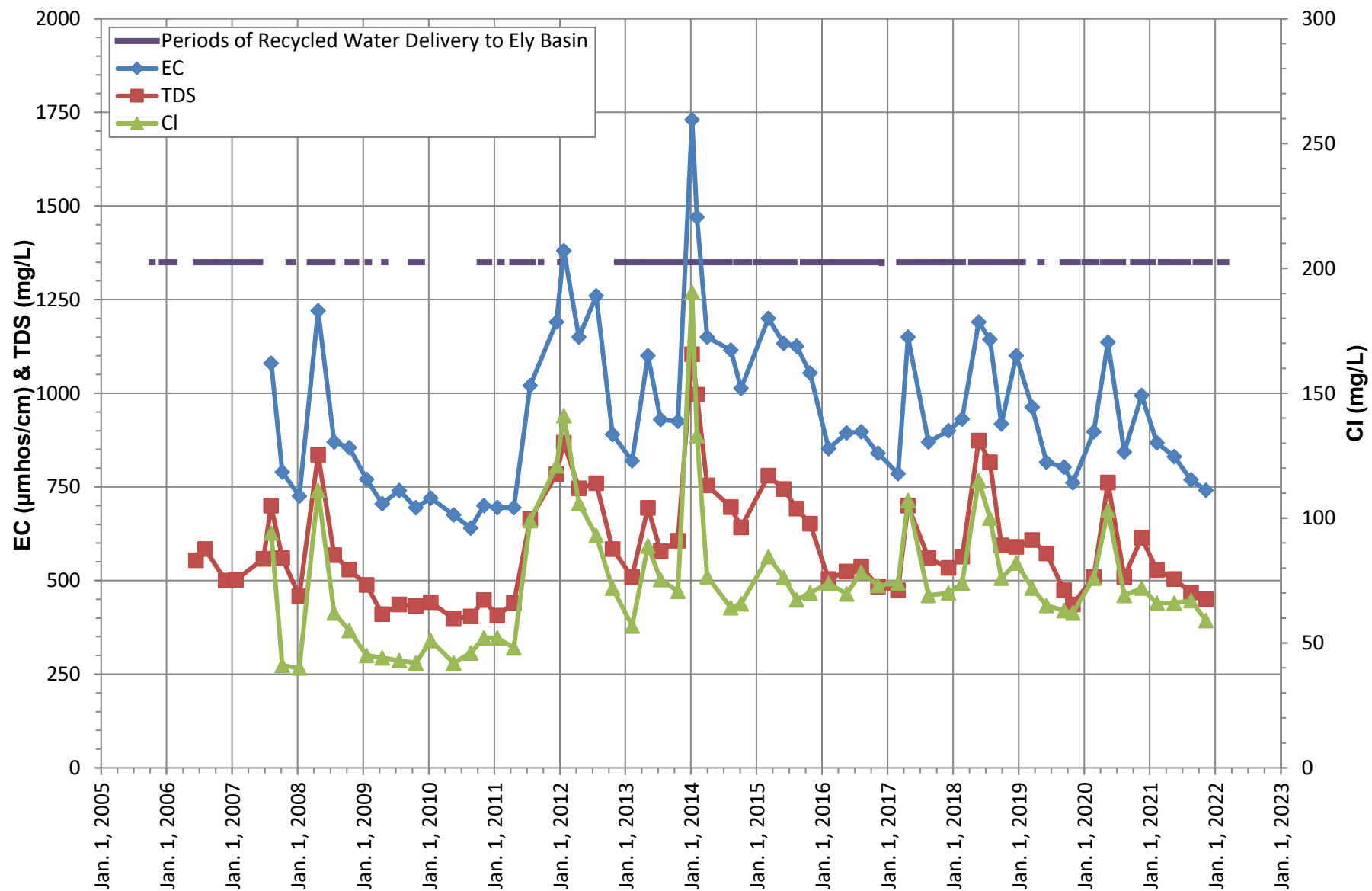
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ELY BASIN  
PHILADELPHIA WELL**





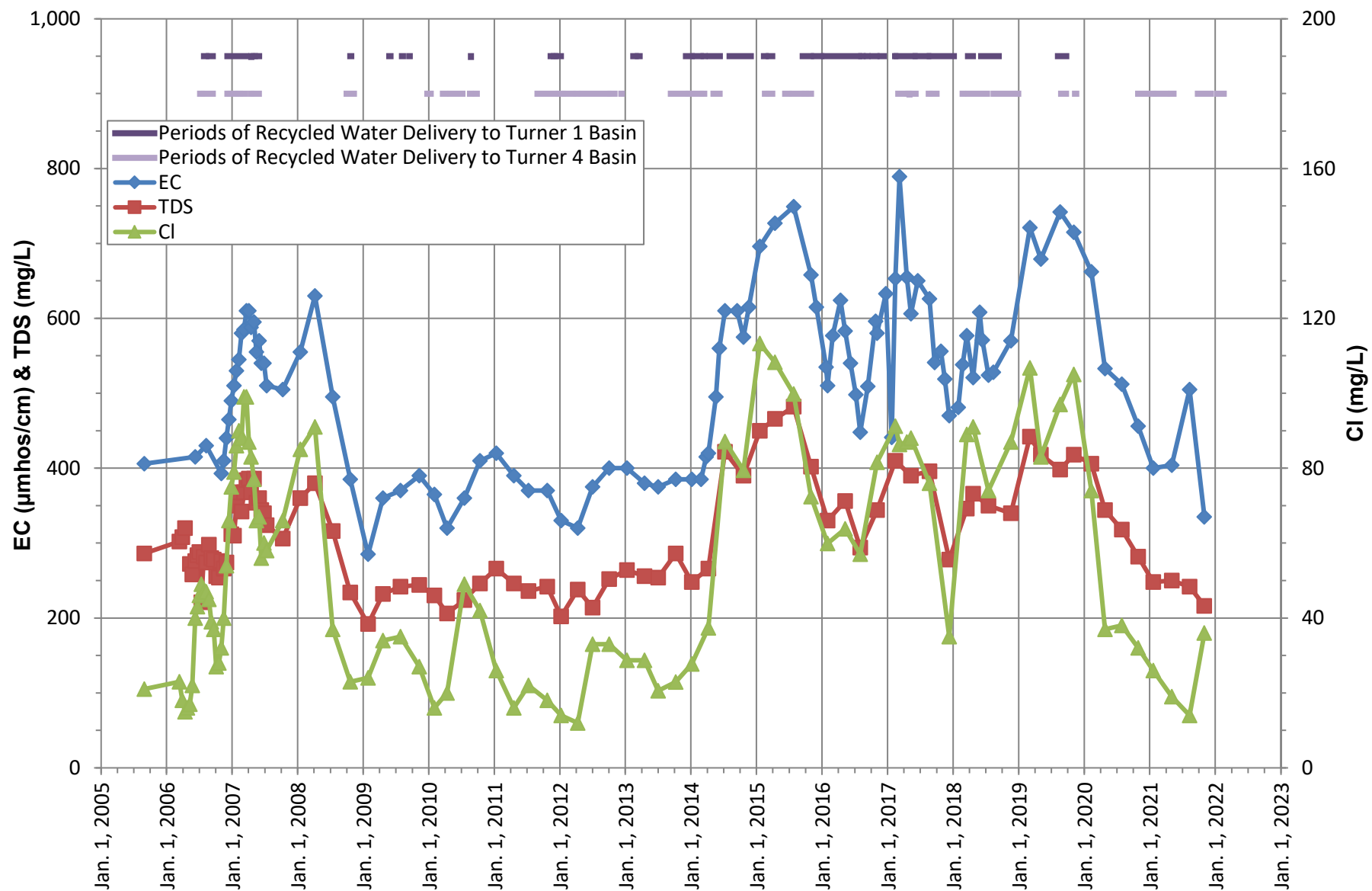
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ELY BASIN  
RIVERSIDE WELL**





**EC, TDS, CHLORIDE TRENDS  
ELY BASIN  
WALNUT WELL**

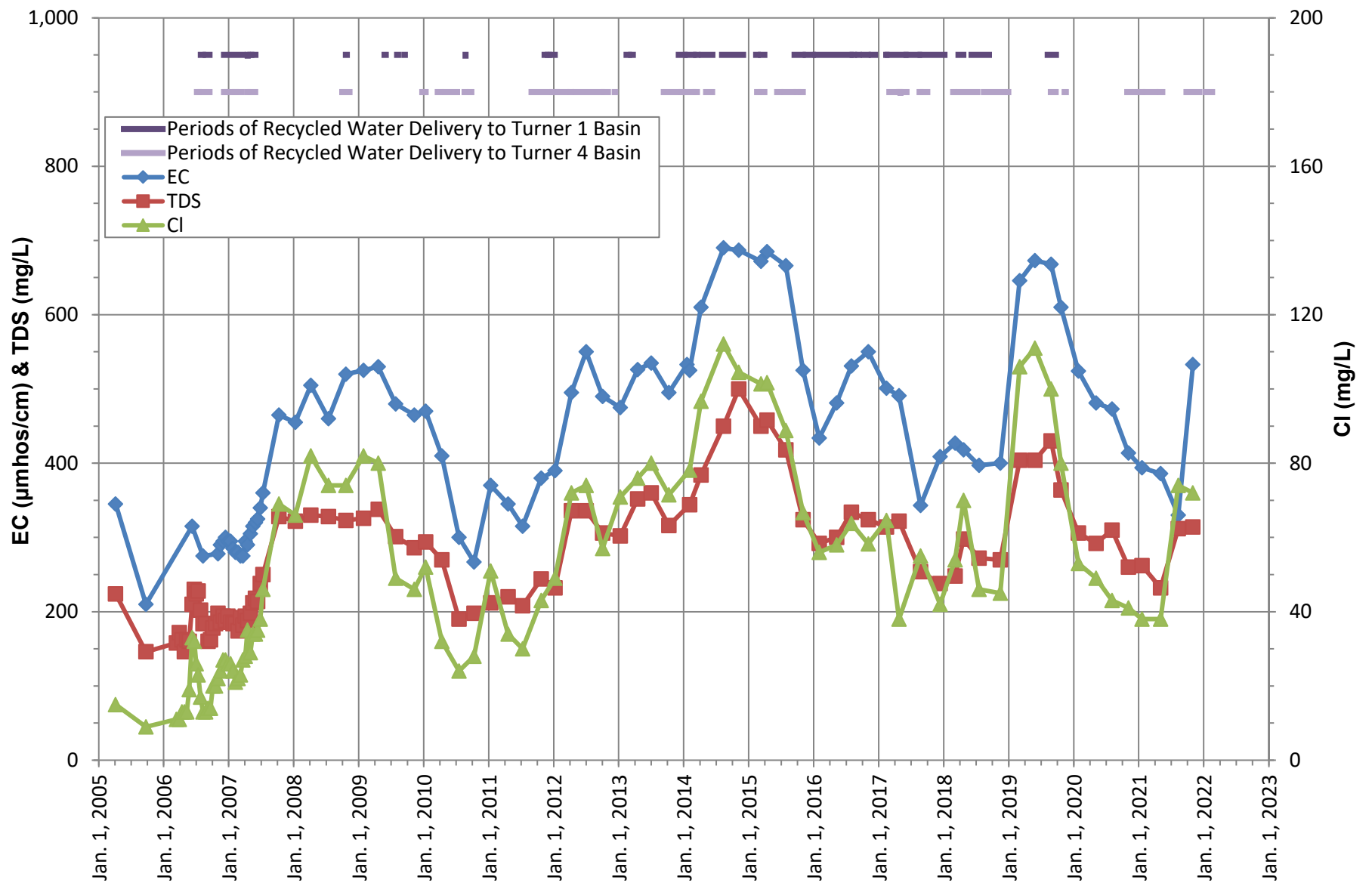




**EC, TDS, CHLORIDE TRENDS  
TURNER BASINS  
MW T-1/2**



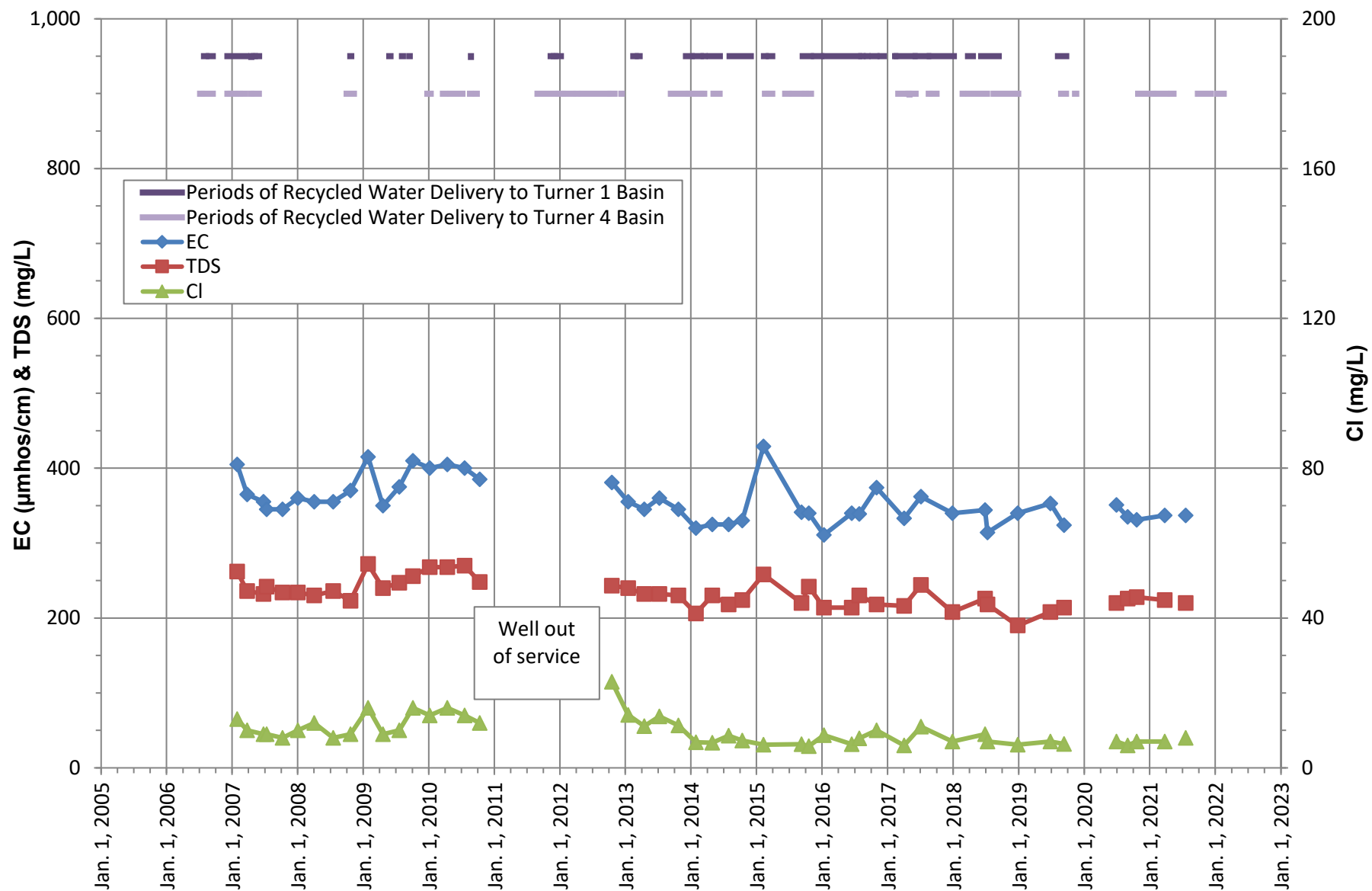




**EC, TDS, CHLORIDE TRENDS  
TURNER BASINS  
MW T-2/2**

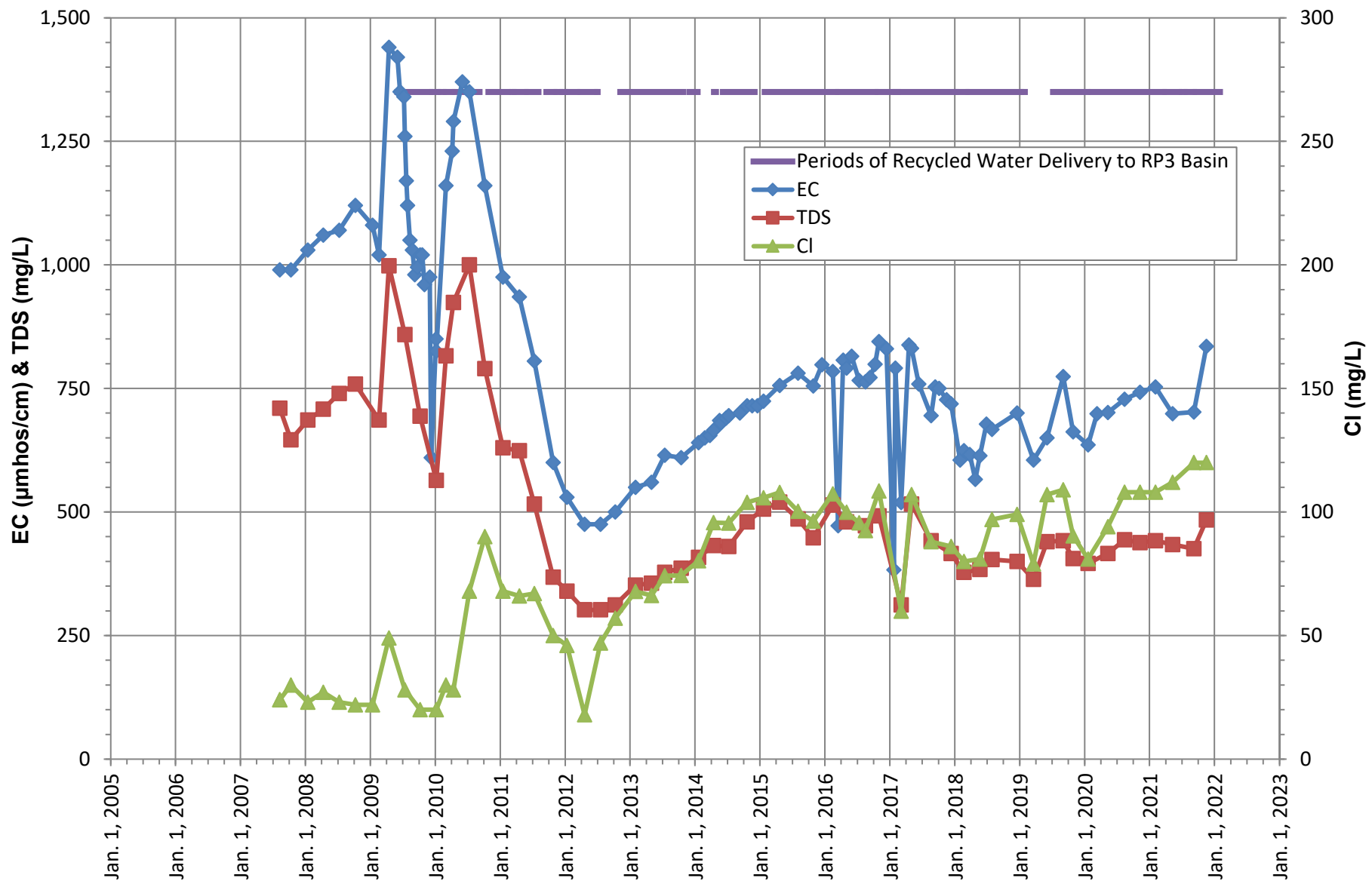






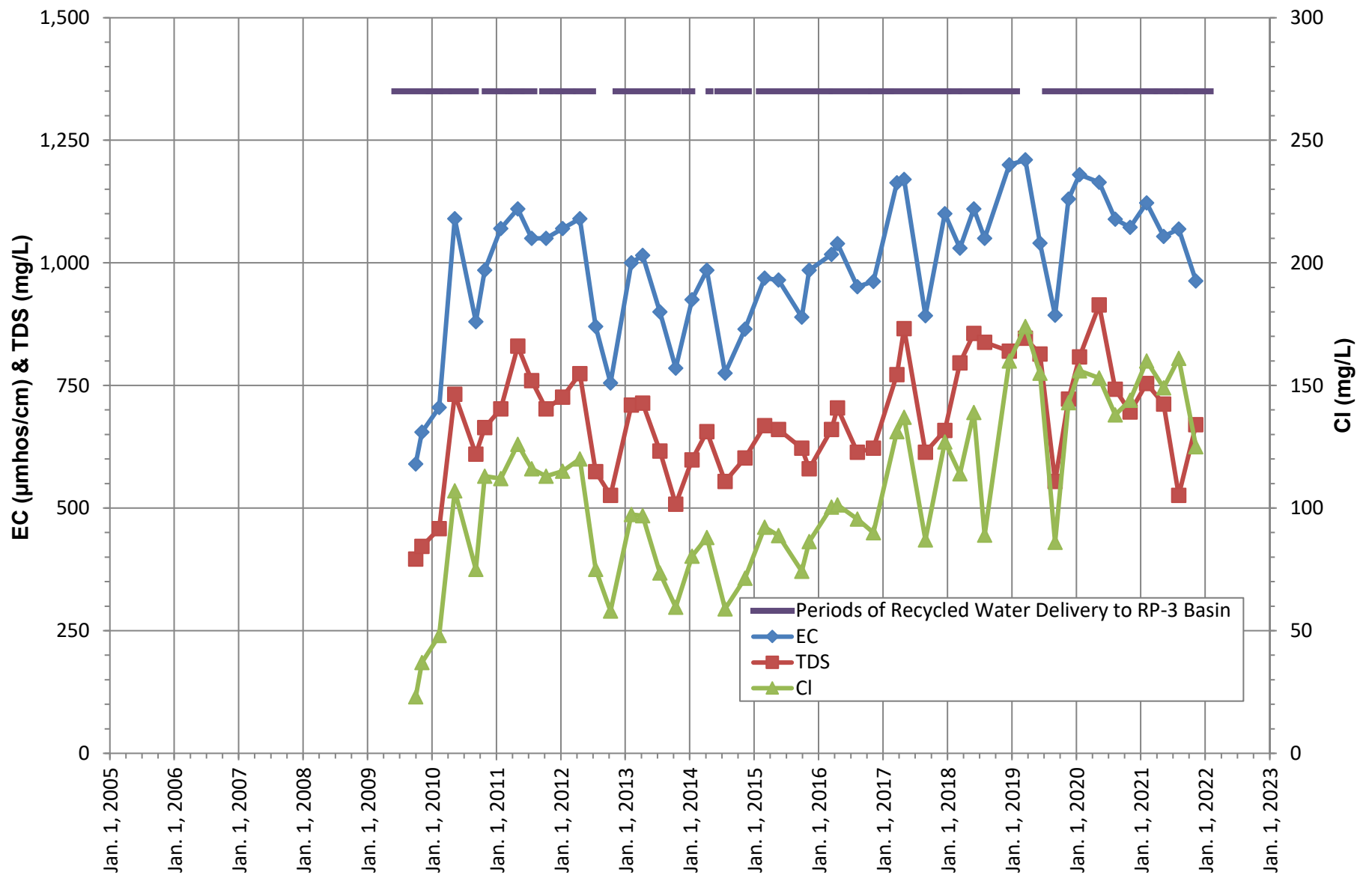
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TURNER BASINS  
ONTARIO NO. 29**





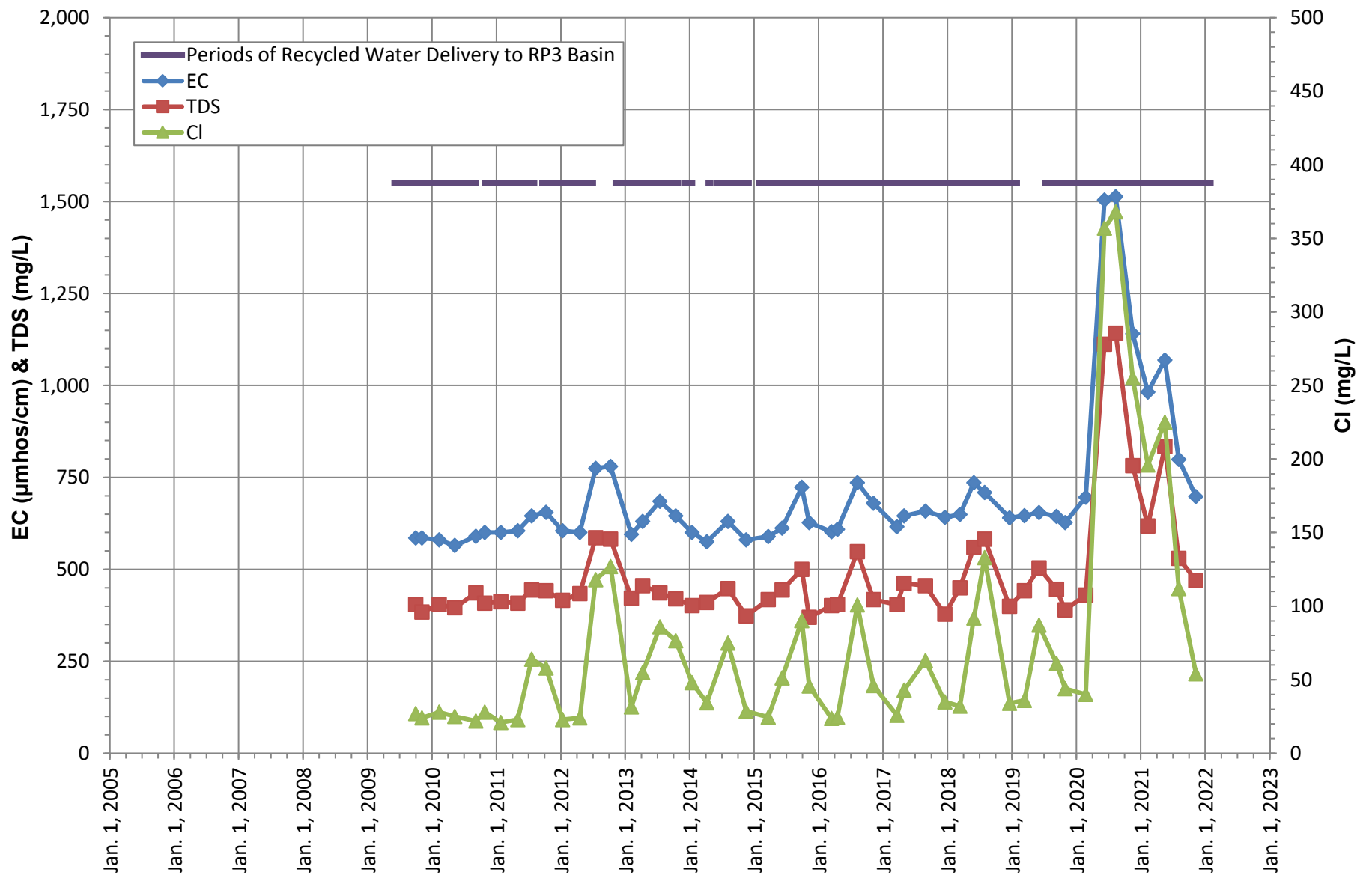
**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
RP3-1/1**





**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
ALCOA MW-3**

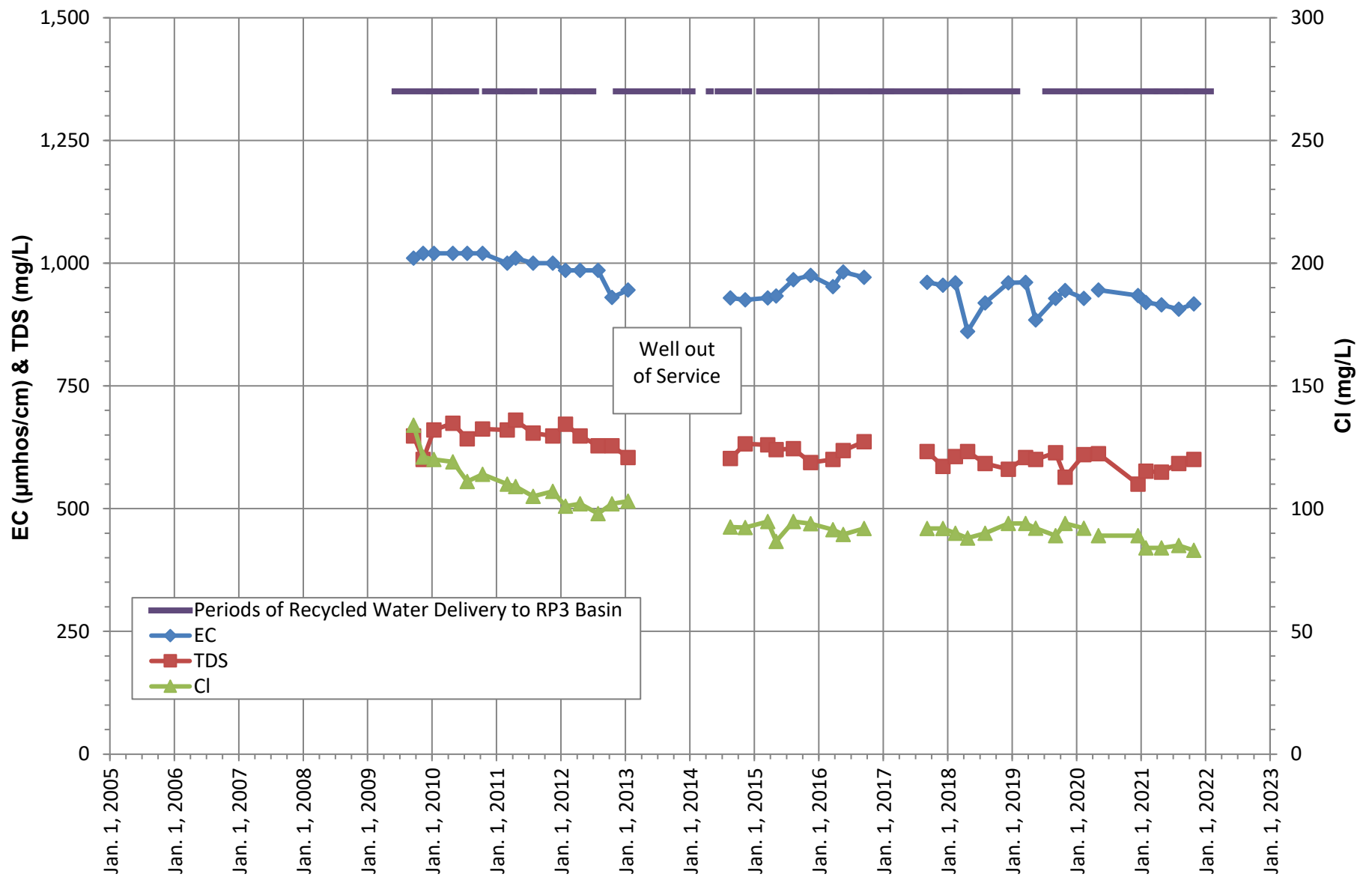




**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
ALCOA MW-1**

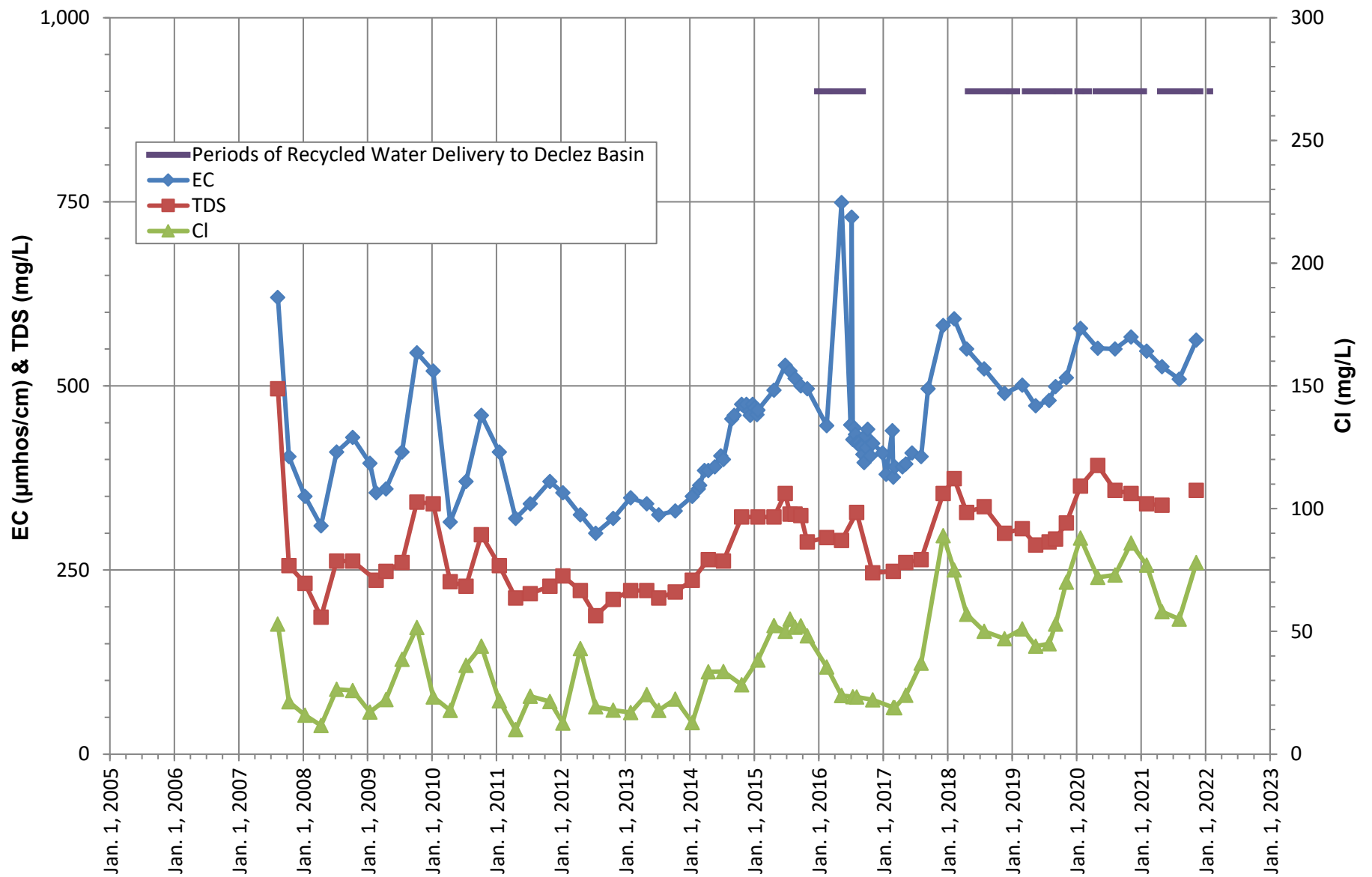






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RP3 BASINS  
Southridge JHS Well**

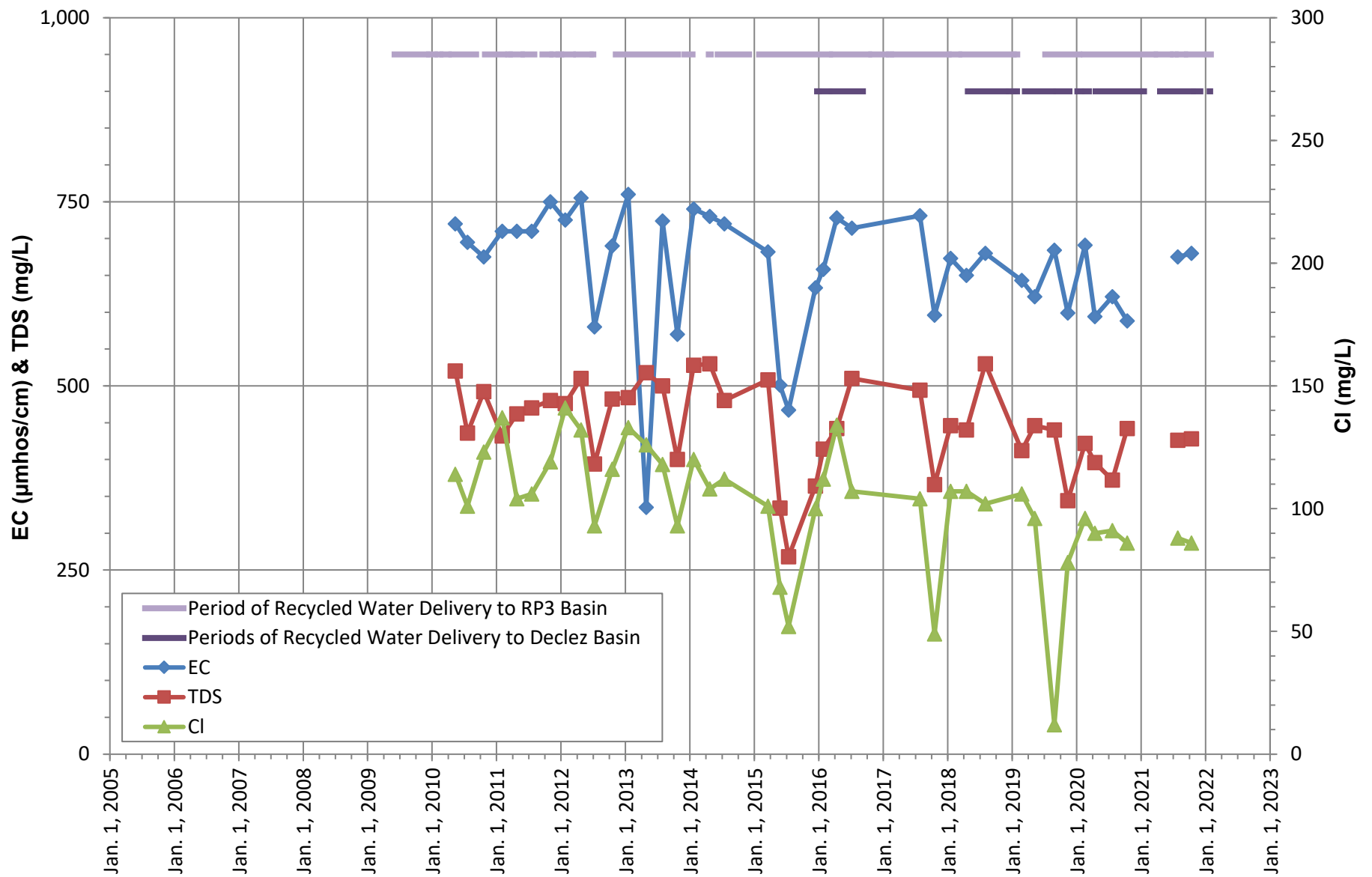




**EC, TDS, CHLORIDE TRENDS  
DECLEZ BASIN  
DCZ-1/1**

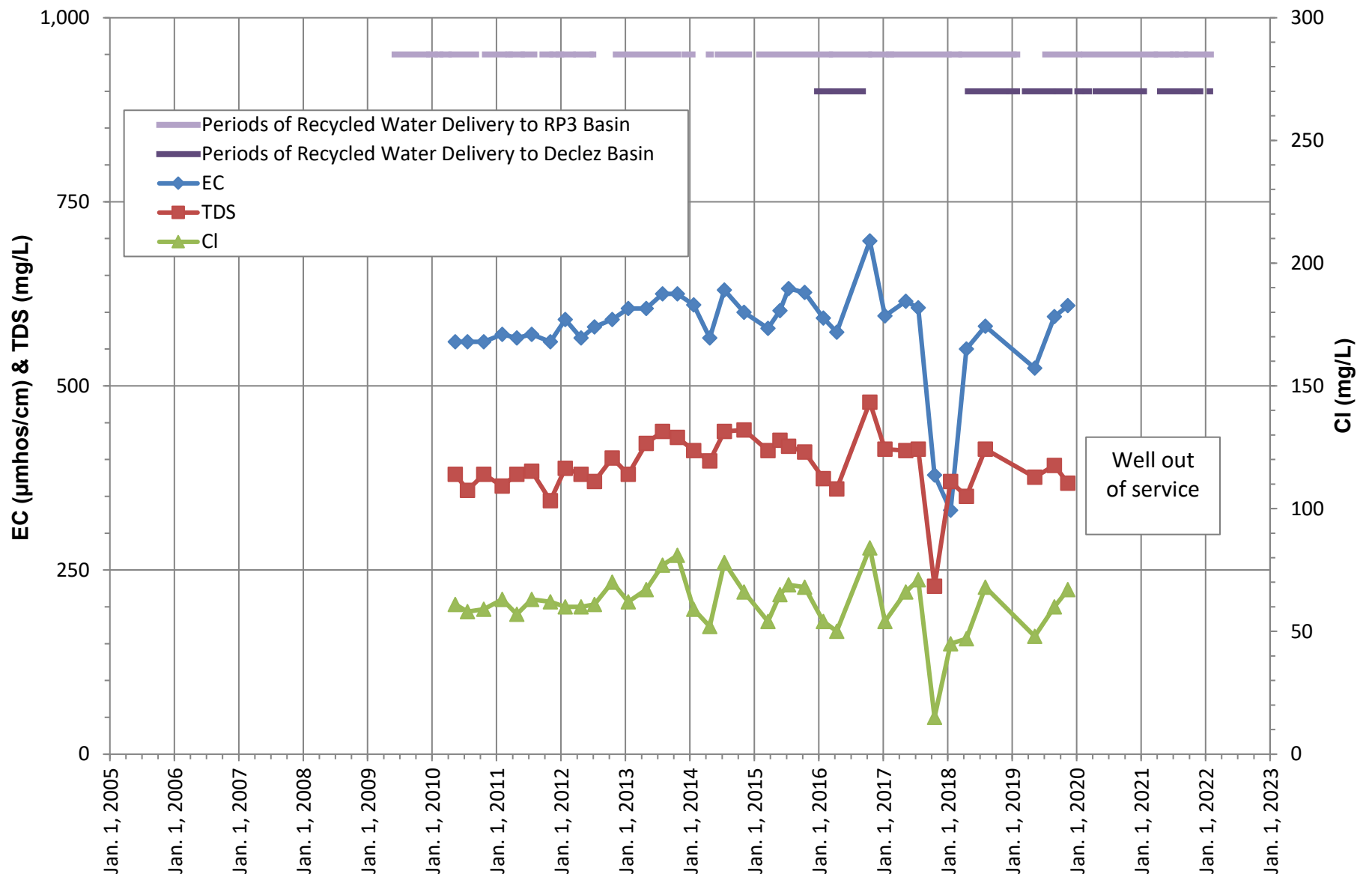






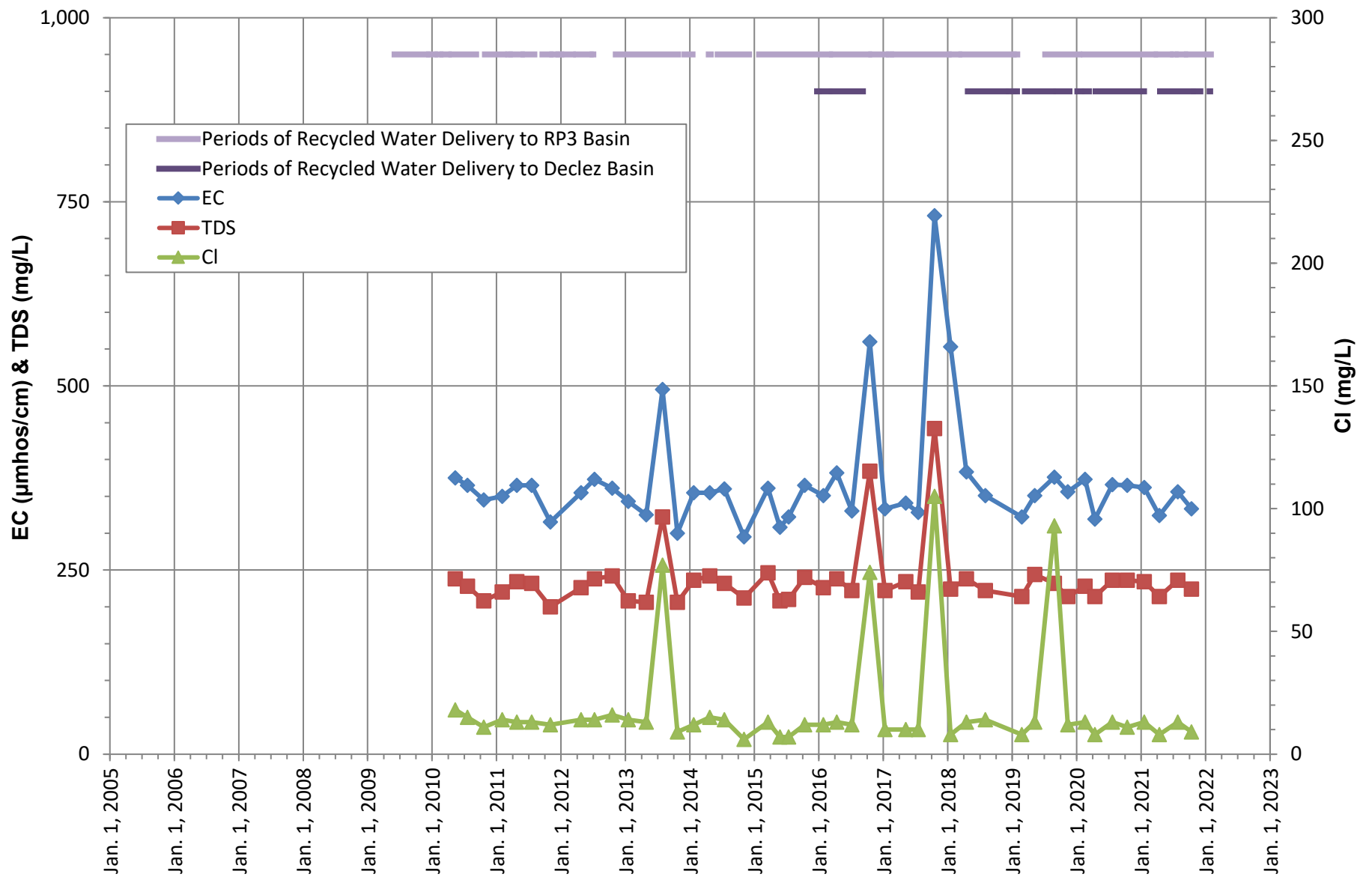
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RP3 AND DECLEZ BASINS  
JCSD Well No. 13**





**EC, TDS, CHLORIDE TRENDS  
RP3 AND DECLEZ BASINS  
JCSD Well No. 17**

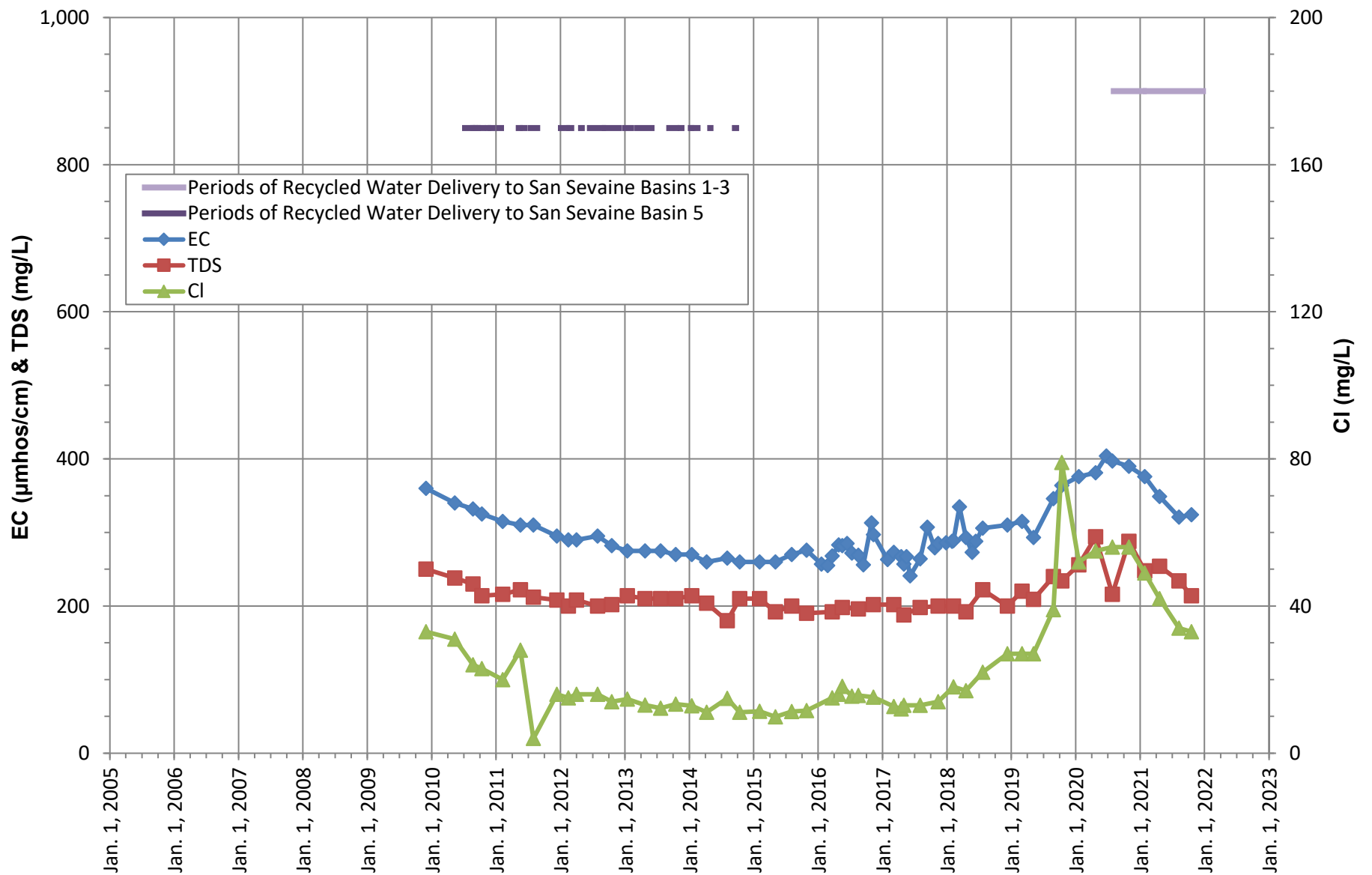




**EC, TDS, CHLORIDE TRENDS  
RP3 AND DECLEZ BASINS  
JCSD Well No. 19**

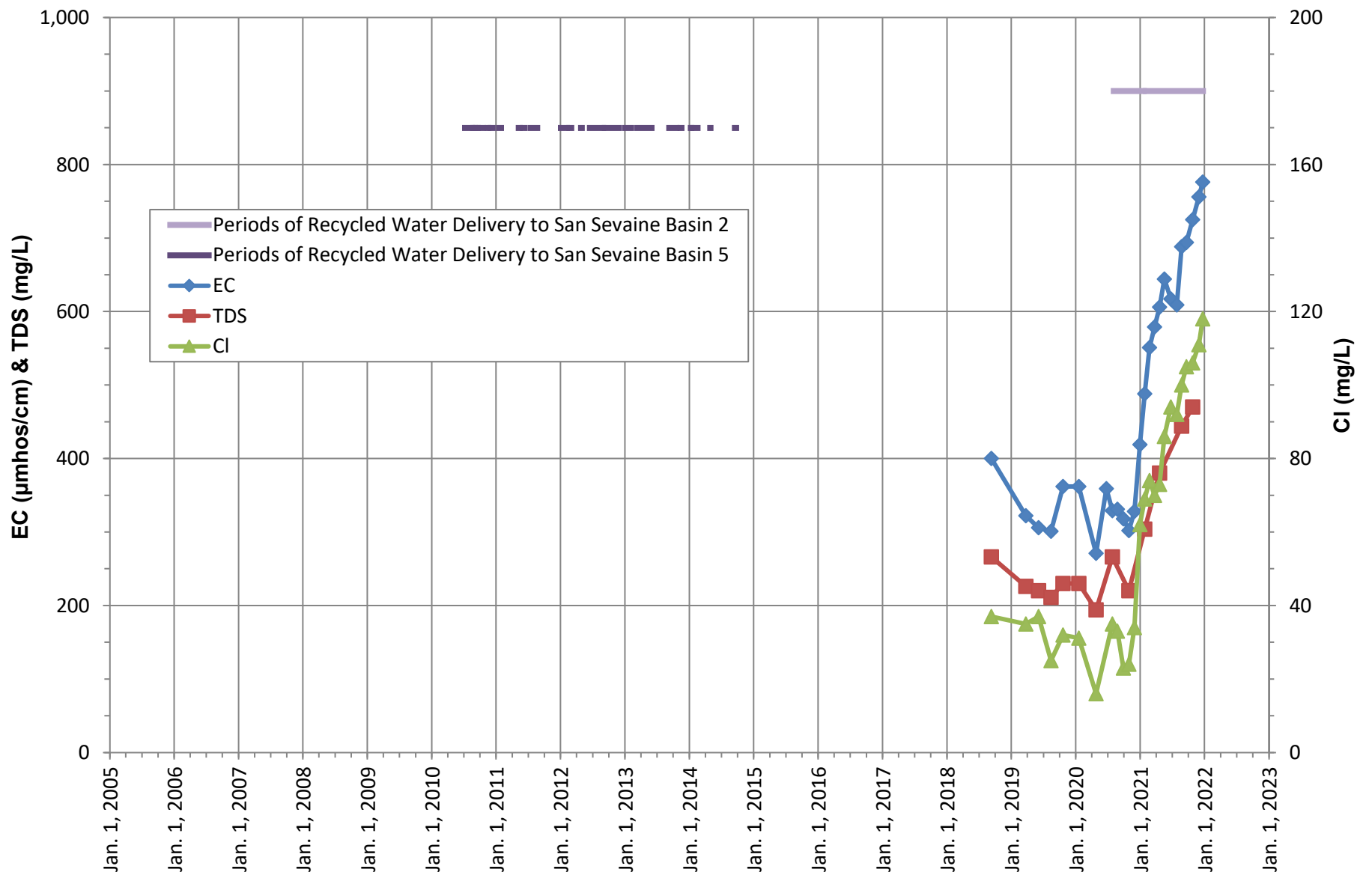






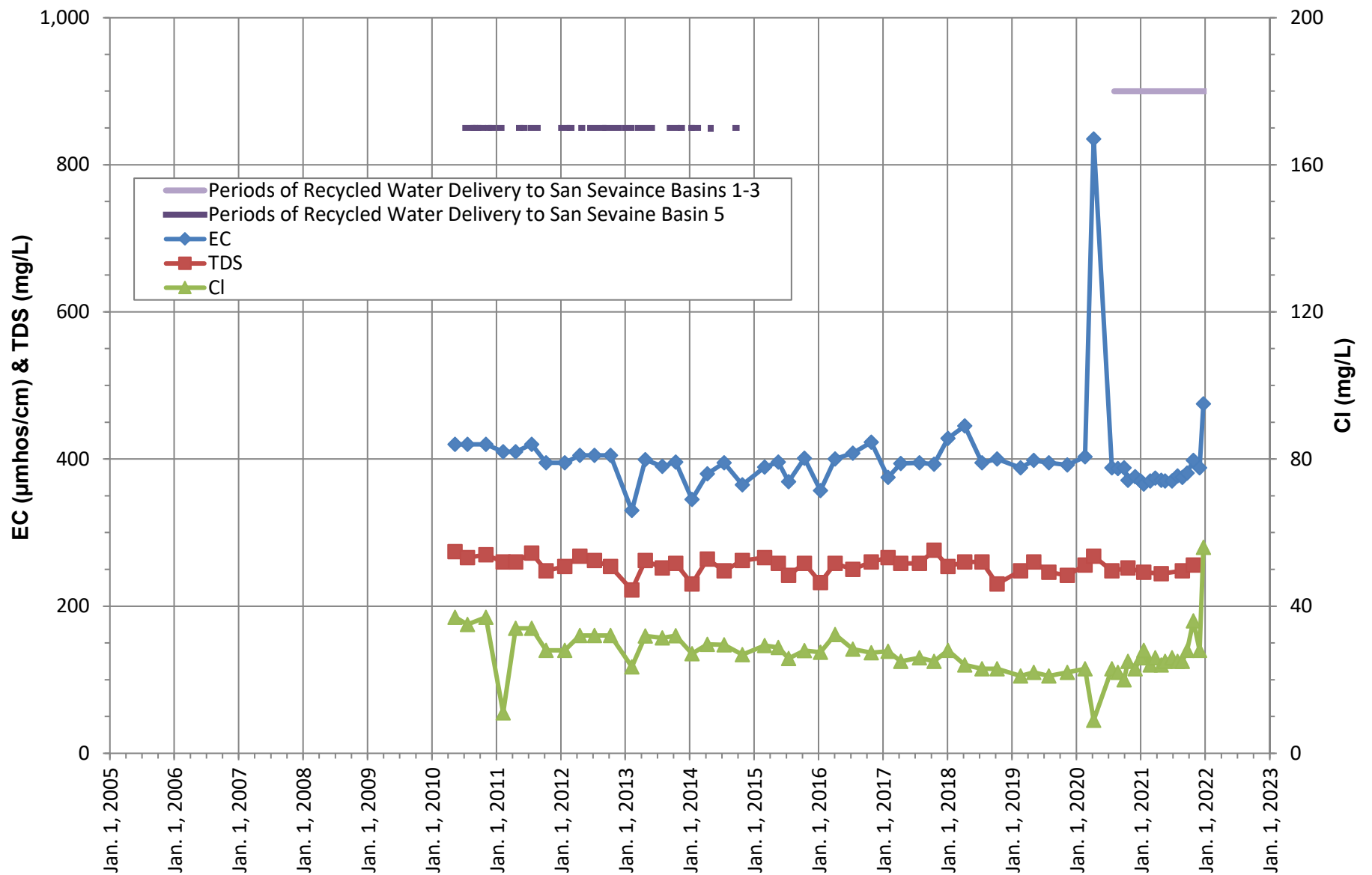
**EC, TDS, CHLORIDE TRENDS  
SAN SEVAIRE BASINS  
SS-1/1**





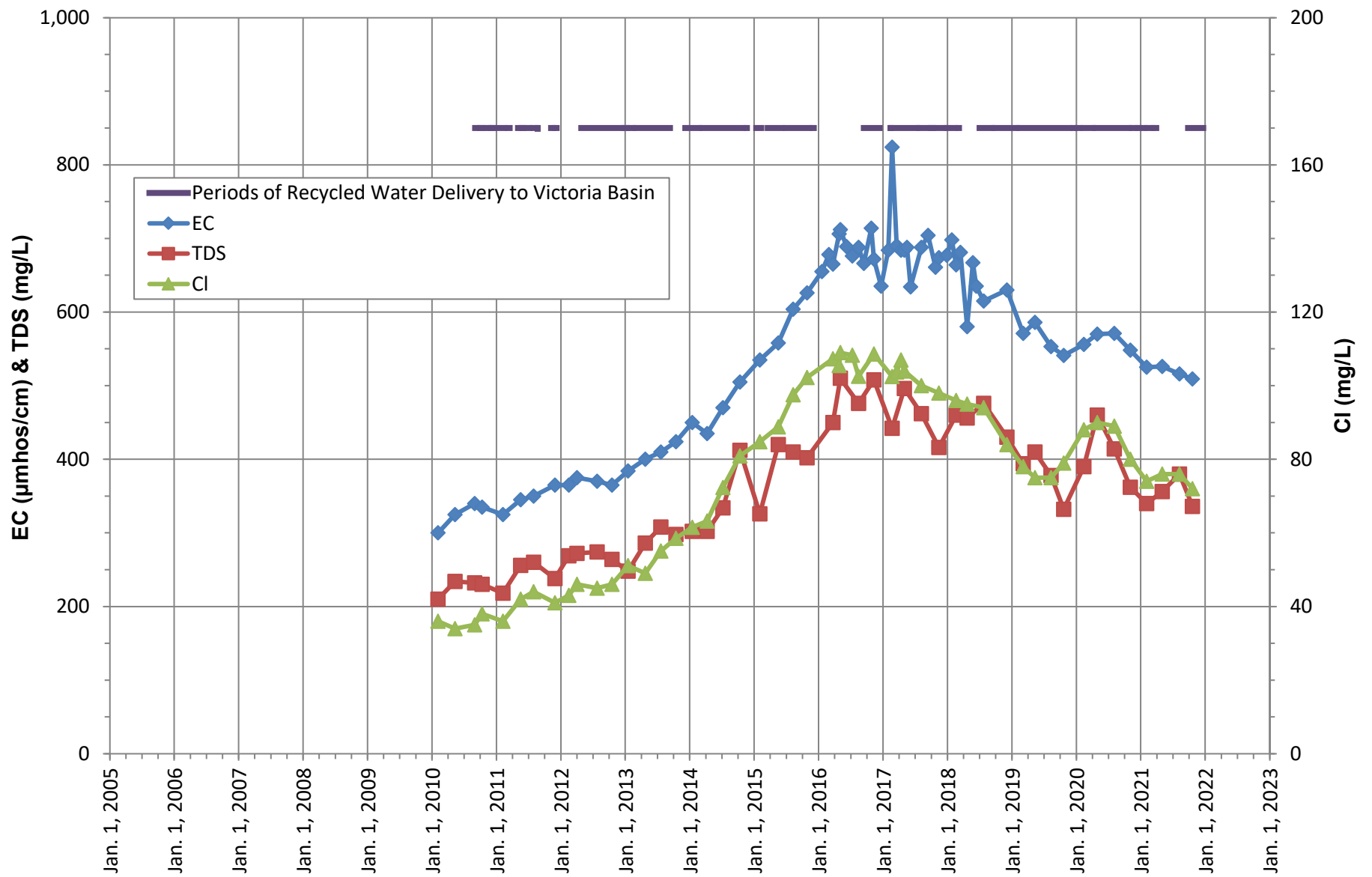
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SAN SEVAINE BASINS  
SSV-2**





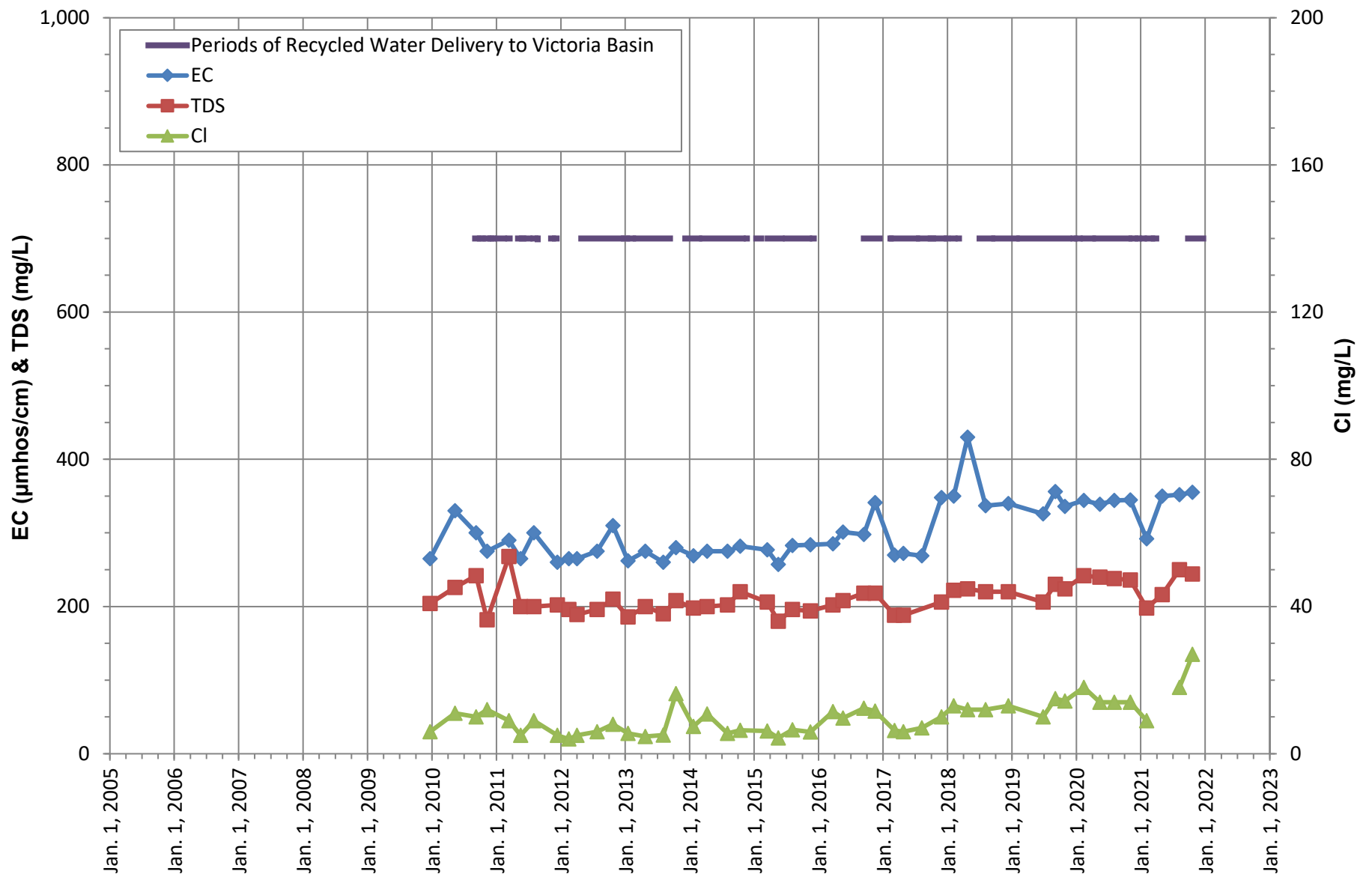
**EC, TDS, CHLORIDE TRENDS  
SAN SEVAINE BASINS  
Unitex 91090**





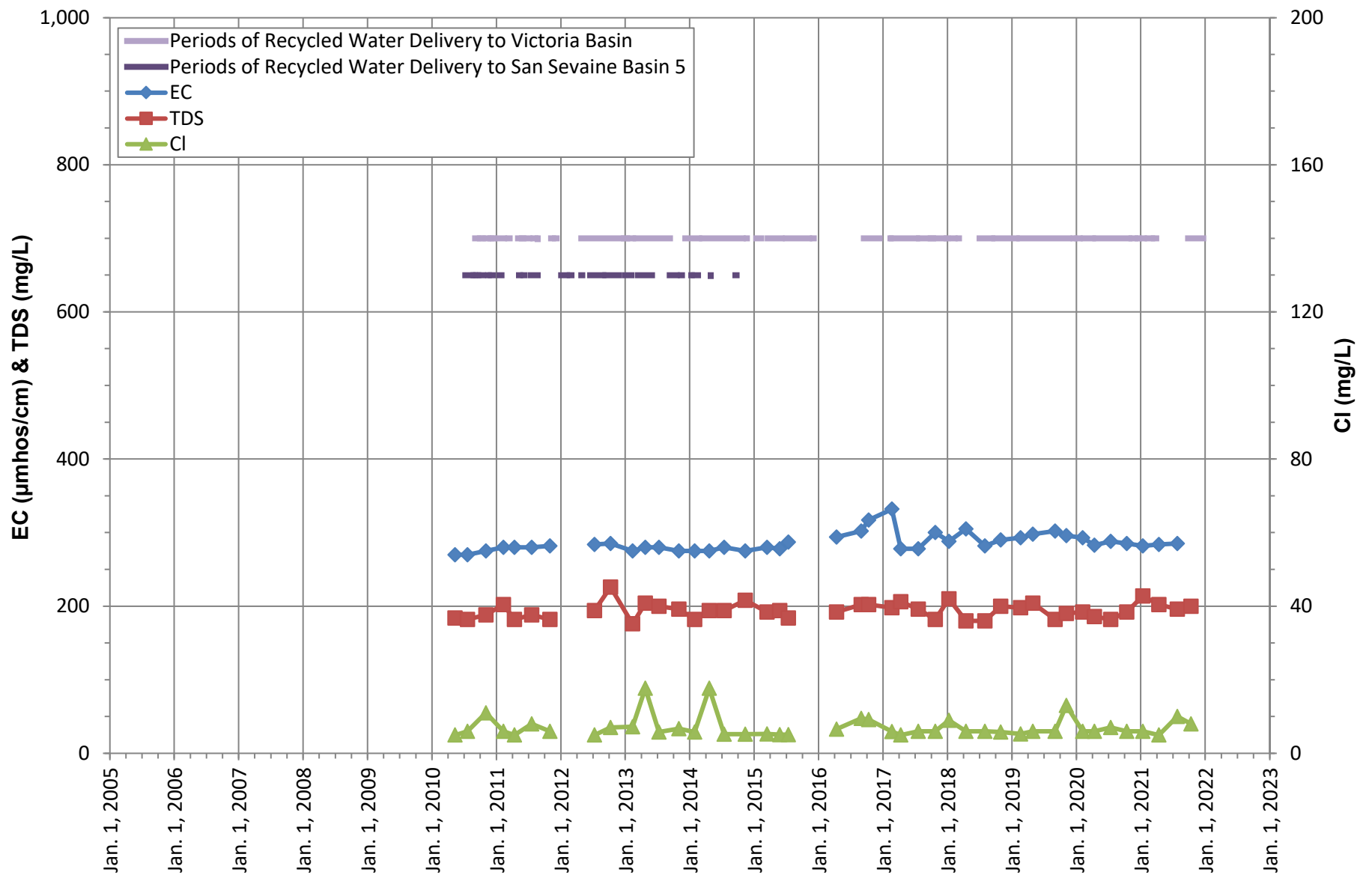
**EC, TDS, CHLORIDE TRENDS  
VICTORIA BASIN  
VCT-1/1**





**EC, TDS, CHLORIDE TRENDS  
VICTORIA BASIN  
VCT-2/2**





**EC, TDS, CHLORIDE TRENDS  
SAN SEVAIRE & VICTORIA BASINS  
CVWD Well No. 39**

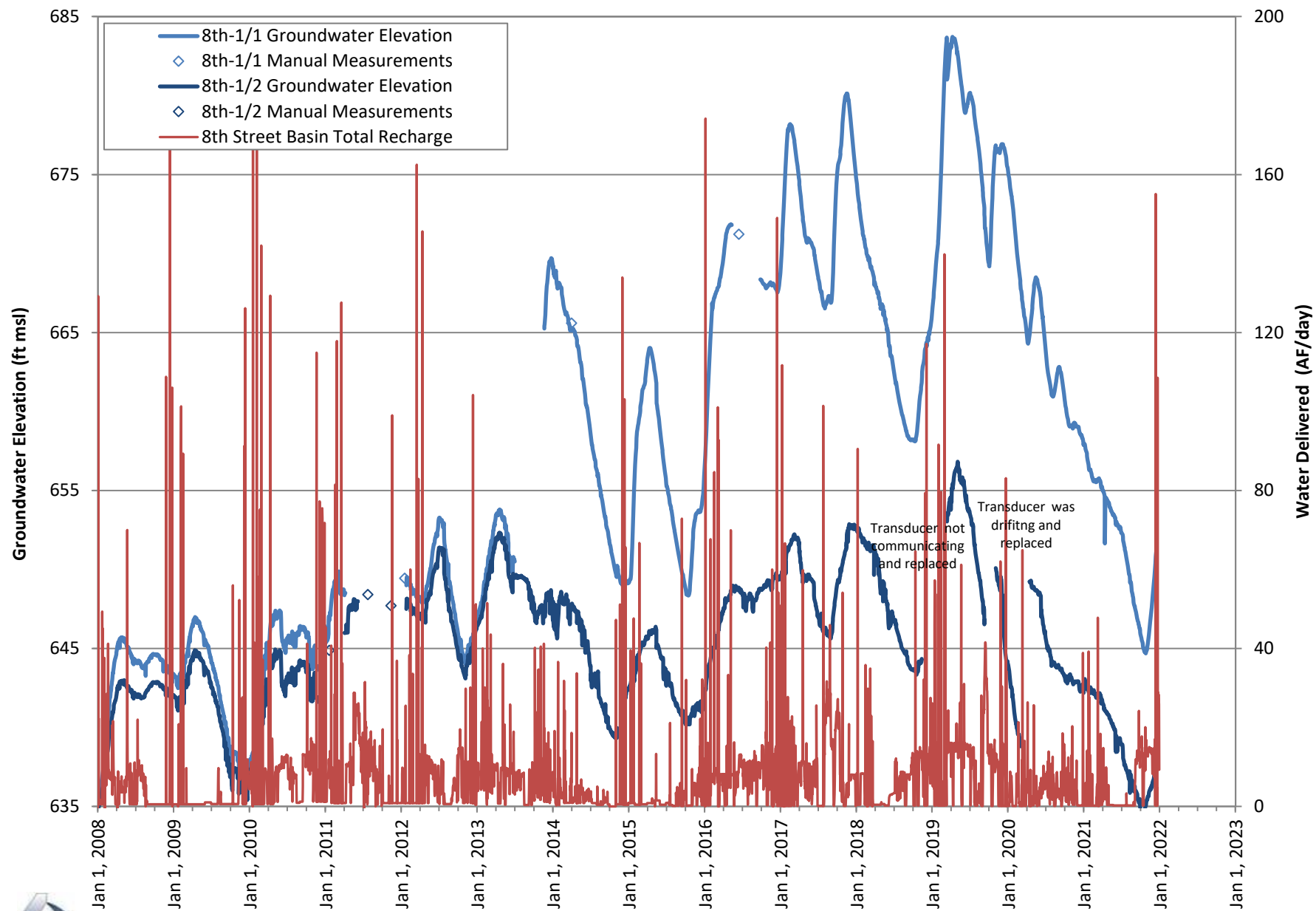




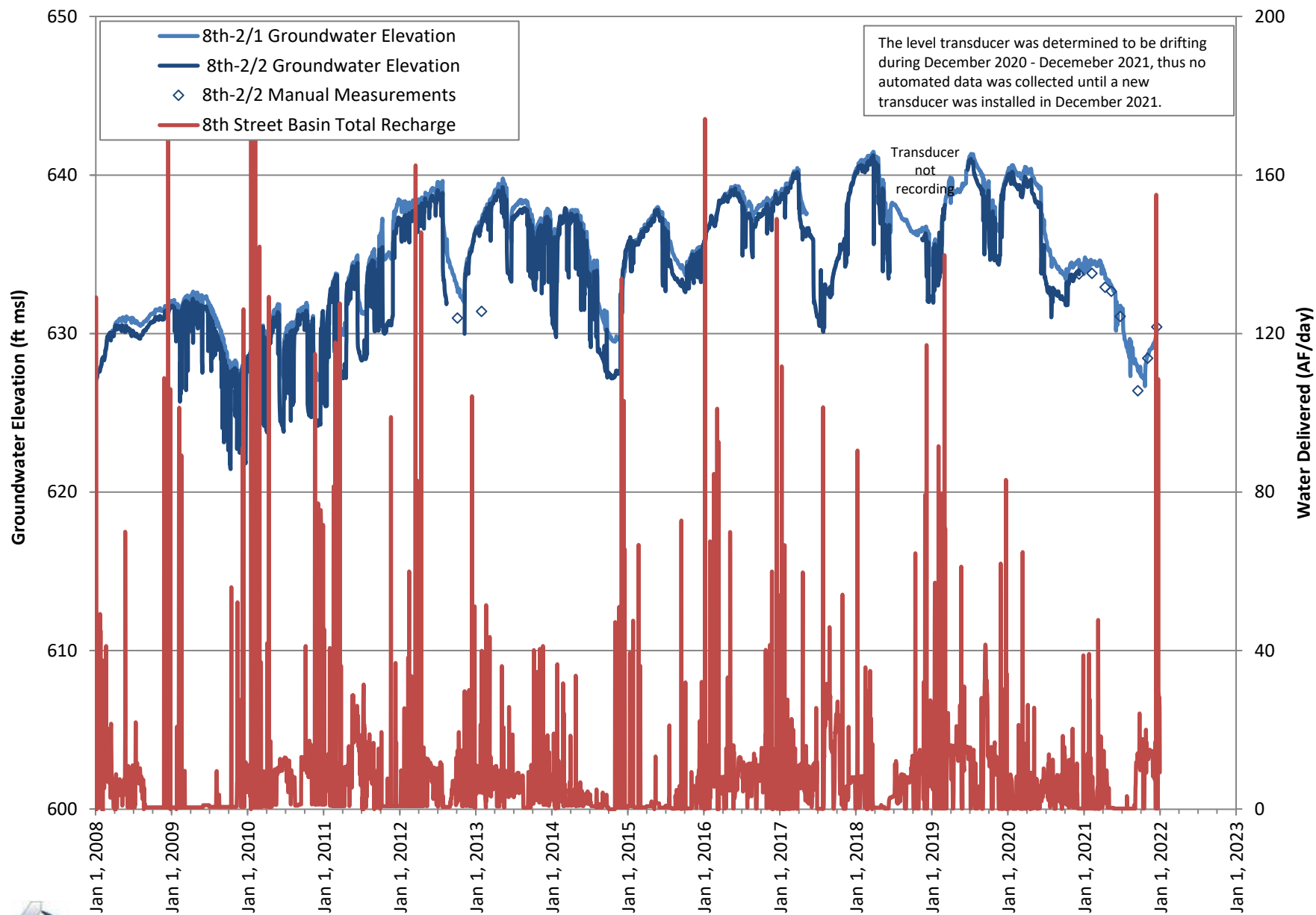
## APPENDIX D

### MONITORING WELL HYDROGRAPHS

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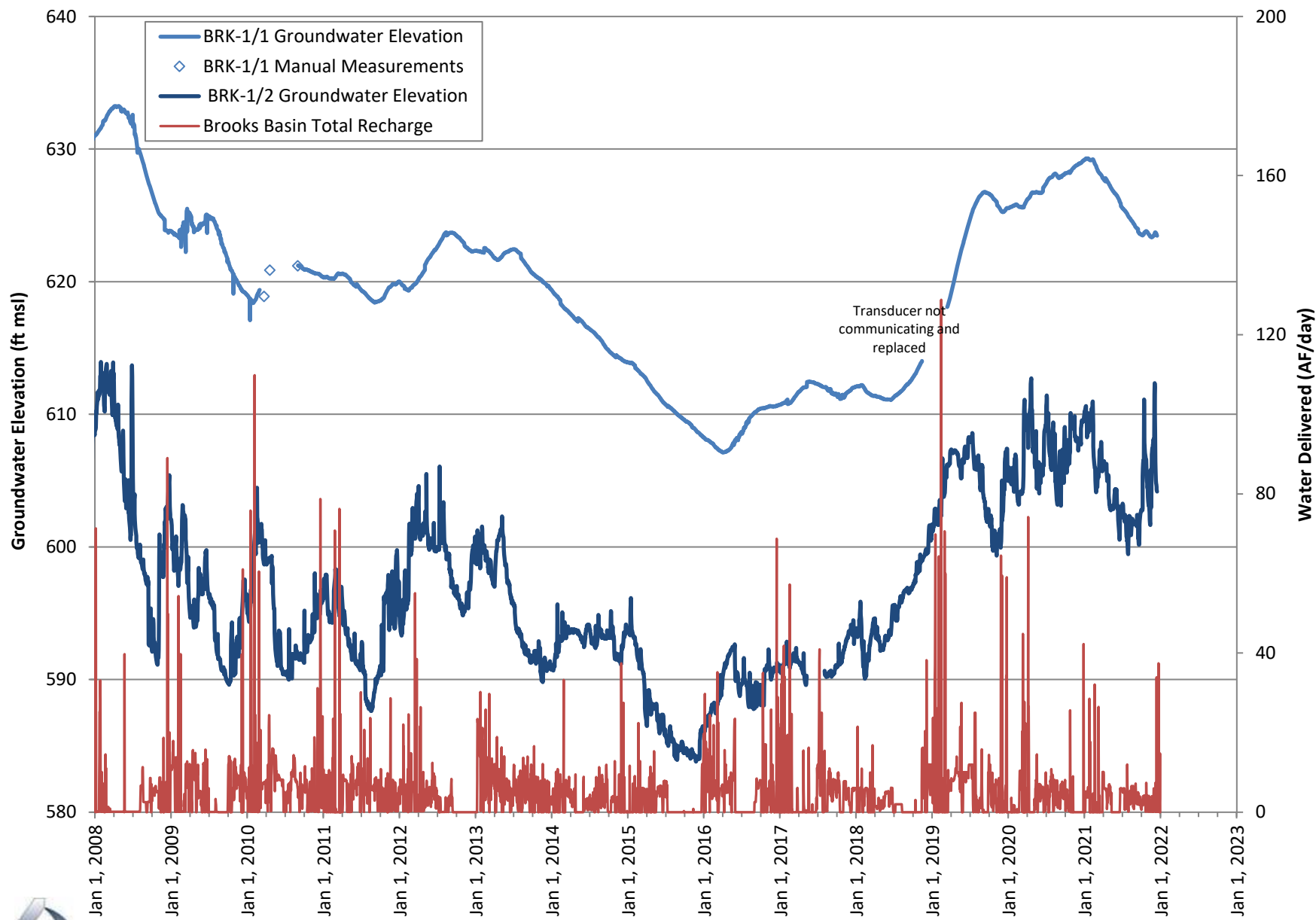


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**MW 8TH-1/1 & 8TH-1/2**

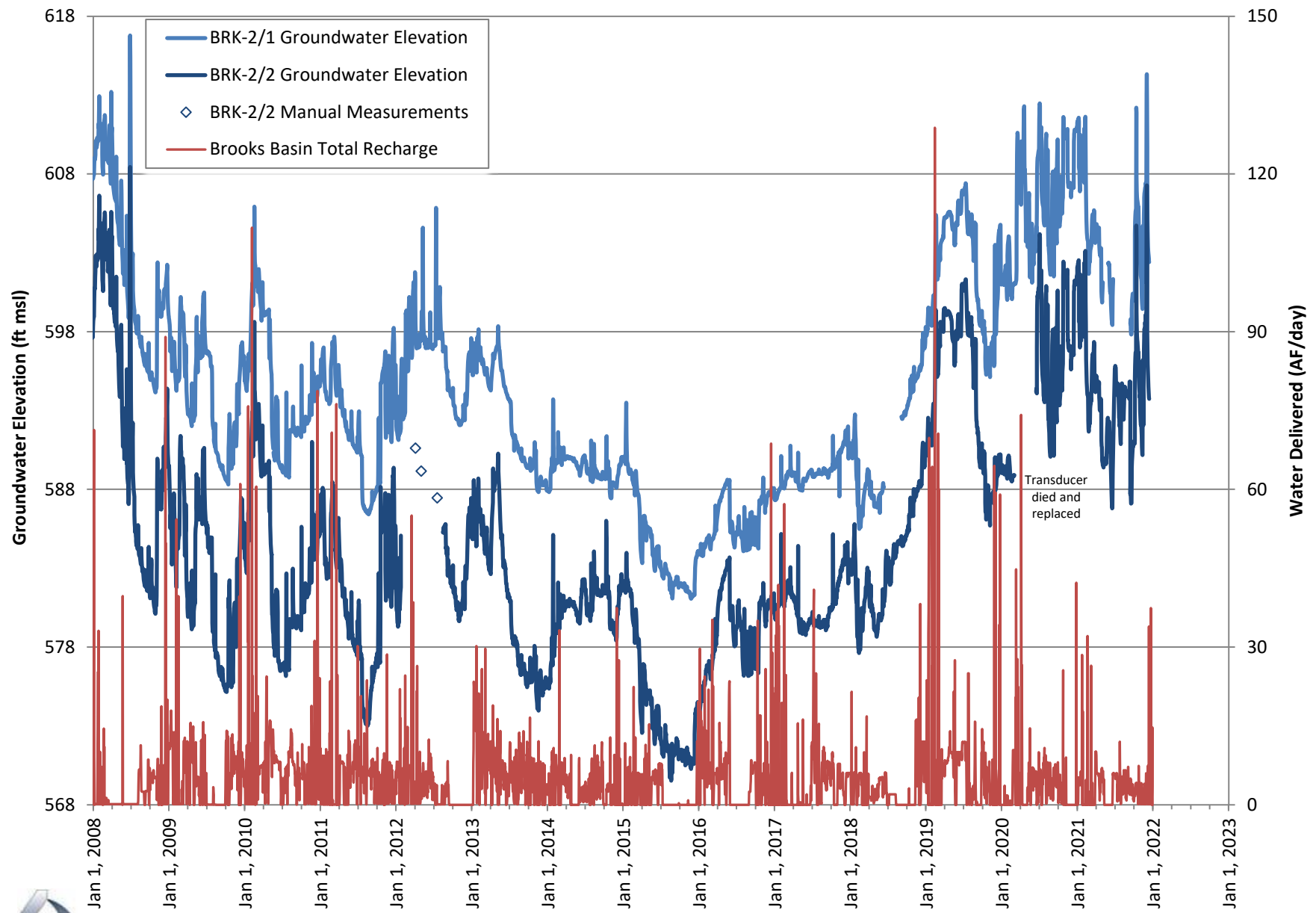


**HYDROGRAPH**  
**MW 8TH-2/1 & 8TH-2/2**

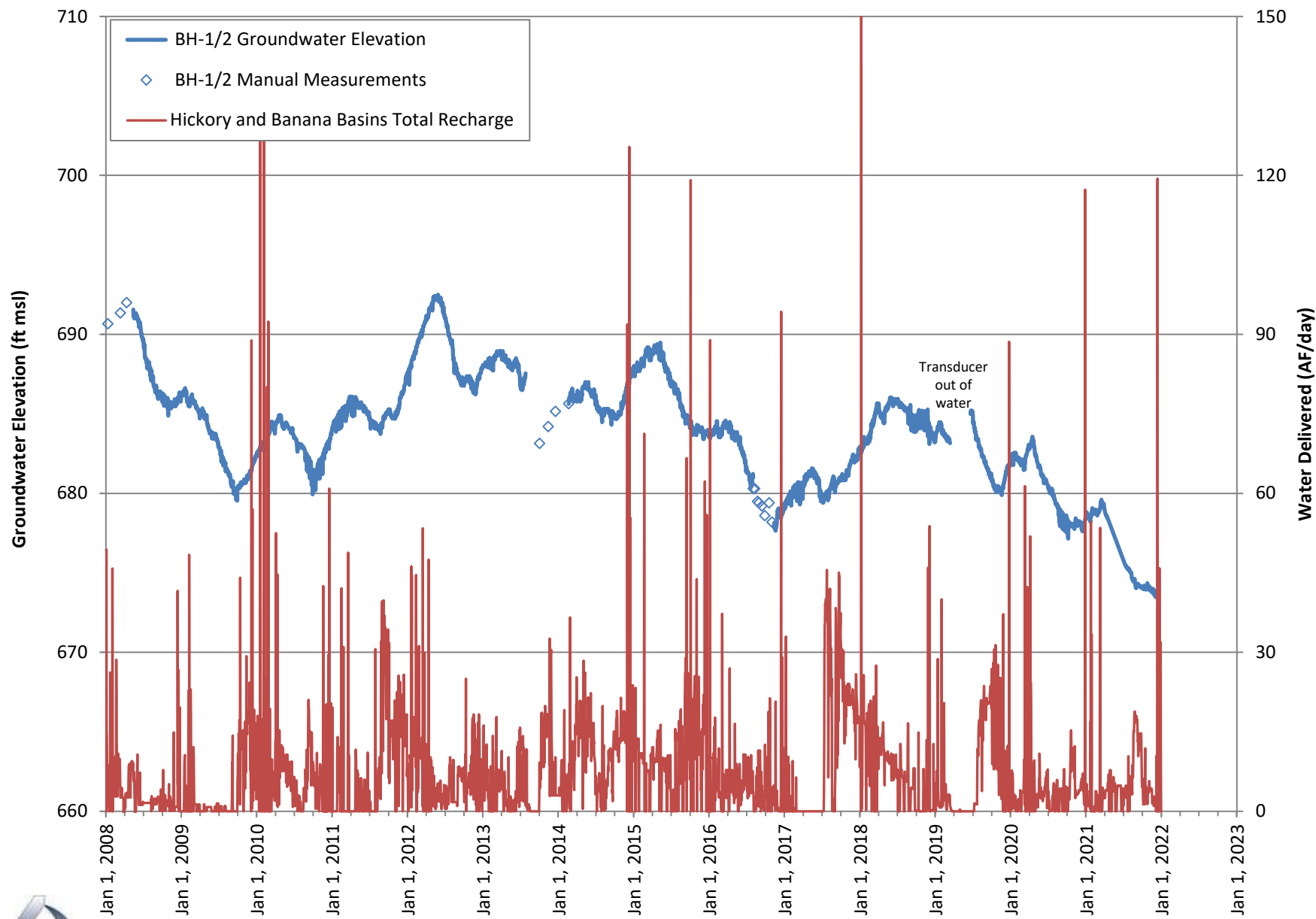




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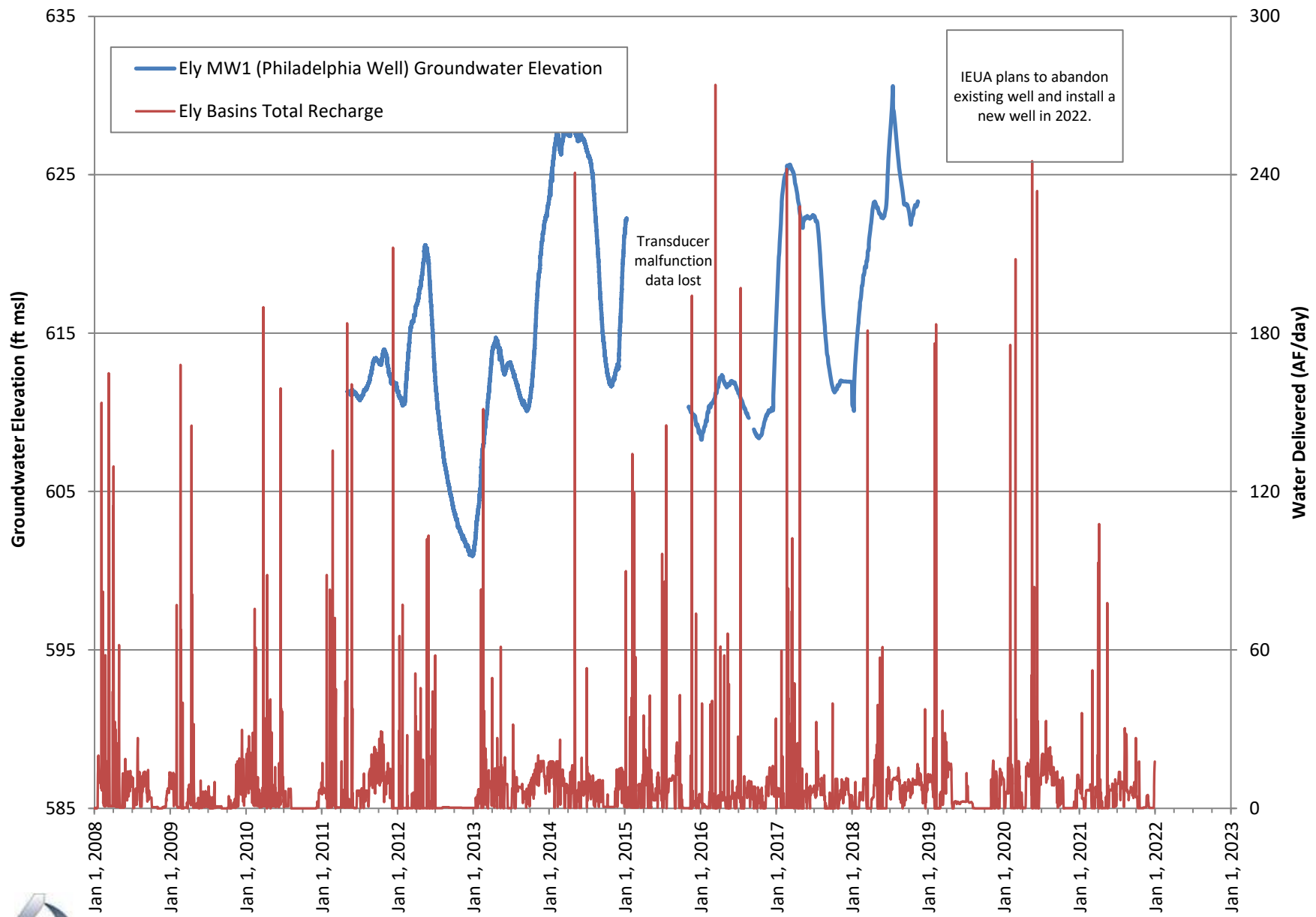


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**MW BRK-2/1 & BRK-2/2**

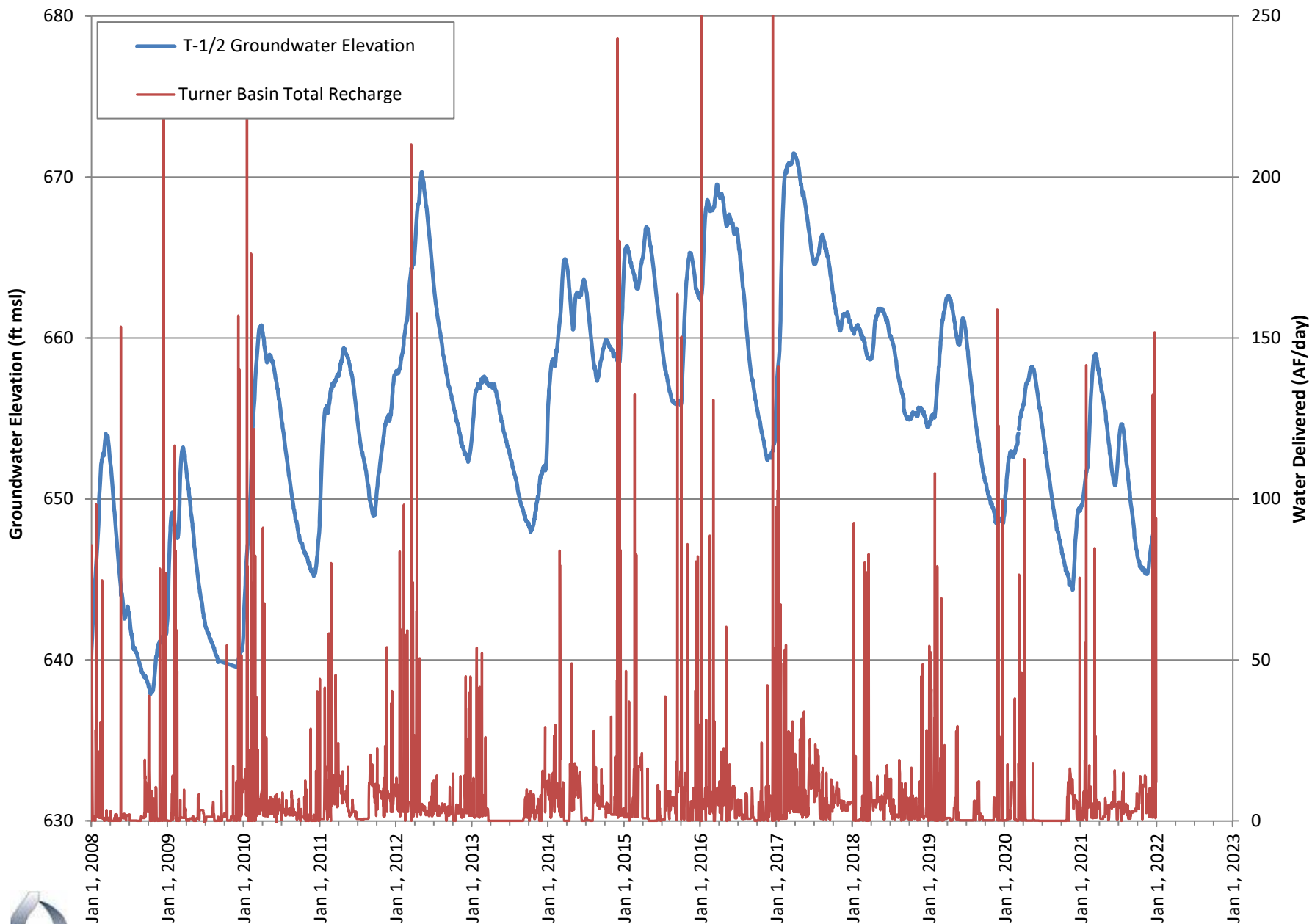


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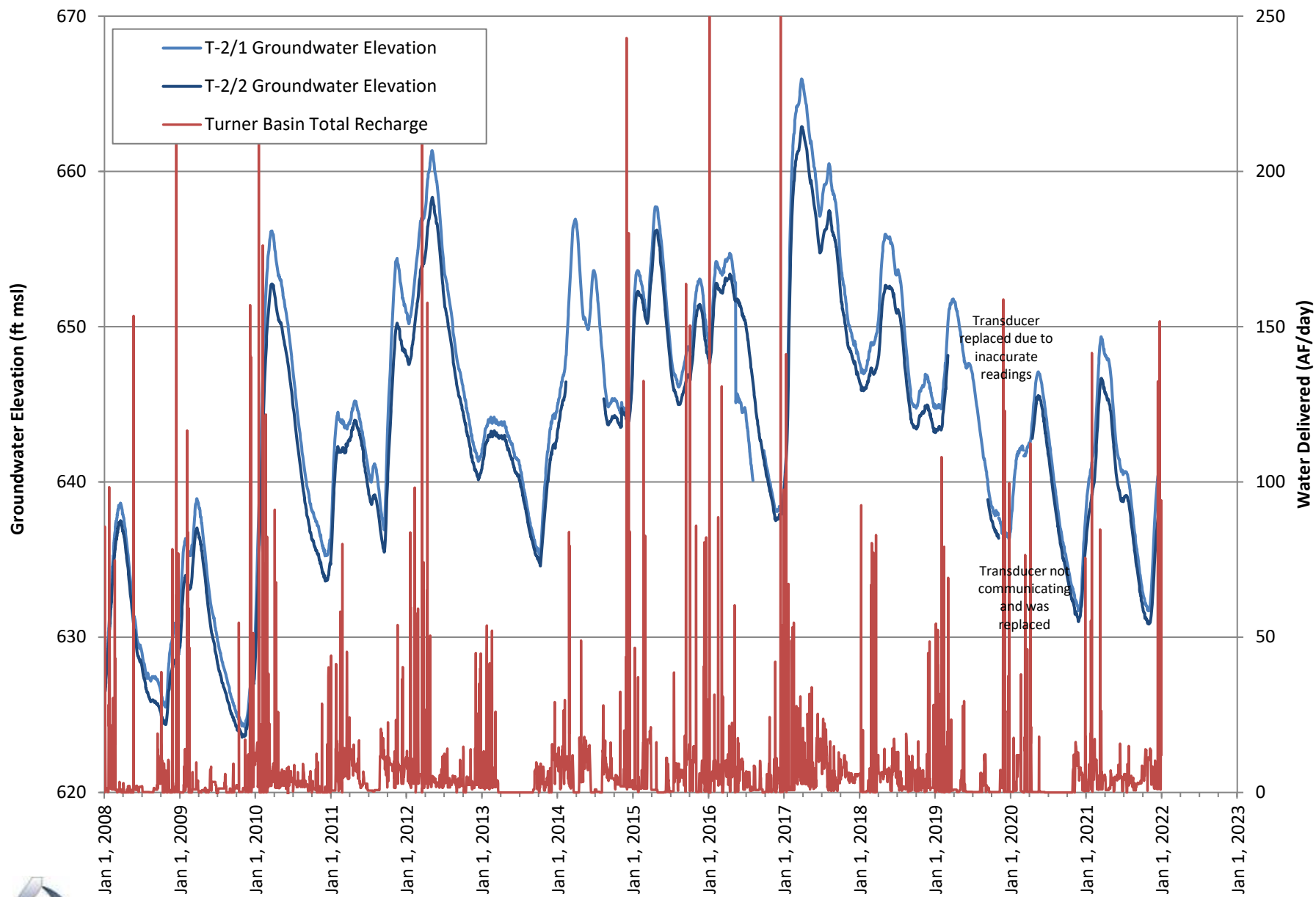




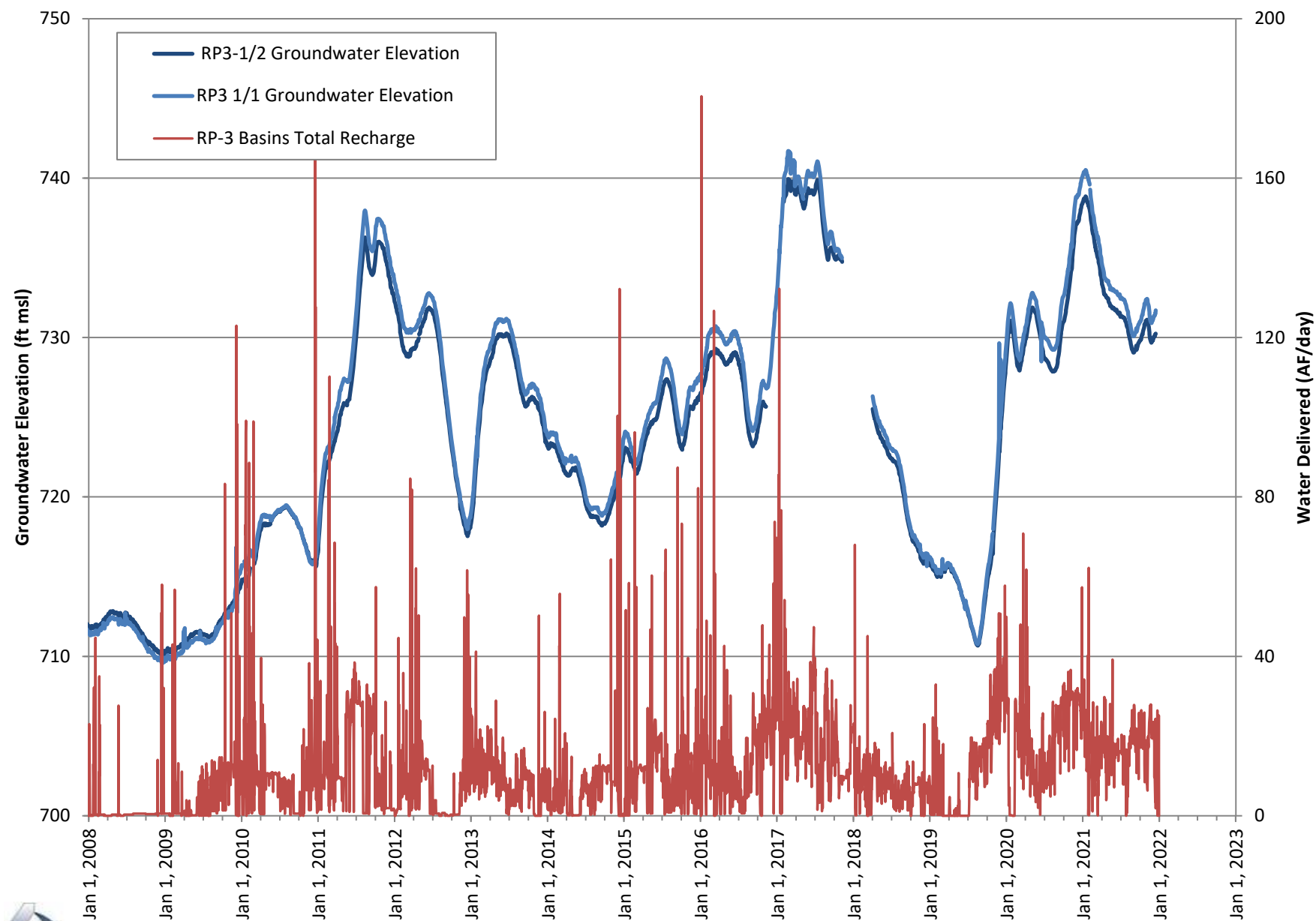
**HYDROGRAPH**  
**Ely MW1 (Philadelphia Well)**



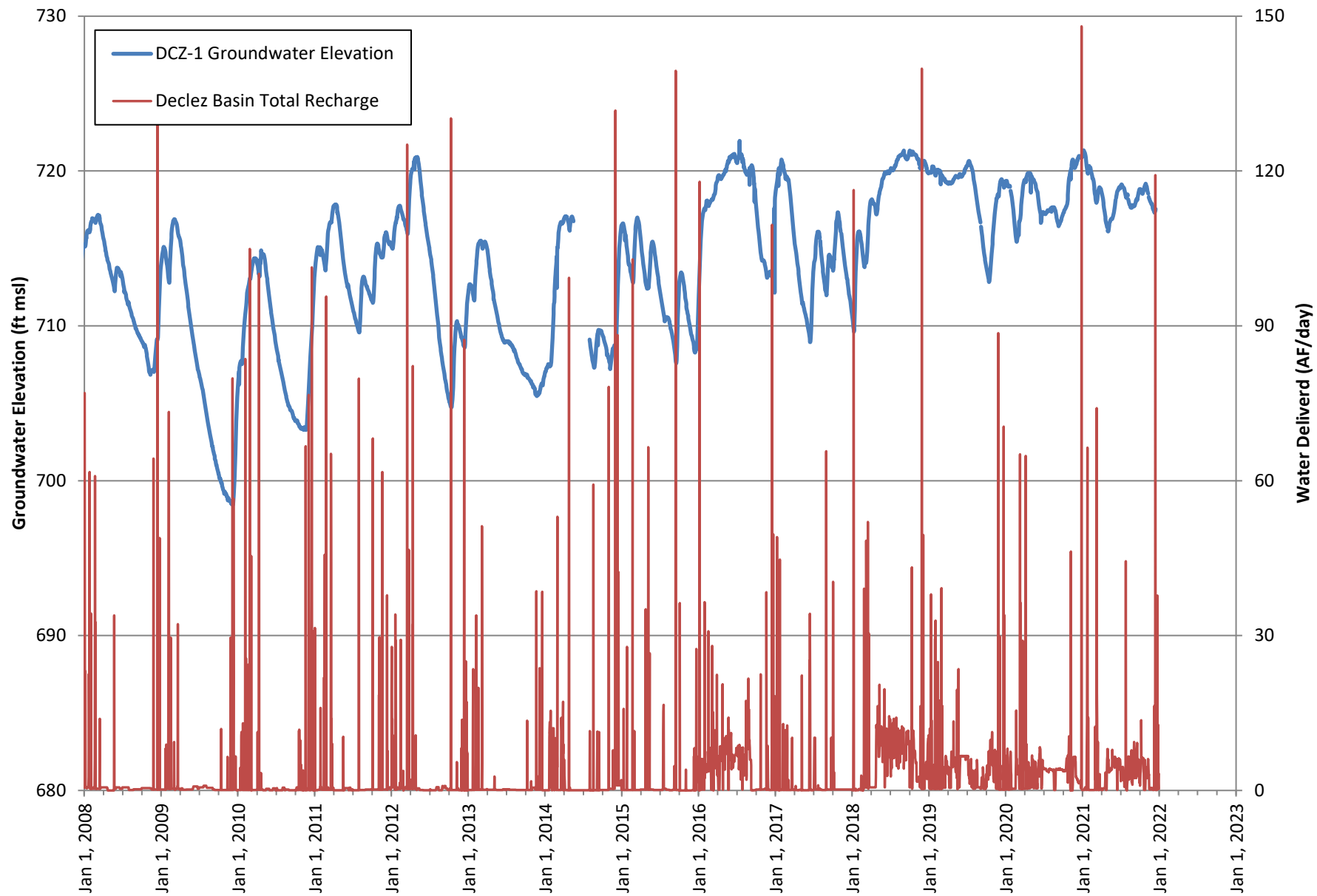
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**MW T-1/2**



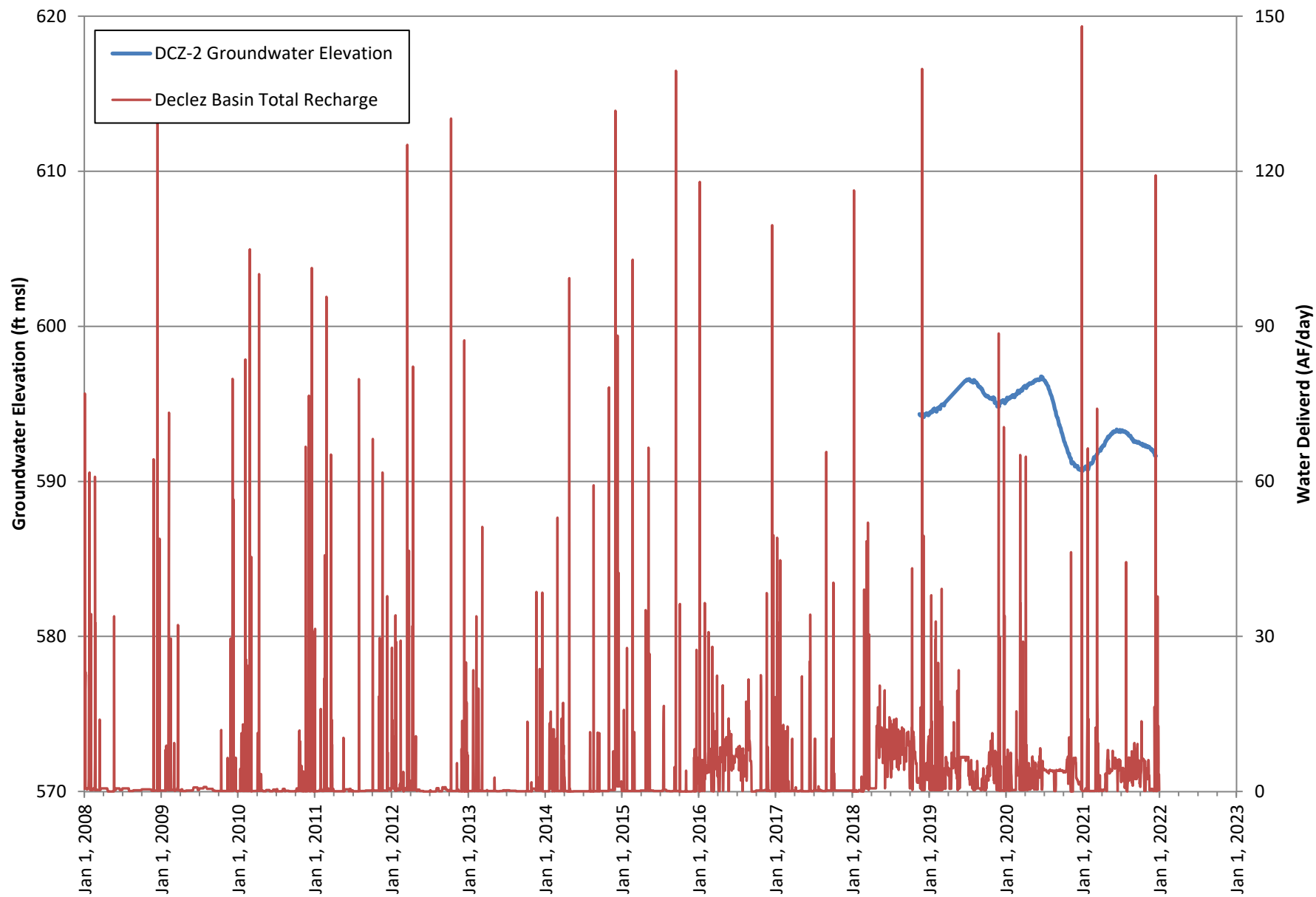
**HYDROGRAPH  
MW T-2/1 & T-2/2**



**HYDROGRAPH**  
**MW RP3-1/1 & RP3-1/2**

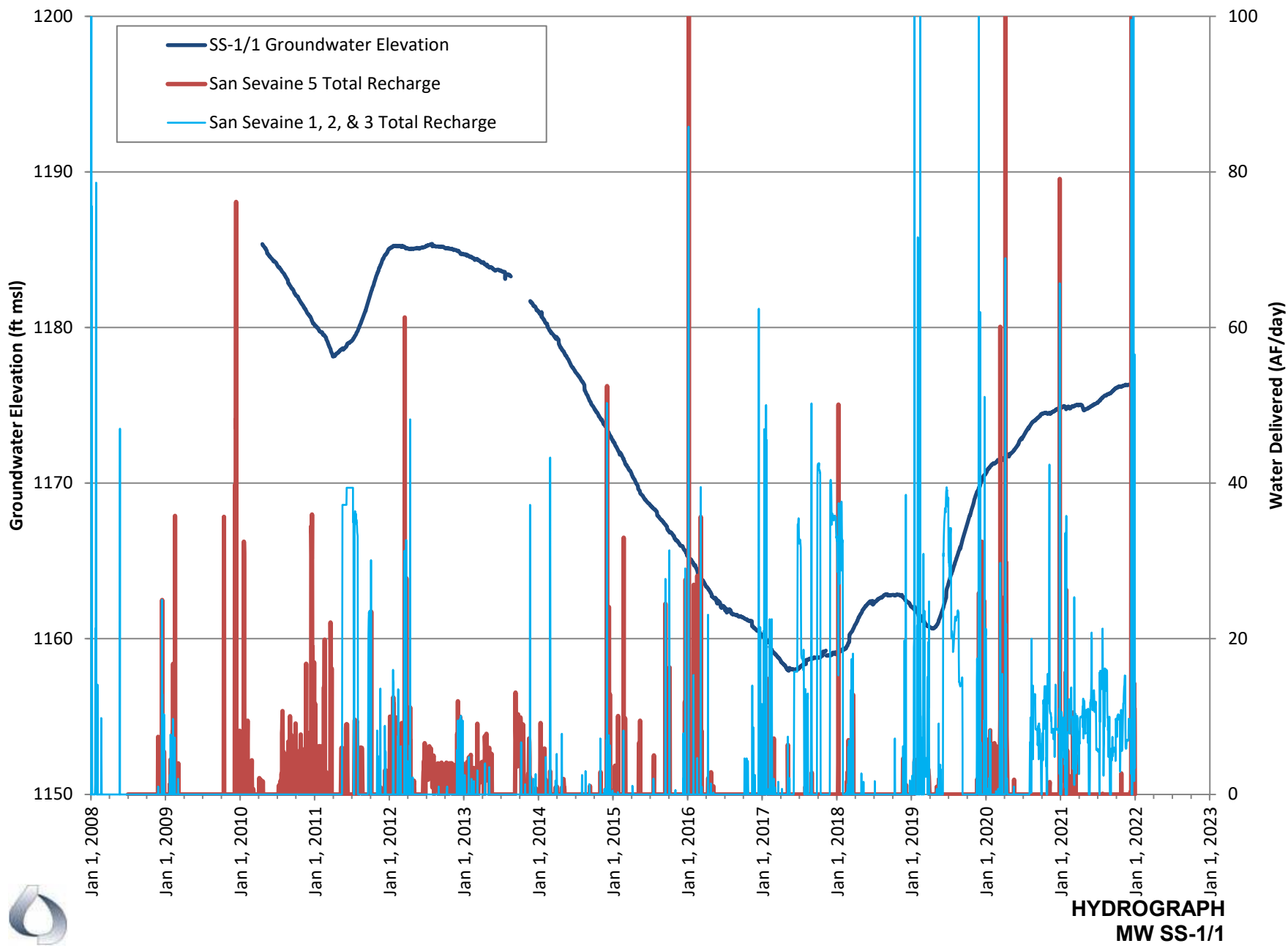


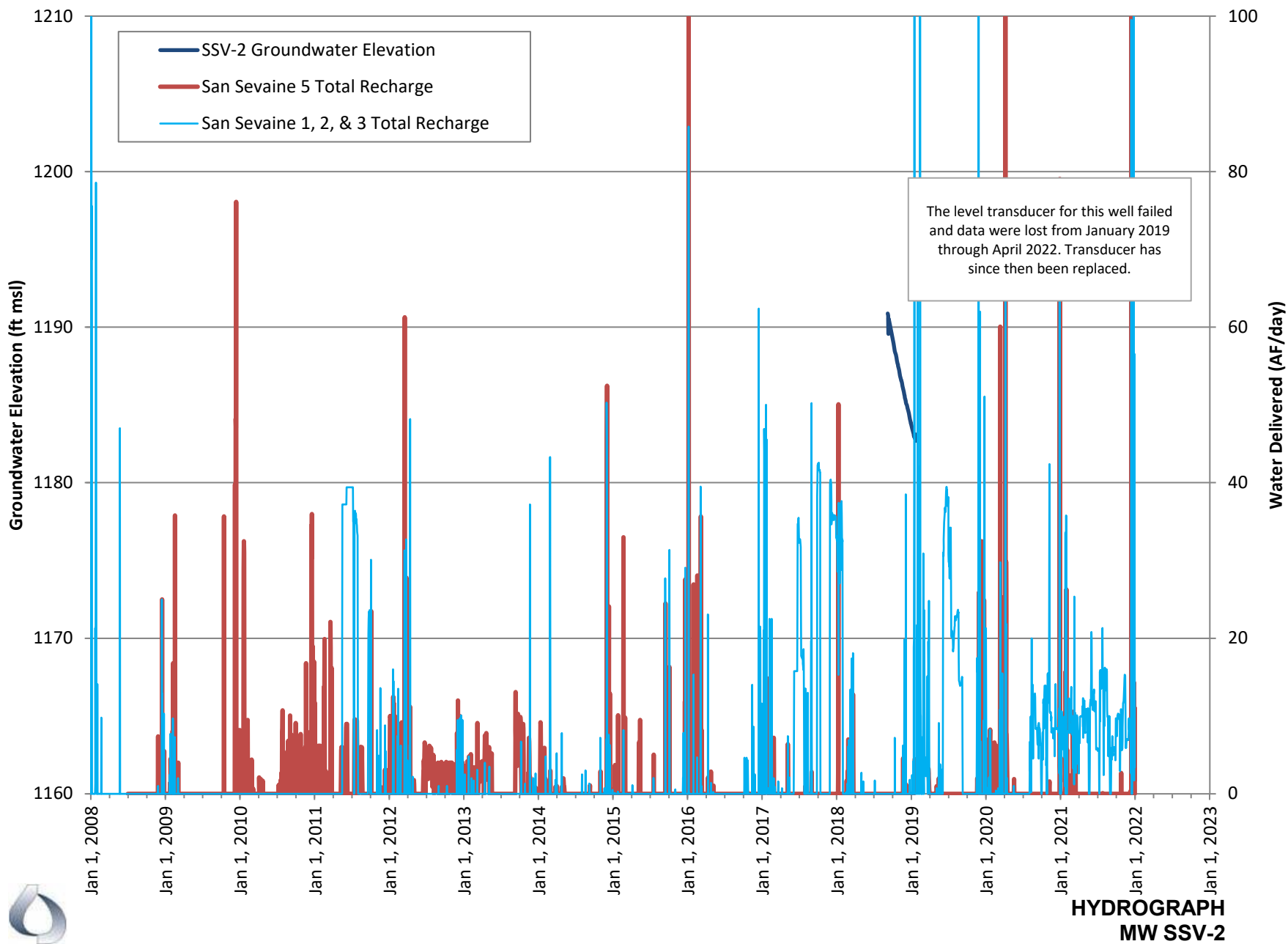
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MW DCZ-1**

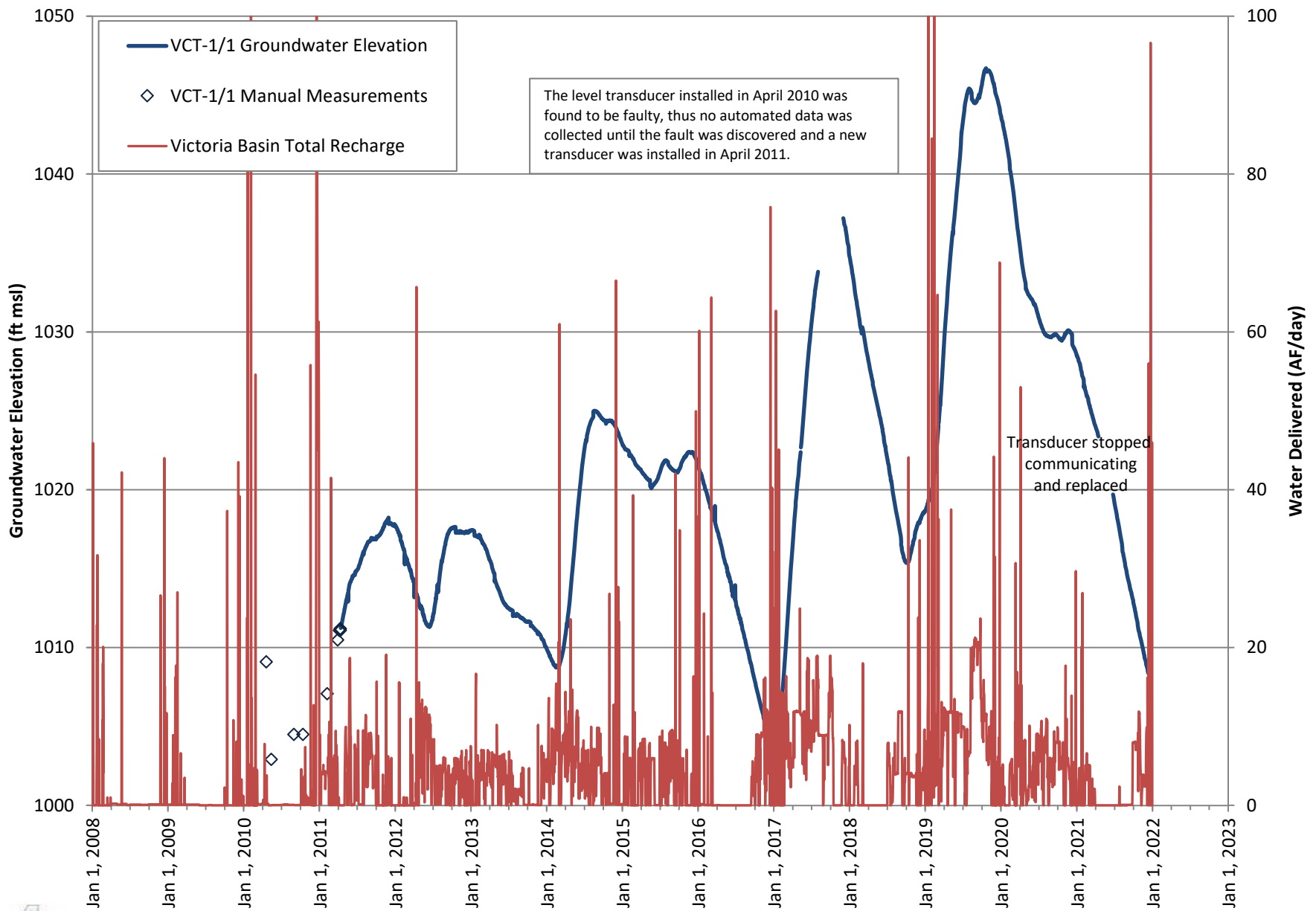


**HYDROGRAPH  
MW DCZ-2**



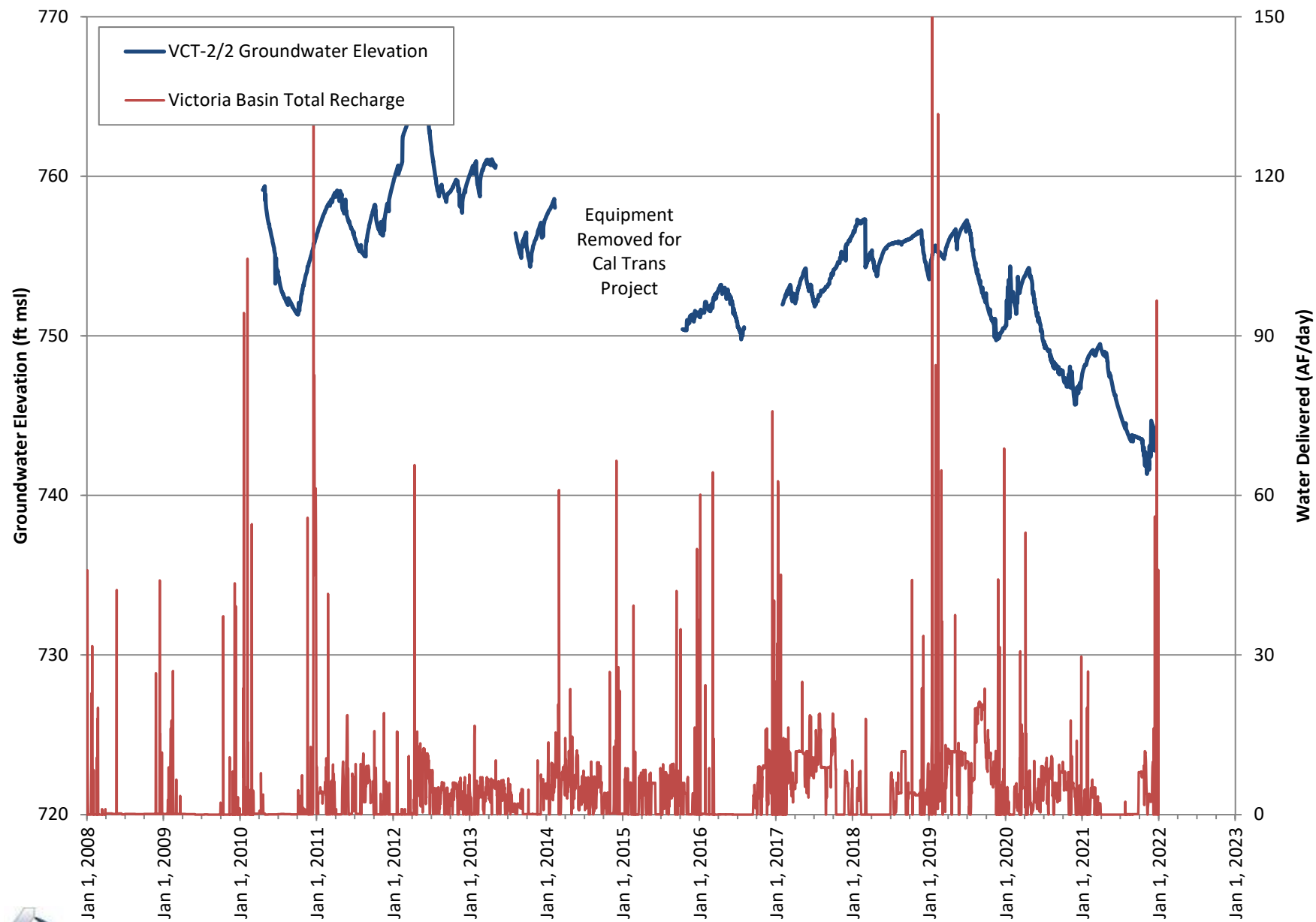






**HYDROGRAPH  
MW VCT-1/1**





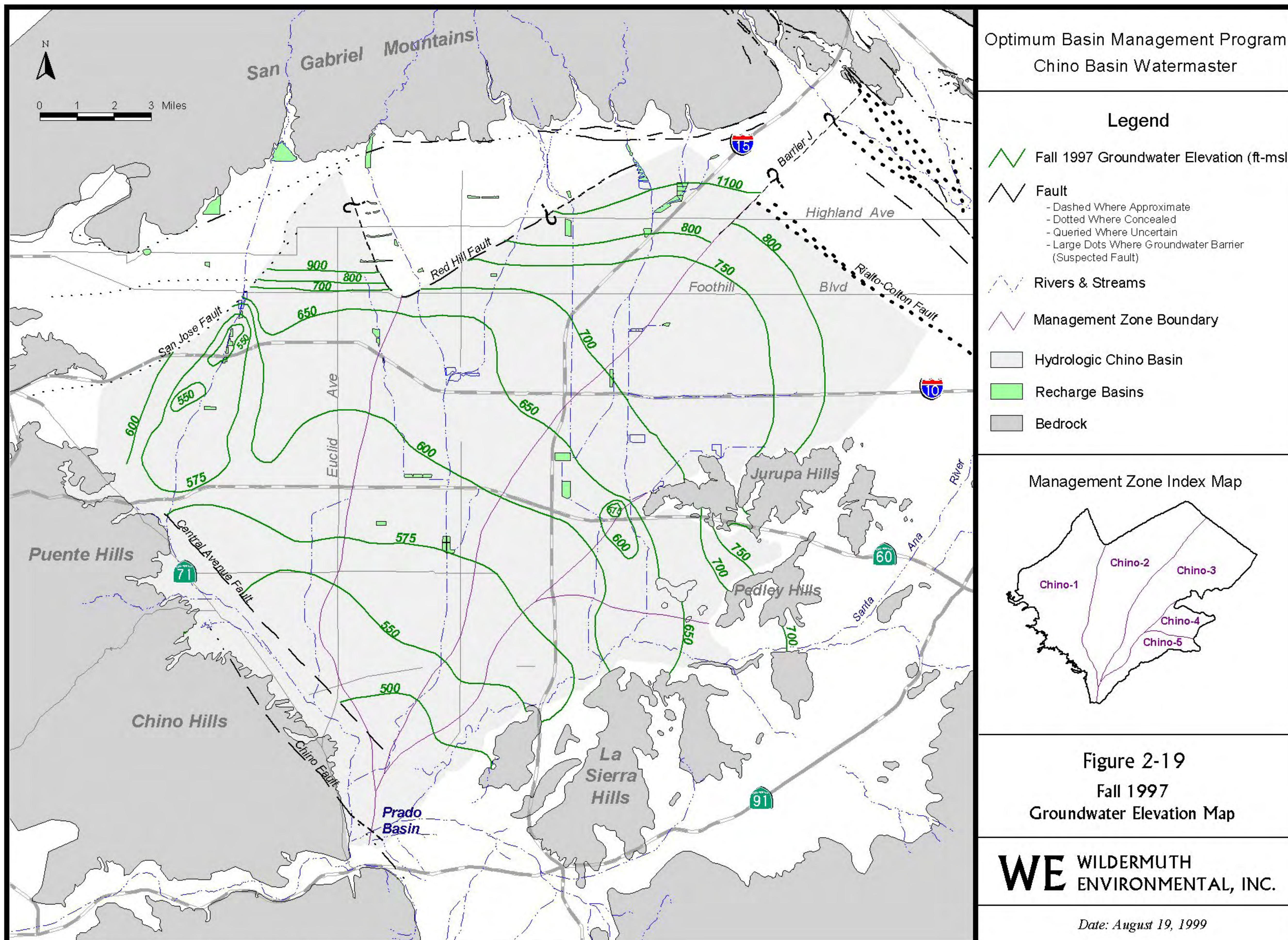
**HYDROGRAPH  
MW VCT-2/2**

APPENDIX E

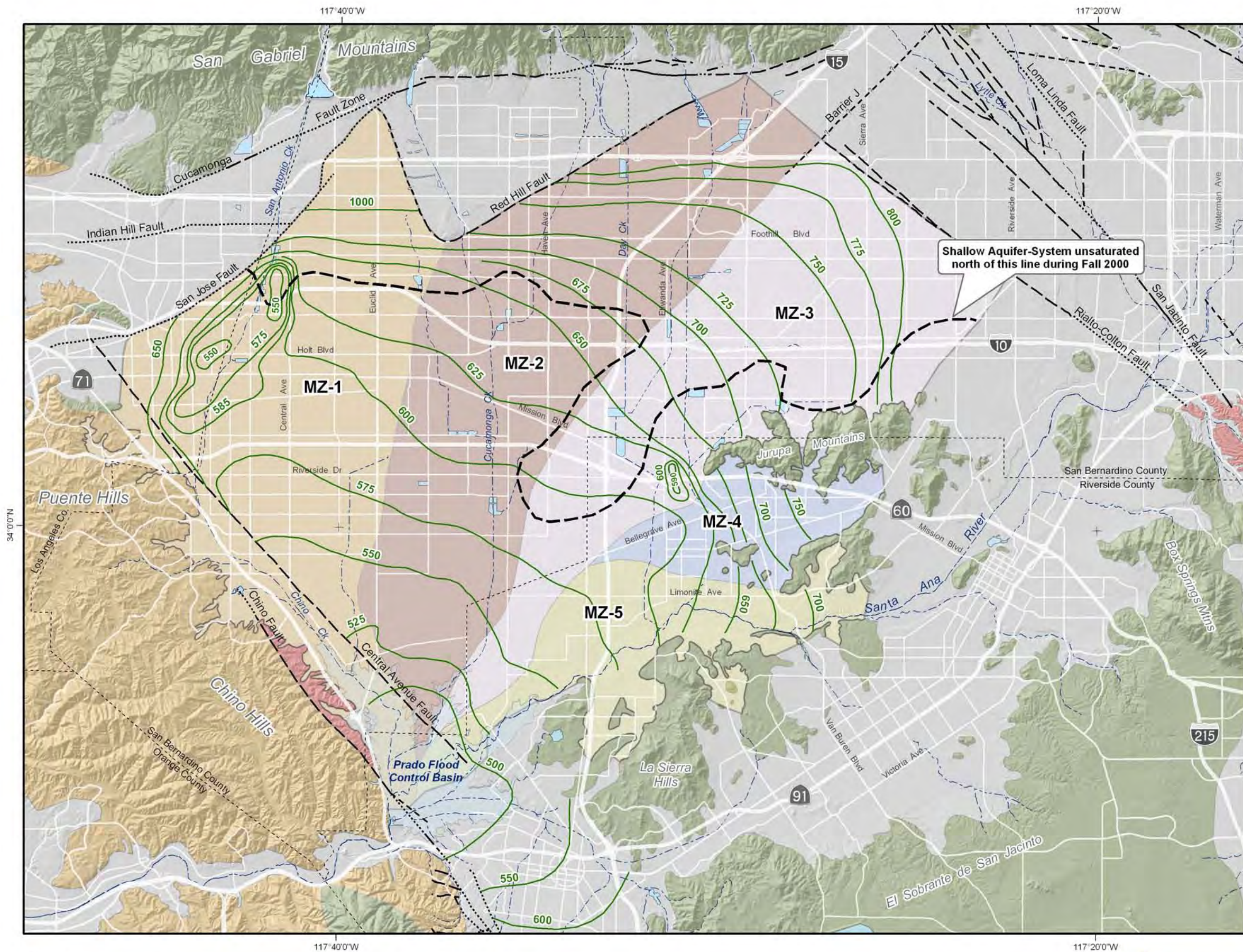
GROUNDWATER ELEVATION CONTOUR MAPS

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- Main Features**
- 800 Groundwater Elevation Contours -- Fall 2000 (feet above mean sea level)
  - 775
- Geology**
- Water-Bearing Sediments*
- Quaternary Alluvium
- Consolidated Bedrock*
- Plio-Pleistocene Sedimentary Rocks
  - Cretaceous to Miocene Sedimentary Rocks
  - Pre-Tertiary Igneous and Metamorphic Rocks
- Faults**
- Location Certain
  - Location Approximate
  - Location Concealed
  - Location Uncertain
- Other Features**
- Flood Control and Conservation Basins



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Author: AEM  
 Update: WEL  
 Date: 20050714  
 File: Figure 8-03.mxd

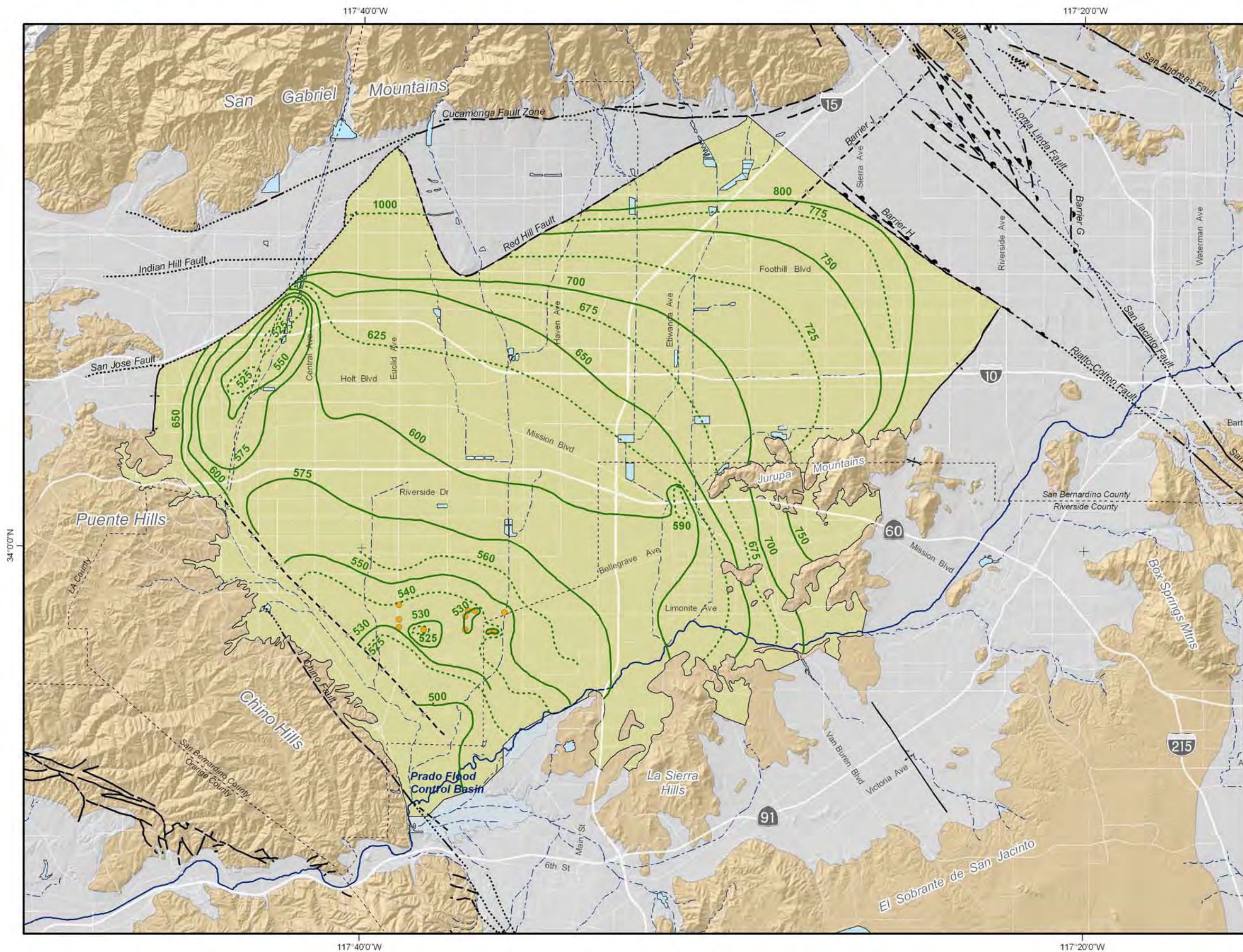


**Inland Empire**  
 UTILITIES AGENCY  
 Phase II Recycled Water  
 Groundwater Recharge Project

**Groundwater Elevation Map  
 Fall 2000**

**Figure 8-3**



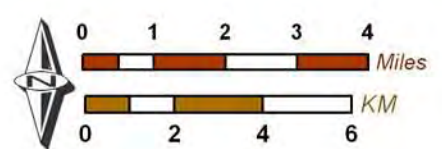


- ### Main Features
- 800  
775  
Groundwater Elevation Contours (feet above mean sea-level)
  - Chino-I Desalter Well
  - Chino Basin Hydrologic Boundary
- ### Geology
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks
- Faults & Groundwater Divides**
- Location Certain
  - Location Approximate
  - Location Concealed
  - Location Uncertain
  - Groundwater Divide



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Author: KD  
 Date: 20050627  
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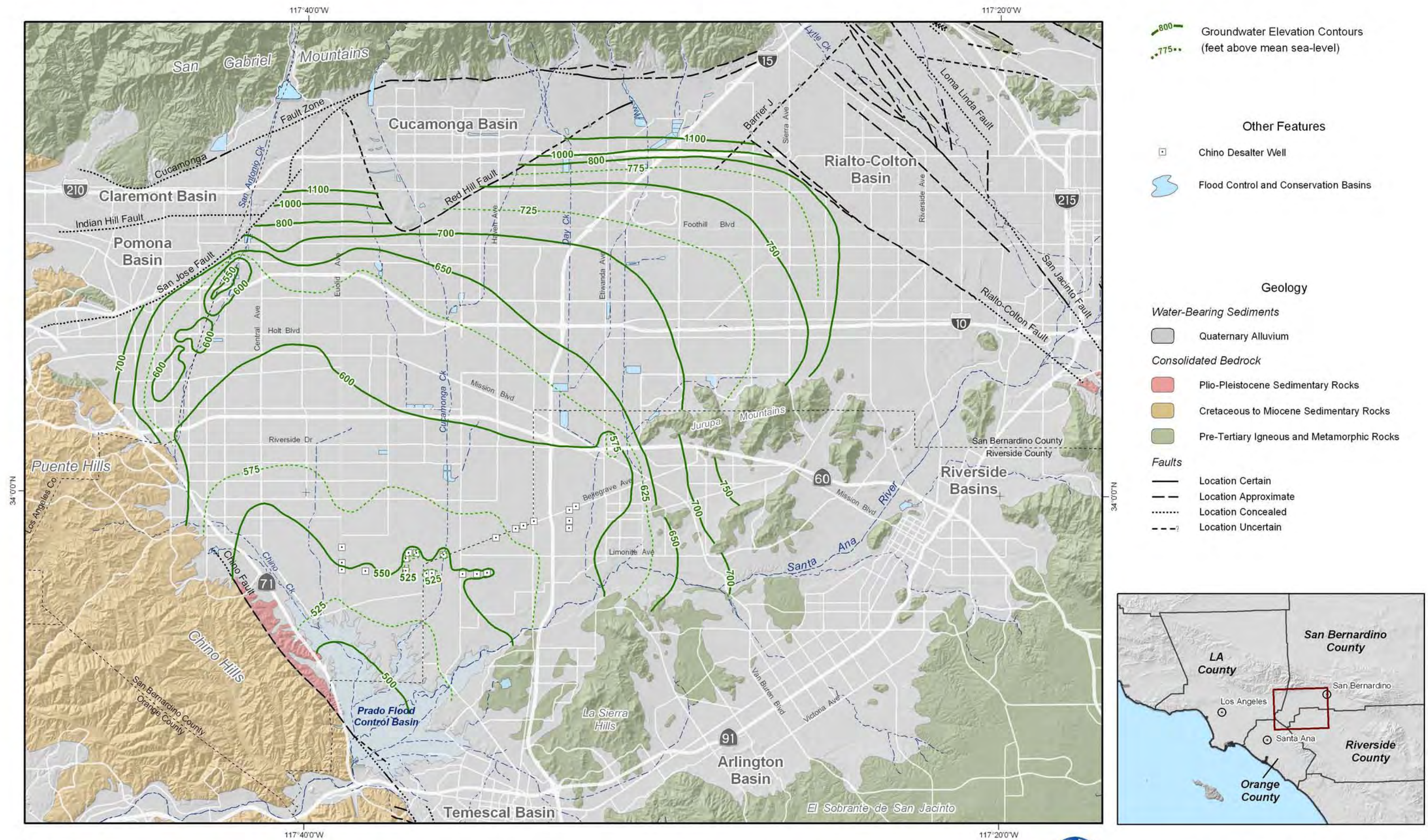
State of the Basin Report -- 2004  
 Groundwater Basin Operation and Response



**Groundwater Elevation Contours**  
 Fall 2003 -- Chino Basin

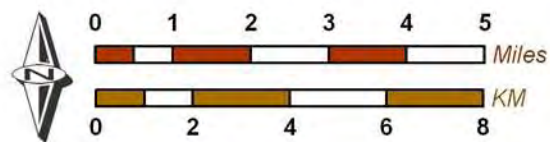
**Figure 3-6**





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Author: ETL  
 Date: 20070511  
 File: Figure\_3-18.mxd



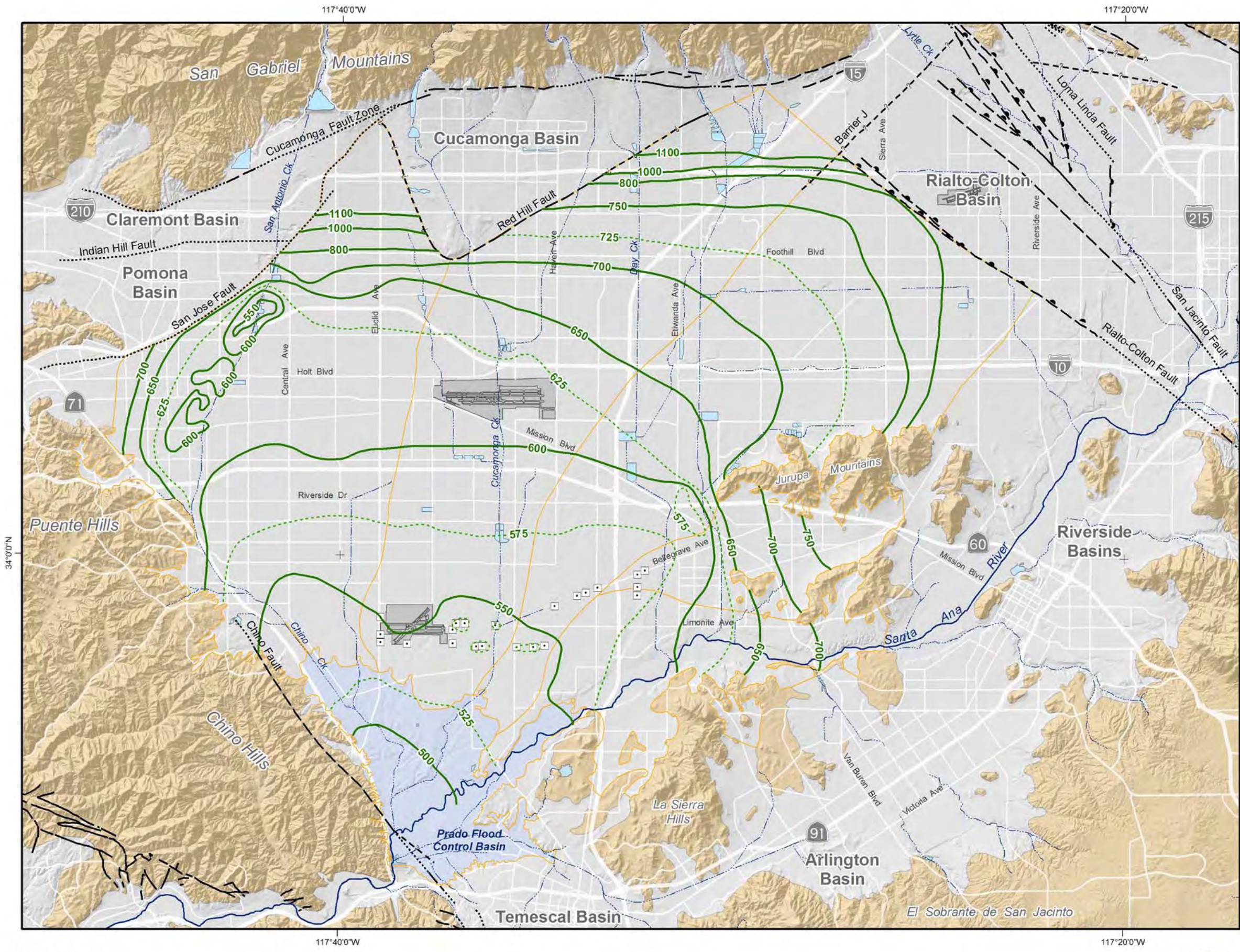
**DRAFT - 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description**  
 Hydrogeologic Setting



**Groundwater Elevation Contours**  
 Fall 2006 -- Chino Basin

**Figure 2-7a**



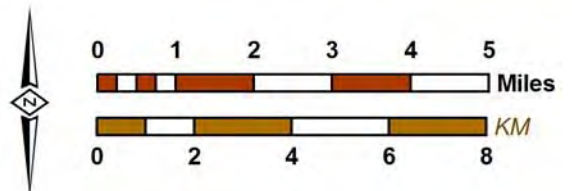


- Groundwater Elevation Contours**  
(feet above mean sea-level)
- 800
  - 775
- Other Features**
- Management Zone Boundary
  - Chino Desalter Well
  - Streams & Flood Control Channels
  - Flood Control & Conservation Basins
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks
- Faults**
- Location Certain
  - Location Approximate
  - Location Concealed
  - Location Uncertain



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Author: ETL/CML  
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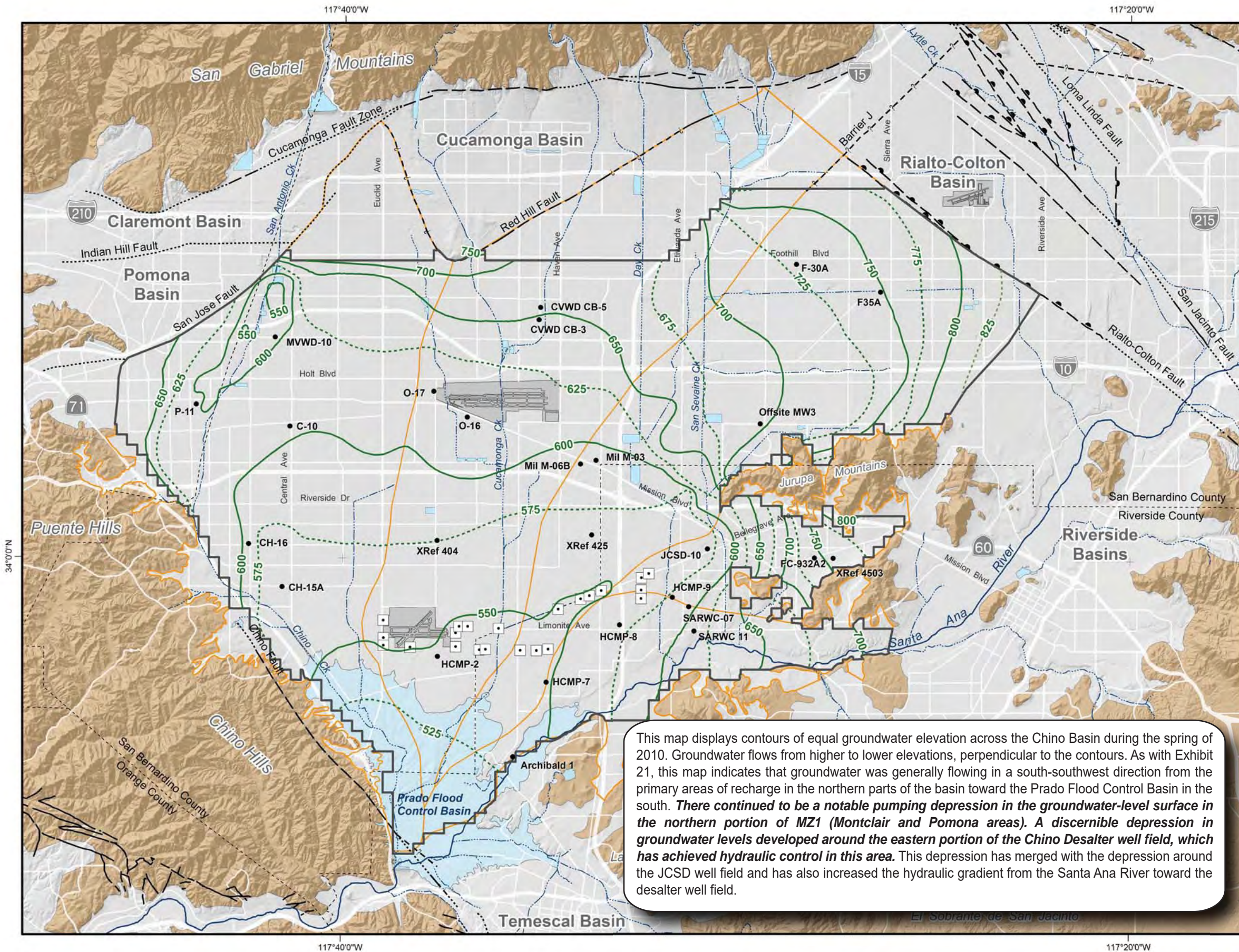


**2008 State of the Basin Report**  
 Groundwater Levels

**Groundwater Elevation Contours**  
 Fall 2008 -- Chino Basin

**Figure 3-19**



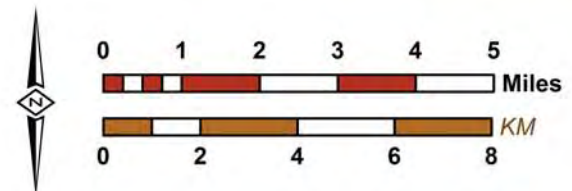


- Groundwater Elevation Contours (feet above mean sea-level)
- Boundry of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
- Well used for Time History Analysis (Exhibits 16 through 20)
- OBMP Management Zones
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks
- Faults**
- Location Certain
- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



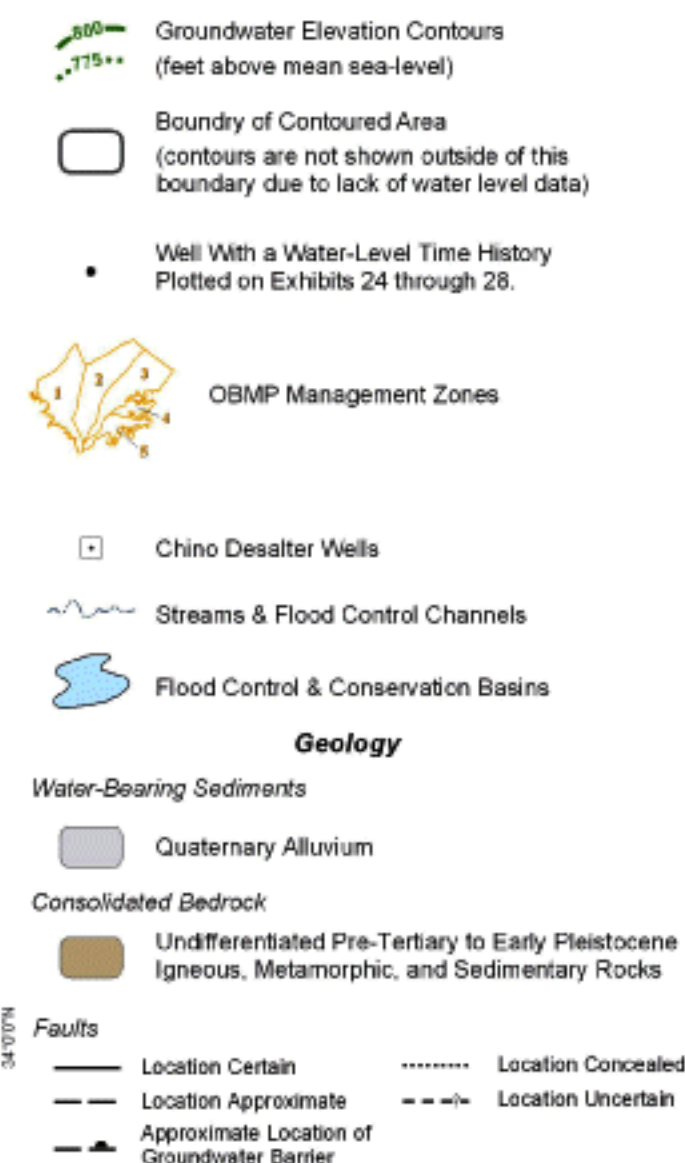
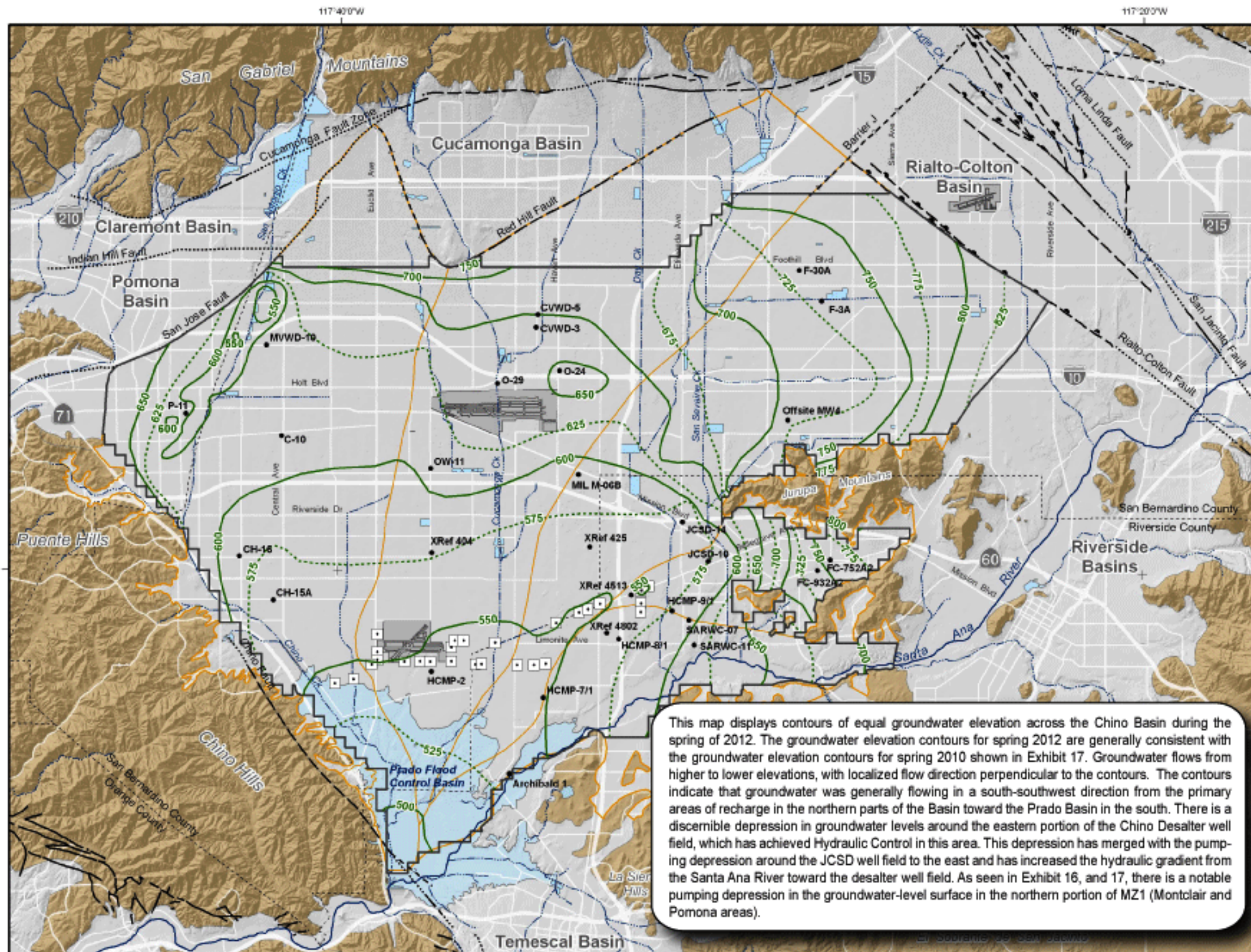
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Author: TCR  
 Date: 20111027  
 File: Exhibit\_22.mxd



2010 State of the Basin  
 Groundwater Levels



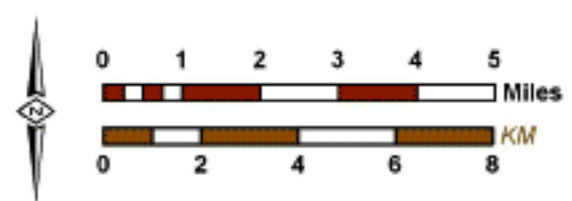


This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2012. The groundwater elevation contours for spring 2012 are generally consistent with the groundwater elevation contours for spring 2010 shown in Exhibit 17. Groundwater flows from higher to lower elevations, with localized flow direction perpendicular to the contours. The contours indicate that groundwater was generally flowing in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There is a discernible depression in groundwater levels around the eastern portion of the Chino Desalter well field, which has achieved Hydraulic Control in this area. This depression has merged with the pumping depression around the JCSD well field to the east and has increased the hydraulic gradient from the Santa Ana River toward the desalter well field. As seen in Exhibit 16, and 17, there is a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).



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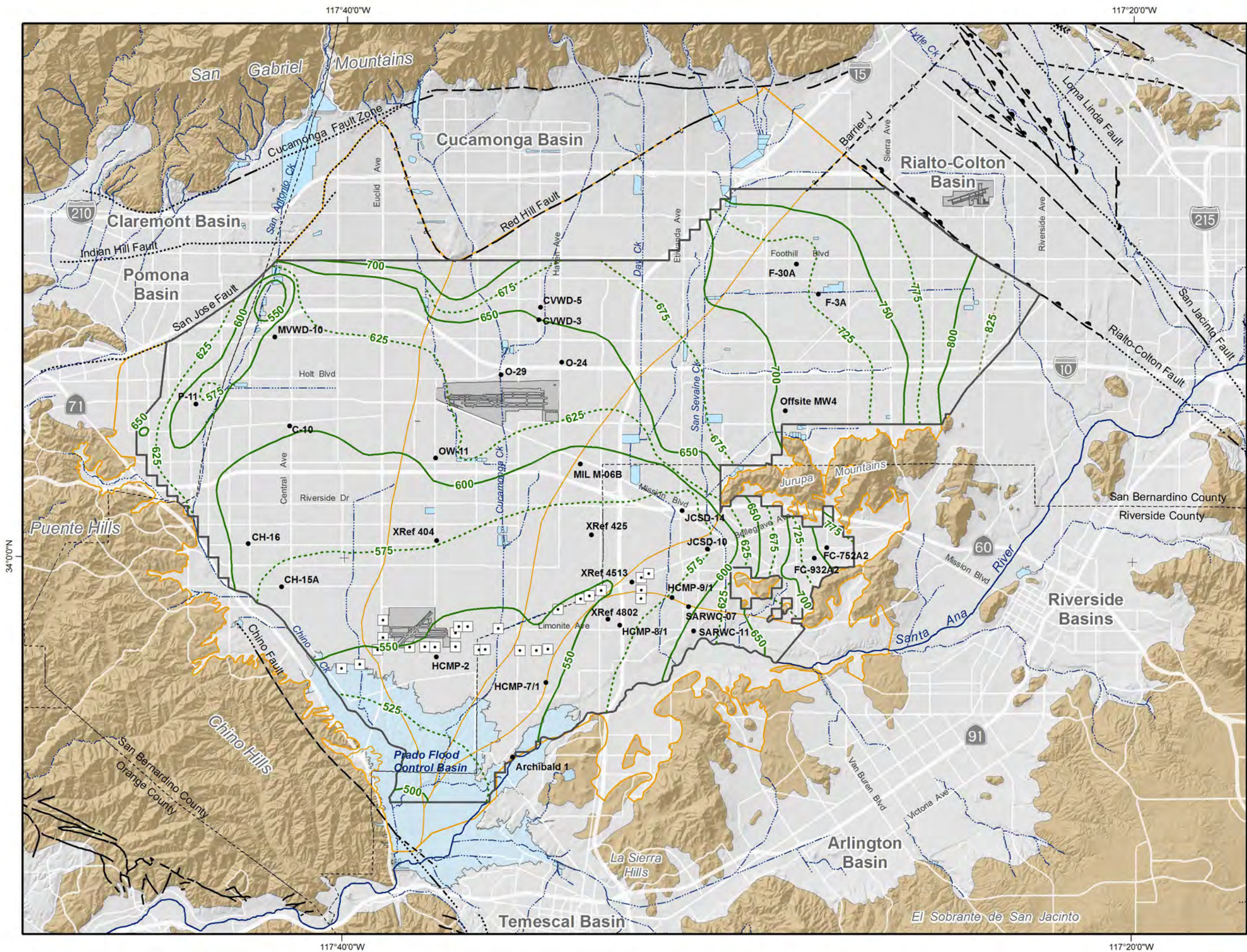
Author: TCR  
Date: 20121130  
File: Exhibit\_18.mxd



**2012 State of the Basin**  
Groundwater Levels

**Groundwater Elevation Contours  
in Spring 2012**  
Shallow Aquifer System



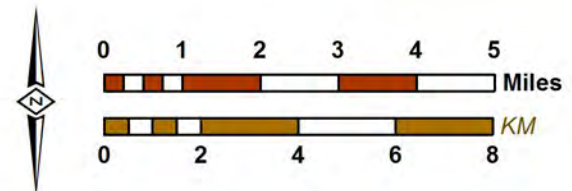


- Groundwater Elevation Contours (feet above mean sea-level)
- Boundry of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater level data)
- Well With a Water-Level Time History Plotted on Exhibits 24 through 28
- OBMP Management Zones
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks
- Faults**
- Location Certain
- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



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Author: amalone  
 Date: 4/3/2015  
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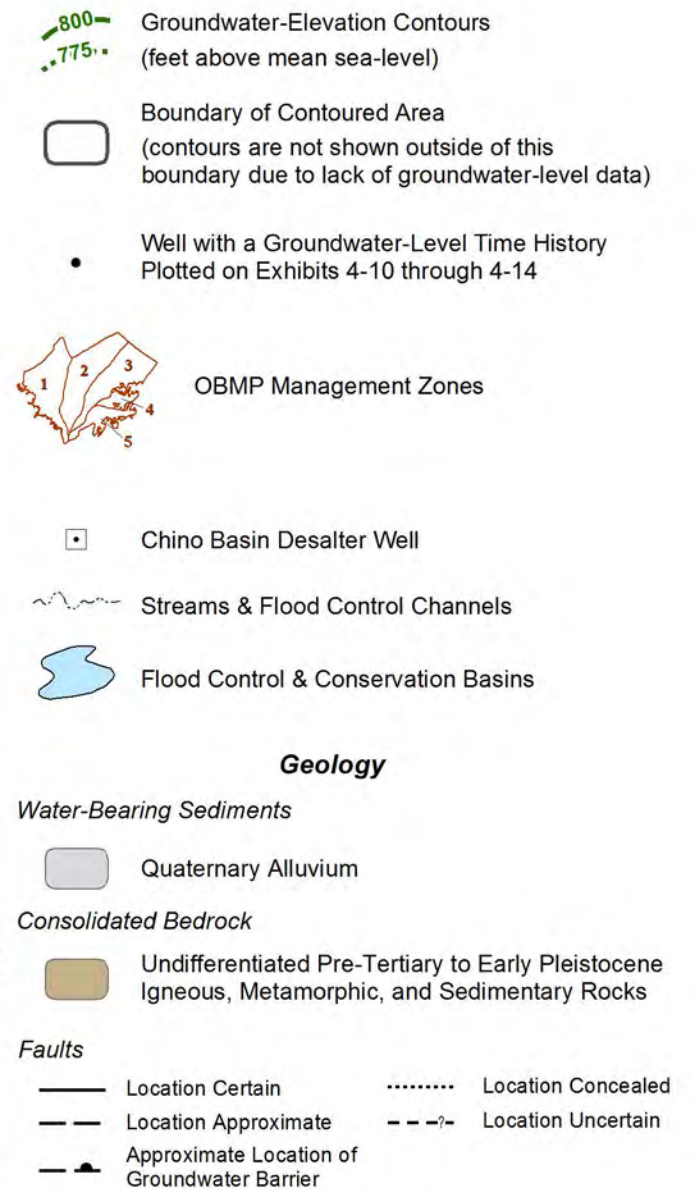
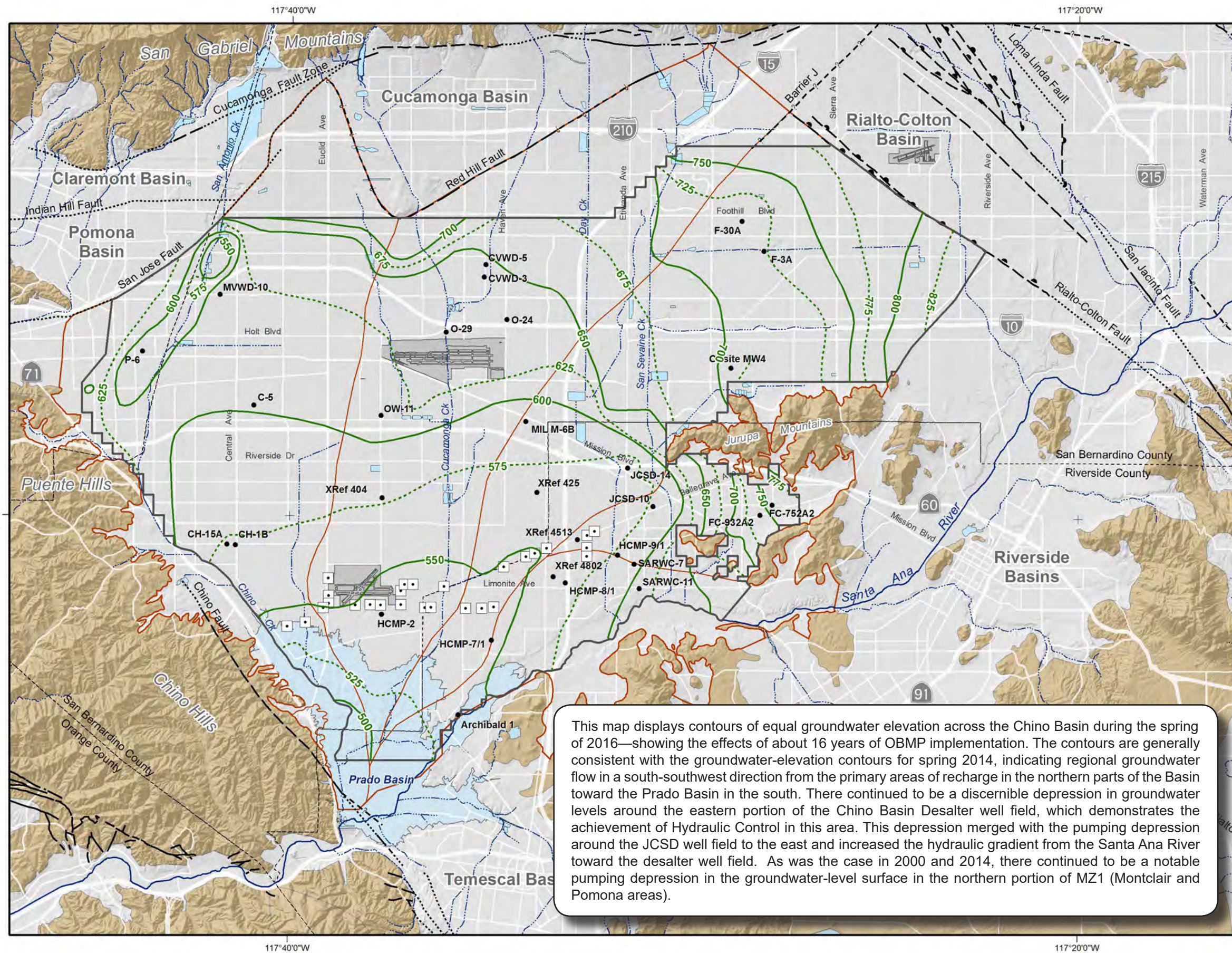
2014 State of the Basin DRAFT  
 Groundwater Levels



## Groundwater Elevation Contours in Spring 2014

Shallow Aquifer System





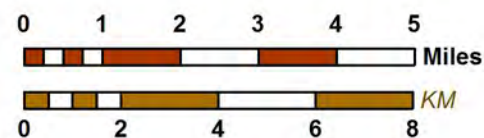
Prepared by:



Author: EM

Date: 6/5/2017

Document Name: Exhibit\_4-4\_sp2016

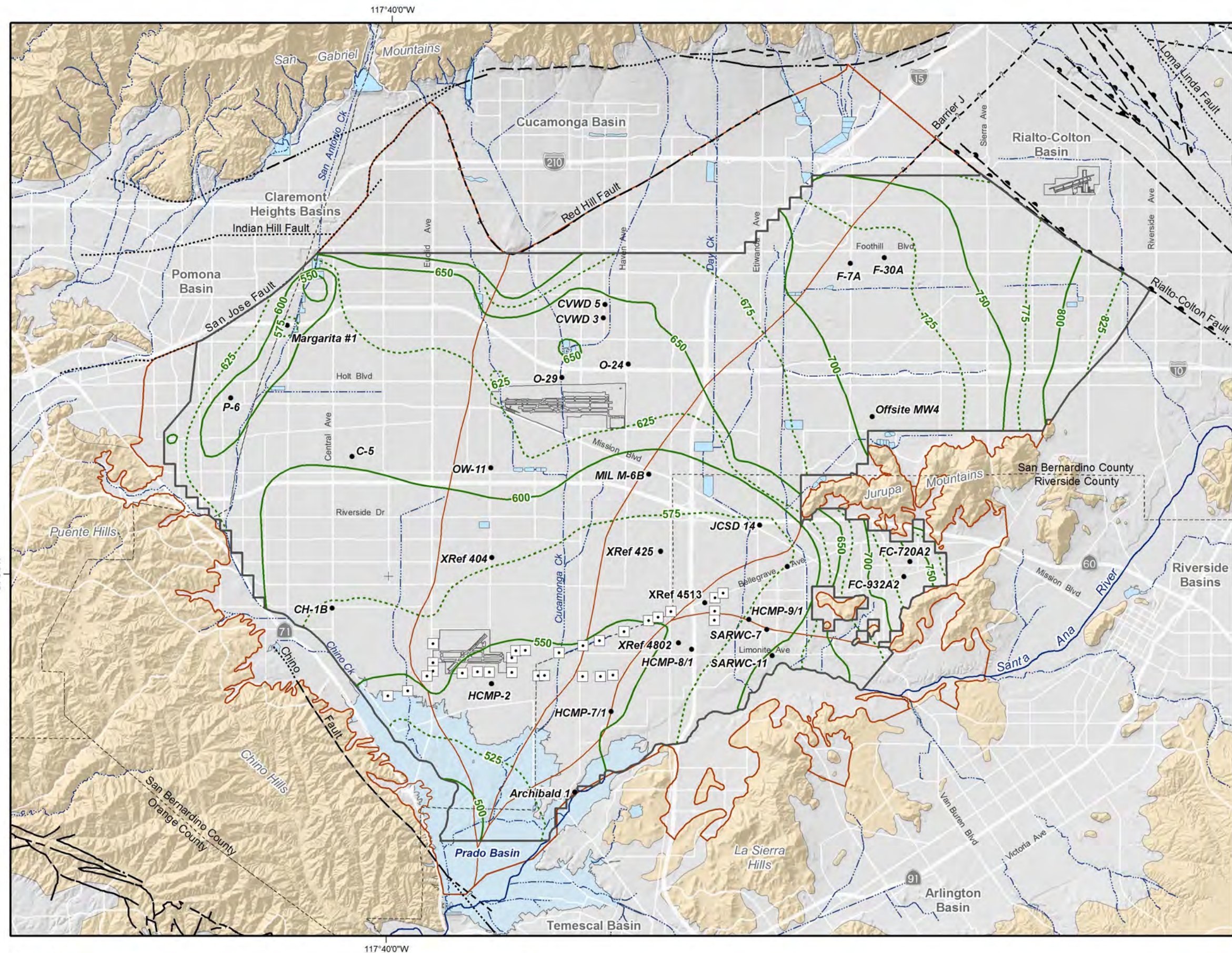


**2016 State of the Basin**  
Groundwater Levels

**Groundwater-Elevation Contours**  
**in Spring 2016**  
Shallow Aquifer System

**Exhibit 4-4**





- 800 — Groundwater-Elevation Contours (feet above mean sea-level)
- - - 775 - - -
- Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater-level data)
- Well With a Groundwater-Level Time History Plotted on Exhibits 4-10 through 4-14
- ◻ Chino Basin Desalter Well

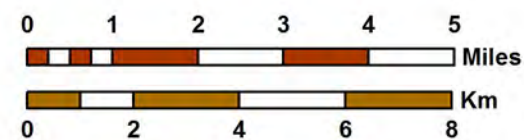
Other key map features are described in the legend of Exhibit 1-1.

This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2018, showing the effects of about 18 years of OBMP implementation. The contours are generally consistent with the groundwater-elevation contours for spring 2016, indicating regional groundwater flow in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There continued to be a discernible depression in groundwater levels around the eastern portion of the Chino Basin Desalter well field, which demonstrates the achievement of Hydraulic Control in this area. This depression merged with the pumping depression around the JCSD well field to the east and increased the hydraulic gradient from the Santa Ana River toward the desalter well field. As was the case in 2000 and 2016, there continues to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).

Prepared by:



Author: EM  
Date: 5/24/2019  
File: Exhibit\_4-4\_sp2018.mxd



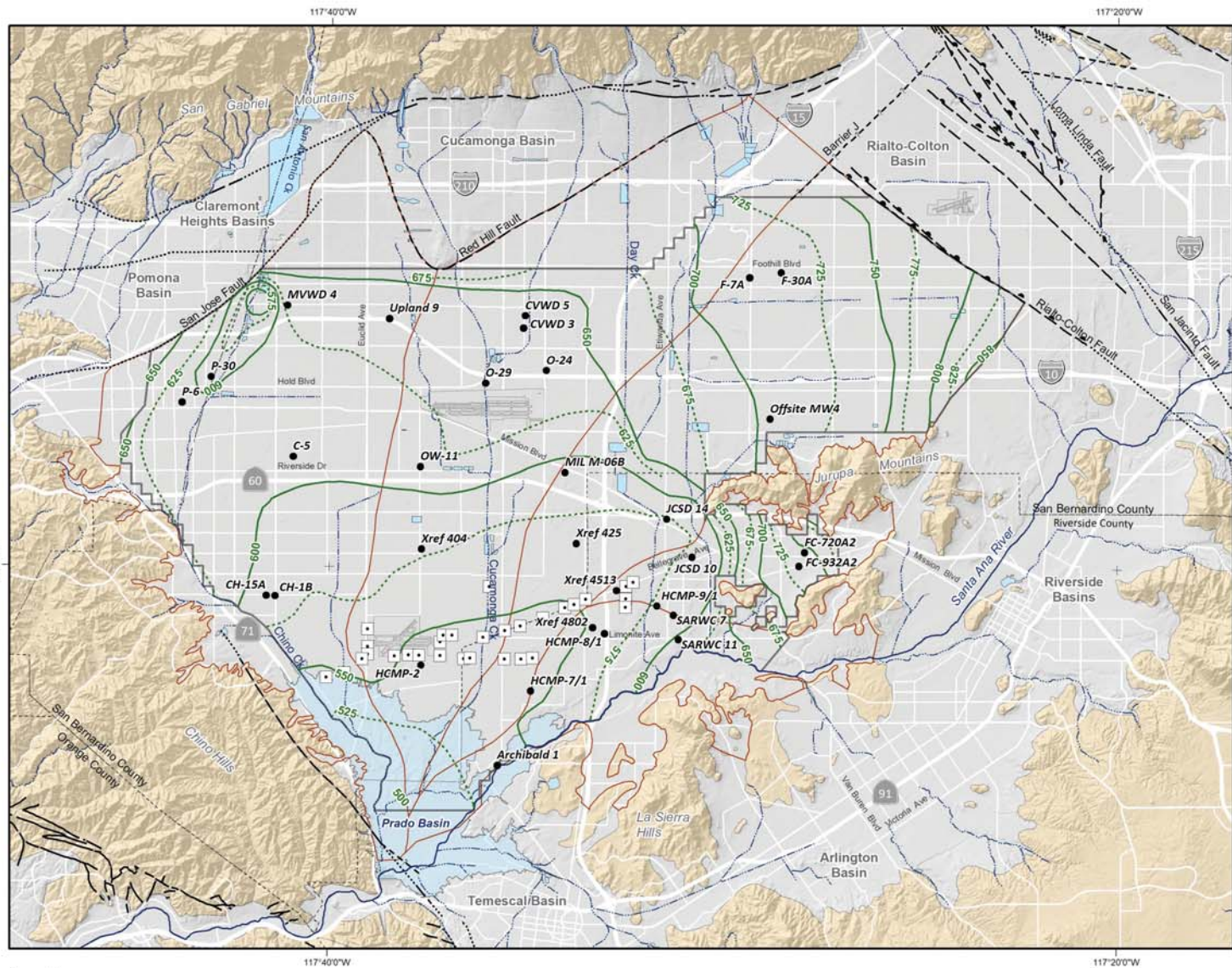
Prepared for:  
**2018 State of the Basin Report**  
Groundwater Levels



**Groundwater-Elevation Contours**  
**for Spring 2018**  
*Shallow Aquifer System*

**Exhibit 4-4**





- 800' Groundwater-Elevation Contours (feet above mean sea-level)
- 775' Groundwater-Elevation Contours (feet above mean sea-level)
- Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater-level data)
- Well With a Groundwater-Level Time History Plotted on Exhibits 4-10 through 4-14
- ◻ Chino Desalter Wells

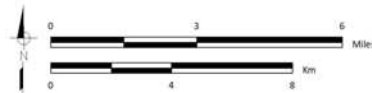
Other key map features are described in the legend of Exhibit 1-1.

This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2020, showing the effects of about 20 years of OBMP implementation. The contours are generally consistent with the groundwater-elevation contours for spring 2018, indicating regional groundwater flow in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There continued to be a discernible depression in groundwater levels around the eastern portion of the Chino Basin Desalter well field, which demonstrates the achievement of Hydraulic Control in this area. This depression merged with the pumping depression around the JCSD well field to the east and increased the hydraulic gradient from the Santa Ana River toward the desalter well field. As was the case in 2000 and 2018, there continues to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).

Prepared by:  
**WEST YOST**  
Water. Engineered.

Author: TA  
Date: 6/21/2021

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Chino Basin Watermaster  
2020 State of the Basin Report  
Groundwater Levels



Groundwater-Elevation Contours for Spring 2020  
Shallow Aquifer System

Exhibit 4-4