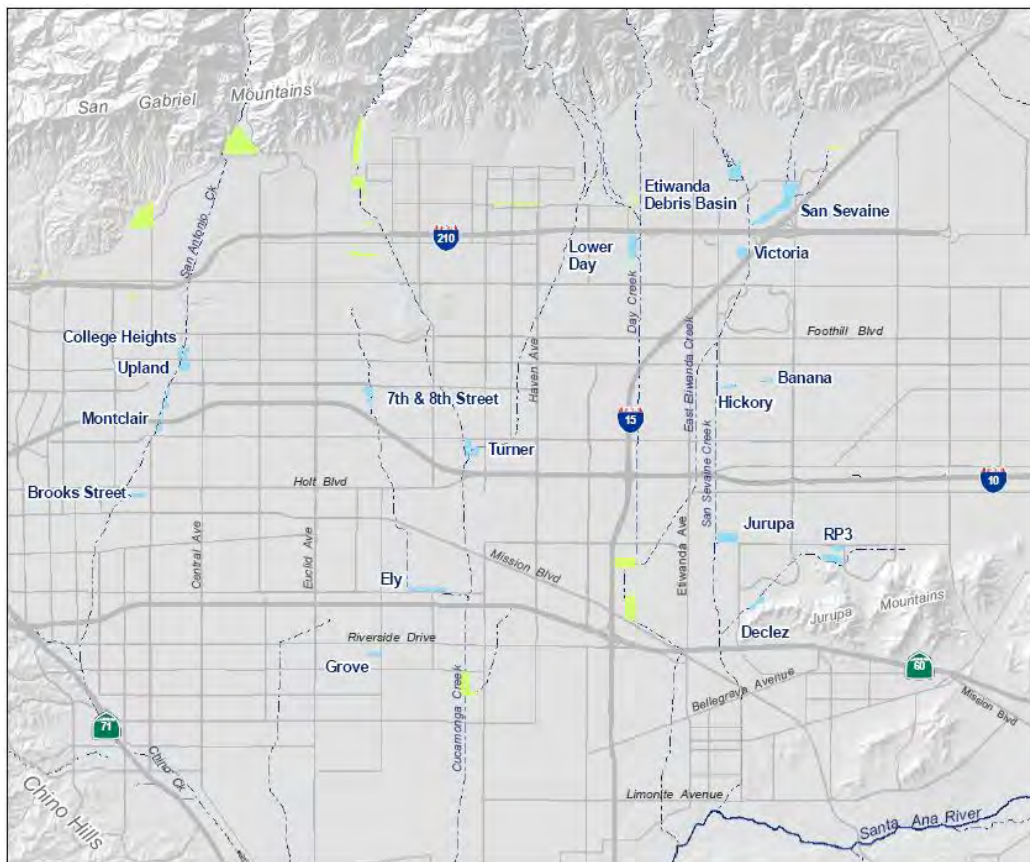


# Chino Basin Recycled Water Groundwater Recharge Program

## 2019 Annual Report



May 1, 2020



**Randy Lee, P.E.**  
Executive Manager of Operations / AGM

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

May 1, 2020

Regional Water Quality Control Board, Santa Ana Region

**Attention: Ms. Hope Smythe**

3737 Main Street, Suite 500

Riverside, California 92501-3348

**Subject: Transmittal of the Annual Report for 2019  
Chino Basin Recycled Water Groundwater Recharge Program**

Dear Ms. Smythe:

The Inland Empire Utilities Agency (IEUA) and the Chino Basin Watermaster (CBWM) hereby submit the *2019 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 2019:

- The 2019 calendar year include annual program recharge of 48,665.8 acre-feet (AF), which includes 14,460.2 AF of storm water and dry weather flows; 11,161.1 AF of recycled water; and 23,044.5 AF of imported water.
- During 2019, 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 exceed during 2019 with the exception of the primary MCLs for carbon tetrachloride and 1,2,3-trichloropropane (1,2,3-TCP), secondary MCL for odor, and NL for perfluorooctanoic acid (PFOA).
- No corrective actions were necessary for RP-1 and RP-4. No unit process changes occurred during 2019.

- 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, Brooks, Banana, and Hickory 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 2019, the volume-based 120-month running average recycled water contributions (RWCs), inclusive of groundwater underflow, by basin were: 8<sup>th</sup> Street - 23%; Banana - 35%; Brooks - 15%; Declez 7%, Ely - 22%, Hickory - 19%, RP3 - 15%; San Sevaine 5 - 5%; Turner Basin Cells 1&2 - 23%; Turner Basin Cells 3&4 – 24%; 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 2019 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) 8<sup>th</sup>-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; TRN-1/2 (3.2 months) for Turner Cell 1; TRN-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 (23 months), and RP3-1 (3.3 months) for RP3 Basin Cell 1. 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 2018) indicates that for areas near the recharge basins, there were minor regional changes in groundwater elevation, but the recharge program has not significantly changed groundwater flow directions. The 2019 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 and 2018 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 2013 and 2) a large mound at the Turner basin that is now sustained and larger than the 25-foot contour interval. 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 2016 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 2016 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 2020 in the Cities of Chino and Rancho Cucamonga.



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Randy Lee, P.E.

*Executive Manager of Operations/  
Assistant General Manager*

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Peter Kavounas, P.E.

*General Manager*



# Chino Basin Recycled Water Groundwater Recharge Program

## 2019 Annual Report

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**Reviewed and Approved by:**



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May 1, 2020

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## 1 INTRODUCTION

This is the 2019 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 Sevaïne, and Victoria Basins have previously been summarized in the four 2019 quarterly monitoring reports to the Regional Board Water Quality Control Board (Regional Board) for these basins where recharge of recycled water has been initiated.

The 2019 calendar year include annual program recharge of 48,665.8 acre-feet (AF) of water were recharged in the Chino Basin, which includes 14,460.2 AF of storm water and dry weather flows; 11,161.1 AF of recycled water; and 23,044.5 AF of imported water. These recharge numbers have been reduced from the metered volume delivered by an evaporation losses factor calculated by CBWM on all supplemental (imported and recycled) water recharge.

### 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.

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. Pursuant to the new GRRP regulations, additional monitoring and reporting began in 3Q15.

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 Organization of the Annual Report

The annual report contains two main sections: Section 2: Recycled Water Quality Monitoring and Section 3: Groundwater Recharge Monitoring. Supporting documents for these sections are included in the 2019 quarterly monitoring reports or are provided as appendices to this report. Section 2 discusses compliance with recycled water production specifications and other water quality requirements. Section 3 discusses the blending and movement of recycled water in the groundwater basin.

## 2 RECYCLED WATER QUALITY MONITORING

### 2.1 Recycled Water Quality Specifications

During 2019, 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 2019a, 2019b, 2019c, 2020).

During 2Q19, the DDW's review of the Compliance Assessment Report (CAR) determined that 001B effluent would need to be reported independently of the RW Blend, due to the Ely Basins receiving only 001B effluent. RP-1 001B effluent monitoring was added in 2Q19.

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

Recycled Water Specifications A.5 through A.9 are narrative limits in the permit. The 2019 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.

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 NPDES-permitted 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 (TIN), total nitrogen (TN), and total organic carbon (TOC) is weekly; and total dissolved solids (TDS) 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 2019.

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 2019, 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 turnout to NRG California South, LP (formerly known as Reliant Energy) prior to 3Q19 and the RP-4 1299 Pressure Zone Pump Station starting 3Q19, as it represents a mixture of recycled water from both RP-1 and RP-4. The turnout to NRG California South, previously used as the representative sampling location, is no longer accessible as the property has been decommissioned and sold.

The 2019 recycled water quality monitoring data and associated limits for Recycled Water Specifications A.1 through A.3 are shown in Table 2-3 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 2019, 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 the carbon tetrachloride, 1,2,3-Trichloropropane, and odor (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 2-4 of the quarterly monitoring report.

The compliance sampling point for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5) not at the RW Blend. Lysimeter compliance sampling for these parameters is performed at groundwater recharge basins actively receiving recycled water prior to sampling. Compliance for TTHMs and HAA5 were consistently met throughout 2019 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, groundwater quality samples are collected and tested annually for 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 2019 can be found in Table 2-9c in the 2Q19 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 2019, 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 2020 and the EEA laboratory certification is valid through January 2021.

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 2019 Annual Laboratory QA/QC Data Summary Report was also submitted to the Regional Board as an attachment in IEUA's 2019 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 a QED MP20 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 2019 in the following categories: primary MCLs for inorganic chemicals; volatile organic compounds (VOCs), *with the exception of carbon tetrachloride and 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, *with the exception of odor*, and oil and grease. Carbon tetrachloride, 1,2,3-TCP, PFOA, odor, and oil and grease exceedances are detailed below:

### Carbon Tetrachloride

The 001B effluent during 2Q19 had a carbon tetrachloride result that exceeded the MCL of 0.5 µg/L. Compliance for carbon tetrachloride is based on a 4-quarter running average, however if a single sample is found to be above the MCL, Title 22 §60320.112(d)(2) requires that a confirmation sample be taken within 72 hours of notification of result, and/or perform weekly sampling until the 4-week running average is below the MCL. Since a confirmation sample was not collected within 72 hours of notification of first exceedance, weekly sampling was initiated on August 13, 2019 and continued until the 4-week running average no longer exceeded the MCL. The fourth weekly sample was collected on September 26, 2019, the four-week average was <0.5 µg/L for carbon tetrachloride, and recycled water deliveries were resumed at the Ely Basins. Carbon tetrachloride sample results from 001B effluent are presented in the table below:

Sample	Parameter	Sample	Results	Ely Basin Status
001B Effluent	Carbon tetrachloride	06/27/19	1.7 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	08/13/19	<0.5 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	08/20/19	<0.5 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	08/27/19	3.7 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	09/03/19	9.5 µg/L	RW Delivery
001B Effluent	Carbon tetrachloride	09/04/19	<0.5 µg/L	RW Delivery
001B Effluent	Carbon tetrachloride	09/12/19	<0.5 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	09/17/19	<0.5 µg/L	No RW Delivery
001B Effluent	Carbon tetrachloride	09/26/19	<0.5 µg/L	No RW Delivery

### 1,2,3-TCP

During 3Q19, recycled water monitoring initiated at the new RW Blend and 001B Effluent sample points and 1,2,3-TCP was detected above the MCL of 0.005 µg/L. A confirmation sample was collected within 72 hours of notification of the first results, and in accordance with §60320.112(d)(2), weekly sampling was initiated. The 1,2,3-TCP results are shown below:

Sample	Date	RW Blend (µg/L)	4-sample avg (µg/L)	Sample	Date	001B Eff (µg/L)	4-sample avg (µg/L)
Original	09/18/19	0.012	<0.005	Original	09/04/19	0.016	--
Confirmation	10/02/19	0.010	0.005	Confirmation	09/26/19	0.014	--
Week 1	10/24/19	0.008	0.007	Week 1	10/02/19	0.017	0.012
Week 2	10/29/19	0.016	0.011	Week 2	10/08/19	0.018	0.013
Week 3	11/06/19	0.009	0.011	Week 3	10/16/19	0.018	0.017
Week 4	11/12/19	0.012	0.011	Week 4	10/24/19	0.013	0.016
Week 5	11/19/19	<0.005	0.009	Week 5	10/29/19	0.018	0.016
Week 6	11/26/19	<0.005	0.005	Week 6	11/06/19	0.006	0.014
Week 7	12/03/19	0.010	0.005	Week 7	11/12/19	0.013	0.012
Week 8	12/10/19	0.012	0.005	Week 8	11/19/19	0.007	0.011
Week 9	12/17/19	0.015	0.009	Week 9	11/26/19	<0.005	0.006



Sample	Date	RW Blend (µg/L)	4-sample avg (µg/L)
Week 10	12/26/19	0.016	0.013
Week 11	12/31/19	0.018	0.016
Week 12	01/07/20	0.017	0.017
Week 13	01/14/20	0.018	0.017
Week 14	01/21/20	0.017	0.018
Week 15	01/28/20	0.016	0.017
Week 16	02/04/20	<0.005	0.013

Sample	Date	001B Eff (µg/L)	4-sample avg (µg/L)
Week 10	12/03/19	0.007	0.007
Week 11	12/10/19	0.009	0.006
Week 12	12/17/19	0.009	0.006
Week 13	12/24/19	0.012	0.009
Week 14	12/31/19	0.011	0.010
Week 15	01/07/20	0.012	0.011
Week 16	01/14/20	0.011	0.011

- §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.” IEUA continued to exceed the four-week average after accelerated monitoring was implemented and 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 §60320.112(d)(2)(B) during 1Q20 and notified the DDW and Regional Board within 48 hours after the final results were received. Notifications were emailed on February 20, 2020 for the RW Blend and on January 22, 2020 for the 001B effluent.

### 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. The NL for PFOS has never been exceeded in the recycled water sampling. However, since the NLs were lowered during 3Q19, PFOA has exceed the NL in the recycled water sampling 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 was initiated. The PFOA results are shown below:

Sample	Date	RW Blend (ng/L)	4-sample avg (ng/L)
Original	09/18/19	6.5	12
Confirmation	--	--	--
Week 1	10/24/19	7.8	10
Week 2	10/29/19	11	9.8
Week 3	11/12/19	13	9.6
Week 4	11/12/19	13	11
Week 5	11/19/19	11	12
Week 6	11/26/19	12	12
Week 7	12/03/19	10	12
Week 8	12/10/19	11	11

Sample	Date	001B Eff (ng/L)	4-sample avg (ng/L)
Original	08/28/19	6.2	--
Confirmation	--	--	--
Week 1	10/24/19	6.9	--
Week 2	10/29/19	6.3	7.6
Week 3	11/06/19	8.6	7.0
Week 4	11/12/19	7.8	7.4
Week 5	11/19/19	7.7	7.6
Week 6	11/26/19	7.3	7.9
Week 7	12/03/19	9.0	8.0
Week 8	12/10/19	11	8.8

Sample	Date	RW Blend (ng/L)	4-sample avg (ng/L)	Sample	Date	001B Eff (ng/L)	4-sample avg (ng/L)
Week 9	12/17/19	10	11	Week 9	12/17/19	7.0	8.6
Week 10	12/26/19	8.7	9.9	Week 10	12/24/19	6.4	8.4
Week 11	12/31/19	9.5	9.8	Week 11	12/31/19	6.0	7.6
Week 12	01/09/20	9.1	9.3	Week 12	01/09/20	6.1	6.4
Week 13	01/14/20	12	9.8	Week 13	01/14/20	5.6	6.0
Week 14	01/21/20	10	10	Week 14	01/21/20	5.0	5.9
Week 15	01/28/20	11	11	Week 15	02/06/20	18	8.7
Week 16	02/04/20	14	12	Week 16	02/20/20	7.2	9.0

- §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 accelerated monitoring was implemented and 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 Regional Board after the final results were received. Notifications were emailed on February 25, 2020 for the RW Blend and on March 5, 2020 for the 001B effluent.

### Odor

Odor has a secondary MCL of 3 Units in Recycled Water Specification A.3. During every quarter of 2019, the 4-quarter running average threshold odor value exceeded the secondary MCL. The 3-quarter running average at the 001B Effluent was 15 Units at the end of 2019. The odor has been identified by Eurofins Eaton Analytical (contract laboratory) as chlorine. Recycled water used for groundwater recharge must meet disinfected tertiary recycled water standards in accordance to Title 22. Sodium hypochlorite is used as the disinfection agent at the RP-1 and RP-4 water recycling facilities; hence, the smell of chlorine is prominent in recycled water and is therefore unavoidable. Order No. R8-2007-0039 allows compliance for secondary MCLs to be determined at the mound monitoring well. Based on the mound monitoring well data (Table 2-9a in the quarterly reports), threshold odor does not exceed 3 Units at any of the monitoring wells.

### Oil & Grease

Oil and grease, which has a narrative limit in Recycled Water Specification A.15 of 1 mg/L, was exceeded during 4Q19 with the sample value of 4 mg/L. Oil and grease is not considered a primary or secondary MCL. At this point in time there is no source to which this exceedance can be attributed. IEUA will continue monitoring to see if additional evaluation necessary or if this is a single anomalous data point.

During 2019, 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 2019 groundwater sampling, and any DDW notifications (no DDW notifications were made during 2019):

- Turbidity exceeding the secondary MCL of 5 NTU was observed at several wells, namely: 8TH-1/1, 8TH-2/2, BRK-1/1, BRK-2/1, DCZ-1/1, RP3-1/1, Southridge Junior High School (JHS), SSV-2, T-2/1, and VCT-1/1.
- The secondary MCL for iron of 300 µg/L was exceeded at Bishop of San Bernardino Corporation well and Ontario Well No. 35.
- The secondary MCL of 15 units for color was exceeded at BRK-2/1 and RP3-1/1.
- The secondary MCLs of 50 µg/L for manganese at BRK-2/2.
- 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 MW3 and Southridge JHS) and Ely MW2 (Walnut). Alcoa MW1 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 2019. 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 2019, as none of wells that showed coliform presence were active municipal drinking water wells.

- During the annual sampling event, the perchlorate concentration at BRK-1/2 was above the primary MCL of 6 µg/L. Perchlorate concentrations at BRK-1/2 have always been at levels slightly above the MCL since sampling at this well began in early 2007, prior to recycled water recharge. The perchlorate concentrations in BRK-1/2 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.

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

No unit process changes occurred during the 2019 calendar year, therefore there was no impact on water quality.

## **2.7 Summary of Chemical Usage**

The summary of treatment chemicals used on a monthly basis at RP-1 and RP-4 during the 2019 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 2019, IEUA's recycled water recharge totaled 11,161.1 AF. The table below summarizes the volume of recycled water recharged during 2019 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	2019 Recycled Water Recharge (AF)	Percent of 2019 Recycled Water Recharge
8 <sup>TH</sup>	2,242.6	20%
Banana	731.8	7%
Brooks	1,417.1	13%
Declez	883.9	8%
Ely	705.6	6%
Hickory	154.8	1%
RP3	3221.5	29%
San Sevaine	0	0%
Turner 1&2	91.6	1%
Turner 3&4	99.7	1%
Victoria	1,612.5	14%
Total	11,161.1	100%

The 2019 calendar year include annual program recharge of 48,665.8 acre-feet (AF), which includes 14,460.2 AF of storm water and dry weather flows; 11,161.1 AF of recycled water; and 23,044.5 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, 2019a, 2019b, 2019c, and 2020), but are repeated in this section's discussion of RWC (recycled water contribution) management plans. The recharge numbers have been reduced from the metered volume delivered 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 horizontal groundwater flow travel velocity away from the recharge site is much slower than the vertical recharge percolation velocity. 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 anticipated, long-term blend as all recharged waters sources move and mix towards distant monitoring wells. The 2019 monthly recharge volumes by water type are presented in Appendix A and the 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 2019 for basins having initiated recycled water recharge are listed below:

Basin	RWC Limit	120-Mo. Running Avg. RWC
8 <sup>th</sup> Street	50%	23%
Banana	50%	35%
Brooks	50%	15%
Ely	50%	22%
Declez	20%	7%
Hickory	50%	19%
RP3	50%	17%
San Sevaine 5	27%	5%
Turner 1&2	24%	23%
Turner 3&4	45%	24%
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. 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, recycled water arrival at the mound monitoring well based on EC and chloride data are inconclusive to determine its arrival. Recycled water recharge at San Sevaine 5 was suspended in 2014 due to poor infiltration rates and resulting maintenance issues.

### ***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 rare 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).

For the wells showing EC (and chloride) increases associated with recycled water recharge, Table 3-1 provides an estimated range of the peak percent blend of recycled water observed at a given well in the past year based on the peak EC and Cl concentrations. The mass-balance blend percentages 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 in Table 3-1 is the approximate well water concentration prior to recycled water recharge. The recycled water EC in Table 3-1 is the current calendar year average concentration of the blended RP-1 and RP-4 recycled water.

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

For the 8th Street Basin area, in the shallower monitoring well (8TH-1/1) there was a 2009-10 increase in chloride concentrations indicating the arrival of recycled water that was recharged in 2007 and 2008. This 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. As presented in Table 3-1, the highest percent blend of recycled water in the groundwater mound at 8TH-1/1 during 2019 was approximately 53% to 60% based on chloride and EC concentrations. After the 2015 peak, recycled water blend at the well has decreased through 2019.

In the deeper casing (8TH-1/2), there were slight increases in the EC, TDS, and chloride concentrations from mid-2011 to 2019 after trending downward from when the well was constructed in 2007 through 2011. The 2011 increases suggest recycled water recharge after 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 2019, 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. At 60 mg/L, the 2019 high chloride concentration continues to be above the lowest potential background concentration (approximately 20 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. As presented in Table 3-1, the highest percent blend of recycled water in the groundwater mound at 8TH-1/2 during 2019 if confirmed would be approximately 47% to 48% based on EC and chloride concentrations.

Between 2007 and 2018, the shallower casing of monitoring well 8TH-2 (8TH-2/1) shows cyclical seasonal variations and a trend of decreasing in EC, TDS, and chloride that make the arrival of recycled water somewhat difficult to evaluate. 8TH-2 is located approximately 2,500 feet farther from 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. In 2016 and 2017, two EC and TDS peaks were greater than their historical high (about 50 mg/L higher for TDS), but returned to background levels in 2018 and 2010. Although inconclusive, this may suggest an 8.5 to 9-year

minimal travel time to this well casing. However, the values returned to within background range throughout late 2017 and 2018. Chloride remained in the historical range.

Between 2007 and 2018, there was insufficient indication from 8TH-2/2 data to identify a recycled water component in the groundwater in relation to the recharge operations at 8th Street Basin. Water quality 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 2017 and 2019, chloride concentrations trended upwards in to a historical high (62 mg/l). This trend 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. As presented in Table 3-1, the highest percent blend of recycled water in the groundwater mound at 8TH-2/2 during 2019 if confirmed would be approximately 36% to 42% based on EC and chloride concentrations.

### **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 2019, concentrations remained fairly stable but slightly lower than the peak of 2016. As presented in Table 3-1 in 2019, the highest percent blend of recycled water the groundwater mound at BH-1/2 based on EC and chloride variations reached approximately 70% to 78%.

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. As presented in Table 3-1 based on EC and chloride variations, in 2019 the highest percent blend of recycled water in the groundwater at the California Speedway Infield Well reached approximately 52 to 100%.

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 2019. While small, the change supports a recycled water arrived at this well in April 2012, an approximately 6.5-year travel time. As presented in Table 3-1 based on EC and chloride variations, in 2019 the highest percent blend of recycled water in the groundwater at the California Speedway Well No. 2 reached approximately 15% to 34%.

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 were 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, the NRG facility

closed in 2018 and the well is no longer operational. Should a new owner maintain the well, sample would be continued.

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 was replaced with Fontana Water Company 7A in 2018. This well is not expected to show a recycled water component. However, EC and TDS concentrations have 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 downgradient 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. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater mound at the recharge basin during 2019 was approximately 69% to 72% 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 2019. Concentration increases of 110 mg/L for TDS and 12 mg/L for chloride have been observed and are attributed to the presence of recycled water at BRK-1/2. As presented in Table 3-1 based on EC and chloride variations, the percent blend of recycled water at BRK-1/2 has been approximately 12% to 63%.

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), remained just above 80 mg/L through 2018, and returned to background levels in 2019. These two chloride pulses increase 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. 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 it is being impacted by recycled water recharge.

### **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 in the in 2013. In 2015 2016, 2017, and 2018, the EC, TDS and chloride concentrations at the Philadelphia well have decreased slightly, but remain 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 for a new well installation in its 2020/21 budget.

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 potential definitive indicator of recycled water source that may be useful for estimation of travel time to the Walnut Well could be a similar EC, TDS, and Chloride trends to that observed between 2014 to 2018 at the Philadelphia well.

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 2019. 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 TRN-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 TRN-1 indicate recharge water moves quickly away from the Turner 1 basin. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater mound at Turner 1 during 2019 was approximately 97% to 100% at TRN-1/2.

At monitoring well TRN-2/2 (adjacent to Turner 4), the EC, TDS, and chloride concentrations are delayed several months from past recharge activities. The slower and smaller relative concentration changes (compared to TRN-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 well TRN-2/2 adjacent to Turner 4 following recharge in late-2018. As

presented in Table 3-1 lend ratios of near 100%, at other times the on EC and chloride variations, the highest percent blend of recycled water in the groundwater mound at the Turner 4 basin during 2019 was approximately 85% to 100%. The TRN-1/2 and TRN-2/2 EC, TDS, and Chloride data periodically indicate blend ratios of near 100% when recharge is near 100% recycled water, at other times these data show recycled water blending in the aquifer beneath the Turner Basins is occurring with groundwater and other source waters.

Downgradient from the Turner Basins, in July 2010 Ontario Well No. 25 showed a slight increase in EC (75  $\mu$ mhos/cm), TDS (40 mg/L), and chloride (10 mg/L) above background levels that suggest recycled water arrival. Between 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 presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater at Ontario Well No. 25 during 2019 was approximately 0% to 18%. In 2019, Ontario Well No. 25 was sampled once due to it being offline for the rest of the year. In that one sample, EC returned to background levels while chloride rose to 29 mg/L.

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 2019 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 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. As presented in Table 3-1 based on EC and chloride variations, the percent blend of recycled water in the groundwater during 2019 at well RP3-1/1 was 99% to 100%. Due to their similarities in water quality, sampling of the deeper casing RP3-1/2 was discontinued in 2015.

Downgradient well ALCOA MW-3 has higher EC, TDS, and chloride concentrations than ALCOA MW-1. ALCO MW-3 -1 are approximately 4,600 feet and 9200 feet distant from RP3 Basin. In 2019, ALCOA MW-3 groundwater continued to show fluctuating EC, TDS, and chloride concentrations, which suggests higher salt content water moving past the well site. From 2017 through 2019, 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 2019. 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. 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 Basin site. The Southridge JHS wells 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 2019. 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 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). Additional long-term monitoring will be needed to verify the travel time and impact of recycled water recharge at this location. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater at DCZ-1/1 during 2019 was estimated at approximately 30% to 55%.

### **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 and resume recycled water recharge there. Resumed recycled water delivery to San Sevaine will likely occur in summer of 2019. For the San Sevaine area, the trends in EC, TDS, and chloride have yet to indicate a detectable arrival of recycled water at monitoring wells SS-1 and Unitex 91090. In 2019, SS-1 data show a gradual increase in EC and TDS concentrations with a larger increase in Chloride. The Chloride concentration will be watched in 2020 for a possible indication of recycled water arrival. The Unitex well continues to show slightly declining or relatively stable concentrations. A new mound

monitoring well was installed in mid 2018 for the coming start-up period of recycled water delivery to the San Sevaine basin 2. Its data will be discussed in future annual reports.

### **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. Through 2017 and 2019, these parameters declined slightly. Mound monitoring well VCT-1/1 water quality data support a travel time of approximately 7.5 months. As presented in Table 3-1 based on EC and chloride variations, the percent blend of recycled water in the groundwater mound at Victoria Basin during 2019 was 57% to 64% 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 5, 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 2014 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 volume-based RWC calculation at the end of each year for each recharge basin for 2009 to 2019. 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 2019 quarterly monitoring reports, CBWM has certified that there was no reported pumping of groundwater in 2019 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 Sevaine, 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; TRN-1/2 and TRN-2/2 for Turner 1 and Turner 4 Basins, respectively; Ontario Well No. 25 for Turner 4 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 natural seasonal variations.



## **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 until a long-term trend is identified for an influence from recharge activity. Water quality sampling of the deeper casing of 8TH-2 (8TH-2/2) was suspended in mid-2015 and resumed in second quarter of 2017. From 2018 through 2019, chloride concentrations increased to greater than background chloride concentration in the first quarter of 2019. However, these increases in chloride concentrations at 8TH-2/2 from 2018 to 2019 did not correspond to concentration increases in EC and TDS. This trend will be watched in 2020.

## **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 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. Travel time from Banana Basin to California Speedway Infield Well is estimated at 890 days (29 months) based on a stepped increase in EC, TDS, and chloride concentrations between data collected on October 9, 2007 and January 7, 2008 (IEUA and CBWM, 2009). The modeled travel time to the California Speedway Infield Well 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 2019. These parameters were relatively stable from 2006 to 2012. 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 and 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. Take out of service in 2017, the downgradient monitoring well, Reliant East, has not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water. The well owner NRG closed in power generating station and the well is no longer available for sampling. The fate of the well location will be evaluated by a future site owner.

## **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 through 2011 and 2012 and again in 2015 through 2019 which could suggest brief arrivals of recycled water. Two peak increases in chloride concentration were also observed in BRK-1/1 prior to the increase in chloride concentration in BRK-2/1. The BRK-1/1 Chloride trend is added to the BRK-2/1 trend for comparison (Appendix C). The two increases in chloride concentration at BRK-1/1 and BRK-2/1 both returned to background levels in about 2 and 4 years respectively. The initial peak increase in chloride concentration at BRK-2/2 suggested a recycled water travel time of 28 months (2.3 years). 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 seasonal variations of TDS, EC, and chloride concentrations at the Philadelphia, Walnut, and Riverside Wells, 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 month 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 has budgeted for a new well installation in its 2020/21 budget.

### **Turner Basin Area**

Travel time from Turner Basins through the vadose zone to the groundwater is approximately 10 to 12 months for both Turner well sites. The initial rise in EC, TDS, and chloride concentrations at TRN-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 TRN-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. TRN-1/1 is not currently sampled as it was constructed above the water table for future mound sampling needs, TRN-2-1 sampling was suspended in 2015 due to sampling results very similar to TRN-2-2. Chloride concentrations in 2019 continue to support the interpretations. 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 TRN-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 suggest a travel time of 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 2018 are consistent with the prior data interpretations for these two Ontario wells. Well 25 was out of service in the last half of 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.

Data collected in 2019 are consistent with the prior data interpretations for the RP3 region monitoring wells. The water quality data from downgradient monitoring wells ALCOA MW3 (about 4,600 feet from RP3) and ALCOA MW1 (about 9,200 feet from RP3) show gradual increasing trends in chloride concentrations. These coinciding 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 2019, 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 has yet to receive recycled water based on its EC, TDS, and Chloride water quality trends.

### **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 San Sevaine 1. The hydrograph of SS-1 is complimented with recharge of both basin 5 (storm water and recycled water) and the combined basins 1, 2, and 3 (stormwater and imported water). These 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). The timing of water level impacts from San Sevaine recharge is complicated and warrants further data collection.

The San Sevaine 5 mound monitoring well did show a spike in Chloride, which will be watched in 2020 to see if its duration matches the limited historical recycled water deliver to basin 5. There is currently insufficient data from the San Sevaine area monitoring wells to establish travel times of recharge from the mound to cross gradient well Unitex 91090. Due to operational and maintenance limitations, recharge of recycled water has been discontinued in San Sevaine 5 and will resume in San Sevaine 1, 2, and 3 in 2020 when a Start-Up Protocol will be implemented.

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 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. No indication of recycled water arrival has yet to be observed 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. 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 located downgradient of 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, Turner Basins, 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 2019, 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 2018) indicates several things. First, regional changes in groundwater elevation near the recharge basins are present, but trends from enhanced recharge (apart 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 2016 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 2018 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 2018 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 2019, that seasonally fluctuate between 640 to 680 feet above mean sea level (MSL). There is an approximate 4-month delay, but a 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 through 2018. Short duration downward spikes in 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 (none to 2-foot) seasonal water level fluctuations and depict more annually 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 2018, and rose through 2019. The downward trends are perhaps more 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.

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

The hydrograph for the Banana and Hickory Basins mound monitoring well (BH-1) shows seasonal water level fluctuations between 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 season fluctuations. 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 pump was discovered to be damaged and is out of service for a well casing evaluation and repair.

### **Turner Basin Area**

The hydrographs for the two Turner Basin monitoring wells, TRN-1/2 and TRN-2/2, show long term increases in water levels. For these two sites, between 2008 and 2019 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. Between 2010 and 2018, the hydrographs have had about a 2 to 3-foot per year increase in the annual low groundwater elevation. That

trend ended in 2019. 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. For 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 increases and decrease. In 2018, water levels remained about 10 feet higher than pre-recycled water recharge. The groundwater level fluctuations in 2019 which can be attributed to the suspension of basin recharge for basin maintenance purposes and resumption of recharge at the basin.

### **Declez Basin Area**

The long-term water level trend at the Declez recharge mound well site has been relative stable between 2008 and 2019 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 include recharge for both San Sevaine 5 and the combined San Sevaine 1, 2, and 3. 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, but began recovering steeply 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 will resume at the San Sevaine 1, 2, and/or 3 basins in mid 2020. To allow this to occur, on June 1, 2019 the nearby Unitex Well was removal from potable service. December 2019 marked the initial operation of the San Sevaine 5 pump station for delivery of stormwater to the upper most San Sevaine basins.

Well SS-2 was installed in late 2018 at basin 2 and its initial hydrography is included in this annual report. Water elevation history is too short to correlate with the San Sevaine recharge history.

### **Victoria Basin Area**

The hydrograph for the Victoria Basin mound monitoring well (VCT-1/1) shows seasonal of up to 30 feet between the summer lows and winter high levels. Longer-term (2014 through 2019) water level fluctuations trend upwards when looking at the summer and winter extremes. The water levels peaks are generally 6 to 9 months delayed from times with higher volume recharge.

The hydrograph for the Victoria Basin downgradient (intermediate) monitoring well (VCT-2/2) shows a relative stability within the elevations 750 to 765 feet MSL from 2010 through 2019. 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 well's site which resulted in the ground and the well casing being lowered. Data collection was resumed in November 2015, and show water levels a few feet lower than the previous year. The transducer failed in mid 2016 and was replaced.



## 4 REFERENCES

- California Regional Water Quality Control Board, Santa Ana Region, 2007a, 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.
- California Regional Water Quality Control Board, Santa Ana Region, 2007b, 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.
- California Regional Water Quality Control Board, Santa Ana Region, 2009, 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.
- California Regional Water Quality Control Board, Santa Ana Region, 2010, 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.
- CH2MHill, 2003, Title 22 Engineering Report, Phase 1 Chino Basin Recycled Water Groundwater Recharge Program.
- CBWM and IEUA, 2003, Optimum Basin Management Program, Chino Basin Dry-Year Yield Program, Modeling Report, Volume III.
- Wildermuth Environmental, 1999, Optimum Basin Management Program, Draft Phase I Report.
- IEUA, 2019a, Chino Basin Recycled Water Groundwater Recharge Program Quarterly Monitoring Report January through March 2019.
- IEUA, 2019b, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report April through June 2019.
- IEUA, 2019c, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report July through September 2019.
- IEUA, 2020, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report October through December 2019.
- IEUA and CBWM, 2009, Chino Basin Recycled Water Groundwater Recharge Program, 2008 Annual Report, May 1, 2009.
- IEUA and CBWM, 2010a, Chino Basin Recycled Water Groundwater Recharge Program, 2009 Annual Report, May 1, 2010a.
- IEUA and CBWM, 2010b, Start-Up Period Report for Brooks Basin, July 21, 2010.
- IEUA and CBWM, 2010c, Start-Up Period Report for RP3 Basin, December 13, 2010.
- IEUA and CBWM, 2011, Chino Basin Recycled Water Groundwater Recharge Program, 2010 Annual Report, May 1, 2011.
- 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.
<i>Jan-19</i>	19,700	0	4,600	101,700	3,461	1,213	29,539
<i>Feb-19</i>	16,100	0	4,200	93,700	3,080	1,075	28,831
<i>Mar-19</i>	13,900	0	4,450	104,700	2,974	1,360	28,827
<i>Apr-19</i>	4,400	0	3,600	106,900	2,369	1,314	26,823
<i>May-19</i>	10,800	0	1,650	101,600	2,535	1,281	27,227
<i>Jun-19</i>	11,100	0	1,475	101,600	2,289	1,318	29,267
<i>Jul-19</i>	10,600	0	5,700	111,300	2,977	1,316	32,273
<i>Aug-19</i>	12,500	0	4,150	116,300	4,489	1,436	32,650
<i>Sep-19</i>	11,700	0	3,700	115,600	4,463	1,631	32,443
<i>Oct-19</i>	11,500	1,605	3,800	114,400	4,948	1,593	27,097
<i>Nov-19</i>	7,500	969	4,500	106,100	4,405	1,312	30,431
<i>Dec-19</i>	7,400	0	5,400	97,000	1,861	1,801	30,604
<b>Total</b>	137,200	2,574	47,225	1,270,900	39,851	16,652	356,012

**Table 3-1**  
**Evidence of Recycled Water Blending Based on Water Quality at**  
**Monitoring Wells Based on EC and Chloride in 2019**

Basin	Well	Well Position	Recycled Water EC (µmhos/cm)	Groundwater Background EC (µmhos/cm)	Peak EC at Well (µmhos/cm)	Mass-Balance Blend (max) (% Recycled Water)	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	732	200	517	60%	110	9	63	53%
	8TH-1/2	Mound	732	255	478	47%	110	13	60	48%
	8TH-2/1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	8TH-2/2	Downgradient	732	400	520	36%	110	20	62	47%
Banana & Hickory	BH-1/2	Mound	732	360	622	70%	110	10	88	78%
	California Speedway Infield	Downgradient	732	440	733	100%	110	10	62	52%
	California Speedway No. 2	Downgradient	732	365	488	34%	110	10	25	15%
	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	732	367	629	72%	110	11	79	69%
	BRK-1/2	Mound	732	535	660	63%	110	16	27	12%
	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	--	110	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	TRN-1/2	Mound	732	390	742	100%	110	21	107	97%
	TRN-2/2	Downgradient	732	350	673	85%	110	9	111	100%
	Ontario No. 25	Downgradient	732	380	380	0%	110	11	29	18%
	Ontario No. 29	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
RP-3	RP3-1/1	Mound	732	475	774	100%	110	20	109	99%
	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	SS1-1/1	Mound	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	Unitex 91090	Cross gradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	VCT-1/1	Mound	732	330	586	64%	110	38	79	57%
	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	732	400	501	30%	110	22	70	55%
	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			

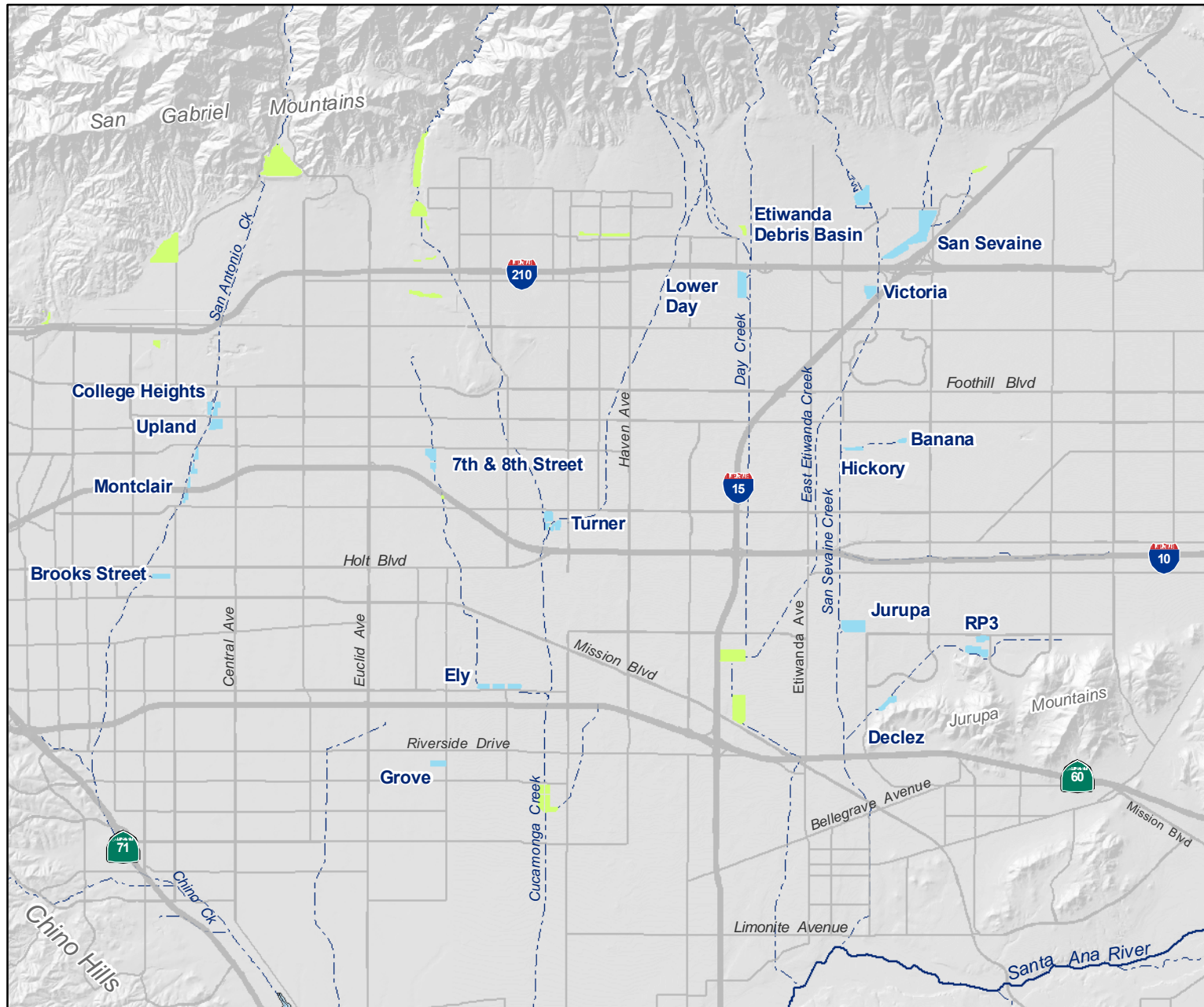
**Table 3-2**  
**Volume-Based RWC Actuals by Basin**  
**(10-Year History)**

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

## FIGURES

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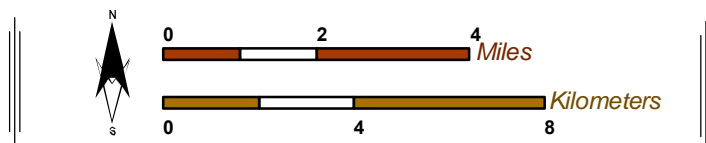
### Main Map Features

- Recharge Basins in the Recycled Water Groundwater Recharge Program
- Non-Program Basins
- Rivers and Streams



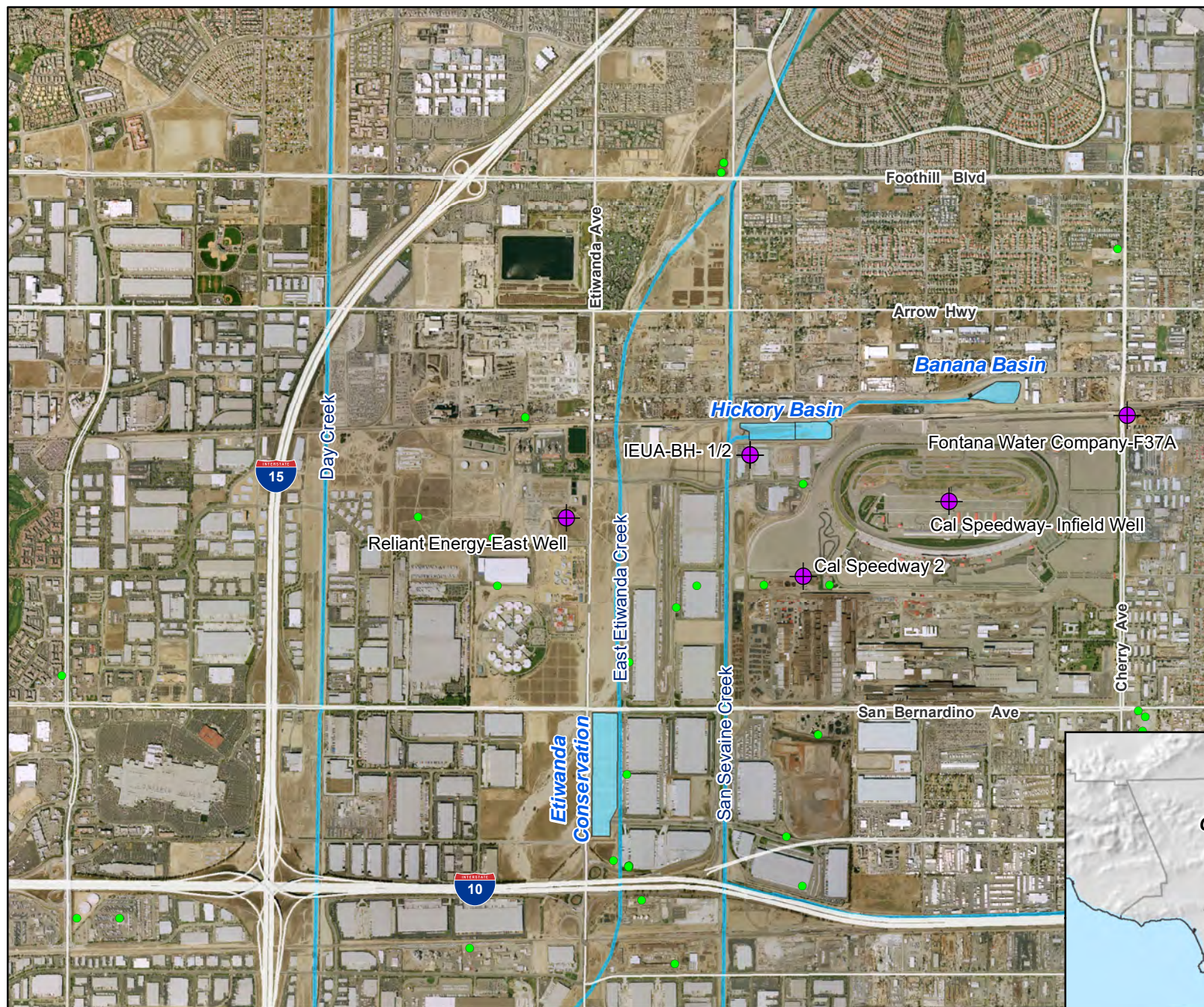
**Chino Basin Recycled Water Groundwater Recharge Program**

*Basin Locations*







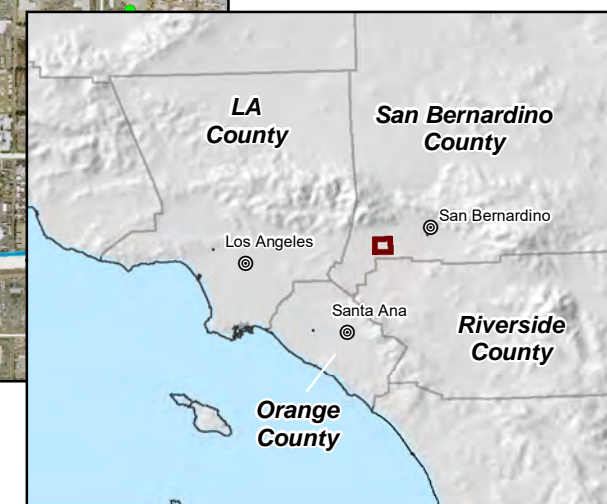
**Figure 1-1**





## Main Map Features

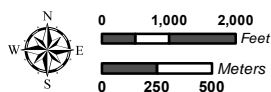
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins



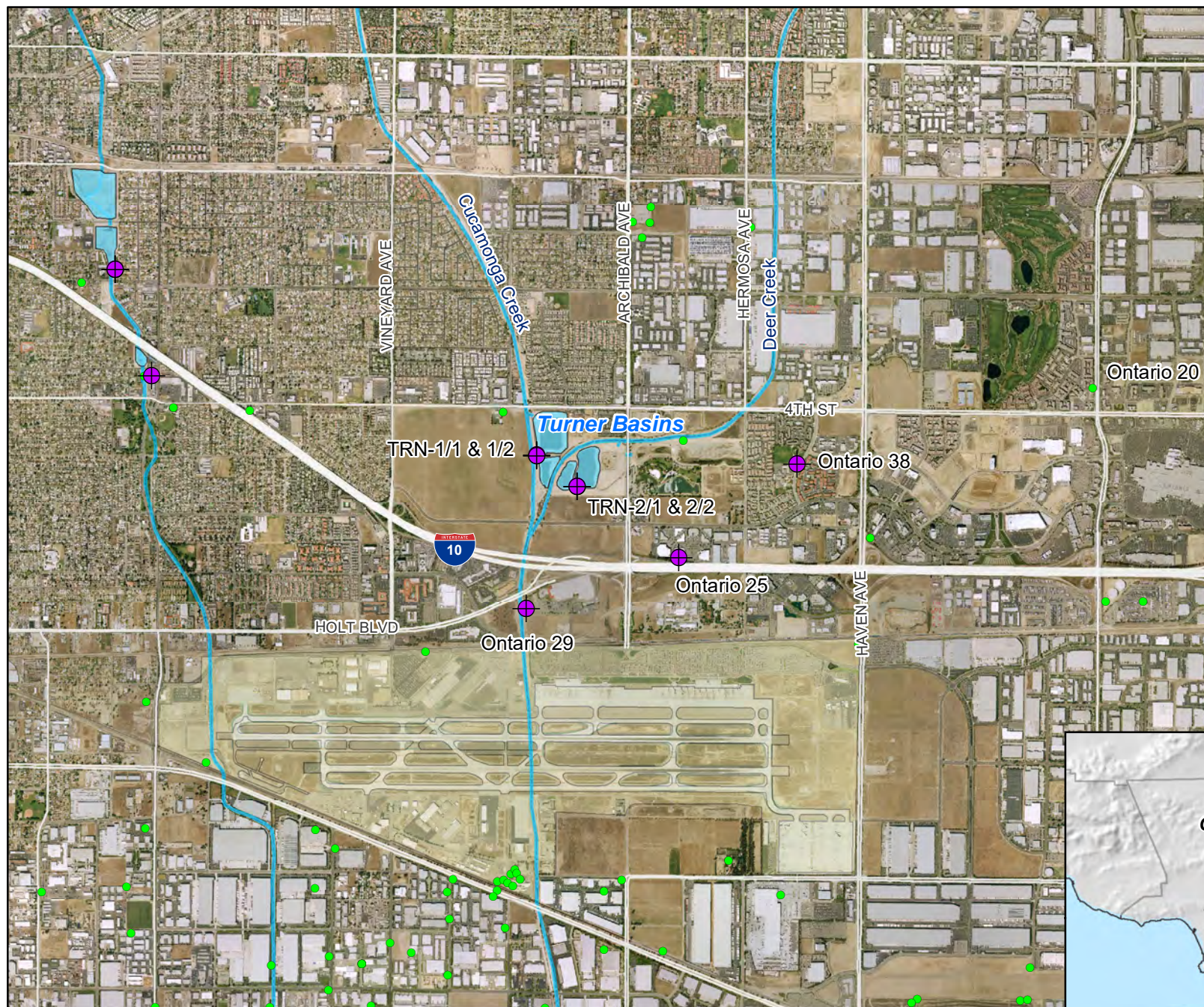
## Monitoring Well Network Hickory and Banana Basins

**Figure 2-1**





Recycled Water Recharge Program







## Main Map Features

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



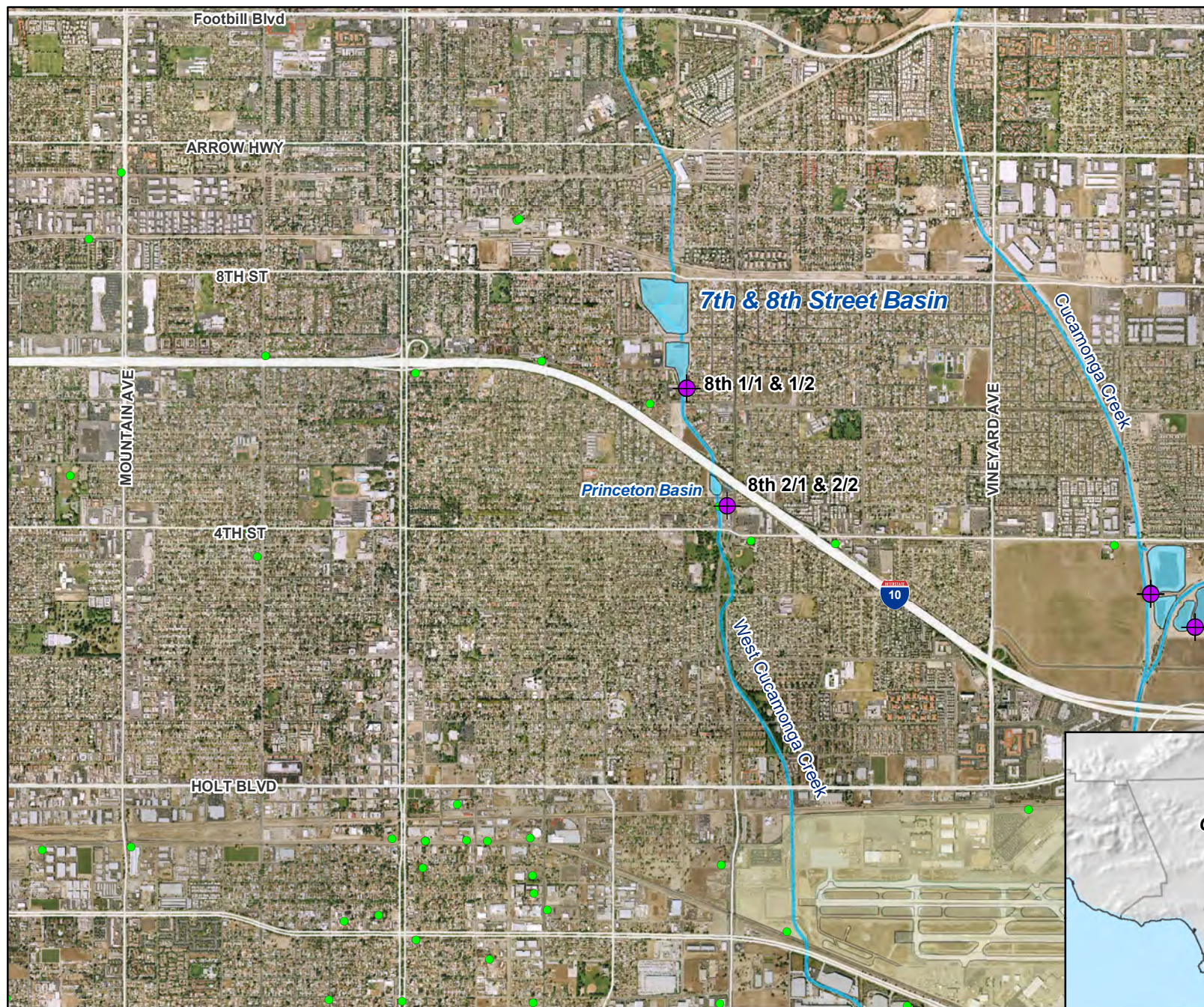
**Monitoring Well Network**  
Turner Basins

**Figure 2-2**





Recycled Water Recharge Program







## Main Map Features

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



## Monitoring Well Network

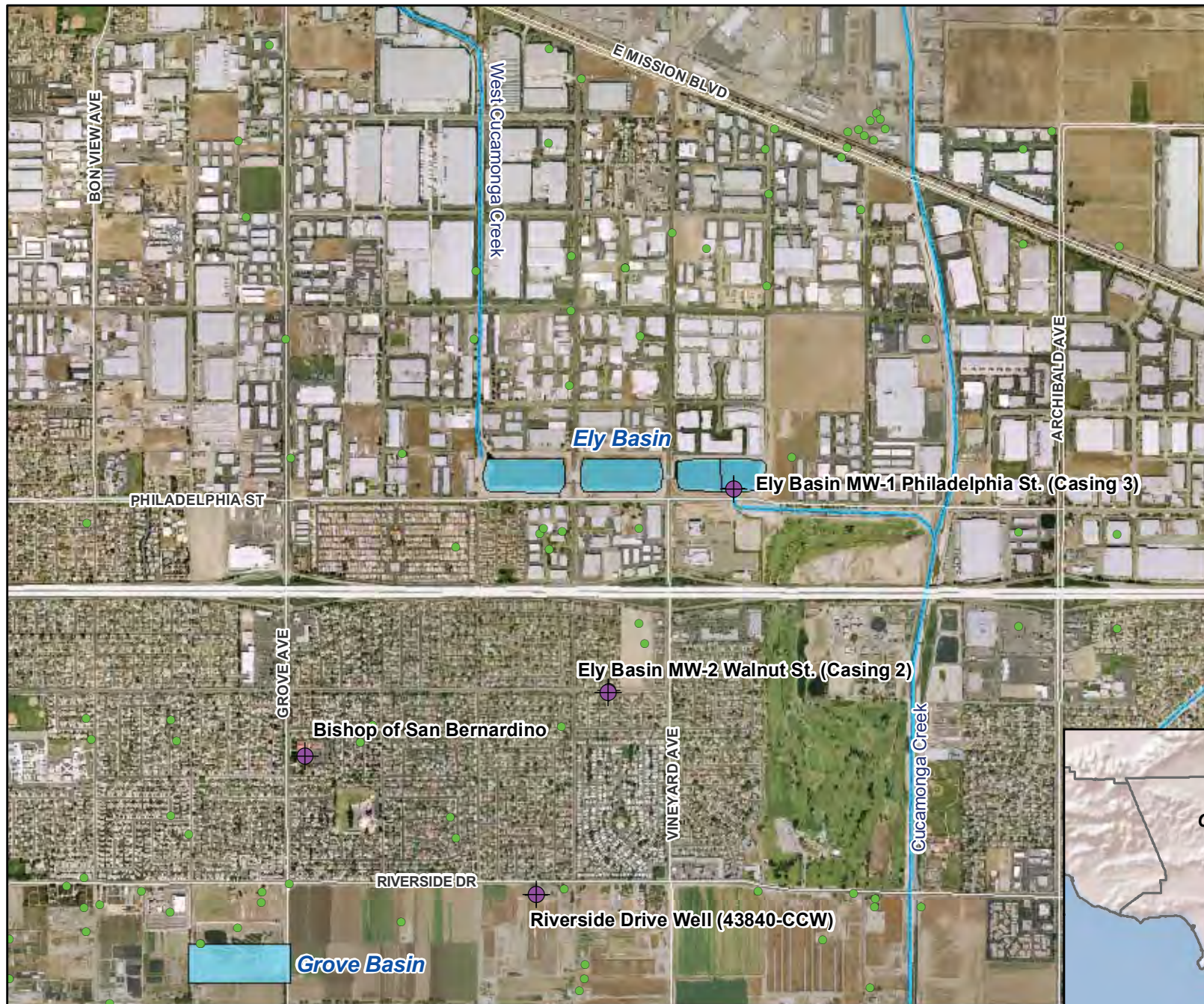
7th and 8th Street Basin

**Figure 2-3**





Recycled Water Recharge Program







### Main Map Features

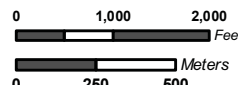
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins



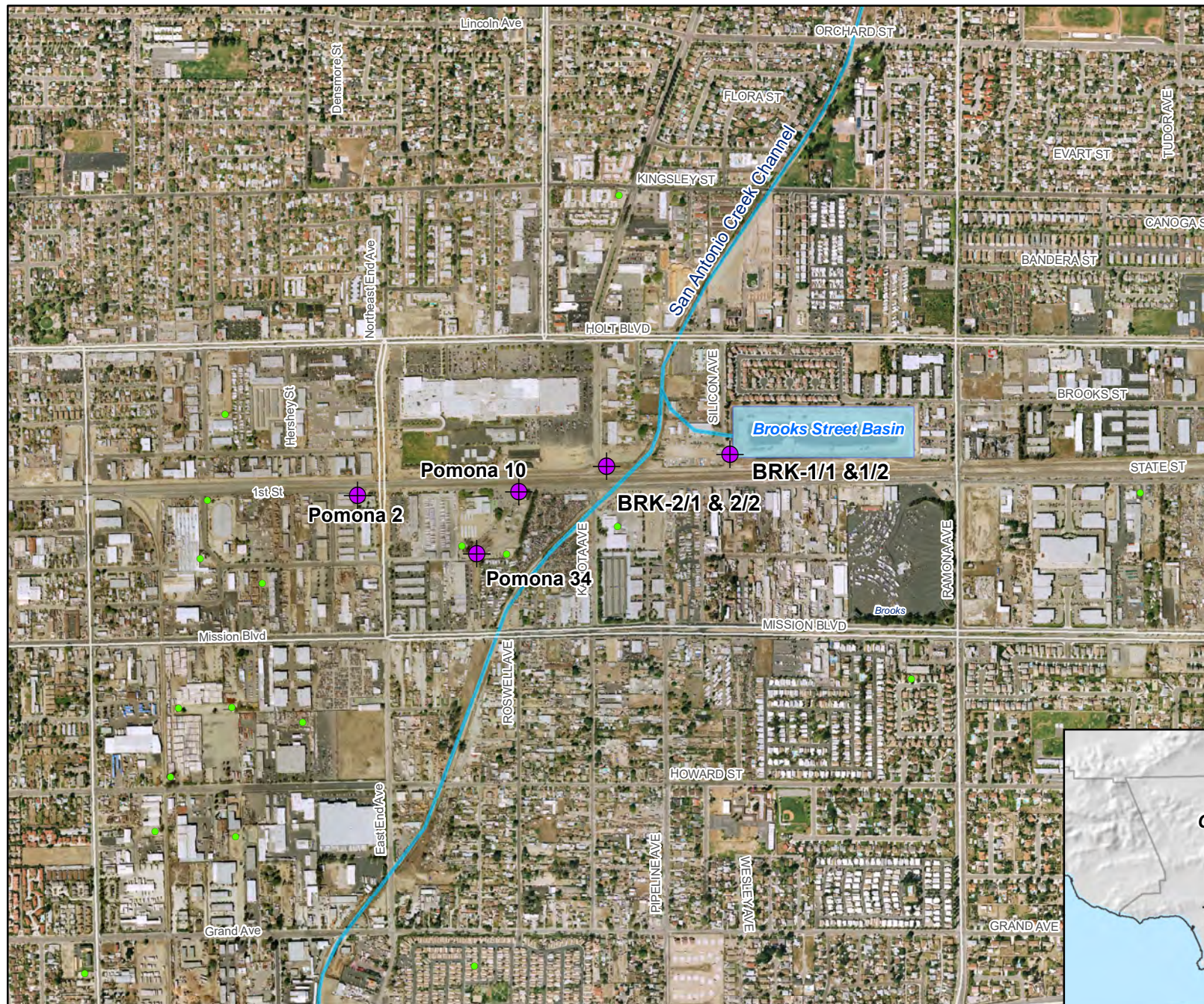
**Monitoring Well Network**  
*Ely Basins*

**Figure 2-4**





Recycled Water Recharge Program







## Main Map Features

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



## Monitoring Well Network

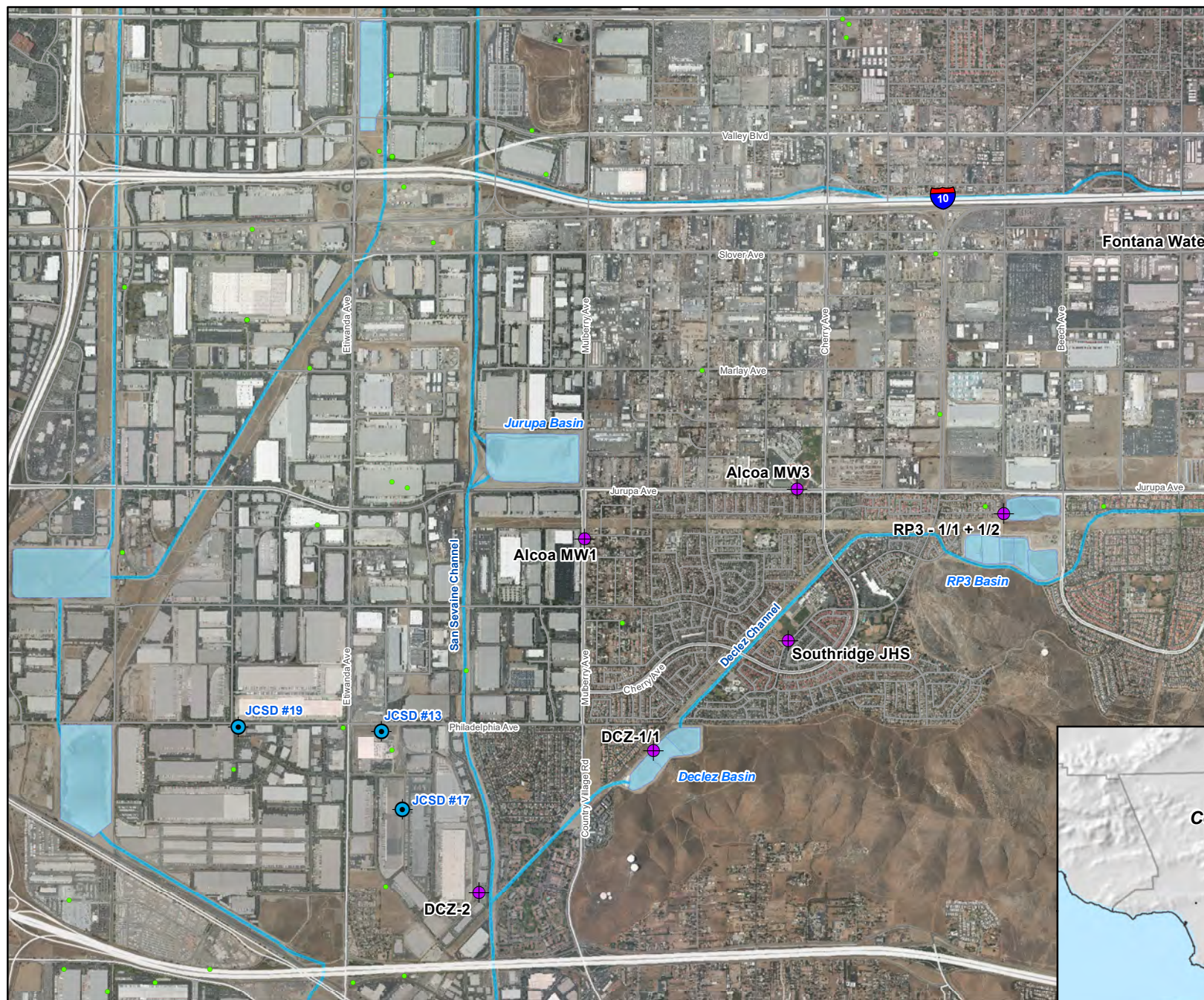
Brooks Street Basin

**Figure 2-5**






Recycled Water Recharge Program







## Main Map Features

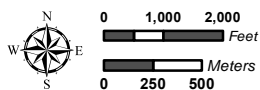
-  JCSD Wells
-  "Other Wells"
-  Existing Monitoring Well
-  Rivers/Streams/Creeks
-  Recharge Basins



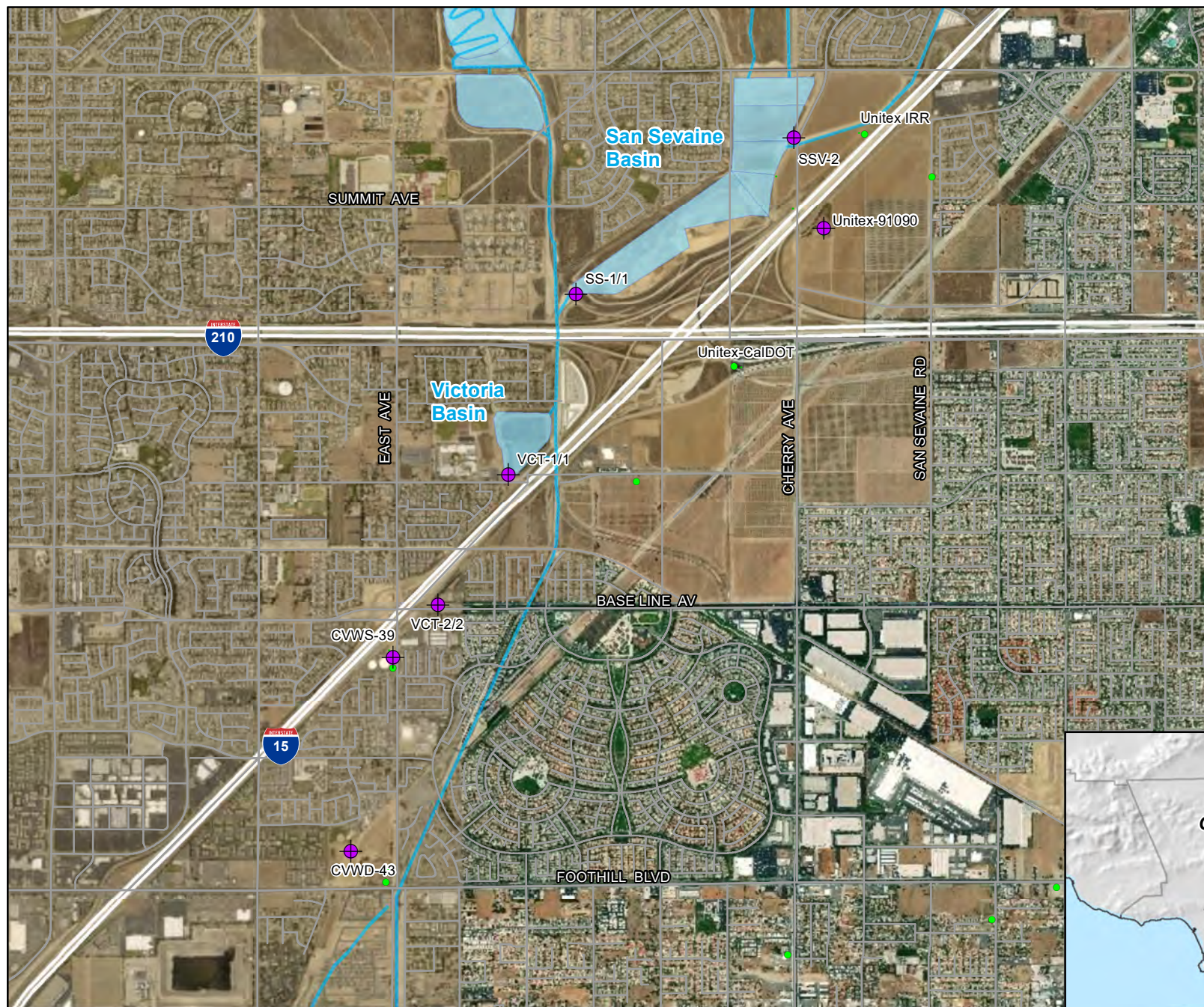
**Monitoring Well Network**  
Declez and RP3 Basins

**Figure 2-6**

Recycled Water Recharge Program







## Main Map Features

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

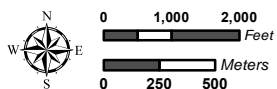


## Monitoring Well Network

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 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,457.4 AF***
College Heights	23.9	18.8	( 0.3)	N	N	
Upland	167.0	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	397.7	0.0	0.0	N	N	
Brooks	259.6	0.0	0.0	66.9	( 1.0)	
West Cucamonga Channel Drainage System						MZ-2 1,765.8 AF***
8th Street	238.4	0.0	0.0	205.0	( 3.1)	
7th Street	41.4	0.0	0.0	43.8	( 0.7)	
Ely 1, 2, & 3	295.4	0.0	0.0	110.8	( 1.7)	
Minor Drainage						
Grove	59.5	N	N	N	N	MZ-2 1,765.8 AF***
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	179.2	0.0	0.0	0.0	0.0	
Turner 3 & 4	153.9	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	123.6	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	132.8	0.0	0.0	X	0.0	
Victoria	251.6	0.0	0.0	92.3	( 1.4)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	255.6	0.0	0.0	0.0	0.0	MZ-3 520.7 AF***
San Sevaine 5	62.6	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	43.6	0.0	0.0	8.1	( 0.1)	
Banana	27.4	0.0	0.0	13.6	( 0.2)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	155.5	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	53.1	0.0	0.0	51.6	( 0.8)	
RP3 Cell 2	44.2	0.0	0.0	18.0	( 0.3)	
Declez	112.5	0.0	0.0	46.8	( 0.7)	January
Non-Replenishment Recharge**						
MZ1: Montclair (MVWC, Upland)	0.0					
MZ1: Brooks (MVWD)	0.0					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 3,743.9 AF	3,078.5	18.8	( 0.3)	656.9	( 10.0)	
All Sources	SW/LR	Imported		Recycled Water		Fiscal Year to Date
Fiscal Year Delivery (with evaporation)		79.2	(0.3)	7,717.2	(249.7)	
Since July 1, 2018 = 13,332.4 AF	5,786.0	78.9		7,467.5		Calendar Year to Date
Calendar Year Delivery (with evaporation)		18.8	(0.3)	656.9	(10.0)	
Since July 1, 2018 = 3,743.9 AF	3,078.5	18.5		646.9		
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.						
Printed: Jul. 21, 19						
v.3						

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS						
Water Delivered* and Evaporation** (AF) - February 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,432.4 AF***
College Heights	76.8	105.6	( 1.6)	N	N	
Upland	259.3	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	390.3	0.0	0.0	N	N	
Brooks	282.8	0.0	0.0	0.0	0.0	
West Cucamonga Channel Drainage System						MZ-2 1,905.5 AF***
8th Street	261.0	0.0	0.0	0.0	0.0	
7th Street	58.2	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	287.5	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	47.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	189.9	0.0	0.0	0.0	0.0	
Turner 3 & 4	188.9	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	190.9	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	101.3	0.0	0.0	X	0.0	
Victoria	372.3	0.0	0.0	8.7	( 0.1)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	320.1	0.0	0.0	0.0	0.0	
San Sevaine 5	108.4	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	90.6	0.0	0.0	0.0	0.0	
Banana	42.2	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	409.0	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	42.1	0.0	0.0	0.0	0.0	
RP3 Cell 2	82.7	0.0	0.0	0.0	0.0	
Declez	130.9	0.0	0.0	0.0	0.0	
Non-Replenishment Recharge**						
MZ1: Montclair (MVWC, Upland)	0.0					
MZ1: Brooks (MVWD)	0.0					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 4,044.8 AF	3,932.2	105.6	( 1.6)	8.7	( 0.1)	
All Sources	SW/LR	104.0		8.6		
Fiscal Year Delivery (with evaporation)	9,718.2	184.8	(1.9)	7,725.9	(249.8)	
Since July 1, 2018 = 17,377.2 AF		182.9		7,476.1		
Calendar Year Delivery (with evaporation)	7,010.7	124.4	(1.9)	665.6	(10.1)	
Since July 1, 2018 = 7,788.7 AF		122.5		655.5		
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.						
Printed: Jul. 21, 19						
v.4						

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS						
Water Delivered* and Evaporation** (AF) - March 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,357.7 AF***
College Heights	13.5	192.2	( 2.9)	N	N	
Upland	118.1	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	258.6	0.0	0.0	N	N	
Brooks	149.2	0.0	0.0	77.8	( 1.2)	
West Cucamonga Channel Drainage System						MZ-2 1,185.6 AF***
8th Street	203.4	0.0	0.0	281.4	( 4.2)	
7th Street	71.8	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	68.1	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	84.7	N	N	N	N	MZ-2 1,185.6 AF***
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	113.9	0.0	0.0	0.0	0.0	
Turner 3 & 4	51.1	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	160.0	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	67.5	0.0	0.0	X	0.0	
Victoria	223.3	0.0	0.0	77.6	( 1.2)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	214.1	0.0	0.0	0.0	0.0	MZ-3 327.5 AF***
San Sevaine 5	98.6	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	27.9	0.0	0.0	0.0	0.0	
Banana	13.5	0.0	0.0	0.0	0.0	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	128.7	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	14.1	0.0	0.0	0.0	0.0	
RP3 Cell 2	22.7	0.0	0.0	0.0	0.0	
Declez	74.6	0.0	0.0	75.0	( 1.1)	March
Non-Replenishment Recharge**						
MZ1: Montclair	0.0					
MZ1: Upland (Upland)	0.0					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 2,870.8 AF	2,177.4	192.2	( 2.9)	511.8	( 7.7)	
All Sources	SW/LR	189.3		504.1		
Fiscal Year Delivery (with evaporation)	11,895.6	377.0	(4.8)	8,237.7	(257.5)	Fiscal Year to Date
Since July 1, 2018 = 20,248.0 AF		372.2		7,980.2		
Calendar Year Delivery (with evaporation)	9,188.1	316.6	(4.8)	1,177.4	(17.8)	Calendar Year to Date
Since July 1, 2018 = 10,659.5 AF		311.8		1,159.6		
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.						
Printed: Jul. 21, 19						
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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS						
Water Delivered* and Evaporation** (AF) - April 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,657.6 AF***
College Heights	0.0	583.2	( 24.5)	N	N	
Upland	3.5	72.0	( 3.0)	N	N	
Montclair 1, 2, 3 & 4	0.8	412.5	( 17.3)	N	N	
Brooks	2.9	0.0	0.0	265.6	( 11.2)	
West Cucamonga Channel Drainage System						MZ-2 390.6 AF***
8th Street	11.0	0.0	0.0	380.0	( 16.0)	
7th Street	0.0	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	73.8	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	12.2	0.0	0.0	0.0	0.0	
Turner 3 & 4	5.2	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	0.7	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.8	0.0	0.0	310.9	( 13.1)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	0.0	0.0	
San Sevaine 5	0.1	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	0.0	0.0	
San Sevaine Channel Drainage System (MZ-3)						MZ-3 147.8 AF***
Jurupa	5.9	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	0.0	0.0	
RP3 Cell 2	1.9	0.0	0.0	17.9	( 0.8)	
Declez	21.7	0.0	0.0	105.6	( 4.4)	
Non-Replenishment Recharge**						April
MZ1: Montclair (Upland)	( 0.8)					
MZ1: Upland (Upland)	( 1.0)					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 2,196.0 AF	138.6	1,067.7	( 44.8)	1,080.0	( 45.5)	
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)		1,444.7	(49.6)	9,317.7	(303.0)	Fiscal Year
Since July 1, 2018 = 22,444.0 AF	12,034.2	1,395.1		9,014.7		to Date
Calendar Year Delivery (with evaporation)		1,384.3	(49.6)	2,257.4	(63.3)	Calendar Year
Since July 1, 2018 = 12,855.5 AF	9,326.7	1,334.7		2,194.1		to Date
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.						
Printed: Jul. 21, 19						
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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS						
Water Delivered* and Evaporation** (AF) - May 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 1,264.6 AF***
College Heights	1.5	267.9	( 11.3)	N	N	
Upland	34.0	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	113.2	178.7	( 7.5)	N	N	
Brooks	61.4	0.0	0.0	197.6	( 8.3)	
West Cucamonga Channel Drainage System						MZ-2 683.3 AF***
8th Street	108.9	0.0	0.0	318.5	( 13.4)	
7th Street	25.9	0.0	0.0	29.0	( 1.2)	
Ely 1, 2, & 3	70.0	0.0	0.0	45.9	( 1.9)	
Minor Drainage						
Grove	79.4	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	133.7	0.0	0.0	0.0	0.0	
Turner 3 & 4	11.5	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	22.7	0.0	0.0	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	45.9	0.0	0.0	261.7	( 11.0)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	22.3	0.0	0.0	0.0	0.0	
San Sevaine 5	3.1	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	0.6	0.0	
San Sevaine Channel Drainage System (MZ-3)						MZ-3 190.2 AF***
Jurupa	9.1	0.0	0.0	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	0.0	0.0	0.0	0.0	0.0	
RP3 Cell 2	20.5	0.0	0.0	0.0	0.0	
Declez	63.1	0.0	0.0	101.2	( 4.3)	
Non-Replenishment Recharge**						May
MZ1: Upland (Upland)	( 1.5)					
MZ1: Upland (8th)	( 28.8)					
MZ2: none	0.0					
MZ3: none	0.0					
Month Total = 2,138.1 AF	795.9	446.6	( 18.8)	954.5	( 40.1)	
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	12,830.1	1,891.3	(68.4)	10,272.2	(343.1)	Fiscal Year
Since July 1, 2018 = 24,582.1 AF		1,822.9		9,929.1		to Date
Calendar Year Delivery (with evaporation)	10,122.6	1,830.9	(68.4)	3,211.9	(103.4)	Calendar Year
Since July 1, 2018 = 14,993.6 AF		1,762.5		3,108.5		to Date
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.						
Printed: Sep. 05, 19						
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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS						
Water Delivered* and Evaporation** (AF) - June 2019						
Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 4,146.3 AF***
College Heights	0.0	1,198.1	( 50.3)	N	N	
Upland	1.4	580.3	( 24.4)	N	N	
Montclair 1, 2, 3 & 4	0.0	1,787.5	( 75.1)	N	N	
Brooks	0.0	0.0	0.0	303.3	( 12.7)	
West Cucamonga Channel Drainage System						MZ-2 1,599.6 AF***
8th Street	6.0	0.0	0.0	432.6	( 18.2)	
7th Street	0.0	0.0	0.0	20.0	( 0.8)	
Ely 1, 2, & 3	0.9	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	0.0	N	N	N	N	MZ-2 1,599.6 AF***
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	3.0	0.0	0.0	0.0	0.0	
Turner 3 & 4	3.0	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	0.0	435.6	( 18.3)	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	332.9	( 14.0)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	894.0	( 37.5)	0.0	0.0	MZ-3 191.7 AF***
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	0.0	0.0	
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	0.0	0.0	
RP3 Cell 2	0.0	0.0	0.0	0.0	0.0	
Declez	18.0	0.0	0.0	181.3	( 7.6)	June
Non-Replenishment Recharge**						
MZ1: Upland (Upland)	( 1.4)					
MZ1:						
MZ2: None						
MZ3: None						
Month Total = 5,937.6 AF	30.9	4,895.5	( 205.6)	1,270.1	( 53.3)	Fiscal Year to Date
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)		6,786.8	(274.0)	11,542.3	(396.4)	Calendar Year to Date
Since July 1, 2018 = 30,519.7 AF	12,861.0	6,512.8		11,145.9		
Calendar Year Delivery (with evaporation)		6,726.4	(274.0)	4,482.0	(156.7)	Calendar Year to Date
Since July 1, 2018 = 20,931.2 AF	10,153.5	6,452.4		4,325.3		
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.						
				Printed: Sep. 05, 19		
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# SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

Water Delivered\* and Evaporation\*\* (AF) - July 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 3,661.6 AF***
College Heights	0.0	1,010.0	( 42.4)	N	N	
Upland	1.5	450.0	( 18.9)	N	N	
Montclair 1, 2, 3 & 4	12.0	1,762.9	( 74.0)	N	N	
Brooks	0.0	116.3	( 4.9)	184.2	( 7.7)	
West Cucamonga Channel Drainage System						MZ-2 1,392.9 AF***
8th Street	6.2	0.0	0.0	292.2	( 12.3)	
7th Street	0.0	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	0.0	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	4.4	0.0	0.0	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	418.2	( 17.6)	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	167.2	( 7.0)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	799.5	( 33.6)	0.0	0.0	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	1.4	63.0	( 2.6)	0.0	0.0	
Banana	0.0	0.0	0.0	34.5	( 1.4)	
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	344.1	( 14.5)	
RP3 Cell 2	2.8	0.0	0.0	0.0	0.0	
Declez	16.0	0.0	0.0	100.8	( 4.2)	
Non-Replenishment Recharge**						
MZ1: Upland (Upland, Montclair)	( 13.5)					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 5,532.6 AF	30.8	4,619.9	( 194.0)	1,123.0	( 47.1)	July
		4,425.9		1,075.9		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	30.8	4,619.9	(194.0)	1,123.0	(47.1)	Fiscal Year to Date
Since July 1, 2019 = 5,532.6 AF		4,425.9		1,075.9		
Calendar Year Delivery (with evaporation)	10,184.3	11,346.3	(468.0)	5,605.0	(203.8)	Calendar Year to Date
Since January 1, 2019 = 26,463.8 AF		10,878.3		5,401.2		

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 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 2,967.0 AF***
College Heights	0.0	339.2	( 14.2)	N	N	
Upland	1.4	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	7.0	2,580.3	( 108.4)	N	N	
Brooks	0.0	40.8	( 1.7)	58.9	( 2.5)	
West Cucamonga Channel Drainage System						MZ-2 2,148.9 AF***
8th Street	4.0	0.0	0.0	31.7	( 1.3)	
7th Street	0.0	0.0	0.0	42.0	( 1.8)	
Ely 1, 2, & 3	22.0	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	5.0	0.0	0.0	78.7	( 3.3)	
Turner 3 & 4	0.0	0.0	0.0	33.5	( 1.4)	
Day Creek Channel Drainage System						
Lower Day	0.0	533.0	( 22.4)	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	0.0	0.0	X	0.0	
Victoria	0.0	359.2	( 15.1)	148.4	( 6.2)	
San Sevaïne Channel Drainage System (MZ-2)						
San Sevaïne 1, 2, 3, & 4	0.0	623.3	( 26.2)	0.0	0.0	
San Sevaïne 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	6.2	365.4	( 15.3)	66.9	( 2.8)	
Banana	0.0	0.0	0.0	104.7	( 4.4)	
San Sevaïne 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	391.7	( 16.5)	
RP3 Cell 2	6.3	0.0	0.0	9.2	( 0.4)	
Declez	10.8	0.0	0.0	29.1	( 1.2)	
Non-Replenishment Recharge**						
MZ1: Upland (Upland Basin)	(1.4)					
MZ1: Upland (Montclair Basin)	(7.0)					
MZ2: None	0.0					
MZ3: None	0.0					
Month Total = 5,645.2 AF	54.3	4,841.2	( 203.3)	994.8	( 41.8)	August
		4,637.9		953.0		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	85.1	9,461.1	(397.3)	2,117.8	(88.9)	Fiscal Year to Date
Since July 1, 2019 = 11,177.8 AF		9,063.8		2,028.9		
Calendar Year Delivery (with evaporation)	10,238.6	16,187.5	(671.3)	6,599.8	(245.6)	Calendar Year to Date
Since January 1, 2019 = 32,109.0 AF		15,516.2		6,354.2		

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) September 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 739.3 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	1.4	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	3.6	0.0	0.0	N	N	
Brooks	0.6	0.0	0.0	37.9	( 1.6)	
West Cucamonga Channel Drainage System						MZ-2 1,756.9 AF***
8th Street	3.0	433.3	( 18.2)	97.0	( 4.1)	
7th Street	0.0	164.1	( 6.9)	36.3	( 1.5)	
Ely 1, 2, & 3	0.0	92.3	( 3.9)	132.6	( 5.6)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	4.8	0.0	0.0	16.9	( 0.7)	
Turner 3 & 4	0.0	0.0	0.0	33.7	( 1.4)	
Day Creek Channel Drainage System						
Lower Day	0.0	385.6	( 16.2)	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	85.4	( 3.6)	X	0.0	
Victoria	0.0	522.9	( 22.0)	51.2	( 2.2)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	122.0	( 5.1)	0.0	0.0	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	6.0	359.4	( 15.1)	20.8	( 0.9)	
Banana	0.0	0.0	0.0	237.0	( 10.0)	
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	428.3	( 18.0)	
RP3 Cell 2	5.8	0.0	0.0	16.2	( 0.7)	
Declez	12.2	0.0	0.0	26.1	( 1.1)	
Non-Replenishment Recharge**						
MZ1: Upland (Upland Basin)	( 1.4)					
MZ1: Upland, MVWD (Montclair	( 4.2)					
MZ2: None	0.0					
MZ3: None	0.0					
				</		

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 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 487.2 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	1.5	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	183.7	( 7.7)	
West Cucamonga Channel Drainage System						MZ-2 1,505.9 AF***
8th Street	3.1	182.6	( 7.7)	49.3	( 2.1)	
7th Street	0.0	78.4	( 3.3)	11.4	( 0.5)	
Ely 1, 2, & 3	3.1	11.6	( 0.5)	252.7	( 10.6)	
Minor Drainage						
Grove	0.0	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	5.0	0.0	0.0	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	438.1	( 18.4)	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	0.0	326.5	( 13.7)	X	0.0	
Victoria	0.0	185.1	( 7.8)	121.5	( 5.1)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	0.0	0.0	
San Sevaine 5	0.0	0.0	0.0	X	X	
West Fontana Channel System						#REF!
Hickory	1.8	202.5	( 8.5)	23.6	( 1.0)	
Banana	0.0	0.0	0.0	252.2	( 10.6)	MZ-3 1,327.3 AF***
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	2.8	306.4	( 12.9)	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	3.8	77.6	( 3.3)	549.2	( 23.1)	
RP3 Cell 2	9.3	4.0	( 0.2)	6.0	( 0.3)	
Declez	9.3	0.0	0.0	164.0	( 6.9)	
Non-Replenishment Recharge**						
MZ1: Upland (Upland Basin)	( 1.5)					
MZ1: Upland (Montclair Basin)	( 3.2)					
MZ2: None						
MZ3: None						
Month Total = 3,320.4 AF	38.2	1,812.8	( 76.3)	1,613.6	( 67.9)	October
		1,736.5		1,545.7		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	155.1	13,438.9	(564.6)	4,865.4	(204.6)	Fiscal Year to Date
Since July 1, 2019 = 17,690.2 AF		12,874.3		4,660.8		
Calendar Year Delivery (with evaporation)	10,308.6	20,165.3	(838.6)	9,347.4	(361.3)	Calendar Year to Date
Since January 1, 2019 = 38,621.4 AF		19,326.7		8,986.1		

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 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 663.8 AF***
College Heights	0.0	0.0	0.0	N	N	
Upland	80.8	0.0	0.0	N	N	
Montclair 1, 2, 3 & 4	162.4	0.0	0.0	N	N	
Brooks	70.1	0.0	0.0	65.4	( 1.0)	
West Cucamonga Channel Drainage System						
8th Street	75.7	93.8	( 1.4)	36.3	( 0.5)	
7th Street	35.3	34.1	( 0.5)	18.1	( 0.3)	
Ely 1, 2, & 3	267.6	0.0	0.0	186.2	( 2.8)	MZ-2 1,953.7 AF***
Minor Drainage						
Grove	79.7	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	91.3	0.0	0.0	0.0	0.0	
Turner 3 & 4	161.3	0.0	0.0	35.8	( 0.5)	
Day Creek Channel Drainage System						
Lower Day	60.1	290.2	( 4.4)	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	23.5	173.0	( 2.6)	X	0.0	
Victoria	62.9	63.5	( 1.0)	75.9	( 1.1)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	119.5	114.6	( 1.7)	0.0	0.0	
San Sevaine 5	35.8	0.0	0.0	X	X	
West Fontana Channel System						
Hickory	14.3	103.5	( 1.6)	10.9	( 0.2)	
Banana	52.9	0.0	0.0	93.4	( 1.4)	
San Sevaine Channel Drainage System (MZ-3)						MZ-3 1,448.7 AF***
Jurupa	21.7	174.8	( 2.6)	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	43.9	133.0	( 2.0)	663.6	( 10.0)	
RP3 Cell 2	25.1	17.0	( 0.3)	18.0	( 0.3)	
Declez	136.4	0.0	0.0	86.8	( 1.3)	
Non-Replenishment Recharge** Agency (GWR Basins)						
MZ1: Upland (Upland & Montclair)	( 4.5)					
MZ2: None						
MZ3: None						
Month Total = 4,066.2 AF	1,615.8	1,197.5	( 18.1)	1,290.4	( 19.4)	November
		1,179.4		1,271.0		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)		14,636.4	(94.4)	6,155.8	(224.0)	Fiscal Year to Date
Since July 1, 2019 = 22,244.7 AF	1,770.9	14,542.0		5,931.8		
Calendar Year Delivery (with evaporation)		21,362.8	(856.7)	10,637.8	(380.7)	Calendar Year to Date
Since January 1, 2019 = 42,687.6 AF	11,924.4	20,506.1		10,257.1		

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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) - December 2019

Drainage System	SW/LR	Imported		Recycled Water		Management
Basin	Delivered	Delivered	Evaporation	Delivered	Evaporation	Zone Subtotals
San Antonio Channel Drainage System						MZ-1 2,721.3 AF***
College Heights	10.8	465.0	( 7.0)	N	N	
Upland	172.8	587.0	( 8.8)	N	N	
Montclair 1, 2, 3 & 4	334.4	813.3	( 12.2)	N	N	
Brooks	159.9	0.0	0.0	31.2	( 0.5)	
West Cucamonga Channel Drainage System						MZ-2 1,890.8 AF***
8th Street	38.4	0.0	0.0	0.0	0.0	
7th Street	141.5	0.0	0.0	0.0	0.0	
Ely 1, 2, & 3	442.9	0.0	0.0	0.0	0.0	
Minor Drainage						
Grove	82.5	N	N	N	N	
Cucamonga and Deer Creek Channel Drainage Systems						
Turner 1 & 2	259.3	0.0	0.0	0.0	0.0	
Turner 3 & 4	62.6	0.0	0.0	0.0	0.0	
Day Creek Channel Drainage System						
Lower Day	88.7	200.4	( 3.0)	X	0.0	
Etiwanda Channel Drainage System						
Etiwanda Debris	5.5	261.5	( 3.9)	X	0.0	
Victoria	116.5	0.0	0.0	27.0	( 0.4)	
San Sevaine Channel Drainage System (MZ-2)						
San Sevaine 1, 2, 3, & 4	133.5	32.0	( 0.5)	0.0	0.0	
San Sevaine 5	77.4	25.5	( 0.4)	X	X	
West Fontana Channel System						
Hickory	51.7	2.5	0.0	30.0	( 0.5)	
Banana	56.5	0.0	0.0	24.2	( 0.4)	
San Sevaine Channel Drainage System (MZ-3)						
Jurupa	31.6	81.4	( 1.2)	0.0	0.0	
Declez Channel Drainage System						
RP3 Cells 1,3, & 4	90.2	108.4	( 1.6)	738.5	( 11.1)	
RP3 Cell 2	32.4	0.0	0.0	67.0	( 1.0)	
Declez	151.2	0.0	0.0	0.0	0.0	
Non-Replenishment Recharge**						
MZ1: Upland (Upland & Montclair)	( 4.5)					
MZ1: Upland (8th St.)	0.0					
MZ2: None						
MZ3: None						
Month Total = 5,978.2 AF	2,535.8	2,577.0	( 38.6)	917.9	( 13.9)	December
		2,538.4		904.0		
All Sources	SW/LR	Imported		Recycled Water		
Fiscal Year Delivery (with evaporation)	4,306.7	17,213.4	(133.0)	7,073.7	(237.9)	Fiscal Year to Date
Since July 1, 2019 = 28,222.9 AF		17,080.4		6,835.8		
Calendar Year Delivery (with evaporation)	14,460.2	23,939.8	(895.3)	11,555.7	(394.6)	Calendar Year to Date
Since January 1, 2019 = 48,665.8 AF		23,044.5		11,161.1		

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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.

## 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
2013/14	Jul '13	70	13	0	310	323	24,535	186	7,432	31,968	23%
	Aug '13	71	13	0	310	323	24,859	118	7,550	32,409	23%
	Sep '13	72	11	0	310	321	25,180	150	7,700	32,880	23%
	Oct '13	73	48	0	310	358	25,538	239	7,939	33,477	24%
	Nov '13	74	49	0	310	359	25,897	249	8,188	34,085	24%
	Dec '13	75	46	0	310	356	26,253	121	8,309	34,563	24%
	Jan '14	76	27	0	310	337	26,591	108	8,417	35,008	24%
	Feb '14	77	59	0	310	369	26,960	88	8,505	35,465	24%
	Mar '14	78	46	5	310	362	27,321	26	8,531	35,853	24%
	Apr '14	79	79	0	310	389	27,711	21	8,552	36,263	24%
	May '14	80	26	0	310	336	28,047	65	8,617	36,664	24%
	Jun '14	81	24	0	310	334	28,381	52	8,669	37,050	23%
2014/15	Jul '14	82	25	0	310	335	28,716	8	8,677	37,393	23%
	Aug '14	83	15	0	310	325	29,041	8	8,685	37,727	23%
	Sep '14	84	14	0	310	324	29,366	32	8,717	38,083	23%
	Oct '14	85	0	0	310	310	29,676	0	8,717	38,393	23%
	Nov '14	86	146	0	310	456	30,132	0	8,717	38,849	22%
	Dec '14	87	353	0	310	663	30,795	0	8,717	39,512	22%
	Jan '15	88	110	0	310	420	31,216	0	8,717	39,933	22%
	Feb '15	89	42	0	310	352	31,568	0	8,717	40,285	22%
	Mar '15	90	42	0	310	352	31,920	0	8,717	40,637	21%
	Apr '15	91	25	0	310	335	32,255	0	8,717	40,972	21%
	May '15	92	57	0	310	367	32,622	0	8,717	41,340	21%
	Jun '15	93	12	0	310	322	32,945	0	8,717	41,662	21%
2015/16	Jul '15	94	44	0	310	354	33,299	0	8,717	42,016	21%
	Aug '15	95	4	0	310	314	33,613	23	8,740	42,353	21%
	Sep '15	96	76	0	310	386	33,939	60	8,800	42,739	21%
	Oct '15	97	39	0	310	349	34,156	13	8,813	42,969	21%
	Nov '15	98	19	0	310	329	34,425	95	8,908	43,333	21%
	Dec '15	99	86	0	310	396	34,761	159	9,067	43,828	21%
	Jan '16	100	249	0	310	559	35,204	59	9,126	44,331	21%
	Feb '16	101	93	0	310	403	35,365	206	9,332	44,697	21%
	Mar '16	102	200	0	310	510	35,550	160	9,492	45,042	21%
	Apr '16	103	34	0	310	344	35,664	195	9,687	45,351	21%
	May '16	104	72	0	310	382	35,996	204	9,891	45,887	22%
	Jun '16	105	5	0	310	315	36,296	296	10,187	46,484	22%
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%

HISTORICAL



# 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
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	67	15,335	65,081	24%
	Mar '20	150	115		310	425	49,787	140	15,361	65,149	24%
	Apr '20	151	85		310	395	49,666	170	15,431	65,098	24%
	May '20	152	42		310	352	49,674	210	15,442	65,117	24%
	Jun '20	153	18		310	328	49,659	230	15,370	65,030	24%
2020/21	Jul '20	154	24		310	334	49,653	230	15,382	65,036	24%
	Aug '20	155	15		310	325	49,640	240	15,516	65,157	24%
	Sep '20	156	24		310	334	49,628	230	15,569	65,198	24%
	Oct '20	157	49		310	359	49,588	200	15,481	65,070	24%
	Nov '20	158	85		310	395	49,486	170	15,488	64,975	24%
	Dec '20	159	209		310	519	49,196	40	15,508	64,705	24%
	Jan '21	160	154		310	464	49,240	100	15,441	64,682	24%
	Feb '21	161	180		310	490	49,144	70	15,428	64,573	24%
	Mar '21	162	115		310	425	49,009	140	15,545	64,555	24%
	Apr '21	163	85		310	395	49,070	170	15,534	64,605	24%
	May '21	164	42		310	352	48,861	210	15,501	64,363	24%
	Jun '21	165	18		310	328	48,533	230	15,529	64,062	24%
2021/2022	Jul '21	166	24		310	334	48,356	230	15,671	64,028	24%
	Aug '21	167	15		310	325	48,139	240	15,865	64,004	25%
	Sep '21	168	24		310	334	47,995	230	16,093	64,088	25%
	Oct '21	169	49		310	359	48,001	200	16,293	64,294	25%
	Nov '21	170	85		310	395	47,948	170	16,463	64,411	26%
	Dec '21	171	209		310	519	48,081	40	16,503	64,584	26%
	Jan '22	172	154		310	464	48,178	100	16,576	64,754	26%
	Feb '22	173	180		310	490	48,204	70	16,646	64,850	26%
	Mar '22	174	115		310	425	48,038	140	16,786	64,824	26%
	Apr '22	175	85		310	395	47,900	170	16,922	64,822	26%
	May '22	176	42		310	352	47,917	210	16,876	64,793	26%
	Jun '22	177	18		310	328	47,914	230	16,918	64,832	26%
2022/2023	Jul '22	178	24		310	334	47,918	230	17,011	64,929	26%
	Aug '22	179	15		310	325	47,912	240	17,251	65,163	26%
	Sep '22	180	24		310	334	47,903	230	17,357	65,260	27%
	Oct '22	181	49		310	359	47,923	200	17,248	65,171	26%
	Nov '22	182	85		310	395	47,942	170	17,170	65,112	26%
	Dec '22	183	209		310	519	47,873	40	17,107	64,980	26%
	Jan '23	184	154		310	464	47,957	100	16,977	64,934	26%
	Feb '23	185	180		310	490	48,047	70	16,821	64,868	26%
	Mar '23	186	115		310	425	48,097	140	16,721	64,818	26%
	Apr '23	187	85		310	395	48,158	170	16,739	64,897	26%
	May '23	188	42		310	352	48,157	210	16,728	64,885	26%
	Jun '23	189	18		310	328	48,163	230	16,687	64,850	26%
2023/2024	Jul '23	190	24		310	334	48,174	230	16,731	64,905	26%
	Aug '23	191	15		310	325	48,176	240	16,853	65,029	26%
	Sep '23	192	24		310	334	48,189	230	16,933	65,122	26%
	Oct '23	193	49		310	359	48,190	200	16,894	65,084	26%
	Nov '23	194	85		310	395	48,226	170	16,815	65,041	26%
	Dec '23	195	209		310	519	48,389	40	16,734	65,123	26%
	Jan '24	196	154		310	464	48,516	100	16,726	65,242	26%
	Feb '24	197	180		310	490	48,637	70	16,708	65,345	26%
	Mar '24	198	115		310	425	48,700	140	16,822	65,523	26%
	Apr '24	199	85		310	395	48,706	170	16,971	65,678	26%
	May '24	200	42		310	352	48,722	210	17,116	65,839	26%
	Jun '24	201	18		310	328	48,716	230	17,294	66,011	26%
2024/2025	Jul '24	202	24		310	334	48,715	230	17,516	66,232	26%
	Aug '24	203	15		310	325	48,715	240	17,748	66,464	27%
	Sep '24	204	24		310	334	48,725	230	17,946	66,672	27%
	Oct '24	205	49		310	359	48,774	200	18,146	66,921	27%
	Nov '24	206	85		310	395	48,713	170	18,316	67,030	27%
	Dec '24	207	209		310	519	48,569	40	18,356	66,926	27%
	Jan '25	208	154		310	464	48,613	100	18,456	67,070	28%
	Feb '25	209	180		310	490	48,751	70	18,526	67,278	28%
	Mar '25	210	115		310	425	48,824	140	18,666	67,491	28%
	Apr '25	211	85		310	395	48,884	170	18,836	67,721	28%
	May '25	212	42		310	352	48,869	210	19,046	67,916	28%
	Jun '25	213	18		310	328	48,875	230	19,276	68,152	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
2025/26	Jul '25	214	24		310	334	48,855	230	19,506	68,362	29%
	Aug '25	215	15		310	325	48,866	240	19,723	68,590	29%
	Sep '25	216	24		310	334	48,814	230	19,893	68,708	29%
	Oct '25	217	49		310	359	48,824	200	20,080	68,905	29%
	Nov '25	218	85		310	395	48,890	170	20,155	69,046	29%
	Dec '25	219	209		310	519	49,013	40	20,036	69,050	29%
	Jan '26	220	154		310	464	48,918	100	20,077	68,996	29%
	Feb '26	221	180		310	490	49,005	70	19,941	68,947	29%
	Mar '26	222	115		310	425	48,920	140	19,921	68,842	29%
	Apr '26	223	85		310	395	48,971	170	19,896	68,868	29%
	May '26	224	42		310	352	48,941	210	19,902	68,844	29%
	Jun '26	225	18		310	328	48,954	230	19,836	68,791	29%
2026/27	Jul '26	226	24		310	334	48,974	230	19,807	68,782	29%
	Aug '26	227	15		310	325	48,981	240	19,779	68,761	29%
	Sep '26	228	24		310	334	49,000	230	19,761	68,762	29%
	Oct '26	229	49		310	359	49,014	200	19,676	68,691	29%
	Nov '26	230	85		310	395	49,017	170	19,618	68,636	29%
	Dec '26	231	209		310	519	48,863	40	19,537	68,401	29%
	Jan '27	232	154		310	464	48,694	100	19,637	68,332	29%
	Feb '27	233	180		310	490	48,774	70	19,673	68,448	29%
	Mar '27	234	115		310	425	48,867	140	19,637	68,505	29%
	Apr '27	235	85		310	395	48,895	170	19,527	68,423	29%
	May '27	236	42		310	352	48,921	210	19,553	68,475	29%
	Jun '27	237	18		310	328	48,902	230	19,585	68,487	29%
2027/28	Jul '27	238	24		310	334	48,821	230	19,814	68,635	29%
	Aug '27	239	15		310	325	48,233	240	19,858	68,091	29%
	Sep '27	240	24		310	334	47,967	230	19,957	67,924	29%
	Oct '27	241	49		310	359	47,765	200	19,953	67,718	29%
	Nov '27	242	85		310	395	47,847	170	20,023	67,870	30%
	Dec '27	243	209		310	519	48,052	40	19,852	67,904	29%
	Jan '28	244	154		310	464	48,085	100	19,853	67,938	29%
	Feb '28	245	180		310	490	48,180	70	19,843	68,023	29%
	Mar '28	246	115		310	425	48,153	140	19,974	68,127	29%
	Apr '28	247	85		310	395	48,226	170	20,144	68,370	29%
	May '28	248	42		310	352	48,261	210	20,348	68,609	30%
	Jun '28	249	18		310	328	48,214	230	20,578	68,791	30%
2028/29	Jul '28	250	24		310	334	48,174	230	20,714	68,888	30%
	Aug '28	251	15		310	325	48,183	240	20,808	68,990	30%
	Sep '28	252	24		310	334	48,201	230	20,788	68,989	30%
	Oct '28	253	49		310	359	48,181	200	20,800	68,982	30%
	Nov '28	254	85		310	395	48,151	170	20,687	68,838	30%
	Dec '28	255	209		310	519	48,196	40	20,477	68,673	30%
	Jan '29	256	154		310	464	48,070	100	20,332	68,402	30%
	Feb '29	257	180		310	490	47,931	70	20,402	68,333	30%
	Mar '29	258	115		310	425	47,771	140	20,264	68,035	30%
	Apr '29	259	85		310	395	47,845	170	20,070	67,915	30%
	May '29	260	42		310	352	47,752	210	19,948	67,700	29%
	Jun '29	261	18		310	328	47,764	230	19,744	67,508	29%
2029/30	Jul '29	262	24		310	334	47,782	230	19,694	67,476	29%
	Aug '29	263	15		310	325	47,793	240	19,863	67,656	29%
	Sep '29	264	24		310	334	47,242	230	19,966	67,207	30%
	Oct '29	265	49		310	359	47,038	200	20,108	67,145	30%
	Nov '29	266	85		310	395	46,886	170	20,224	67,110	30%
	Dec '29	267	209		310	519	46,915	40	20,264	67,179	30%
	Jan '30	268	154		310	464	47,064	100	20,297	67,360	30%
	Feb '30	269	180		310	490	47,225	70	20,300	67,525	30%
	Mar '30	270	115		310	425	47,225	140	20,300	67,525	30%
	Apr '30	271	85		310	395	47,225	170	20,300	67,525	30%
	May '30	272	42		310	352	47,225	210	20,300	67,525	30%
	Jun '30	273	18		310	328	48,774	230	20,300	69,074	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.

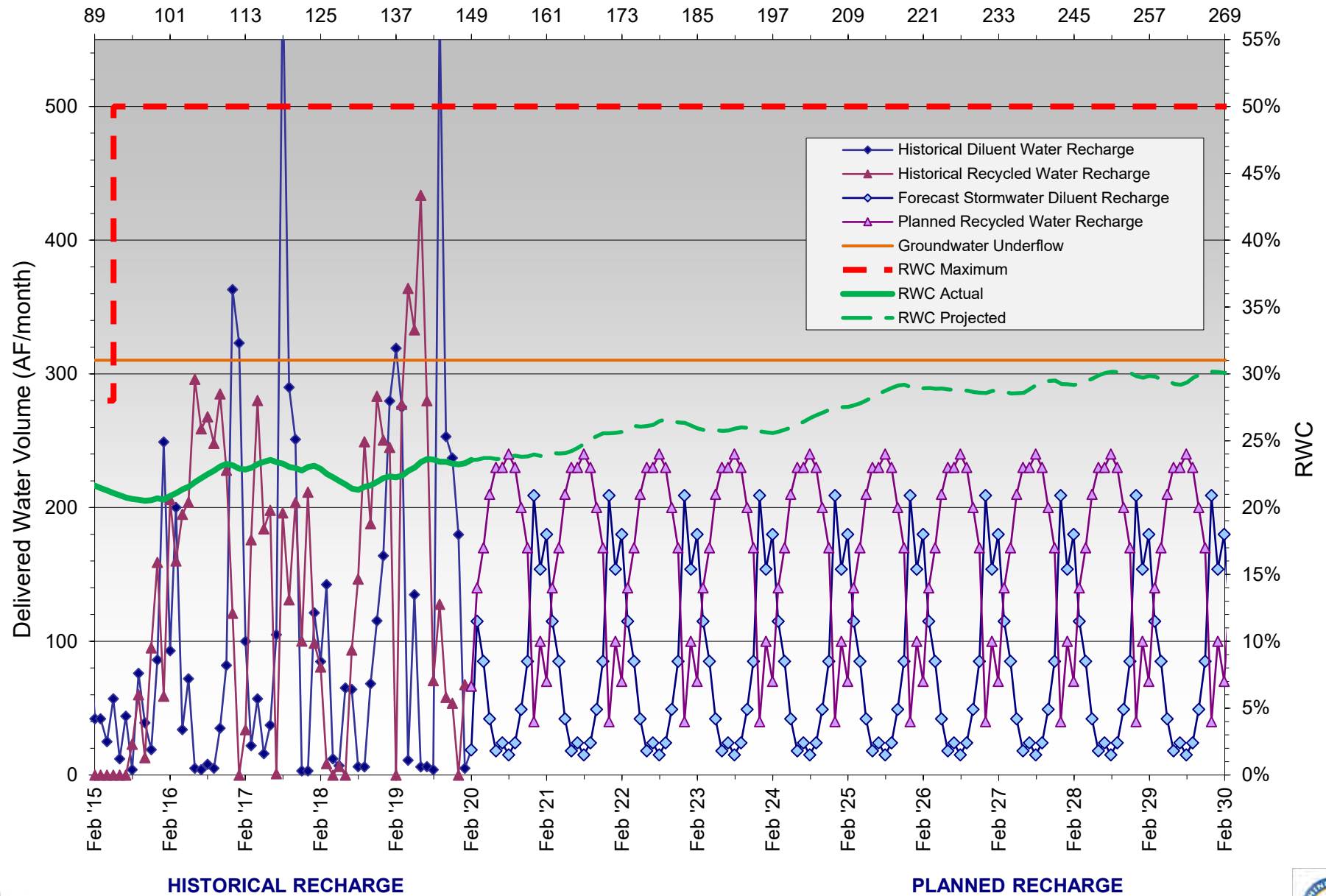
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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 - 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
2013/14	Jul '13	96	0	0	151	151	10,513	15	5,204	15,717	33%
	Aug '13	97	0	0	151	151	10,664	12	5,216	15,880	33%
	Sep '13	98	0	0	151	151	10,815	0	5,216	16,031	33%
	Oct '13	99	0	0	151	151	10,967	385	5,601	16,568	34%
	Nov '13	100	22	0	151	173	11,106	102	5,703	16,809	34%
	Dec '13	101	6	0	151	157	11,226	0	5,703	16,929	34%
	Jan '14	102	9	8	151	169	11,390	0	5,703	17,093	33%
	Feb '14	103	39	16	151	206	11,513	0	5,703	17,216	33%
	Mar '14	104	9	0	151	160	11,645	85	5,788	17,433	33%
	Apr '14	105	2	0	151	153	11,798	88	5,876	17,674	33%
	May '14	106	0	0	151	151	11,949	194	6,070	18,019	34%
	Jun '14	107	0	0	151	151	12,100	190	6,260	18,361	34%
2014/15	Jul '14	108	0	0	151	151	12,252	0	6,260	18,512	34%
	Aug '14	109	0	0	151	151	12,403	82	6,342	18,745	34%
	Sep '14	110	0	0	151	151	12,554	72	6,414	18,968	34%
	Oct '14	111	0	0	151	151	12,643	206	6,620	19,263	34%
	Nov '14	112	7	0	151	158	12,784	173	6,793	19,577	35%
	Dec '14	113	145	0	151	296	13,055	67	6,860	19,915	34%
	Jan '15	114	24	0	151	175	13,137	144	7,004	20,141	35%
	Feb '15	115	16	0	151	167	13,193	47	7,051	20,244	35%
	Mar '15	116	2	0	151	153	13,322	80	7,131	20,453	35%
	Apr '15	117	3	0	151	154	13,457	90	7,221	20,678	35%
	May '15	118	0	0	151	151	13,594	161	7,382	20,976	35%
	Jun '15	119	0	0	151	151	13,745	26	7,408	21,153	35%
2015/16	Jul '15	120	0	0	151	151	13,704	54	7,442	21,146	35%
	Aug '15	121	0	0	151	151	13,855	156	7,344	21,200	35%
	Sep '15	122	40	0	151	191	14,046	376	7,592	21,638	35%
	Oct '15	123	105	0	151	256	14,274	349	7,915	22,189	36%
	Nov '15	124	30	0	151	181	14,455	262	8,169	22,625	36%
	Dec '15	125	59	0	151	210	14,647	283	8,442	23,089	37%
	Jan '16	126	71	0	151	222	14,863	75	8,467	23,330	36%
	Feb '16	127	7	0	151	158	14,999	110	8,522	23,521	36%
	Mar '16	128	38	0	151	189	15,133	74	8,596	23,729	36%
	Apr '16	129	0	0	151	151	15,249	97	8,693	23,941	36%
	May '16	130	15	0	151	166	15,358	113	8,806	24,164	36%
	Jun '16	131	0	0	151	151	15,509	157	8,916	24,425	37%
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%

HISTORICAL



## 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
2019/2020	Jul '19	168	0	151	151	20,391	33	11,036	31,428	35%	P L A N N E D
	Aug '19	169	0	151	151	20,543	100	11,137	31,679	35%	
	Sep '19	170	0	151	151	20,694	227	11,364	32,057	35%	
	Oct '19	171	0	151	151	20,679	242	11,476	32,155	36%	
	Nov '19	172	53	151	204	20,732	92	11,387	32,119	35%	
	Dec '19	173	57	151	208	20,713	24	11,344	32,057	35%	
	Jan '20	174	0	151	151	20,613	45	11,314	31,927	35%	
	Feb '20	175	0	151	151	20,470	24	11,338	31,808	36%	
	Mar '20	176	18	151	169	20,471	110	11,448	31,919	36%	
	Apr '20	177	12	151	163	20,417	110	11,418	31,835	36%	
	May '20	178	8	151	159	20,425	120	11,361	31,786	36%	
	Jun '20	179	1	151	152	20,426	120	11,352	31,778	36%	
2020/2021	Jul '20	180	4	151	155	20,430	120	11,395	31,825	36%	
	Aug '20	181	3	151	154	20,433	120	11,461	31,894	36%	
	Sep '20	182	5	151	156	20,438	120	11,522	31,960	36%	
	Oct '20	183	17	151	168	20,450	110	11,584	32,034	36%	
	Nov '20	184	19	151	170	20,453	110	11,665	32,118	36%	
	Dec '20	185	47	151	198	20,449	80	11,745	32,194	36%	
	Jan '21	186	43	151	194	20,482	80	11,825	32,307	37%	
	Feb '21	187	41	151	192	20,497	80	11,905	32,402	37%	
	Mar '21	188	18	151	169	20,515	110	12,015	32,530	37%	
	Apr '21	189	12	151	163	20,527	110	12,125	32,652	37%	
	May '21	190	8	151	159	20,535	120	12,245	32,780	37%	
	Jun '21	191	1	151	152	20,536	120	12,365	32,901	38%	
2021/2022	Jul '21	192	4	151	155	20,509	120	12,485	32,994	38%	
	Aug '21	193	3	151	154	20,512	120	12,470	32,982	38%	
	Sep '21	194	5	151	156	20,517	120	12,195	32,712	37%	
	Oct '21	195	17	151	168	20,514	110	11,901	32,415	37%	
	Nov '21	196	19	151	170	20,503	110	11,850	32,353	37%	
	Dec '21	197	47	151	198	20,532	80	11,685	32,217	36%	
	Jan '22	198	43	151	194	20,527	80	11,604	32,131	36%	
	Feb '22	199	41	151	192	20,547	80	11,517	32,064	36%	
	Mar '22	200	18	151	169	20,521	110	11,555	32,076	36%	
	Apr '22	201	12	151	163	20,498	110	11,614	32,112	36%	
	May '22	202	8	151	159	20,506	120	11,689	32,195	36%	
	Jun '22	203	1	151	152	20,507	120	11,730	32,237	36%	
2022/2023	Jul '22	204	4	151	155	20,511	120	11,809	32,320	37%	
	Aug '22	205	3	151	154	20,514	120	11,927	32,441	37%	
	Sep '22	206	5	151	156	20,519	120	11,859	32,378	37%	
	Oct '22	207	17	151	168	20,525	110	11,866	32,391	37%	
	Nov '22	208	19	151	170	20,539	110	11,856	32,395	37%	
	Dec '22	209	47	151	198	20,537	80	11,921	32,458	37%	
	Jan '23	210	43	151	194	20,562	80	11,973	32,535	37%	
	Feb '23	211	41	151	192	20,583	80	12,051	32,634	37%	
	Mar '23	212	18	151	169	20,593	110	12,119	32,712	37%	
	Apr '23	213	12	151	163	20,605	110	12,174	32,779	37%	
	May '23	214	8	151	159	20,610	120	12,255	32,865	37%	
	Jun '23	215	1	151	152	20,611	120	12,340	32,951	37%	
2023/2024	Jul '23	216	4	151	155	20,615	120	12,445	33,060	38%	
	Aug '23	217	3	151	154	20,618	120	12,553	33,171	38%	
	Sep '23	218	5	151	156	20,623	120	12,673	33,296	38%	
	Oct '23	219	17	151	168	20,640	110	12,398	33,038	38%	
	Nov '23	220	19	151	170	20,637	110	12,406	33,043	38%	
	Dec '23	221	47	151	198	20,678	80	12,486	33,164	38%	
	Jan '24	222	43	151	194	20,704	80	12,566	33,270	38%	
	Feb '24	223	41	151	192	20,690	80	12,646	33,336	38%	
	Mar '24	224	18	151	169	20,699	110	12,671	33,370	38%	
	Apr '24	225	12	151	163	20,709	110	12,693	33,402	38%	
	May '24	226	8	151	159	20,717	120	12,619	33,336	38%	
	Jun '24	227	1	151	152	20,718	120	12,549	33,267	38%	
2024/2025	Jul '24	228	4	151	155	20,722	120	12,669	33,391	38%	
	Aug '24	229	3	151	154	20,725	120	12,707	33,432	38%	
	Sep '24	230	5	151	156	20,730	120	12,755	33,485	38%	
	Oct '24	231	17	151	168	20,747	110	12,659	33,406	38%	
	Nov '24	232	19	151	170	20,759	110	12,596	33,355	38%	
	Dec '24	233	47	151	198	20,661	80	12,609	33,270	38%	
	Jan '25	234	43	151	194	20,680	80	12,545	33,225	38%	
	Feb '25	235	41	151	192	20,705	80	12,578	33,283	38%	
	Mar '25	236	18	151	169	20,721	110	12,608	33,329	38%	
	Apr '25	237	12	151	163	20,730	110	12,628	33,358	38%	
	May '25	238	8	151	159	20,738	120	12,587	33,325	38%	
	Jun '25	239	1	151	152	20,739	120	12,681	33,420	38%	



## RWC Management Plan for Banana Basin

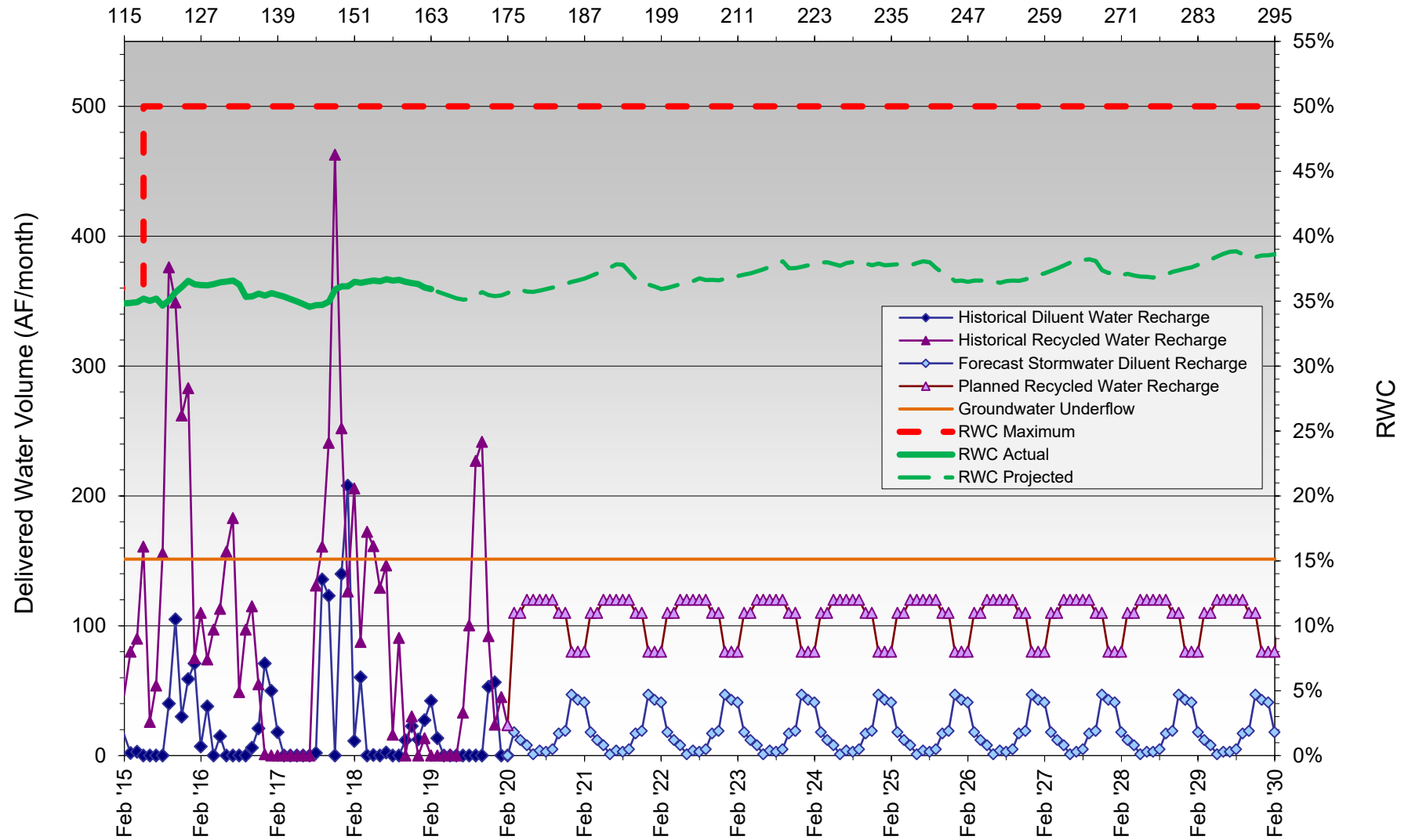
(120-month averaging period)  
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

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
2025/2026	Jul '25	240	4		151	155	20,743	120	12,747	33,490	38%
	Aug '25	241	3		151	154	20,746	120	12,711	33,457	38%
	Sep '25	242	5		151	156	20,711	120	12,455	33,166	38%
	Oct '25	243	17		151	168	20,623	110	12,216	32,839	37%
	Nov '25	244	19		151	170	20,612	110	12,064	32,676	37%
	Dec '25	245	47		151	198	20,600	80	11,861	32,461	37%
	Jan '26	246	43		151	194	20,572	80	11,866	32,438	37%
	Feb '26	247	41		151	192	20,606	80	11,836	32,442	36%
	Mar '26	248	18		151	169	20,586	110	11,872	32,458	37%
	Apr '26	249	12		151	163	20,598	110	11,885	32,483	37%
	May '26	250	8		151	159	20,591	120	11,892	32,483	37%
	Jun '26	251	1		151	152	20,592	120	11,855	32,447	37%
2026/2027	Jul '26	252	4		151	155	20,596	120	11,792	32,388	36%
	Aug '26	253	3		151	154	20,599	120	11,863	32,462	37%
	Sep '26	254	5		151	156	20,604	120	11,886	32,490	37%
	Oct '26	255	17		151	168	20,615	110	11,881	32,496	37%
	Nov '26	256	19		151	170	20,613	110	11,936	32,549	37%
	Dec '26	257	47		151	198	20,589	80	12,015	32,604	37%
	Jan '27	258	43		151	194	20,582	80	12,095	32,677	37%
	Feb '27	259	41		151	192	20,605	80	12,175	32,780	37%
	Mar '27	260	18		151	169	20,623	110	12,285	32,908	37%
	Apr '27	261	12		151	163	20,635	110	12,395	33,030	38%
	May '27	262	8		151	159	20,643	120	12,515	33,158	38%
	Jun '27	263	1		151	152	20,644	120	12,635	33,279	38%
2027/28	Jul '27	264	3		151	154	20,647	120	12,755	33,402	38%
	Aug '27	265	5		151	156	20,650	120	12,744	33,394	38%
	Sep '27	266	17		151	168	20,531	120	12,703	33,234	38%
	Oct '27	267	19		151	170	20,427	110	12,572	32,999	38%
	Nov '27	268	47		151	198	20,474	110	12,219	32,693	37%
	Dec '27	269	43		151	194	20,377	80	12,047	32,424	37%
	Jan '28	270	41		151	192	20,211	80	12,000	32,211	37%
	Feb '28	271	18		151	169	20,217	80	11,875	32,092	37%
	Mar '28	272	12		151	163	20,169	110	11,897	32,066	37%
	Apr '28	273	8		151	159	20,177	110	11,835	32,012	37%
	May '28	274	1		151	152	20,178	120	11,793	31,971	37%
	Jun '28	275	3		151	154	20,181	120	11,784	31,965	37%
2028/29	Jul '28	276	3		151	154	20,181	120	11,758	31,939	37%
	Aug '28	277	5		151	156	20,186	120	11,861	32,047	37%
	Sep '28	278	17		151	168	20,203	120	11,891	32,094	37%
	Oct '28	279	19		151	170	20,210	110	12,001	32,211	37%
	Nov '28	280	47		151	198	20,235	110	12,080	32,315	37%
	Dec '28	281	43		151	194	20,265	80	12,160	32,426	38%
	Jan '29	282	41		151	192	20,279	80	12,227	32,506	38%
	Feb '29	283	18		151	169	20,255	80	12,307	32,562	38%
	Mar '29	284	12		151	163	20,253	110	12,417	32,670	38%
	Apr '29	285	8		151	159	20,261	110	12,527	32,788	38%
	May '29	286	1		151	152	20,262	120	12,646	32,909	38%
	Jun '29	287	3		151	154	20,265	120	12,766	33,032	39%
2029/30	Jul '29	288	3		151	154	20,268	120	12,853	33,121	39%
	Aug '29	289	5		151	156	20,273	120	12,873	33,146	39%
	Sep '29	290	17		151	168	20,290	120	12,766	33,056	39%
	Oct '29	291	19		151	170	20,309	110	12,634	32,944	38%
	Nov '29	292	47		151	198	20,303	110	12,652	32,956	38%
	Dec '29	293	43		151	194	20,290	80	12,709	32,998	39%
	Jan '30	294	41		151	192	20,331	80	12,744	33,074	39%
	Feb '30	295	18		151	169	20,349	80	12,800	33,149	39%
	Mar '30	296	12		151	163	20,343	110	12,800	33,143	39%
	Apr '30	297	8		151	159	20,339	110	12,800	33,139	39%
	May '30	298	1		151	152	20,332	120	12,800	33,132	39%
	Jun '30	299	3		151	154	20,334	120	12,800	33,134	39%
<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 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
2013/14	Jul '13	59	1	0	509	510	32,414	169	7,183	39,597	18%
	Aug '13	60	1	0	509	510	32,924	197	7,380	40,304	18%
	Sep '13	61	28	0	509	537	33,461	182	7,562	41,023	18%
	Oct '13	62	23	0	509	532	33,994	108	7,670	41,664	18%
	Nov '13	63	4	0	509	513	34,507	94	7,764	42,271	18%
	Dec '13	64	8	0	509	517	35,024	104	7,868	42,892	18%
	Jan '14	65	3	0	509	512	35,536	109	7,977	43,513	18%
	Feb '14	66	47	0	509	556	36,093	102	8,079	44,172	18%
	Mar '14	67	12	0	509	521	36,614	130	8,209	44,823	18%
	Apr '14	68	14	0	509	523	37,137	65	8,274	45,411	18%
	May '14	69	0	0	509	509	37,646	0	8,274	45,920	18%
	Jun '14	70	19	0	509	528	38,174	48	8,322	46,496	18%
2014/15	Jul '14	71	7	0	509	516	38,691	72	8,394	47,085	18%
	Aug '14	72	1	0	509	510	39,201	141	8,535	47,736	18%
	Sep '14	73	1	0	509	510	39,711	157	8,692	48,403	18%
	Oct '14	74	6	0	509	515	40,226	56	8,748	48,974	18%
	Nov '14	75	28	0	509	537	40,764	37	8,785	49,549	18%
	Dec '14	76	95	0	509	604	41,368	0	8,785	50,153	18%
	Jan '15	77	19	0	509	528	41,896	10	8,795	50,691	17%
	Feb '15	78	27	0	509	536	42,432	92	8,887	51,319	17%
	Mar '15	79	13	0	509	522	42,955	69	8,956	51,911	17%
	Apr '15	80	10	0	509	519	43,474	101	9,057	52,531	17%
	May '15	81	21	0	509	530	44,004	120	9,177	53,181	17%
	Jun '15	82	0	0	509	509	44,513	156	9,333	53,846	17%
2015/16	Jul '15	83	0	0	509	509	44,990	63	9,396	54,386	17%
	Aug '15	84	0	0	509	509	45,324	0	9,396	54,720	17%
	Sep '15	85	1	0	509	510	45,148	0	9,396	54,544	17%
	Oct '15	86	0	0	509	509	45,530	0	9,396	54,926	17%
	Nov '15	87	1	0	509	510	45,650	0	9,396	55,046	17%
	Dec '15	88	0	0	509	509	45,796	101	9,497	55,293	17%
	Jan '16	89	54	0	509	563	46,103	254	9,751	55,854	17%
	Feb '16	90	91	0	509	600	46,310	116	9,867	56,177	18%
	Mar '16	91	91	0	509	600	46,696	211	10,078	56,774	18%
	Apr '16	92	13	0	509	522	46,956	192	10,270	57,226	18%
	May '16	93	1	0	509	510	47,166	278	10,548	57,714	18%
	Jun '16	94	0	0	509	509	47,304	0	10,548	57,852	18%
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%

H I S T O R I C A L



# 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
2019/20	Jul '19	131	0	111	509	621	65,328	177	12,147	77,474	16%	P L A N N E D
	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	0	11,854	78,077	15%	
	Feb '20	138	0	0	509	509	66,007	51	11,851	77,859	15%	
	Mar '20	139	61		509	570	66,041	90	11,761	77,803	15%	
	Apr '20	140	28		509	537	66,046	120	11,646	77,693	15%	
	May '20	141	14		509	523	66,058	140	11,430	77,489	15%	
	Jun '20	142	2		509	511	66,059	150	11,372	77,432	15%	
2020/21	Jul '20	143	3		509	512	66,061	150	11,375	77,437	15%	
	Aug '20	144	4		509	513	66,047	150	11,250	77,298	15%	
	Sep '20	145	8		509	517	66,054	140	11,249	77,304	15%	
	Oct '20	146	11		509	520	66,041	140	11,259	77,301	15%	
	Nov '20	147	27		509	536	66,024	120	11,292	77,317	15%	
	Dec '20	148	80		509	589	65,822	70	11,328	77,151	15%	
	Jan '21	149	94		509	603	65,804	60	11,388	77,193	15%	
	Feb '21	150	102		509	611	65,742	50	11,438	77,181	15%	
	Mar '21	151	61		509	570	65,661	90	11,528	77,190	15%	
	Apr '21	152	28		509	537	65,688	120	11,474	77,163	15%	
	May '21	153	14		509	523	65,692	140	11,452	77,145	15%	
	Jun '21	154	2		509	511	65,693	150	11,379	77,073	15%	
2021/22	Jul '21	155	3		509	512	65,459	150	11,529	76,988	15%	
	Aug '21	156	4		509	513	65,277	150	11,679	76,957	15%	
	Sep '21	157	8		509	517	65,132	140	11,819	76,951	15%	
	Oct '21	158	11		509	520	65,125	140	11,879	77,004	15%	
	Nov '21	159	27		509	536	65,102	120	11,963	77,065	16%	
	Dec '21	160	80		509	589	65,166	70	11,935	77,101	15%	
	Jan '22	161	94		509	603	65,215	60	11,853	77,068	15%	
	Feb '22	162	102		509	611	65,267	50	11,826	77,093	15%	
	Mar '22	163	61		509	570	65,225	90	11,831	77,056	15%	
	Apr '22	164	28		509	537	65,189	120	11,919	77,108	15%	
	May '22	165	14		509	523	65,202	140	11,934	77,136	15%	
	Jun '22	166	2		509	511	65,204	150	11,923	77,127	15%	
2022/23	Jul '22	167	3		509	512	65,206	150	12,040	77,246	16%	
	Aug '22	168	4		509	513	65,208	150	12,151	77,359	16%	
	Sep '22	169	8		509	517	65,214	140	12,240	77,454	16%	
	Oct '22	170	11		509	520	65,225	140	12,380	77,605	16%	
	Nov '22	171	27		509	536	65,252	120	12,500	77,752	16%	
	Dec '22	172	80		509	589	65,332	70	12,570	77,902	16%	
	Jan '23	173	94		509	603	65,391	60	12,288	77,679	16%	
	Feb '23	174	102		509	611	65,467	50	12,039	77,506	16%	
	Mar '23	175	61		509	570	65,496	90	11,891	77,387	15%	
	Apr '23	176	28		509	537	65,524	120	11,780	77,304	15%	
	May '23	177	14		509	523	65,521	140	11,768	77,289	15%	
	Jun '23	178	2		509	511	65,522	150	11,798	77,320	15%	
2023/24	Jul '23	179	3		509	512	65,524	150	11,779	77,303	15%	
	Aug '23	180	4		509	513	65,527	150	11,732	77,259	15%	
	Sep '23	181	8		509	517	65,507	140	11,690	77,197	15%	
	Oct '23	182	11		509	520	65,495	140	11,722	77,217	15%	
	Nov '23	183	27		509	536	65,518	120	11,748	77,266	15%	
	Dec '23	184	80		509	589	65,590	70	11,714	77,304	15%	
	Jan '24	185	94		509	603	65,681	60	11,665	77,346	15%	
	Feb '24	186	102		509	611	65,736	50	11,613	77,349	15%	
	Mar '24	187	61		509	570	65,785	90	11,573	77,358	15%	
	Apr '24	188	28		509	537	65,799	120	11,628	77,427	15%	
	May '24	189	14		509	523	65,813	140	11,768	77,581	15%	
	Jun '24	190	2		509	511	65,796	150	11,870	77,666	15%	
2024/25	Jul '24	191	3		509	512	65,792	150	11,948	77,740	15%	
	Aug '24	192	4		509	513	65,795	150	11,957	77,752	15%	
	Sep '24	193	8		509	517	65,802	140	11,940	77,742	15%	
	Oct '24	194	11		509	520	65,807	140	12,024	77,831	15%	
	Nov '24	195	27		509	536	65,806	120	12,107	77,913	16%	
	Dec '24	196	80		509	589	65,791	70	12,177	77,968	16%	
	Jan '25	197	94		509	603	65,866	60	12,227	78,093	16%	
	Feb '25	198	102		509	611	65,941	50	12,185	78,126	16%	
	Mar '25	199	61		509	570	65,989	90	12,206	78,195	16%	
	Apr '25	200	28		509	537	66,007	120	12,225	78,232	16%	
	May '25	201	14		509	523	66,000	140	12,245	78,245	16%	
	Jun '25	202	2		509	511	66,002	150	12,239	78,241	16%	





# 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
2025/26	Jul '25	203	3		509	512	66,005	150	12,326	78,331	16%
	Aug '25	204	4		509	513	66,009	150	12,476	78,485	16%
	Sep '25	205	8		509	517	66,016	140	12,616	78,632	16%
	Oct '25	206	11		509	520	66,027	140	12,756	78,783	16%
	Nov '25	207	27		509	536	66,053	120	12,876	78,929	16%
	Dec '25	208	80		509	589	66,133	70	12,845	78,978	16%
	Jan '26	209	94		509	603	66,173	60	12,651	78,824	16%
	Feb '26	210	102		509	611	66,184	50	12,585	78,769	16%
	Mar '26	211	61		509	570	66,154	90	12,464	78,618	16%
	Apr '26	212	28		509	537	66,169	120	12,392	78,561	16%
	May '26	213	14		509	523	66,182	140	12,254	78,436	16%
	Jun '26	214	2		509	511	66,184	150	12,404	78,588	16%
2026/27	Jul '26	215	3		509	512	66,187	150	12,554	78,741	16%
	Aug '26	216	4		509	513	66,191	150	12,704	78,895	16%
	Sep '26	217	8		509	517	66,168	140	12,699	78,867	16%
	Oct '26	218	11		509	520	65,992	140	12,820	78,812	16%
	Nov '26	219	27		509	536	65,980	120	12,824	78,804	16%
	Dec '26	220	80		509	589	65,864	70	12,881	78,745	16%
	Jan '27	221	94		509	603	65,704	60	12,941	78,645	16%
	Feb '27	222	102		509	611	65,664	50	12,991	78,655	17%
	Mar '27	223	61		509	570	65,724	90	13,065	78,789	17%
	Apr '27	224	28		509	537	65,736	120	13,177	78,913	17%
	May '27	225	14		509	523	65,749	140	13,279	79,028	17%
	Jun '27	226	2		509	511	65,749	150	13,399	79,148	17%
2027/28	Jul '27	227	3		509	512	65,658	150	13,321	78,979	17%
	Aug '27	228	4		509	513	65,567	150	13,416	78,983	17%
	Sep '27	229	8		509	517	65,571	140	13,387	78,958	17%
	Oct '27	230	11		509	520	65,581	140	13,428	79,008	17%
	Nov '27	231	27		509	536	65,604	120	13,397	79,001	17%
	Dec '27	232	80		509	589	65,684	70	13,344	79,028	17%
	Jan '28	233	94		509	603	65,745	60	13,310	79,055	17%
	Feb '28	234	102		509	611	65,838	50	13,254	79,092	17%
	Mar '28	235	61		509	570	65,856	90	13,332	79,187	17%
	Apr '28	236	28		509	537	65,881	120	13,415	79,297	17%
	May '28	237	14		509	523	65,892	140	13,470	79,362	17%
	Jun '28	238	2		509	511	65,892	150	13,512	79,404	17%
2028/29	Jul '28	239	3		509	512	65,895	150	13,616	79,512	17%
	Aug '28	240	4		509	513	65,899	150	13,748	79,647	17%
	Sep '28	241	8		509	517	65,907	140	13,888	79,795	17%
	Oct '28	242	11		509	520	65,915	140	14,028	79,943	18%
	Nov '28	243	27		509	536	65,920	120	13,965	79,885	17%
	Dec '28	244	80		509	589	65,958	70	13,778	79,735	17%
	Jan '29	245	94		509	603	65,792	60	13,772	79,564	17%
	Feb '29	246	102		509	611	65,611	50	13,822	79,433	17%
	Mar '29	247	61		509	570	65,523	90	13,835	79,358	17%
	Apr '29	248	28		509	537	65,548	120	13,701	79,249	17%
	May '29	249	14		509	523	65,501	140	13,652	79,152	17%
	Jun '29	250	2		509	511	65,503	150	13,511	79,014	17%
2029/30	Jul '29	251	3		509	512	65,394	150	13,485	78,879	17%
	Aug '29	252	4		509	513	65,359	150	13,578	78,937	17%
	Sep '29	253	8		509	517	65,367	140	13,682	79,048	17%
	Oct '29	254	11		509	520	65,378	140	13,646	79,023	17%
	Nov '29	255	27		509	536	65,334	120	13,701	79,036	17%
	Dec '29	256	80		509	589	65,255	70	13,741	78,995	17%
	Jan '30	257	94		509	603	65,345	60	13,801	79,146	17%
	Feb '30	258	102		509	611	65,447	50	13,800	79,247	17%
	Mar '30	259	61		509	570	65,447	90	13,800	79,247	17%
	Apr '30	260	28		509	537	65,447	120	13,800	79,247	17%
	May '30	261	14		509	523	65,447	140	13,800	79,247	17%
	Jun '30	262	2		509	511	65,447	150	13,800	79,247	17%

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.

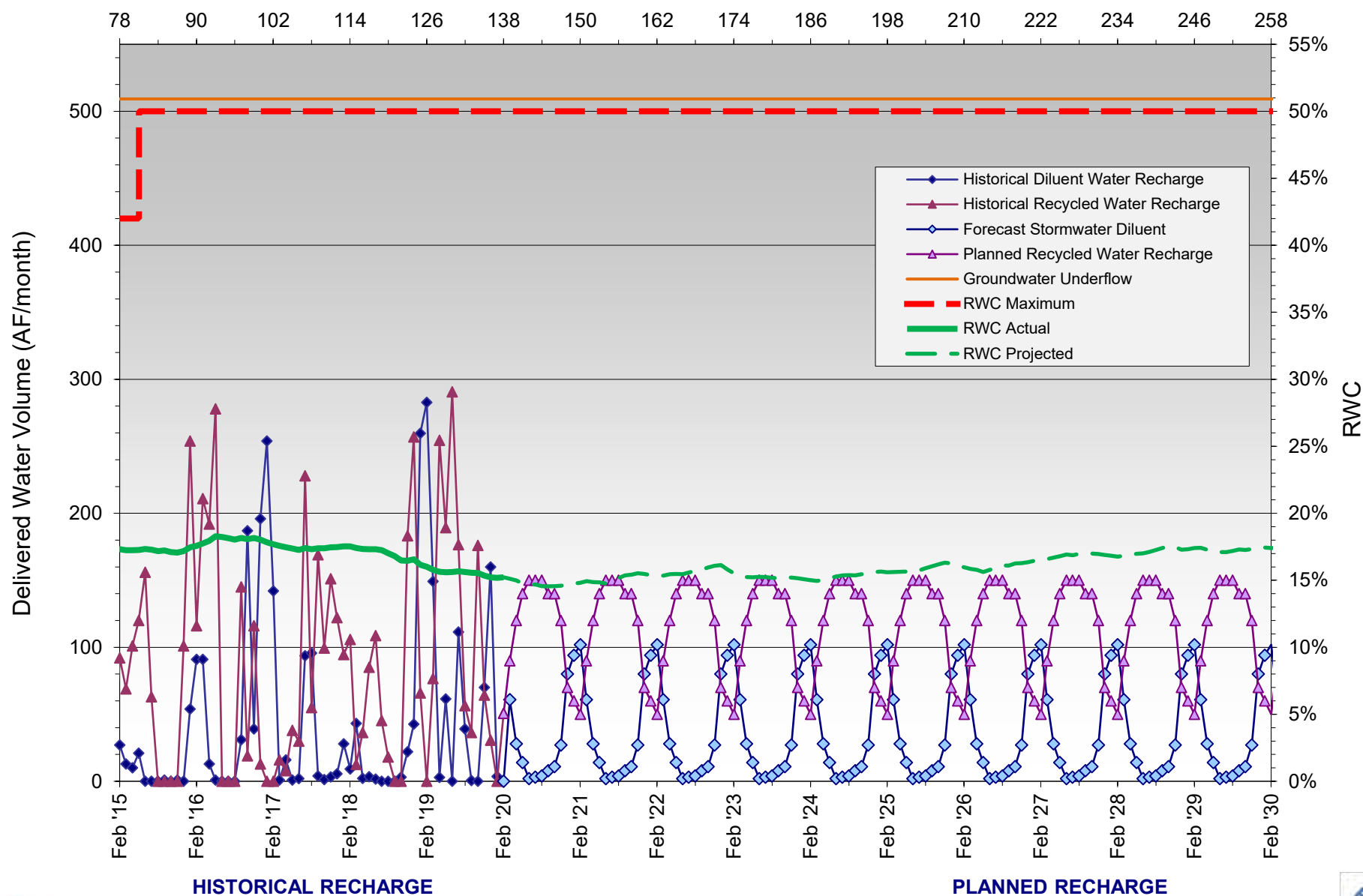
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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 - 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
2013/14	Jul '13	-29	6	0	0	6	5,671	0	65	5,736	1%
	Aug '13	-28	3	0	0	3	5,674	0	65	5,739	1%
	Sep '13	-27	2	0	0	2	5,676	0	65	5,741	1%
	Oct '13	-26	18	0	0	18	5,694	0	65	5,759	1%
	Nov '13	-25	52	0	0	52	5,746	0	65	5,811	1%
	Dec '13	-24	66	0	0	66	5,812	0	65	5,877	1%
	Jan '14	-23	3	99	0	102	5,914	0	65	5,979	1%
	Feb '14	-22	24	152	0	176	6,090	0	65	6,155	1%
	Mar '14	-21	56	117	0	173	6,263	0	65	6,328	1%
	Apr '14	-20	108	7	0	115	6,378	0	65	6,443	1%
	May '14	-19	1	0	0	1	6,379	0	65	6,444	1%
	Jun '14	-18	2	0	0	2	6,381	0	65	6,446	1%
2014/15	Jul '14	-17	2	0	0	2	6,383	0	65	6,448	1%
	Aug '14	-16	72	0	0	72	6,455	0	65	6,520	1%
	Sep '14	-15	30	0	0	30	6,485	0	65	6,550	1%
	Oct '14	-14	3	0	0	3	6,488	0	65	6,553	1%
	Nov '14	-13	100	0	0	100	6,588	0	65	6,653	1%
	Dec '14	-12	315	0	0	315	6,903	0	65	6,968	1%
	Jan '15	-11	47	0	0	47	6,950	0	65	7,015	1%
	Feb '15	-10	106	0	0	106	7,056	0	65	7,121	1%
	Mar '15	-9	15	0	0	15	7,071	0	65	7,136	1%
	Apr '15	-8	41	0	0	41	7,112	0	65	7,177	1%
	May '15	-7	99	0	0	99	7,211	0	65	7,276	1%
	Jun '15	-6	3	0	0	3	7,214	0	65	7,279	1%
2015/16	Jul '15	-5	49	0	0	49	7,252	0	65	7,317	1%
	Aug '15	-4	3	0	0	3	7,245	0	65	7,310	1%
	Sep '15	-3	147	0	0	147	7,362	0	65	7,427	1%
	Oct '15	-2	36	0	0	36	7,283	0	65	7,348	1%
	Nov '15	-1	4	0	0	4	7,257	0	65	7,322	1%
	Dec '15	0	49	0	904	953	8,180	50	115	8,295	1%
	Jan '16	1	158	0	904	1,062	9,207	78	193	9,400	2%
	Feb '16	2	34	0	904	938	10,035	153	346	10,381	3%
	Mar '16	3	92	0	904	996	10,840	126	472	11,312	4%
	Apr '16	4	20	0	904	924	11,662	133	605	12,267	5%
	May '16	5	12	0	904	916	12,520	228	833	13,353	6%
	Jun '16	6	3	0	904	907	13,411	201	1,034	14,445	7%
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%
	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%
2017/18	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%
	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%
2018/19	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%
	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%

HISTORICAL

START - UP



# 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
2019/20	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%
	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	81		904	985	54,089	100	4,366	58,455	7%
	Apr '20	52	58		904	962	54,929	140	4,506	59,435	8%
	May '20	53	24		904	928	55,850	160	4,666	60,517	8%
	Jun '20	54	7		904	911	56,755	180	4,846	61,601	8%
2020/21	Jul '20	55	17		904	921	57,673	170	5,016	62,689	8%
	Aug '20	56	13		904	917	58,582	170	5,186	63,768	8%
	Sep '20	57	25		904	929	59,509	170	5,356	64,865	8%
	Oct '20	58	46		904	949	60,413	150	5,506	65,919	8%
	Nov '20	59	61		904	964	61,282	120	5,626	66,909	8%
	Dec '20	60	147		904	1,050	62,020	60	5,686	67,706	8%
	Jan '21	61	86		904	990	62,958	100	5,786	68,744	8%
	Feb '21	62	117		904	1,021	63,783	80	5,866	69,649	8%
	Mar '21	63	81		904	985	64,629	100	5,966	70,595	8%
	Apr '21	64	58		904	962	65,589	140	6,106	71,695	9%
	May '21	65	24		904	928	66,503	160	6,266	72,769	9%
	Jun '21	66	7		904	911	67,404	180	6,446	73,851	9%
2021/22	Jul '21	67	17		904	921	68,244	170	6,616	74,861	9%
	Aug '21	68	13		904	917	69,158	170	6,786	75,944	9%
	Sep '21	69	25		904	929	70,081	170	6,956	77,037	9%
	Oct '21	70	46		904	949	70,956	150	7,106	78,062	9%
	Nov '21	71	61		904	964	71,801	120	7,226	79,027	9%
	Dec '21	72	147		904	1,050	72,795	60	7,286	80,081	9%
	Jan '22	73	86		904	990	73,698	100	7,321	81,019	9%
	Feb '22	74	117		904	1,021	74,673	80	7,401	82,074	9%
	Mar '22	75	81		904	985	75,473	100	7,501	82,975	9%
	Apr '22	76	58		904	962	76,302	140	7,641	83,943	9%
	May '22	77	24		904	928	77,223	160	7,801	85,024	9%
	Jun '22	78	7		904	911	78,133	180	7,981	86,114	9%
2022/23	Jul '22	79	17		904	921	79,053	170	8,151	87,204	9%
	Aug '22	80	13		904	917	79,959	170	8,321	88,281	9%
	Sep '22	81	25		904	929	80,873	170	8,491	89,364	10%
	Oct '22	82	46		904	949	81,688	150	8,641	90,329	10%
	Nov '22	83	61		904	964	82,632	120	8,761	91,393	10%
	Dec '22	84	147		904	1,050	83,514	60	8,821	92,335	10%
	Jan '23	85	86		904	990	84,456	100	8,921	93,377	10%
	Feb '23	86	117		904	1,021	85,419	80	9,001	94,420	10%
	Mar '23	87	81		904	985	86,343	100	9,101	95,444	10%
	Apr '23	88	58		904	962	87,300	140	9,241	96,541	10%
	May '23	89	24		904	928	88,222	160	9,401	97,623	10%
	Jun '23	90	7		904	911	89,129	180	9,581	98,710	10%
2023/24	Jul '23	91	17		904	921	90,044	170	9,751	99,795	10%
	Aug '23	92	13		904	917	90,958	170	9,921	100,879	10%
	Sep '23	93	25		904	929	91,884	170	10,091	101,975	10%
	Oct '23	94	46		904	949	92,816	150	10,241	103,057	10%
	Nov '23	95	61		904	964	93,728	120	10,361	104,089	10%
	Dec '23	96	147		904	1,050	94,712	60	10,421	105,134	10%
	Jan '24	97	86		904	990	95,601	100	10,521	106,122	10%
	Feb '24	98	117		904	1,021	96,445	80	10,601	107,047	10%
	Mar '24	99	81		904	985	97,258	100	10,701	107,959	10%
	Apr '24	100	58		904	962	98,104	140	10,841	108,945	10%
	May '24	101	24		904	928	99,031	160	11,001	110,032	10%
	Jun '24	102	7		904	911	99,940	180	11,181	111,121	10%
2024/25	Jul '24	103	17		904	921	100,859	170	11,351	112,210	10%
	Aug '24	104	13		904	917	101,703	170	11,521	113,224	10%
	Sep '24	105	25		904	929	102,602	170	11,691	114,293	10%
	Oct '24	106	46		904	949	103,548	150	11,841	115,389	10%
	Nov '24	107	61		904	964	104,413	120	11,961	116,374	10%
	Dec '24	108	147		904	1,050	105,148	60	12,021	117,169	10%
	Jan '25	109	86		904	990	106,091	100	12,121	118,212	10%
	Feb '25	110	117		904	1,021	107,006	80	12,201	119,207	10%
	Mar '25	111	81		904	985	107,976	100	12,301	120,277	10%
	Apr '25	112	58		904	962	108,896	140	12,441	121,337	10%
	May '25	113	24		904	928	109,725	160	12,601	122,326	10%
	Jun '25	114	7		904	911	110,633	180	12,781	123,414	10%

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
2025/26	Jul '25	115	17		904	921	111,505	170	12,951	124,456	10%
	Aug '25	116	13		904	917	112,419	170	13,121	125,540	10%
	Sep '25	117	25		904	929	113,200	170	13,291	126,491	11%
	Oct '25	118	46		904	949	114,114	150	13,441	127,555	11%
	Nov '25	119	61		904	964	115,074	120	13,561	128,635	11%
	Dec '25	120	147		904	1,050	115,172	60	13,571	128,743	11%
	Jan '26	121	86		904	990	115,100	100	13,593	128,693	11%
	Feb '26	122	117		904	1,021	115,183	80	13,520	128,703	11%
	Mar '26	123	81		904	985	115,172	100	13,494	128,666	10%
	Apr '26	124	58		904	962	115,210	140	13,501	128,711	10%
	May '26	125	24		904	928	115,222	160	13,433	128,655	10%
	Jun '26	126	7		904	911	115,226	180	13,412	128,638	10%
2026/27	Jul '26	127	17		904	921	115,243	170	13,381	128,624	10%
	Aug '26	128	13		904	917	115,256	170	13,290	128,546	10%
	Sep '26	129	25		904	929	115,280	170	13,408	128,688	10%
	Oct '26	130	46		904	949	115,278	150	13,558	128,836	11%
	Nov '26	131	61		904	964	115,284	120	13,678	128,962	11%
	Dec '26	132	147		904	1,050	115,214	60	13,738	128,952	11%
	Jan '27	133	86		904	990	115,133	100	13,838	128,971	11%
	Feb '27	134	117		904	1,021	115,180	80	13,918	129,098	11%
	Mar '27	135	81		904	985	115,241	100	14,018	129,259	11%
	Apr '27	136	58		904	962	115,296	140	14,158	129,454	11%
	May '27	137	24		904	928	115,296	160	14,318	129,614	11%
	Jun '27	138	7		904	911	115,201	180	14,498	129,699	11%
2027/28	Jul '27	139	17		904	921	115,166	170	14,668	129,834	11%
	Aug '27	140	13		904	917	115,109	170	14,838	129,947	11%
	Sep '27	141	25		904	929	115,108	170	15,008	130,116	12%
	Oct '27	142	46		904	949	115,081	150	15,158	130,239	12%
	Nov '27	143	61		904	964	115,136	120	15,278	130,414	12%
	Dec '27	144	147		904	1,050	115,276	60	15,338	130,614	12%
	Jan '28	145	86		904	990	115,226	100	15,438	130,664	12%
	Feb '28	146	117		904	1,021	115,295	80	15,518	130,813	12%
	Mar '28	147	81		904	985	115,152	100	15,618	130,770	12%
	Apr '28	148	58		904	962	115,192	140	15,703	130,895	12%
	May '28	149	24		904	928	115,186	160	15,568	130,755	12%
	Jun '28	150	7		904	911	115,176	180	15,510	130,686	12%
2028/29	Jul '28	151	17		904	921	115,183	170	15,414	130,597	12%
	Aug '28	152	13		904	917	115,187	170	15,309	130,495	12%
	Sep '28	153	25		904	929	115,200	170	15,221	130,421	12%
	Oct '28	154	46		904	949	115,185	150	15,204	130,389	12%
	Nov '28	155	61		904	964	115,076	120	15,267	130,342	12%
	Dec '28	156	147		904	1,050	115,162	60	15,223	130,385	12%
	Jan '29	157	86		904	990	115,135	100	15,277	130,412	12%
	Feb '29	158	117		904	1,021	115,121	80	15,357	130,478	12%
	Mar '29	159	81		904	985	115,128	100	15,383	130,511	12%
	Apr '29	160	58		904	962	115,164	140	15,422	130,586	12%
	May '29	161	24		904	928	115,125	160	15,485	130,609	12%
	Jun '29	162	7		904	911	115,114	180	15,491	130,605	12%
2029/30	Jul '29	163	17		904	921	115,115	170	15,565	130,680	12%
	Aug '29	164	13		904	917	115,117	170	15,707	130,824	12%
	Sep '29	165	25		904	929	115,130	170	15,852	130,981	12%
	Oct '29	166	46		904	949	115,166	150	15,845	131,011	12%
	Nov '29	167	61		904	964	115,090	120	15,879	130,969	12%
	Dec '29	168	147		904	1,050	115,086	60	15,939	131,025	12%
	Jan '30	169	86		904	990	115,163	100	15,968	131,132	12%
	Feb '30	170	117		904	1,021	115,262	80	16,000	131,262	12%
	Mar '30	171	81		904	985	115,262	100	16,000	131,262	12%
	Apr '30	172	58		904	962	115,262	140	16,000	131,262	12%
	May '30	173	24		904	928	115,262	160	16,000	131,262	12%
	Jun '30	174	7		904	911	115,262	180	16,000	131,262	12%

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.

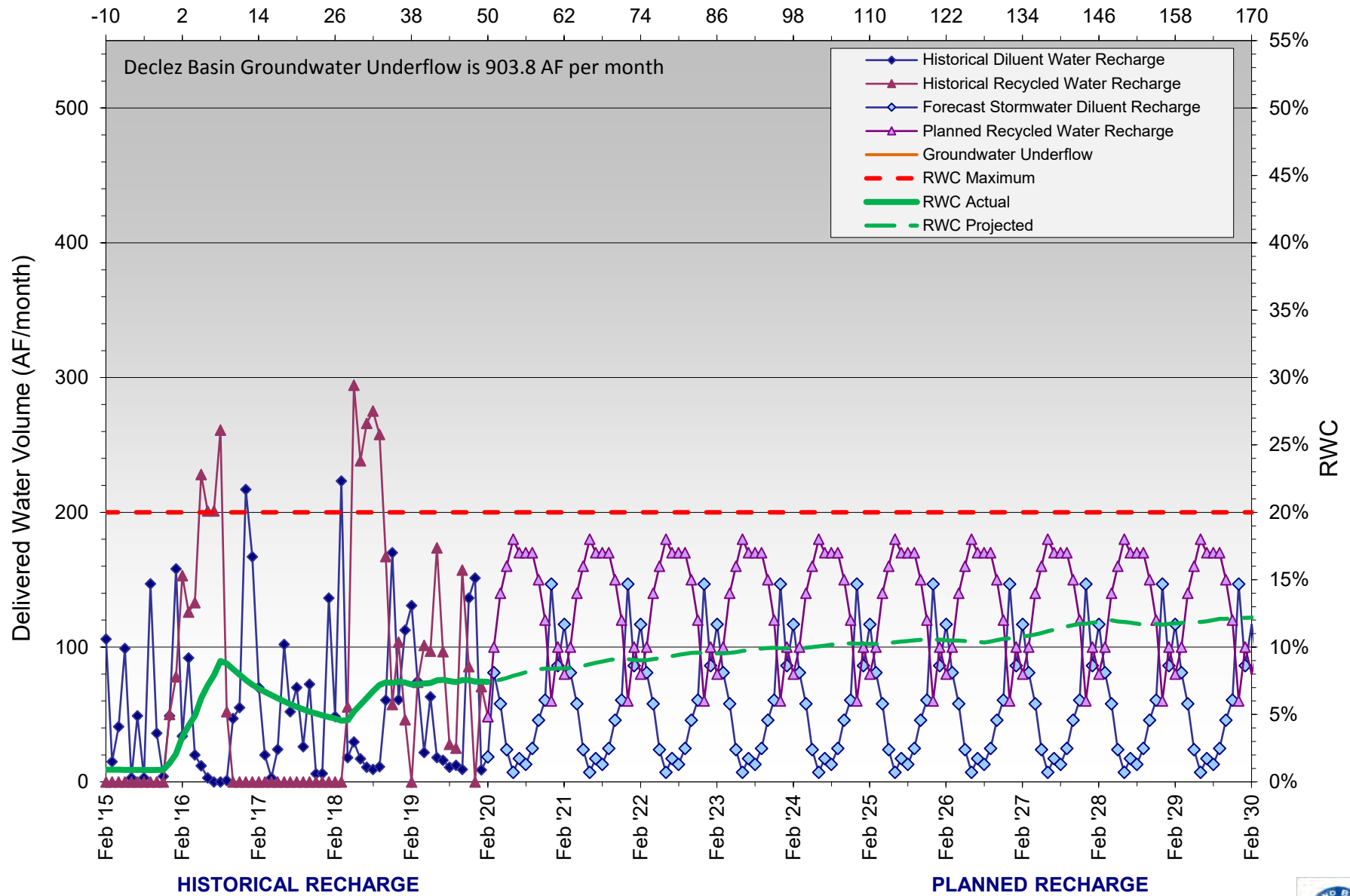
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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 - 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
2013/14	Jul '13	166	6	0	286	292	27,786	157	4,718	32,504	15%
	Aug '13	167	4	0	286	290	28,044	334	5,052	33,096	15%
	Sep '13	168	6	0	286	292	28,325	457	5,509	33,834	16%
	Oct '13	169	0	0	286	286	28,600	358	5,867	34,467	17%
	Nov '13	170	21	0	286	307	28,803	421	6,288	35,091	18%
	Dec '13	171	24	0	286	310	28,920	413	6,701	35,621	19%
	Jan '14	172	8	0	286	294	29,181	211	6,912	36,093	19%
	Feb '14	173	294	0	286	580	29,431	194	7,106	36,537	19%
	Mar '14	174	63	0	286	349	29,606	108	7,214	36,820	20%
	Apr '14	175	83	0	286	369	29,907	218	7,432	37,339	20%
	May '14	176	9	0	286	295	30,185	241	7,668	37,853	20%
	Jun '14	177	15	0	286	301	30,473	186	7,810	38,284	20%
2014/15	Jul '14	178	16	0	286	302	30,761	101	7,865	38,627	20%
	Aug '14	179	16	0	286	302	30,969	8	7,825	38,795	20%
	Sep '14	180	15	0	286	301	31,092	121	7,905	38,997	20%
	Oct '14	181	16	0	286	302	31,064	286	8,168	39,232	21%
	Nov '14	182	170	0	286	456	31,190	70	8,238	39,429	21%
	Dec '14	183	392	0	286	678	31,539	5	8,243	39,782	21%
	Jan '15	184	44	0	286	330	31,539	183	8,426	39,965	21%
	Feb '15	185	72	0	286	358	31,567	222	8,648	40,215	22%
	Mar '15	186	15	0	286	301	31,630	157	8,805	40,435	22%
	Apr '15	187	100	0	286	386	31,841	165	8,970	40,811	22%
	May '15	188	231	0	286	517	32,218	160	9,130	41,349	22%
	Jun '15	189	0	0	286	286	32,502	273	9,403	41,905	22%
2015/16	Jul '15	190	285	0	286	571	33,073	102	9,505	42,578	22%
	Aug '15	191	3	0	286	289	33,362	1	9,506	42,868	22%
	Sep '15	192	215	0	286	501	33,863	31	9,537	43,401	22%
	Oct '15	193	75	0	286	361	34,026	76	9,581	43,607	22%
	Nov '15	194	41	0	286	327	34,338	21	9,602	43,941	22%
	Dec '15	195	92	0	286	378	34,609	128	9,695	44,304	22%
	Jan '16	196	337	0	286	623	35,042	61	9,736	44,778	22%
	Feb '16	197	59	0	286	345	35,120	89	9,750	44,870	22%
	Mar '16	198	177	0	286	463	35,245	47	9,797	45,042	22%
	Apr '16	199	24	0	286	310	35,193	127	9,924	45,117	22%
	May '16	200	197	0	286	483	35,641	119	10,043	45,684	22%
	Jun '16	201	1	0	286	287	35,902	210	10,227	46,129	22%
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%

HISTORICAL



# 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
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	162		286	448	46,494	60	13,977	60,470	23%
	Apr '20	247	151		286	437	46,251	70	14,047	60,297	23%
	May '20	248	94		286	380	46,247	120	14,167	60,413	23%
	Jun '20	249	27		286	313	46,274	190	14,357	60,630	24%
2020/21	Jul '20	250	40		286	326	46,314	180	14,537	60,850	24%
	Aug '20	251	32		286	318	46,346	190	14,727	61,072	24%
	Sep '20	252	52		286	338	46,398	170	14,897	61,294	24%
	Oct '20	253	84		286	370	46,453	130	14,913	61,365	24%
	Nov '20	254	147		286	433	46,473	70	14,863	61,335	24%
	Dec '20	255	225		286	511	46,126	0	14,851	60,976	24%
	Jan '21	256	203		286	489	46,225	20	14,871	61,095	24%
	Feb '21	257	222		286	508	46,124	0	14,828	60,951	24%
	Mar '21	258	162		286	448	46,050	60	14,888	60,937	24%
	Apr '21	259	151		286	437	46,198	70	14,851	61,048	24%
	May '21	260	94		286	380	46,279	120	14,816	61,094	24%
	Jun '21	261	27		286	313	46,215	190	14,800	61,014	24%
2021/22	Jul '21	262	40		286	326	45,952	180	14,804	60,755	24%
	Aug '21	263	32		286	318	45,693	190	14,853	60,545	25%
	Sep '21	264	52		286	338	45,401	170	15,017	60,417	25%
	Oct '21	265	84		286	370	45,270	130	15,147	60,416	25%
	Nov '21	266	147		286	433	45,206	70	15,217	60,422	25%
	Dec '21	267	225		286	511	45,395	0	15,217	60,611	25%
	Jan '22	268	203		286	489	45,509	20	15,173	60,681	25%
	Feb '22	269	222		286	508	45,636	0	15,167	60,802	25%
	Mar '22	270	162		286	448	45,551	60	15,227	60,777	25%
	Apr '22	271	151		286	437	45,567	70	15,297	60,863	25%
	May '22	272	94		286	380	45,658	120	15,417	61,074	25%
	Jun '22	273	27		286	313	45,673	190	15,607	61,279	25%
2022/23	Jul '22	274	40		286	326	45,706	180	15,787	61,492	26%
	Aug '22	275	32		286	318	45,731	190	15,977	61,707	26%
	Sep '22	276	52		286	338	45,778	170	16,147	61,924	26%
	Oct '22	277	84		286	370	45,857	130	16,277	62,133	26%
	Nov '22	278	147		286	433	45,995	70	16,267	62,261	26%
	Dec '22	279	225		286	511	45,885	0	16,200	62,084	26%
	Jan '23	280	203		286	489	46,016	20	16,075	62,090	26%
	Feb '23	281	222		286	508	46,201	0	15,850	62,050	26%
	Mar '23	282	162		286	448	46,300	60	15,596	61,895	25%
	Apr '23	283	151		286	437	46,450	70	15,587	62,036	25%
	May '23	284	94		286	380	46,521	120	15,448	61,968	25%
	Jun '23	285	27		286	313	46,544	190	15,429	61,972	25%
2023/24	Jul '23	286	40		286	326	46,578	180	15,452	62,029	25%
	Aug '23	287	32		286	318	46,606	190	15,308	61,913	25%
	Sep '23	288	52		286	338	46,652	170	15,021	61,672	24%
	Oct '23	289	84		286	370	46,736	130	14,793	61,528	24%
	Nov '23	290	147		286	433	46,862	70	14,442	61,303	24%
	Dec '23	291	225		286	511	47,063	0	14,029	61,091	23%
	Jan '24	292	203		286	489	47,258	20	13,838	61,095	23%
	Feb '24	293	222		286	508	47,186	0	13,644	60,829	22%
	Mar '24	294	162		286	448	47,285	60	13,596	60,880	22%
	Apr '24	295	151		286	437	47,353	70	13,448	60,800	22%
	May '24	296	94		286	380	47,438	120	13,327	60,764	22%
	Jun '24	297	27		286	313	47,450	190	13,331	60,780	22%
2024/25	Jul '24	298	40		286	326	47,474	180	13,410	60,883	22%
	Aug '24	299	32		286	318	47,490	190	13,592	61,081	22%
	Sep '24	300	52		286	338	47,527	170	13,641	61,167	22%
	Oct '24	301	84		286	370	47,595	130	13,485	61,079	22%
	Nov '24	302	147		286	433	47,572	70	13,485	61,056	22%
	Dec '24	303	225		286	511	47,405	0	13,480	60,884	22%
	Jan '25	304	203		286	489	47,564	20	13,317	60,880	22%
	Feb '25	305	222		286	508	47,714	0	13,095	60,808	22%
	Mar '25	306	162		286	448	47,861	60	12,998	60,858	21%
	Apr '25	307	151		286	437	47,912	70	12,903	60,814	21%
	May '25	308	94		286	380	47,775	120	12,863	60,637	21%
	Jun '25	309	27		286	313	47,802	190	12,780	60,581	21%

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
2025/26	Jul '25	310	40		286	326	47,557	180	12,858	60,414	21%
	Aug '25	311	32		286	318	47,586	190	13,047	60,632	22%
	Sep '25	312	52		286	338	47,423	170	13,186	60,608	22%
	Oct '25	313	84		286	370	47,432	130	13,240	60,671	22%
	Nov '25	314	147		286	433	47,538	70	13,289	60,826	22%
	Dec '25	315	225		286	511	47,671	0	13,161	60,831	22%
	Jan '26	316	203		286	489	47,537	20	13,120	60,656	22%
	Feb '26	317	222		286	508	47,700	0	13,031	60,730	21%
	Mar '26	318	162		286	448	47,685	60	13,044	60,728	21%
	Apr '26	319	151		286	437	47,812	70	12,987	60,798	21%
	May '26	320	94		286	380	47,709	120	12,988	60,696	21%
	Jun '26	321	27		286	313	47,735	190	12,968	60,702	21%
2026/27	Jul '26	322	40		286	326	47,773	180	13,035	60,807	21%
	Aug '26	323	32		286	318	47,805	190	13,136	60,940	22%
	Sep '26	324	52		286	338	47,854	170	13,074	60,927	21%
	Oct '26	325	84		286	370	47,891	130	12,971	60,861	21%
	Nov '26	326	147		286	433	47,952	70	12,929	60,880	21%
	Dec '26	327	225		286	511	47,654	0	12,929	60,582	21%
	Jan '27	328	203		286	489	47,540	20	12,949	60,488	21%
	Feb '27	329	222		286	508	47,424	0	12,949	60,372	21%
	Mar '27	330	222		286	508	47,630	60	12,886	60,515	21%
	Apr '27	331	222		286	508	47,843	70	12,766	60,608	21%
	May '27	332	222		286	508	48,028	120	12,636	60,663	21%
	Jun '27	333	222		286	508	48,250	190	12,677	60,926	21%
2027/28	Jul '27	334	162		286	448	47,685	180	13,044	60,728	21%
	Aug '27	335	151		286	437	47,812	190	12,987	60,798	21%
	Sep '27	336	94		286	380	47,709	170	12,988	60,696	21%
	Oct '27	337	27		286	313	47,735	130	12,968	60,702	21%
	Nov '27	338	40		286	326	47,773	70	13,035	60,807	21%
	Dec '27	339	32		286	318	47,805	0	13,136	60,940	22%
	Jan '28	340	52		286	338	47,854	20	13,074	60,927	21%
	Feb '28	341	84		286	370	47,891	0	12,971	60,861	21%
	Mar '28	342	147		286	433	47,952	60	12,929	60,880	21%
	Apr '28	343	225		286	511	47,654	70	12,929	60,582	21%
	May '28	344	203		286	489	47,540	120	12,949	60,488	21%
	Jun '28	345	222		286	508	47,424	190	12,949	60,372	21%
2028/29	Jul '28	346	162		286	448	47,630	180	12,886	60,515	21%
	Aug '28	347	151		286	437	47,843	190	12,766	60,608	21%
	Sep '28	348	94		286	380	48,028	170	12,636	60,663	21%
	Oct '28	349	27		286	313	48,250	130	12,677	60,926	21%
	Nov '28	350	40		286	326	48,375	70	12,823	60,728	21%
	Dec '28	351	32		286	318	48,400	0	12,986	60,798	21%
	Jan '29	352	52		286	338	48,494	20	12,940	60,696	21%
	Feb '29	353	84		286	370	48,464	0	12,982	60,702	21%
	Mar '29	354	147		286	433	48,504	60	13,016	60,807	21%
	Apr '29	355	225		286	511	48,536	70	12,797	60,940	21%
	May '29	356	203		286	489	48,333	120	12,787	60,927	21%
	Jun '29	357	222		286	508	48,327	190	12,606	60,861	21%
2029/30	Jul '29	358	162		286	448	48,208	180	12,666	60,880	21%
	Aug '29	359	151		286	437	48,414	190	12,582	60,582	21%
	Sep '29	360	94		286	380	48,617	170	12,401	60,488	21%
	Oct '29	361	27		286	313	48,839	130	12,366	60,372	20%
	Nov '29	362	40		286	326	49,001	70	12,336	60,515	20%
	Dec '29	363	32		286	318	49,152	0	12,274	60,608	20%
	Jan '30	364	52		286	338	49,246	20	12,108	60,663	20%
	Feb '30	365	84		286	370	49,238	0	12,082	60,926	20%
	Mar '30	366	147		286	433	49,076	60	11,896	61,197	19%
	Apr '30	367	225		286	511	48,886	70	11,871	61,385	19%
	May '30	368	203		286	489	48,642	120	11,781	61,433	19%
	Jun '30	369	222		286	508	48,439	190	11,781	61,446	19%

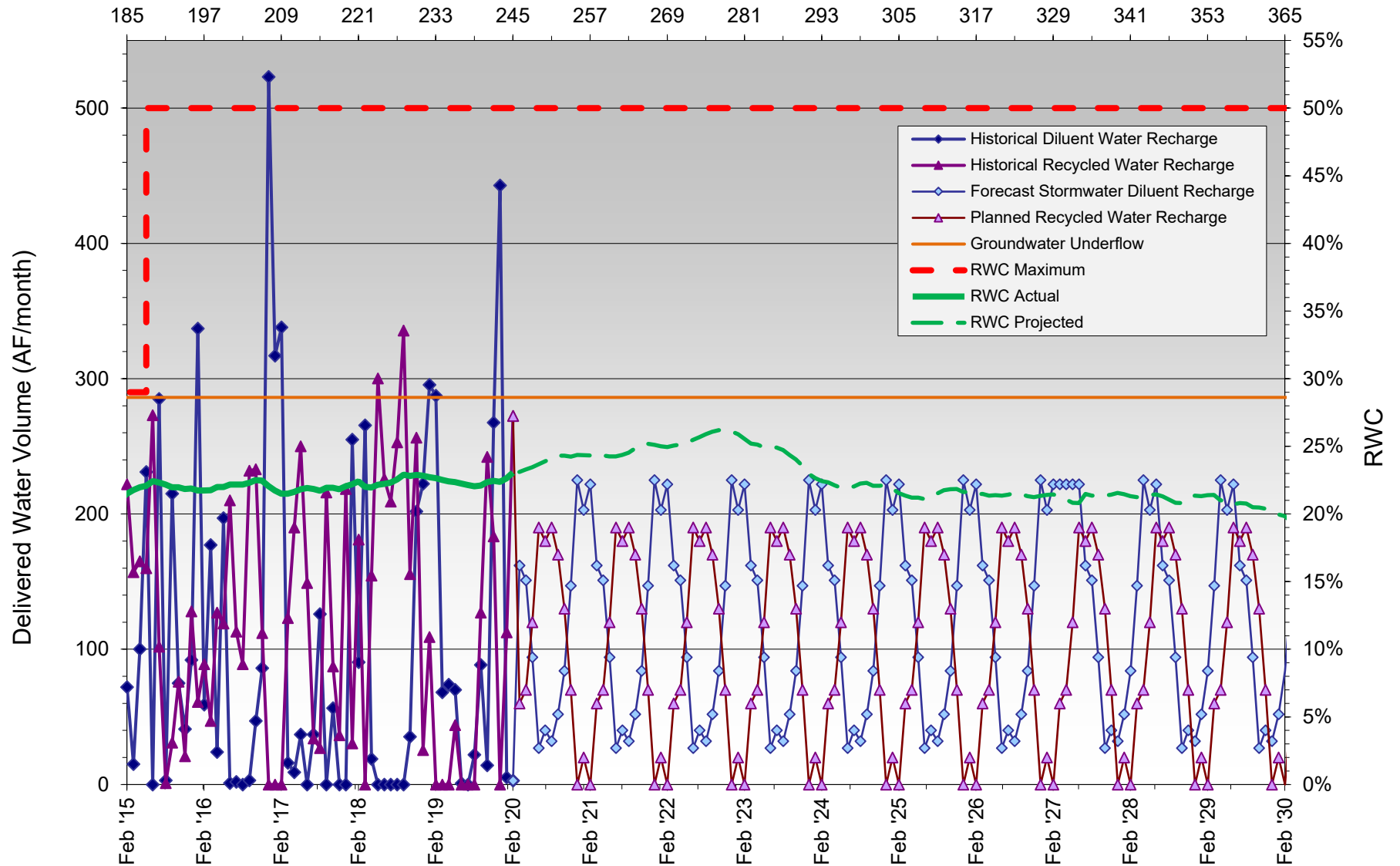
## Notes:

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
2013/14	Jul '13	94	4	0	267	271	18,327	201	5,267	23,594	22%
	Aug '13	95	0	0	267	267	18,594	11	5,278	23,872	22%
	Sep '13	96	0	0	267	267	18,860	0	5,278	24,139	22%
	Oct '13	97	1	0	267	268	19,128	1	5,279	24,407	22%
	Nov '13	98	59	0	267	326	19,449	339	5,618	25,067	22%
	Dec '13	99	8	0	267	275	19,688	108	5,726	25,415	23%
	Jan '14	100	9	3	267	278	19,966	86	5,812	25,778	23%
	Feb '14	101	19	1	267	287	20,124	67	5,879	26,003	23%
	Mar '14	102	13	0	267	280	20,349	224	6,103	26,452	23%
	Apr '14	103	23	10	267	299	20,648	379	6,482	27,130	24%
	May '14	104	33	0	267	300	20,947	292	6,774	27,721	24%
	Jun '14	105	2	0	267	269	21,216	212	6,986	28,202	25%
2014/15	Jul '14	106	0	0	267	267	21,483	118	7,104	28,587	25%
	Aug '14	107	0	0	267	267	21,749	82	7,186	28,935	25%
	Sep '14	108	0	0	267	267	22,016	236	7,422	29,438	25%
	Oct '14	109	0	0	267	267	22,165	226	7,648	29,813	26%
	Nov '14	110	0	0	267	267	22,429	272	7,920	30,350	26%
	Dec '14	111	185	0	267	452	22,842	46	7,966	30,808	26%
	Jan '15	112	8	0	267	275	22,967	194	8,160	31,127	26%
	Feb '15	113	47	0	267	314	23,153	180	8,340	31,493	26%
	Mar '15	114	0	0	267	267	23,392	115	8,455	31,848	27%
	Apr '15	115	0	0	267	267	23,655	229	8,684	32,339	27%
	May '15	116	3	0	267	270	23,873	139	8,823	32,696	27%
	Jun '15	117	0	0	267	267	23,920	197	9,020	32,941	27%
2015/16	Jul '15	118	0	0	267	267	23,922	39	9,059	32,981	27%
	Aug '15	119	0	0	267	267	23,701	56	9,115	32,816	28%
	Sep '15	120	9	0	267	276	23,846	107	9,083	32,930	28%
	Oct '15	121	14	0	267	281	24,105	73	9,064	33,169	27%
	Nov '15	122	14	0	267	281	24,386	84	9,055	33,441	27%
	Dec '15	123	64	0	267	331	24,709	53	9,077	33,785	27%
	Jan '16	124	35	0	267	302	24,998	23	9,017	34,014	27%
	Feb '16	125	5	0	267	272	25,235	27	8,965	34,199	26%
	Mar '16	126	22	0	267	289	25,497	0	8,965	34,461	26%
	Apr '16	127	21	0	267	288	25,741	43	9,008	34,748	26%
	May '16	128	0	0	267	267	25,924	52	9,060	34,984	26%
	Jun '16	129	0	0	267	267	26,147	18	9,078	35,224	26%
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%

H I S T O R I C 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
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	29		267	296	37,271	120	9,211	46,483	20%
	Apr '20	175	21		267	288	37,246	130	9,285	46,532	20%
	May '20	176	17		267	284	37,263	130	9,304	46,568	20%
	Jun '20	177	11		267	278	37,274	140	9,394	46,669	20%
2020/2021	Jul '20	178	20		267	287	37,294	130	9,503	46,798	20%
	Aug '20	179	19		267	286	37,313	130	9,605	46,919	20%
	Sep '20	180	23		267	290	37,324	130	9,450	46,775	20%
	Oct '20	181	19		267	286	37,330	130	9,486	46,817	20%
	Nov '20	182	25		267	292	37,319	130	9,565	46,885	20%
	Dec '20	183	64		267	331	37,234	90	9,655	46,890	21%
	Jan '21	184	42		267	309	37,264	110	9,715	46,980	21%
	Feb '21	185	51		267	318	37,236	100	9,778	47,015	21%
	Mar '21	186	29		267	296	37,195	120	9,898	47,094	21%
	Apr '21	187	21		267	288	37,216	130	9,976	47,193	21%
	May '21	188	17		267	284	37,231	130	10,022	47,254	21%
	Jun '21	189	11		267	278	37,234	140	10,088	47,323	21%
2021/2022	Jul '21	190	20		267	287	37,254	130	10,204	47,459	22%
	Aug '21	191	19		267	286	37,201	130	10,334	47,535	22%
	Sep '21	192	23		267	290	36,745	130	10,444	47,189	22%
	Oct '21	193	19		267	286	36,747	130	10,539	47,286	22%
	Nov '21	194	25		267	292	36,761	130	10,467	47,228	22%
	Dec '21	195	64		267	331	36,824	90	10,331	47,155	22%
	Jan '22	196	42		267	309	36,817	110	10,425	47,242	22%
	Feb '22	197	51		267	318	36,809	100	10,442	47,251	22%
	Mar '22	198	29		267	296	36,785	120	10,483	47,268	22%
	Apr '22	199	21		267	288	36,776	130	10,547	47,323	22%
	May '22	200	17		267	284	36,793	130	10,637	47,430	22%
	Jun '22	201	11		267	278	36,802	140	10,775	47,577	23%
2022/2023	Jul '22	202	20		267	287	36,800	130	10,848	47,648	23%
	Aug '22	203	19		267	286	36,769	130	10,934	47,703	23%
	Sep '22	204	23		267	290	36,763	130	11,064	47,827	23%
	Oct '22	205	19		267	286	36,731	130	11,194	47,925	23%
	Nov '22	206	25		267	292	36,743	130	11,147	47,890	23%
	Dec '22	207	64		267	331	36,801	90	11,093	47,894	23%
	Jan '23	208	42		267	309	36,843	110	11,088	47,931	23%
	Feb '23	209	51		267	318	36,886	100	11,185	48,071	23%
	Mar '23	210	29		267	296	36,902	120	11,158	48,060	23%
	Apr '23	211	21		267	288	36,923	130	11,217	48,140	23%
	May '23	212	17		267	284	36,934	130	11,347	48,281	24%
	Jun '23	213	11		267	278	36,944	140	11,371	48,315	24%
2023/2024	Jul '23	214	20		267	287	36,960	130	11,300	48,260	23%
	Aug '23	215	19		267	286	36,979	130	11,419	48,398	24%
	Sep '23	216	23		267	290	37,002	130	11,549	48,551	24%
	Oct '23	217	19		267	286	37,020	130	11,678	48,698	24%
	Nov '23	218	25		267	292	36,986	130	11,469	48,455	24%
	Dec '23	219	64		267	331	37,042	90	11,451	48,493	24%
	Jan '24	220	42		267	309	37,073	110	11,475	48,548	24%
	Feb '24	221	51		267	318	37,104	100	11,508	48,612	24%
	Mar '24	222	29		267	296	37,120	120	11,404	48,524	24%
	Apr '24	223	21		267	288	37,108	130	11,155	48,263	23%
	May '24	224	17		267	284	37,092	130	10,993	48,085	23%
	Jun '24	225	11		267	278	37,101	140	10,921	48,022	23%
2024/2025	Jul '24	226	20		267	287	37,121	130	10,933	48,054	23%
	Aug '24	227	19		267	286	37,140	130	10,981	48,121	23%
	Sep '24	228	23		267	290	37,163	130	10,875	48,038	23%
	Oct '24	229	19		267	286	37,182	130	10,779	47,961	22%
	Nov '24	230	25		267	292	37,207	130	10,637	47,844	22%
	Dec '24	231	64		267	331	37,086	90	10,681	47,767	22%
	Jan '25	232	42		267	309	37,120	110	10,597	47,717	22%
	Feb '25	233	51		267	318	37,124	100	10,517	47,641	22%
	Mar '25	234	29		267	296	37,153	120	10,522	47,675	22%
	Apr '25	235	21		267	288	37,174	130	10,423	47,597	22%
	May '25	236	17		267	284	37,188	130	10,414	47,602	22%
	Jun '25	237	11		267	278	37,199	140	10,357	47,556	22%

P L A N N E D





## RWC Management Plan for Hickory Basin

(120-month averaging period)

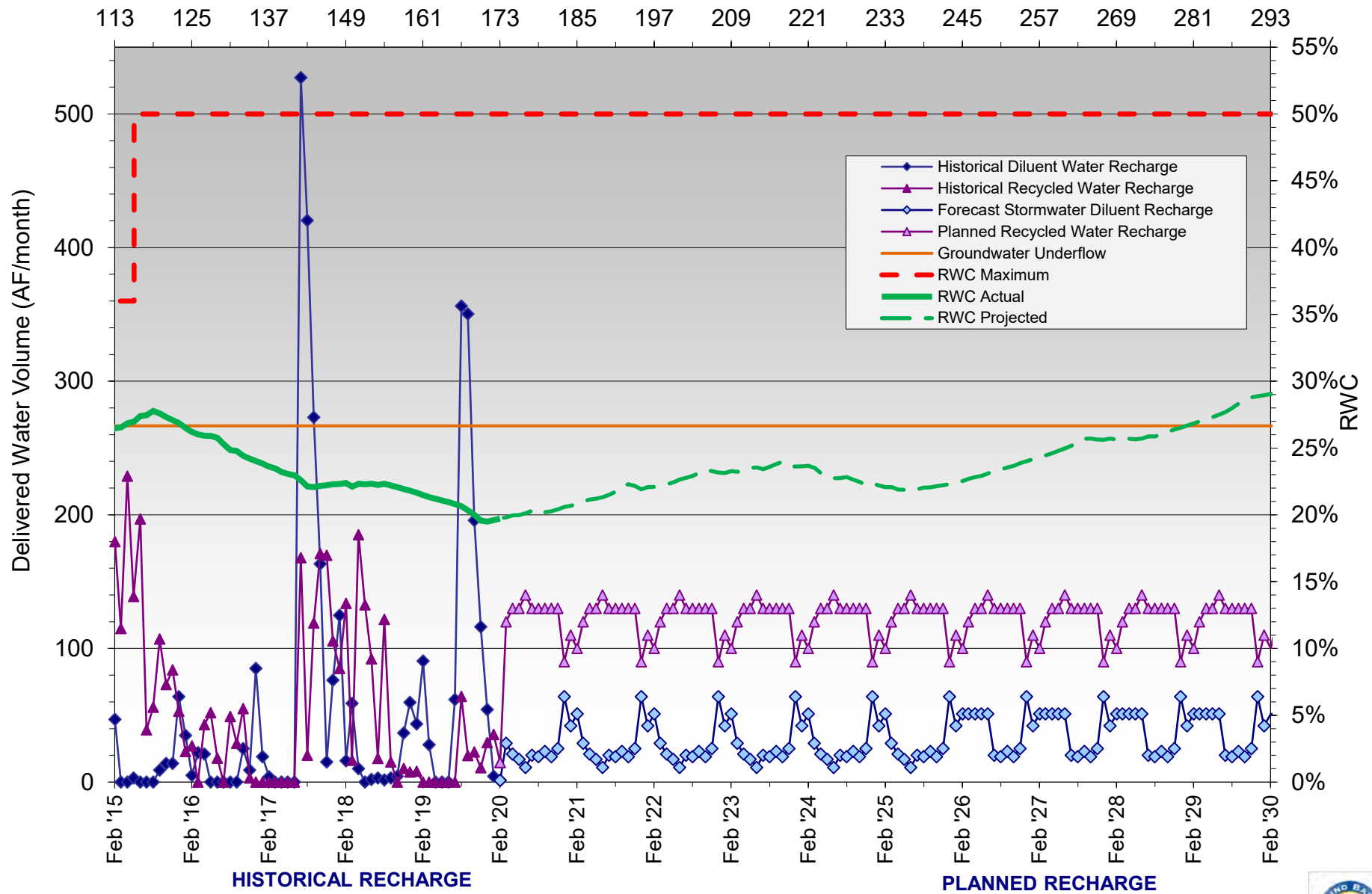
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

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 (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC		
2025/26	Jul '25	238	20		267	287	37,219	130	10,448	47,667	22%	
	Aug '25	239	19		267	286	37,238	130	10,522	47,760	22%	
	Sep '25	240	23		267	290	37,252	130	10,545	47,797	22%	
	Oct '25	241	19		267	286	37,257	130	10,602	47,859	22%	
	Nov '25	242	25		267	292	37,268	130	10,648	47,916	22%	
	Dec '25	243	64		267	331	37,268	90	10,685	47,953	22%	
	Jan '26	244	42		267	309	37,275	110	10,772	48,047	22%	
	Feb '26	245	51		267	318	37,321	100	10,845	48,166	23%	
	Mar '26	246	51		267	318	37,350	120	10,965	48,315	23%	
	Apr '26	247	51		267	318	37,380	130	11,052	48,432	23%	
	May '26	248	51		267	318	37,431	130	11,130	48,561	23%	
	Jun '26	249	51		267	318	37,482	140	11,252	48,734	23%	
2026/27	Jul '26	250	20		267	287	37,502	130	11,382	48,884	23%	
	Aug '26	251	19		267	286	37,521	130	11,463	48,984	23%	
	Sep '26	252	23		267	290	37,544	130	11,564	49,108	24%	
	Oct '26	253	19		267	286	37,538	130	11,639	49,177	24%	
	Nov '26	254	25		267	292	37,554	130	11,766	49,320	24%	
	Dec '26	255	64		267	331	37,533	90	11,856	49,389	24%	
	Jan '27	256	42		267	309	37,556	110	11,966	49,522	24%	
	Feb '27	257	51		267	318	37,603	100	12,066	49,669	24%	
	Mar '27	258	51		267	318	37,654	120	12,186	49,840	24%	
	Apr '27	259	51		267	318	37,705	130	12,316	50,021	25%	
	May '27	260	51		267	318	37,756	130	12,446	50,202	25%	
	Jun '27	261	51		267	318	37,807	140	12,586	50,393	25%	
2027/28	Jul '27	262	20		267	287	37,300	130	12,548	49,848	25%	
	Aug '27	263	19		267	286	36,899	130	12,658	49,557	26%	
	Sep '27	264	23		267	290	36,649	130	12,669	49,318	26%	
	Oct '27	265	19		267	286	36,504	130	12,628	49,133	26%	
	Nov '27	266	25		267	292	36,514	130	12,588	49,103	26%	
	Dec '27	267	64		267	331	36,502	90	12,573	49,075	26%	
	Jan '28	268	42		267	309	36,419	110	12,598	49,017	26%	
	Feb '28	269	51		267	318	36,454	100	12,564	49,018	26%	
	Mar '28	270	51		267	318	36,446	120	12,668	49,114	26%	
	Apr '28	271	51		267	318	36,487	130	12,613	49,100	26%	
	May '28	272	51		267	318	36,538	130	12,610	49,148	26%	
	Jun '28	273	51		267	318	36,587	140	12,658	49,245	26%	
2028/29	Jul '28	274	20		267	287	36,604	130	12,770	49,374	26%	
	Aug '28	275	19		267	286	36,622	130	12,778	49,400	26%	
	Sep '28	276	23		267	290	36,642	130	12,893	49,534	26%	
	Oct '28	277	19		267	286	36,656	130	13,023	49,679	26%	
	Nov '28	278	25		267	292	36,644	130	13,143	49,787	26%	
	Dec '28	279	64		267	331	36,649	90	13,225	49,874	27%	
	Jan '29	280	42		267	309	36,647	110	13,327	49,974	27%	
	Feb '29	281	51		267	318	36,608	100	13,427	50,035	27%	
	Mar '29	282	51		267	318	36,631	120	13,547	50,178	27%	
	Apr '29	283	51		267	318	36,682	130	13,677	50,359	27%	
	May '29	284	51		267	318	36,733	130	13,807	50,540	27%	
	Jun '29	285	51		267	318	36,784	140	13,947	50,731	27%	
2029/30	Jul '29	286	20		267	287	36,742	130	14,077	50,819	28%	
	Aug '29	287	19		267	286	36,405	130	14,143	50,548	28%	
	Sep '29	288	23		267	290	36,077	130	14,253	50,330	28%	
	Oct '29	289	19		267	286	35,900	130	14,361	50,261	29%	
	Nov '29	290	25		267	292	35,809	130	14,480	50,289	29%	
	Dec '29	291	64		267	331	35,819	90	14,540	50,359	29%	
	Jan '30	292	42		267	309	35,857	110	14,615	50,471	29%	
	Feb '30	293	51		267	318	35,907	100	14,700	50,607	29%	
	Mar '30	294	51		267	318	35,929	120	14,700	50,629	29%	
	Apr '30	295	51		267	318	35,959	130	14,700	50,659	29%	
	May '30	296	51		267	318	35,993	130	14,700	50,693	29%	
	Jun '30	297	51		267	318	36,033	140	14,700	50,733	29%	
<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 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
2013/14	Jul '13	49	72	0	904	976	52,813	74	8,017	60,830	13%	H I S T O R I C A L
	Aug '13	50	68	0	904	972	53,785	216	8,233	62,018	13%	
	Sep '13	51	58	0	904	962	54,747	353	8,586	63,333	14%	
	Oct '13	52	53	0	904	957	55,704	164	8,750	64,454	14%	
	Nov '13	53	60	0	904	964	56,668	4	8,754	65,422	13%	
	Dec '13	54	72	0	904	976	57,643	251	9,005	66,648	14%	
	Jan '14	55	43	86	904	1,033	58,676	72	9,077	67,753	13%	
	Feb '14	56	131	66	904	1,101	59,777	0	9,077	68,854	13%	
	Mar '14	57	103	160	904	1,167	60,944	0	9,077	70,021	13%	
	Apr '14	58	48	38	904	989	61,933	49	9,126	71,059	13%	
May '14	59	3	0	904	907	62,840	0	9,126	71,966	13%		
Jun '14	60	6	0	904	910	63,750	172	9,298	73,048	13%		
2014/15	Jul '14	61	9	0	904	913	64,663	184	9,482	74,145	13%	
	Aug '14	62	23	0	904	927	65,589	192	9,674	75,263	13%	
	Sep '14	63	40	0	904	944	66,533	243	9,917	76,450	13%	
	Oct '14	64	25	0	904	929	67,462	335	10,252	77,714	13%	
	Nov '14	65	112	0	904	1,016	68,478	250	10,502	78,980	13%	
	Dec '14	66	419	0	904	1,323	69,800	6	10,508	80,308	13%	
	Jan '15	67	132	0	904	1,036	70,836	29	10,537	81,373	13%	
	Feb '15	68	95	0	904	999	71,835	243	10,780	82,615	13%	
	Mar '15	69	69	0	904	973	72,808	325	11,105	83,913	13%	
	Apr '15	70	41	0	904	945	73,752	282	11,387	85,139	13%	
May '15	71	121	0	904	1,025	74,777	348	11,735	86,512	14%		
Jun '15	72	12	0	904	916	75,693	531	12,266	87,959	14%		
2015/16	Jul '15	73	134	0	904	1,038	76,700	268	12,534	89,234	14%	
	Aug '15	74	31	0	904	935	77,603	141	12,675	90,278	14%	
	Sep '15	75	123	0	904	1,027	78,570	219	12,894	91,464	14%	
	Oct '15	76	86	0	904	990	79,482	363	13,257	92,739	14%	
	Nov '15	77	54	0	904	958	80,380	228	13,485	93,865	14%	
	Dec '15	78	188	0	904	1,092	81,411	274	13,759	95,170	14%	
	Jan '16	79	239	0	904	1,143	82,522	390	14,149	96,671	15%	
	Feb '16	80	54	0	904	958	83,415	358	14,507	97,922	15%	
	Mar '16	81	208	0	904	1,112	84,366	174	14,681	99,047	15%	
	Apr '16	82	50	0	904	954	85,193	247	14,928	100,121	15%	
May '16	83	48	0	904	952	86,108	375	15,303	101,411	15%		
Jun '16	84	11	0	904	915	86,997	245	15,548	102,545	15%		
2016/17	Jul '16	85	18	0	904	922	87,904	99	15,647	103,551	15%	
	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%		



# 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
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	112		904	1,016	123,361	460	26,373	149,734	18%
	Apr '20	130	63		904	967	123,296	510	26,812	150,108	18%
	May '20	131	37		904	941	123,284	530	27,070	150,354	18%
	Jun '20	132	18		904	922	123,260	550	27,359	150,619	18%
2020/21	Jul '20	133	32		904	936	123,285	540	27,670	150,955	18%
	Aug '20	134	23		904	927	123,302	550	28,039	151,341	19%
	Sep '20	135	32		904	936	123,309	540	28,531	151,840	19%
	Oct '20	136	52		904	956	123,290	520	29,028	152,318	19%
	Nov '20	137	67		904	971	123,211	500	29,335	152,546	19%
	Dec '20	138	206		904	1,110	122,673	360	29,573	152,246	19%
	Jan '21	139	163		904	1,067	122,601	410	29,880	152,481	20%
	Feb '21	140	141		904	1,045	122,427	430	30,133	152,560	20%
	Mar '21	141	112		904	1,016	122,125	460	30,467	152,592	20%
	Apr '21	142	63		904	967	122,046	510	30,740	152,786	20%
	May '21	143	37		904	941	121,722	530	31,094	152,816	20%
	Jun '21	144	18		904	922	121,123	550	31,460	152,583	21%
2021/22	Jul '21	145	32		904	936	120,288	540	31,747	152,035	21%
	Aug '21	146	23		904	927	119,993	550	32,282	152,275	21%
	Sep '21	147	32		904	936	119,411	540	32,792	152,203	22%
	Oct '21	148	52		904	956	119,242	520	33,130	152,372	22%
	Nov '21	149	67		904	971	119,187	500	33,533	152,720	22%
	Dec '21	150	206		904	1,110	119,315	360	33,729	153,044	22%
	Jan '22	151	163		904	1,067	119,374	410	34,048	153,422	22%
	Feb '22	152	141		904	1,045	119,339	430	34,318	153,657	22%
	Mar '22	153	112		904	1,016	119,229	460	34,684	153,913	23%
	Apr '22	154	63		904	967	119,072	510	35,047	154,119	23%
	May '22	155	37		904	941	119,048	530	35,202	154,250	23%
	Jun '22	156	18		904	922	119,006	550	35,571	154,577	23%
2022/23	Jul '22	157	32		904	936	118,988	540	36,099	155,087	23%
	Aug '22	158	23		904	927	118,999	550	36,649	155,648	24%
	Sep '22	159	32		904	936	119,027	540	37,189	156,216	24%
	Oct '22	160	52		904	956	119,061	520	37,709	156,770	24%
	Nov '22	161	67		904	971	119,027	500	38,055	157,082	24%
	Dec '22	162	206		904	1,110	118,872	360	38,195	157,067	24%
	Jan '23	163	163		904	1,067	118,888	410	38,252	157,140	24%
	Feb '23	164	141		904	1,045	118,916	430	38,385	157,301	24%
	Mar '23	165	112		904	1,016	118,950	460	38,570	157,520	24%
	Apr '23	166	63		904	967	118,973	510	38,694	157,667	25%
	May '23	167	37		904	941	118,956	530	38,962	157,918	25%
	Jun '23	168	18		904	922	118,931	550	39,273	158,204	25%
2023/24	Jul '23	169	32		904	936	118,891	540	39,739	158,630	25%
	Aug '23	170	23		904	927	118,846	550	40,073	158,919	25%
	Sep '23	171	32		904	936	118,820	540	40,260	159,080	25%
	Oct '23	172	52		904	956	118,819	520	40,616	159,435	25%
	Nov '23	173	67		904	971	118,826	500	41,112	159,938	26%
	Dec '23	174	206		904	1,110	118,960	360	41,221	160,181	26%
	Jan '24	175	163		904	1,067	118,994	410	41,559	160,553	26%
	Feb '24	176	141		904	1,045	118,938	430	41,989	160,927	26%
	Mar '24	177	112		904	1,016	118,787	460	42,449	161,236	26%
	Apr '24	178	63		904	967	118,764	510	42,910	161,674	27%
	May '24	179	37		904	941	118,798	530	43,440	162,238	27%
	Jun '24	180	18		904	922	118,810	550	43,818	162,628	27%
2024/25	Jul '24	181	32		904	936	118,833	540	44,174	163,007	27%
	Aug '24	182	23		904	927	118,833	550	44,532	163,365	27%
	Sep '24	183	32		904	936	118,825	540	44,829	163,654	27%
	Oct '24	184	52		904	956	118,852	520	45,014	163,866	27%
	Nov '24	185	67		904	971	118,807	500	45,264	164,071	28%
	Dec '24	186	206		904	1,110	118,594	360	45,618	164,212	28%
	Jan '25	187	163		904	1,067	118,625	410	45,999	164,624	28%
	Feb '25	188	141		904	1,045	118,671	430	46,186	164,857	28%
	Mar '25	189	112		904	1,016	118,714	460	46,321	165,035	28%
	Apr '25	190	63		904	967	118,736	510	46,549	165,285	28%
	May '25	191	37		904	941	118,652	530	46,731	165,383	28%
	Jun '25	192	18		904	922	118,658	550	46,750	165,408	28%





## RWC Management Plan for RP3 Basins

(120-month averaging period)

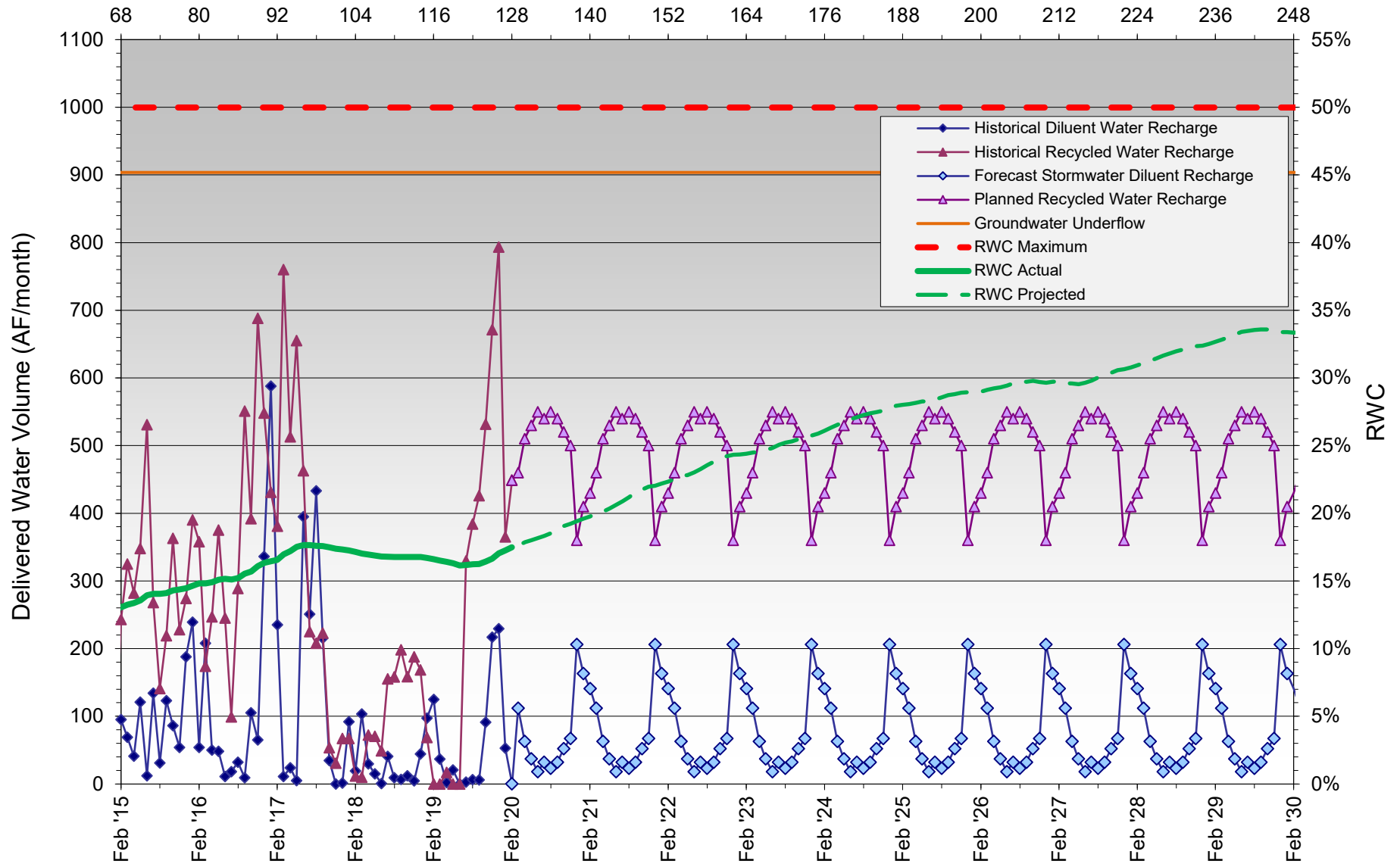
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

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
2025/26	Jul '25	193	32		904	936	118,556	540	47,022	165,578	28%
	Aug '25	194	23		904	927	118,548	550	47,431	165,979	29%
	Sep '25	195	32		904	936	118,457	540	47,752	166,209	29%
	Oct '25	196	52		904	956	118,423	520	47,909	166,332	29%
	Nov '25	197	67		904	971	118,436	500	48,181	166,617	29%
	Dec '25	198	206		904	1,110	118,454	360	48,267	166,721	29%
	Jan '26	199	163		904	1,067	118,378	410	48,287	166,665	29%
	Feb '26	200	141		904	1,045	118,465	430	48,359	166,824	29%
	Mar '26	201	112		904	1,016	118,369	460	48,645	167,014	29%
	Apr '26	202	63		904	967	118,382	510	48,908	167,290	29%
	May '26	203	37		904	941	118,371	530	49,063	167,434	29%
	Jun '26	204	18		904	922	118,378	550	49,368	167,746	29%
2026/27	Jul '26	205	32		904	936	118,392	540	49,809	168,201	30%
	Aug '26	206	23		904	927	118,383	550	50,070	168,453	30%
	Sep '26	207	32		904	936	118,406	540	50,059	168,465	30%
	Oct '26	208	52		904	956	118,353	520	50,187	168,540	30%
	Nov '26	209	67		904	971	118,355	500	49,999	168,354	30%
	Dec '26	210	206		904	1,110	118,225	360	49,811	168,036	30%
	Jan '27	211	163		904	1,067	117,800	410	49,790	167,590	30%
	Feb '27	212	141		904	1,045	117,706	430	49,839	167,545	30%
	Mar '27	213	112		904	1,016	117,807	460	49,539	167,346	30%
	Apr '27	214	63		904	967	117,846	510	49,536	167,382	30%
	May '27	215	37		904	941	117,878	530	49,411	167,289	30%
	Jun '27	216	18		904	922	117,501	550	49,498	166,999	30%
2027/28	Jul '27	217	32		904	936	117,282	540	49,813	167,096	30%
	Aug '27	218	23		904	927	116,872	550	50,155	167,027	30%
	Sep '27	219	32		904	936	116,689	540	50,472	167,161	30%
	Oct '27	220	52		904	956	116,706	520	50,939	167,645	30%
	Nov '27	221	67		904	971	116,773	500	51,408	168,181	31%
	Dec '27	222	206		904	1,110	116,978	360	51,701	168,679	31%
	Jan '28	223	163		904	1,067	117,049	410	52,044	169,093	31%
	Feb '28	224	141		904	1,045	117,171	430	52,463	169,634	31%
	Mar '28	225	112		904	1,016	117,180	460	52,913	170,092	31%
	Apr '28	226	63		904	967	117,213	510	53,351	170,564	31%
	May '28	227	37		904	941	117,235	530	53,810	171,045	31%
	Jun '28	228	18		904	922	117,252	550	54,312	171,564	32%
2028/29	Jul '28	229	32		904	936	117,244	540	54,696	171,940	32%
	Aug '28	230	23		904	927	117,257	550	55,088	172,346	32%
	Sep '28	231	32		904	936	117,283	540	55,430	172,713	32%
	Oct '28	232	52		904	956	117,323	520	55,792	173,114	32%
	Nov '28	233	67		904	971	117,385	500	56,104	173,489	32%
	Dec '28	234	206		904	1,110	117,547	360	56,296	173,843	32%
	Jan '29	235	163		904	1,067	117,613	410	56,637	174,250	33%
	Feb '29	236	141		904	1,045	117,629	430	57,067	174,696	33%
	Mar '29	237	112		904	1,016	117,704	460	57,527	175,231	33%
	Apr '29	238	63		904	967	117,765	510	58,020	175,785	33%
	May '29	239	37		904	941	117,782	530	58,550	176,332	33%
	Jun '29	240	18		904	922	117,800	550	59,100	176,900	33%
2029/30	Jul '29	241	32		904	936	117,829	540	59,310	177,139	33%
	Aug '29	242	23		904	927	117,846	550	59,476	177,322	34%
	Sep '29	243	32		904	936	117,872	540	59,591	177,462	34%
	Oct '29	244	52		904	956	117,833	520	59,579	177,411	34%
	Nov '29	245	67		904	971	117,683	500	59,407	177,090	34%
	Dec '29	246	206		904	1,110	117,660	360	58,974	176,634	33%
	Jan '30	247	163		904	1,067	117,770	410	59,019	176,789	33%
	Feb '30	248	141		904	1,045	117,911	430	59,000	176,911	33%
	Mar '30	249	112		904	1,016	117,911	460	59,000	176,911	33%
	Apr '30	250	63		904	967	117,911	510	59,000	176,911	33%
	May '30	251	37		904	941	117,911	530	59,000	176,911	33%
	Jun '30	252	18		904	922	117,911	550	59,000	176,911	33%
<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 - 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
2013/14	Jul '13	36	0	0	139	139	29,185	0	1,484	30,669	5%
	Aug '13	37	0	0	139	139	29,324	0	1,484	30,808	5%
	Sep '13	38	0	0	139	139	29,463	154	1,638	31,101	5%
	Oct '13	39	11	0	139	150	29,613	69	1,707	31,320	5%
	Nov '13	40	39	0	139	178	29,791	9	1,716	31,507	5%
	Dec '13	41	6	0	139	145	29,936	0	1,716	31,652	5%
	Jan '14	42	0	0	139	139	30,075	12	1,728	31,803	5%
	Feb '14	43	69	0	139	208	30,283	16	1,744	32,027	5%
	Mar '14	44	20	0	139	159	30,442	0	1,744	32,186	5%
	Apr '14	45	17	0	139	156	30,598	2	1,746	32,344	5%
	May '14	46	0	0	139	139	30,737	12	1,758	32,495	5%
	Jun '14	47	0	0	139	139	30,875	0	1,758	32,633	5%
2014/15	Jul '14	48	0	0	139	139	31,014	0	1,758	32,772	5%
	Aug '14	49	6	0	139	145	31,159	0	1,758	32,917	5%
	Sep '14	50	1	0	139	140	31,299	1	1,759	33,058	5%
	Oct '14	51	0	0	139	139	31,438	0	1,759	33,197	5%
	Nov '14	52	18	0	139	157	31,595	0	1,759	33,354	5%
	Dec '14	53	247	0	139	386	31,981	0	1,759	33,740	5%
	Jan '15	54	-6	0	139	133	32,114	0	1,759	33,873	5%
	Feb '15	55	39	0	139	178	32,292	0	1,759	34,051	5%
	Mar '15	56	2	0	139	141	32,433	0	1,759	34,192	5%
	Apr '15	57	0	0	139	139	32,572	0	1,759	34,331	5%
	May '15	58	17	0	139	156	32,334	0	1,759	34,093	5%
	Jun '15	59	0	0	139	139	31,282	0	1,759	33,041	5%
2015/16	Jul '15	60	9	0	139	148	30,995	0	1,759	32,754	5%
	Aug '15	61	0	0	139	139	30,921	0	1,759	32,680	5%
	Sep '15	62	53	0	139	192	30,555	0	1,759	32,314	5%
	Oct '15	63	47	0	139	186	30,166	0	1,759	31,925	6%
	Nov '15	64	1	0	139	140	29,164	0	1,759	30,923	6%
	Dec '15	65	80	0	139	219	28,396	0	1,759	30,155	6%
	Jan '16	66	244	0	139	383	27,811	0	1,759	29,570	6%
	Feb '16	67	33	0	139	172	26,859	0	1,759	28,618	6%
	Mar '16	68	88	0	139	227	26,122	0	1,759	27,881	6%
	Apr '16	69	29	0	139	168	25,103	0	1,759	26,862	7%
	May '16	70	1	0	139	140	23,857	0	1,759	25,616	7%
	Jun '16	71	0	0	139	139	23,047	0	1,759	24,806	7%
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%

HISTORICAL



# 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
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	102		278	380	35,901	50	1,809	37,710	5%
	Apr '20	117	98		278	376	36,224	50	1,859	38,083	5%
	May '20	118	21		278	299	36,523	130	1,989	38,512	5%
	Jun '20	119	2		278	280	36,803	150	2,139	38,942	5%
2020/21	Jul '20	120	1		278	279	37,082	150	2,239	39,321	6%
	Aug '20	121	4		278	282	37,364	150	2,345	39,709	6%
	Sep '20	122	4		278	282	37,646	150	2,453	40,099	6%
	Oct '20	123	20		278	298	37,849	130	2,510	40,359	6%
	Nov '20	124	30		278	308	37,937	120	2,617	40,554	6%
	Dec '20	125	133		278	411	37,631	20	2,605	40,236	6%
	Jan '21	126	146		278	424	37,903	0	2,533	40,436	6%
	Feb '21	127	98		278	376	37,997	50	2,583	40,580	6%
	Mar '21	128	102		278	380	38,105	50	2,633	40,738	6%
	Apr '21	129	98		278	376	38,342	50	2,683	41,025	7%
	May '21	130	21		278	299	37,957	130	2,777	40,734	7%
	Jun '21	131	2		278	280	36,929	150	2,893	39,822	7%
2021/22	Jul '21	132	1		278	279	36,058	150	2,930	38,988	8%
	Aug '21	133	4		278	282	36,190	150	2,990	39,180	8%
	Sep '21	134	4		278	282	36,127	150	3,140	39,267	8%
	Oct '21	135	20		278	298	36,247	130	3,270	39,517	8%
	Nov '21	136	30		278	308	36,384	120	3,390	39,774	9%
	Dec '21	137	133		278	411	36,636	20	3,410	40,046	9%
	Jan '22	138	146		278	424	36,866	0	3,251	40,117	8%
	Feb '22	139	98		278	376	37,049	50	3,227	40,276	8%
	Mar '22	140	102		278	380	37,130	50	3,261	40,391	8%
	Apr '22	141	98		278	376	37,291	50	3,307	40,598	8%
	May '22	142	21		278	299	37,451	130	3,434	40,885	8%
	Jun '22	143	2		278	280	37,592	150	3,530	41,122	9%
2022/23	Jul '22	144	1		278	279	37,732	150	3,558	41,290	9%
	Aug '22	145	4		278	282	37,874	150	3,624	41,498	9%
	Sep '22	146	4		278	282	38,017	150	3,735	41,752	9%
	Oct '22	147	20		278	298	38,175	130	3,802	41,977	9%
	Nov '22	148	30		278	308	38,330	120	3,856	42,186	9%
	Dec '22	149	133		278	411	38,523	20	3,875	42,398	9%
	Jan '23	150	146		278	424	38,787	0	3,816	42,603	9%
	Feb '23	151	98		278	376	39,015	50	3,847	42,862	9%
	Mar '23	152	102		278	380	39,243	50	3,844	43,087	9%
	Apr '23	153	98		278	376	39,475	50	3,853	43,328	9%
	May '23	154	21		278	299	39,630	130	3,957	43,587	9%
	Jun '23	155	2		278	280	39,771	150	4,105	43,876	9%
2023/24	Jul '23	156	1		278	279	39,911	150	4,255	44,166	10%
	Aug '23	157	4		278	282	40,054	150	4,405	44,459	10%
	Sep '23	158	4		278	282	40,197	150	4,401	44,598	10%
	Oct '23	159	20		278	298	40,345	130	4,462	44,807	10%
	Nov '23	160	30		278	308	40,475	120	4,573	45,048	10%
	Dec '23	161	133		278	411	40,741	20	4,593	45,334	10%
	Jan '24	162	146		278	424	41,026	0	4,581	45,607	10%
	Feb '24	163	98		278	376	41,194	50	4,615	45,809	10%
	Mar '24	164	102		278	380	41,415	50	4,665	46,080	10%
	Apr '24	165	98		278	376	41,635	50	4,713	46,348	10%
	May '24	166	21		278	299	41,795	130	4,831	46,626	10%
	Jun '24	167	2		278	280	41,936	150	4,981	46,917	11%
2024/25	Jul '24	168	1		278	279	42,076	150	5,131	47,207	11%
	Aug '24	169	4		278	282	42,213	150	5,281	47,494	11%
	Sep '24	170	4		278	282	42,355	150	5,430	47,785	11%
	Oct '24	171	20		278	298	42,514	130	5,560	48,074	12%
	Nov '24	172	30		278	308	42,665	120	5,680	48,345	12%
	Dec '24	173	133		278	411	42,690	20	5,700	48,390	12%
	Jan '25	174	146		278	424	42,981	0	5,700	48,681	12%
	Feb '25	175	98		278	376	43,178	50	5,750	48,928	12%
	Mar '25	176	102		278	380	43,417	50	5,800	49,217	12%
	Apr '25	177	98		278	376	43,654	50	5,850	49,504	12%
	May '25	178	21		278	299	43,797	130	5,980	49,777	12%
	Jun '25	179	2		278	280	43,938	150	6,130	50,068	12%

P L A N N E D





## RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

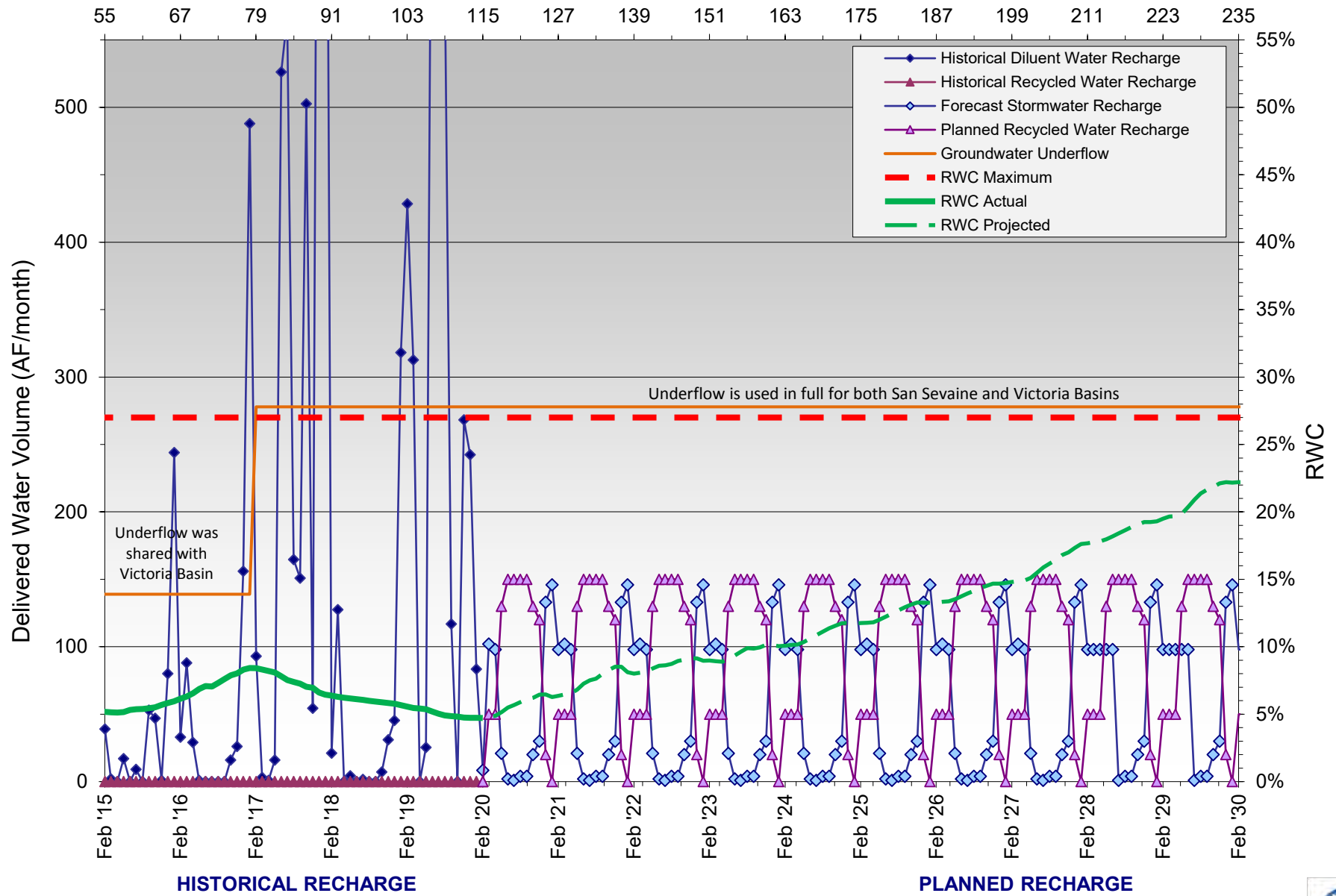
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

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
2025/26	Jul '25	180	1		278	279	44,069	150	6,280	50,349	12%
	Aug '25	181	4		278	282	44,212	150	6,430	50,642	13%
	Sep '25	182	4		278	282	44,302	150	6,580	50,882	13%
	Oct '25	183	20		278	298	44,414	130	6,710	51,124	13%
	Nov '25	184	30		278	308	44,582	120	6,830	51,412	13%
	Dec '25	185	133		278	411	44,774	20	6,850	51,624	13%
	Jan '26	186	146		278	424	44,815	0	6,850	51,665	13%
	Feb '26	187	98		278	376	45,019	50	6,900	51,919	13%
	Mar '26	188	102		278	380	45,172	50	6,950	52,122	13%
	Apr '26	189	98		278	376	45,380	50	7,000	52,380	13%
	May '26	190	21		278	299	45,539	130	7,130	52,669	14%
	Jun '26	191	2		278	280	45,680	150	7,280	52,960	14%
2026/27	Jul '26	192	1		278	279	45,820	150	7,430	53,250	14%
	Aug '26	193	4		278	282	45,963	150	7,580	53,543	14%
	Sep '26	194	4		278	282	46,106	150	7,730	53,836	14%
	Oct '26	195	20		278	298	46,249	130	7,860	54,109	15%
	Nov '26	196	30		278	308	46,391	120	7,980	54,371	15%
	Dec '26	197	133		278	411	46,507	20	8,000	54,507	15%
	Jan '27	198	146		278	424	46,304	0	8,000	54,304	15%
	Feb '27	199	98		278	376	46,309	50	8,050	54,359	15%
	Mar '27	200	102		278	380	46,408	50	8,100	54,508	15%
	Apr '27	201	98		278	376	46,505	50	8,150	54,655	15%
	May '27	202	21		278	299	46,510	130	8,280	54,790	15%
	Jun '27	203	2		278	280	45,986	150	8,430	54,416	15%
2027/28	Jul '27	204	1		278	279	45,420	150	8,580	54,000	16%
	Aug '27	205	4		278	282	45,260	150	8,730	53,990	16%
	Sep '27	206	4		278	282	45,113	150	8,880	53,993	16%
	Oct '27	207	20		278	298	44,630	130	9,010	53,640	17%
	Nov '27	208	30		278	308	44,606	120	9,130	53,736	17%
	Dec '27	209	133		278	411	43,635	20	9,150	52,785	17%
	Jan '28	210	146		278	424	42,784	0	9,150	51,934	18%
	Feb '28	211	98		278	376	42,861	50	9,200	52,061	18%
	Mar '28	212	98		278	376	42,832	50	9,250	52,082	18%
	Apr '28	213	98		278	376	42,930	50	9,300	52,230	18%
	May '28	214	98		278	376	43,023	130	9,430	52,453	18%
	Jun '28	215	98		278	376	43,121	150	9,580	52,701	18%
2028/29	Jul '28	216	1		278	279	43,121	150	9,730	52,851	18%
	Aug '28	217	4		278	282	43,125	150	9,880	53,005	19%
	Sep '28	218	4		278	282	43,129	150	10,030	53,159	19%
	Oct '28	219	20		278	298	43,141	130	10,160	53,301	19%
	Nov '28	220	30		278	308	43,140	120	10,280	53,420	19%
	Dec '28	221	133		278	411	43,228	20	10,300	53,528	19%
	Jan '29	222	146		278	424	43,056	0	10,300	53,356	19%
	Feb '29	223	98		278	376	42,725	50	10,350	53,075	20%
	Mar '29	224	98		278	376	42,511	50	10,400	52,911	20%
	Apr '29	225	98		278	376	42,609	50	10,450	53,059	20%
	May '29	226	98		278	376	42,681	130	10,580	53,261	20%
	Jun '29	227	98		278	376	41,923	150	10,730	52,653	20%
2029/30	Jul '29	228	1		278	279	41,158	150	10,880	52,038	21%
	Aug '29	229	4		278	282	40,565	150	11,030	51,595	21%
	Sep '29	230	4		278	282	40,452	150	11,180	51,632	22%
	Oct '29	231	20		278	298	40,472	130	11,310	51,782	22%
	Nov '29	232	30		278	308	40,234	120	11,430	51,664	22%
	Dec '29	233	133		278	411	40,124	20	11,450	51,574	22%
	Jan '30	234	146		278	424	40,187	0	11,450	51,637	22%
	Feb '30	235	98		278	376	40,276	50	11,500	51,776	22%
	Mar '30	236	98		278	376	40,272	50	11,500	51,772	22%
	Apr '30	237	98		278	376	40,272	50	11,500	51,772	22%
	May '30	238	98		278	376	40,349	130	11,500	51,849	22%
	Jun '30	239	98		278	376	40,445	150	11,500	51,945	22%
<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 - 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
2013/14	Jul '13	84	0	0	67	67	14,142	0	940	15,082	6%
	Aug '13	85	0	0	67	67	14,209	0	940	15,149	6%
	Sep '13	86	0	0	67	67	14,276	0	940	15,216	6%
	Oct '13	87	0	0	67	67	14,343	0	940	15,284	6%
	Nov '13	88	0	0	67	67	14,411	0	940	15,351	6%
	Dec '13	89	72	0	67	139	14,550	174	1,114	15,664	7%
	Jan '14	90	45	0	67	112	14,662	102	1,216	15,879	8%
	Feb '14	91	94	0	67	161	14,824	70	1,286	16,110	8%
	Mar '14	92	63	0	67	130	14,954	20	1,306	16,260	8%
	Apr '14	93	61	0	67	128	15,082	105	1,411	16,493	9%
	May '14	94	21	0	67	88	15,170	136	1,547	16,718	9%
	Jun '14	95	23	0	67	90	15,261	32	1,579	16,840	9%
2014/15	Jul '14	96	0	0	67	67	15,328	0	1,579	16,907	9%
	Aug '14	97	76	0	67	143	15,471	205	1,784	17,255	10%
	Sep '14	98	54	0	67	121	15,592	128	1,912	17,505	11%
	Oct '14	99	39	0	67	106	15,638	63	1,975	17,614	11%
	Nov '14	100	108	0	67	175	15,683	58	2,033	17,716	11%
	Dec '14	101	255	0	67	322	15,839	2	2,035	17,875	11%
	Jan '15	102	117	0	67	184	15,927	0	2,035	17,962	11%
	Feb '15	103	93	0	67	160	16,000	60	2,095	18,095	12%
	Mar '15	104	52	0	67	119	16,054	143	2,238	18,292	12%
	Apr '15	105	0	0	67	67	16,121	0	2,238	18,359	12%
	May '15	106	0	0	67	67	16,188	0	2,238	18,426	12%
	Jun '15	107	0	0	67	67	16,255	0	2,238	18,493	12%
2015/16	Jul '15	108	0	0	67	67	16,322	0	2,238	18,560	12%
	Aug '15	109	1	0	67	68	16,390	0	2,238	18,629	12%
	Sep '15	110	120	0	67	187	16,488	145	2,383	18,872	13%
	Oct '15	111	98	0	67	165	16,558	238	2,621	19,180	14%
	Nov '15	112	45	0	67	112	16,492	79	2,700	19,193	14%
	Dec '15	113	105	0	67	172	16,305	224	2,924	19,230	15%
	Jan '16	114	269	0	67	336	16,380	102	3,026	19,406	16%
	Feb '16	115	51	0	67	118	16,346	198	3,224	19,570	16%
	Mar '16	116	165	0	67	232	16,152	161	3,385	19,537	17%
	Apr '16	117	19	0	67	86	15,848	128	3,513	19,362	18%
	May '16	118	38	0	67	105	15,857	156	3,669	19,526	19%
	Jun '16	119	5	0	67	72	15,918	159	3,828	19,746	19%
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%

HISTORICAL



# 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
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	127		67	194	17,040	0	5,139	22,179	23%
	Apr '20	165	91		67	158	16,973	0	5,139	22,112	23%
	May '20	166	51		67	118	16,986	0	5,139	22,125	23%
2020/21	Jun '20	167	18		67	85	17,004	0	5,139	22,143	23%
	Jul '20	168	12		67	79	16,993	0	5,139	22,132	23%
	Aug '20	169	20		67	87	16,960	0	5,131	22,091	23%
	Sep '20	170	40		67	107	16,943	0	5,131	22,074	23%
	Oct '20	171	47		67	114	16,900	0	5,131	22,031	23%
	Nov '20	172	74		67	141	16,809	0	5,131	21,940	23%
	Dec '20	173	197		67	264	16,641	0	5,131	21,772	24%
	Jan '21	174	149		67	216	16,600	0	5,131	21,731	24%
	Feb '21	175	164		67	231	16,531	0	5,131	21,662	24%
	Mar '21	176	127		67	194	16,394	0	5,131	21,525	24%
	Apr '21	177	91		67	158	16,152	0	5,131	21,283	24%
	May '21	178	51		67	118	16,022	0	5,131	21,153	24%
	Jun '21	179	18		67	85	15,950	0	5,131	21,081	24%
2021/22	Jul '21	180	12		67	79	15,946	0	5,131	21,077	24%
	Aug '21	181	20		67	87	15,944	0	5,131	21,075	24%
	Sep '21	182	40		67	107	15,982	0	5,131	21,113	24%
	Oct '21	183	47		67	114	16,029	0	5,131	21,160	24%
	Nov '21	184	74		67	141	16,022	0	5,090	21,112	24%
	Dec '21	185	197		67	264	16,131	0	5,030	21,161	24%
	Jan '22	186	149		67	216	16,134	0	5,001	21,135	24%
	Feb '22	187	164		67	231	16,077	0	5,001	21,078	24%
	Mar '22	188	127		67	194	15,909	0	5,001	20,910	24%
	Apr '22	189	91		67	158	15,742	0	5,001	20,743	24%
	May '22	190	51		67	118	15,779	0	5,001	20,780	24%
	Jun '22	191	18		67	85	15,777	0	5,001	20,778	24%
2022/23	Jul '22	192	12		67	79	15,706	0	5,001	20,707	24%
	Aug '22	193	20		67	87	15,690	0	5,001	20,691	24%
	Sep '22	194	40		67	107	15,699	0	5,001	20,700	24%
	Oct '22	195	47		67	114	15,685	0	5,001	20,686	24%
	Nov '22	196	74		67	141	15,698	0	5,001	20,699	24%
	Dec '22	197	197		67	264	15,605	0	5,001	20,606	24%
	Jan '23	198	149		67	216	15,605	0	5,001	20,606	24%
	Feb '23	199	164		67	231	15,653	0	4,975	20,628	24%
	Mar '23	200	127		67	194	15,732	0	4,954	20,686	24%
	Apr '23	201	91		67	158	15,823	0	4,954	20,777	24%
	May '23	202	51		67	118	15,874	0	4,954	20,828	24%
	Jun '23	203	18		67	85	15,892	0	4,954	20,846	24%
2023/24	Jul '23	204	12		67	79	15,904	50	5,004	20,908	24%
	Aug '23	205	20		67	87	15,924	30	5,034	20,958	24%
	Sep '23	206	40		67	107	15,964	10	5,044	21,008	24%
	Oct '23	207	47		67	114	16,011	0	5,044	21,055	24%
	Nov '23	208	74		67	141	16,085	0	5,044	21,129	24%
	Dec '23	209	197		67	264	16,210	100	4,970	21,180	23%
	Jan '24	210	149		67	216	16,314	100	4,968	21,282	23%
	Feb '24	211	164		67	231	16,384	100	4,998	21,382	23%
	Mar '24	212	127		67	194	16,448	100	5,078	21,526	24%
	Apr '24	213	91		67	158	16,478	100	5,073	21,551	24%
	May '24	214	51		67	118	16,508	100	5,037	21,545	23%
	Jun '24	215	18		67	85	16,503	90	5,095	21,598	24%
2024/25	Jul '24	216	12		67	79	16,515	50	5,145	21,660	24%
	Aug '24	217	20		67	87	16,459	30	4,970	21,429	23%
	Sep '24	218	40		67	107	16,445	10	4,852	21,297	23%
	Oct '24	219	47		67	114	16,453	0	4,789	21,242	23%
	Nov '24	220	74		67	141	16,419	0	4,731	21,150	22%
	Dec '24	221	197		67	264	16,361	100	4,829	21,190	23%
	Jan '25	222	149		67	216	16,393	100	4,929	21,322	23%
	Feb '25	223	164		67	231	16,464	100	4,969	21,433	23%
	Mar '25	224	127		67	194	16,539	100	4,926	21,465	23%
	Apr '25	225	91		67	158	16,630	100	5,026	21,656	23%
	May '25	226	51		67	118	16,681	100	5,126	21,807	24%
	Jun '25	227	18		67	85	16,699	90	5,216	21,915	24%

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
2025/26	Jul '25	228	12		67	79	16,711	50	5,266	21,977	24%
	Aug '25	229	20		67	87	16,730	30	5,296	22,026	24%
	Sep '25	230	40		67	107	16,650	10	5,161	21,811	24%
	Oct '25	231	47		67	114	16,599	0	4,923	21,522	23%
	Nov '25	232	74		67	141	16,628	0	4,844	21,472	23%
	Dec '25	233	197		67	264	16,720	100	4,720	21,440	22%
	Jan '26	234	149		67	216	16,600	100	4,718	21,318	22%
	Feb '26	235	164		67	231	16,713	100	4,620	21,333	22%
	Mar '26	236	127		67	194	16,675	100	4,559	21,234	21%
	Apr '26	237	91		67	158	16,747	100	4,531	21,278	21%
	May '26	238	51		67	118	16,760	100	4,475	21,235	21%
	Jun '26	239	18		67	85	16,773	90	4,406	21,179	21%
2026/27	Jul '26	240	12		67	79	16,781	50	4,367	21,148	21%
	Aug '26	241	20		67	87	16,779	30	4,345	21,124	21%
	Sep '26	242	40		67	107	16,801	10	4,315	21,116	20%
	Oct '26	243	47		67	114	16,810	0	4,211	21,021	20%
	Nov '26	244	74		67	141	16,800	0	4,199	20,999	20%
	Dec '26	245	197		67	264	16,758	100	4,228	20,986	20%
	Jan '27	246	149		67	216	16,674	100	4,328	21,002	21%
	Feb '27	247	164		67	231	16,708	100	4,362	21,070	21%
	Mar '27	248	127		67	194	16,821	100	4,323	21,144	20%
	Apr '27	249	91		67	158	16,903	100	4,313	21,216	20%
	May '27	250	51		67	118	16,948	100	4,357	21,305	20%
	Jun '27	251	18		67	85	16,963	90	4,357	21,320	20%
2027/28	Jul '27	252	12		67	79	16,972	50	4,251	21,223	20%
	Aug '27	253	20		67	87	16,989	30	4,238	21,227	20%
	Sep '27	254	40		67	107	17,027	10	4,178	21,205	20%
	Oct '27	255	47		67	114	17,071	0	3,944	21,015	19%
	Nov '27	256	74		67	141	17,142	0	3,797	20,939	18%
	Dec '27	257	197		67	264	17,338	100	3,741	21,080	18%
	Jan '28	258	149		67	216	17,450	100	3,815	21,265	18%
	Feb '28	259	164		67	231	17,595	100	3,915	21,510	18%
	Mar '28	260	127		67	194	17,514	100	4,000	21,514	19%
	Apr '28	261	91		67	158	17,599	100	4,067	21,666	19%
	May '28	262	51		67	118	17,645	100	4,167	21,812	19%
	Jun '28	263	18		67	85	17,661	90	4,174	21,834	19%
2028/29	Jul '28	264	12		67	79	17,670	80	4,186	21,855	19%
	Aug '28	265	20		67	87	17,686	70	4,162	21,849	19%
	Sep '28	266	40		67	107	17,720	50	4,192	21,911	19%
	Oct '28	267	47		67	114	17,752	40	4,232	21,984	19%
	Nov '28	268	74		67	141	17,767	20	4,252	22,019	19%
	Dec '28	269	197		67	264	17,910	0	4,252	22,161	19%
	Jan '29	270	149		67	216	17,879	0	4,252	22,131	19%
	Feb '29	271	164		67	231	17,854	0	4,252	22,105	19%
	Mar '29	272	127		67	194	17,867	0	4,252	22,118	19%
	Apr '29	273	91		67	158	17,945	0	4,252	22,197	19%
	May '29	274	51		67	118	17,863	40	4,292	22,154	19%
	Jun '29	275	18		67	85	17,878	70	4,362	22,239	20%
2029/30	Jul '29	276	12		67	79	17,885	80	4,442	22,327	20%
	Aug '29	277	20		67	87	17,900	70	4,436	22,337	20%
	Sep '29	278	40		67	107	17,936	50	4,470	22,406	20%
	Oct '29	279	47		67	114	17,978	40	4,510	22,488	20%
	Nov '29	280	74		67	141	17,960	20	4,530	22,490	20%
	Dec '29	281	197		67	264	17,898	0	4,530	22,428	20%
	Jan '30	282	149		67	216	18,030	0	4,530	22,560	20%
	Feb '30	283	164		67	231	17,973	0	4,530	22,503	20%
	Mar '30	284	127		67	194	17,973	0	4,530	22,503	20%
	Apr '30	285	91		67	158	17,973	0	4,530	22,503	20%
	May '30	286	51		67	118	17,973	40	4,570	22,543	20%
	Jun '30	287	18		67	85	17,973	70	4,640	22,613	21%
<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											

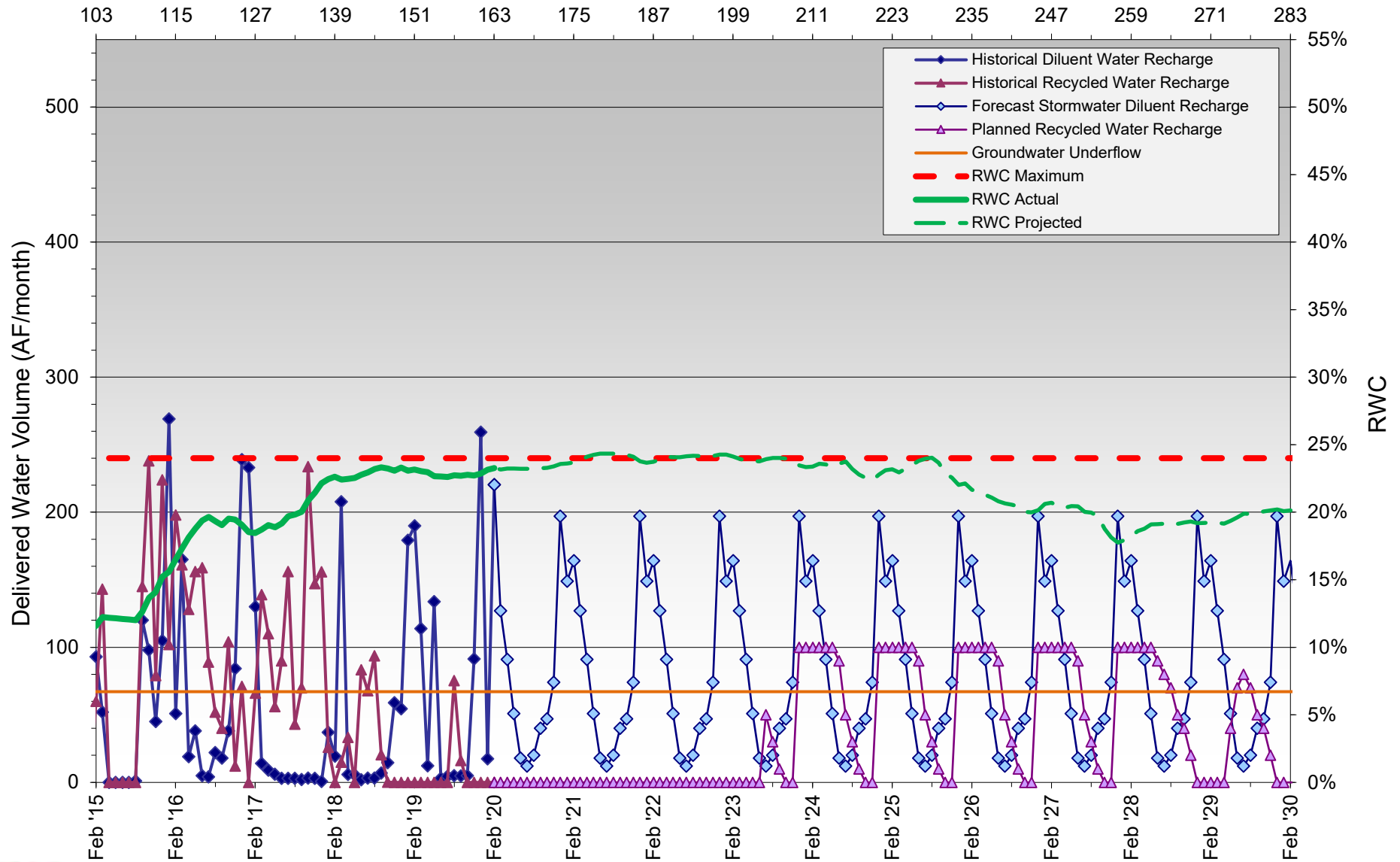
P L A N N E D





## 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

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
2013/14	Jul '13	84	0	0	60	60	8,086	0	2,123	10,208	21%
	Aug '13	85	0	0	60	60	8,146	0	2,123	10,268	21%
	Sep '13	86	24	0	60	84	8,229	107	2,230	10,459	21%
	Oct '13	87	20	0	60	80	8,309	117	2,347	10,656	22%
	Nov '13	88	17	0	60	77	8,386	89	2,436	10,821	23%
	Dec '13	89	5	0	60	65	8,451	85	2,521	10,971	23%
	Jan '14	90	16	0	60	76	8,526	139	2,660	11,186	24%
	Feb '14	91	62	0	60	122	8,648	120	2,780	11,428	24%
	Mar '14	92	50	0	60	110	8,758	47	2,827	11,584	24%
	Apr '14	93	0	0	60	60	8,817	0	2,827	11,644	24%
	May '14	94	23	0	60	83	8,900	168	2,995	11,895	25%
	Jun '14	95	12	0	60	72	8,972	54	3,049	12,021	25%
2014/15	Jul '14	96	11	0	60	71	9,043	0	3,049	12,091	25%
	Aug '14	97	0	0	60	60	9,102	0	3,049	12,151	25%
	Sep '14	98	0	0	60	60	9,162	0	3,049	12,211	25%
	Oct '14	99	0	0	60	60	9,101	0	3,049	12,150	25%
	Nov '14	100	0	0	60	60	9,033	0	3,049	12,081	25%
	Dec '14	101	348	0	60	408	9,223	0	3,049	12,271	25%
	Jan '15	102	4	0	60	64	9,029	0	3,049	12,078	25%
	Feb '15	103	65	0	60	125	8,922	53	3,102	12,023	26%
	Mar '15	104	71	0	60	131	8,878	155	3,257	12,135	27%
	Apr '15	105	39	0	60	99	8,977	0	3,257	12,233	27%
	May '15	106	0	0	60	60	9,036	0	3,257	12,293	26%
	Jun '15	107	2	0	60	62	9,098	81	3,338	12,435	27%
2015/16	Jul '15	108	87	0	60	147	9,245	85	3,423	12,667	27%
	Aug '15	109	15	0	60	75	9,319	163	3,586	12,905	28%
	Sep '15	110	74	0	60	134	9,453	51	3,637	13,090	28%
	Oct '15	111	64	0	60	124	9,577	65	3,702	13,278	28%
	Nov '15	112	44	0	60	104	9,681	3	3,705	13,385	28%
	Dec '15	113	144	0	60	204	9,760	1	3,706	13,466	28%
	Jan '16	114	82	0	60	142	9,827	0	3,706	13,533	27%
	Feb '16	115	41	0	60	101	9,857	0	3,706	13,563	27%
	Mar '16	116	47	0	60	107	9,792	0	3,706	13,498	27%
	Apr '16	117	49	0	60	109	9,641	0	3,706	13,346	28%
	May '16	118	33	0	60	93	9,661	0	3,706	13,367	28%
	Jun '16	119	20	0	60	80	9,654	0	3,706	13,360	28%
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%

HISTORICAL



# 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
2019/2020	Jul '19	156	0	0	60	60	13,478	0	4,332	17,810	24%	P L A N N E D
	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	19	0	60	79	13,554	0	4,242	17,796	24%	
Feb '20	163	32	0	60	92	13,411	0	4,242	17,653	24%		
	Mar '20	164	68		60	128	13,365	50	4,248	17,613	24%	
	Apr '20	165	37		60	97	13,319	80	4,313	17,632	24%	
	May '20	166	20		60	80	13,312	100	4,343	17,655	25%	
	Jun '20	167	17		60	77	13,254	100	4,403	17,657	25%	
2020/21	Jul '20	168	18		60	78	13,177	100	4,497	17,674	25%	
	Aug '20	169	13		60	73	13,106	110	4,585	17,691	26%	
	Sep '20	170	18		60	78	13,070	100	4,668	17,738	26%	
	Oct '20	171	27		60	87	13,042	90	4,758	17,800	27%	
	Nov '20	172	40		60	100	13,043	80	4,838	17,881	27%	
	Dec '20	173	107		60	167	12,989	10	4,848	17,837	27%	
	Jan '21	174	89		60	149	13,077	30	4,878	17,955	27%	
	Feb '21	175	86		60	146	13,113	30	4,908	18,021	27%	
	Mar '21	176	68		60	128	13,132	50	4,958	18,090	27%	
	Apr '21	177	37		60	97	13,169	80	5,038	18,207	28%	
	May '21	178	20		60	80	13,189	100	5,138	18,327	28%	
	Jun '21	179	17		60	77	13,206	100	5,238	18,444	28%	
2021/22	Jul '21	180	18		60	78	13,224	100	5,338	18,562	29%	
	Aug '21	181	13		60	73	13,180	110	5,441	18,621	29%	
	Sep '21	182	18		60	78	13,012	100	5,355	18,367	29%	
	Oct '21	183	27		60	87	12,976	90	5,222	18,198	29%	
	Nov '21	184	40		60	100	12,950	80	5,206	18,156	29%	
	Dec '21	185	107		60	167	12,988	10	5,164	18,152	28%	
	Jan '22	186	89		60	149	12,991	30	5,122	18,113	28%	
	Feb '22	187	86		60	146	12,968	30	5,055	18,023	28%	
	Mar '22	188	68		60	128	12,910	50	5,070	17,980	28%	
	Apr '22	189	37		60	97	12,859	80	5,135	17,994	29%	
	May '22	190	20		60	80	12,839	100	5,179	18,018	29%	
	Jun '22	191	17		60	77	12,831	100	5,214	18,045	29%	
2022/23	Jul '22	192	18		60	78	12,824	100	5,263	18,087	29%	
	Aug '22	193	13		60	73	12,801	110	5,338	18,139	29%	
	Sep '22	194	18		60	78	12,788	100	5,414	18,202	30%	
	Oct '22	195	27		60	87	12,793	90	5,495	18,288	30%	
	Nov '22	196	40		60	100	12,803	80	5,570	18,373	30%	
	Dec '22	197	107		60	167	12,863	10	5,575	18,438	30%	
	Jan '23	198	89		60	149	12,937	30	5,605	18,542	30%	
	Feb '23	199	86		60	146	12,998	30	5,635	18,633	30%	
	Mar '23	200	68		60	128	13,052	50	5,685	18,737	30%	
	Apr '23	201	37		60	97	13,089	80	5,765	18,854	31%	
	May '23	202	20		60	80	13,109	100	5,865	18,974	31%	
	Jun '23	203	17		60	77	13,126	100	5,965	19,091	31%	
2023/24	Jul '23	204	18		60	78	13,144	100	6,065	19,209	32%	
	Aug '23	205	13		60	73	13,157	110	6,175	19,332	32%	
	Sep '23	206	18		60	78	13,151	100	6,168	19,319	32%	
	Oct '23	207	27		60	87	13,158	90	6,141	19,299	32%	
	Nov '23	208	40		60	100	13,181	80	6,132	19,313	32%	
	Dec '23	209	107		60	167	13,283	10	6,057	19,340	31%	
	Jan '24	210	89		60	149	13,356	30	5,948	19,304	31%	
	Feb '24	211	86		60	146	13,380	30	5,858	19,238	30%	
	Mar '24	212	68		60	128	13,398	50	5,861	19,259	30%	
	Apr '24	213	37		60	97	13,435	80	5,941	19,376	31%	
	May '24	214	20		60	80	13,432	100	5,873	19,305	30%	
	Jun '24	215	17		60	77	13,437	100	5,919	19,356	31%	
2024/25	Jul '24	216	18		60	78	13,444	100	6,019	19,463	31%	
	Aug '24	217	13		60	73	13,457	110	6,129	19,586	31%	
	Sep '24	218	18		60	78	13,475	100	6,229	19,704	32%	
	Oct '24	219	27		60	87	13,502	90	6,319	19,821	32%	
	Nov '24	220	40		60	100	13,542	80	6,399	19,941	32%	
	Dec '24	221	107		60	167	13,301	10	6,409	19,710	33%	
	Jan '25	222	89		60	149	13,386	30	6,439	19,825	32%	
	Feb '25	223	86		60	146	13,407	30	6,416	19,823	32%	
	Mar '25	224	68		60	128	13,404	50	6,311	19,715	32%	
	Apr '25	225	37		60	97	13,402	80	6,391	19,793	32%	
	May '25	226	20		60	80	13,422	100	6,491	19,913	33%	
	Jun '25	227	17		60	77	13,437	100	6,510	19,947	33%	

P L A N N E D



# RWC Management Plan for Turner Basin Cells 3 & 4

(120-month averaging period)

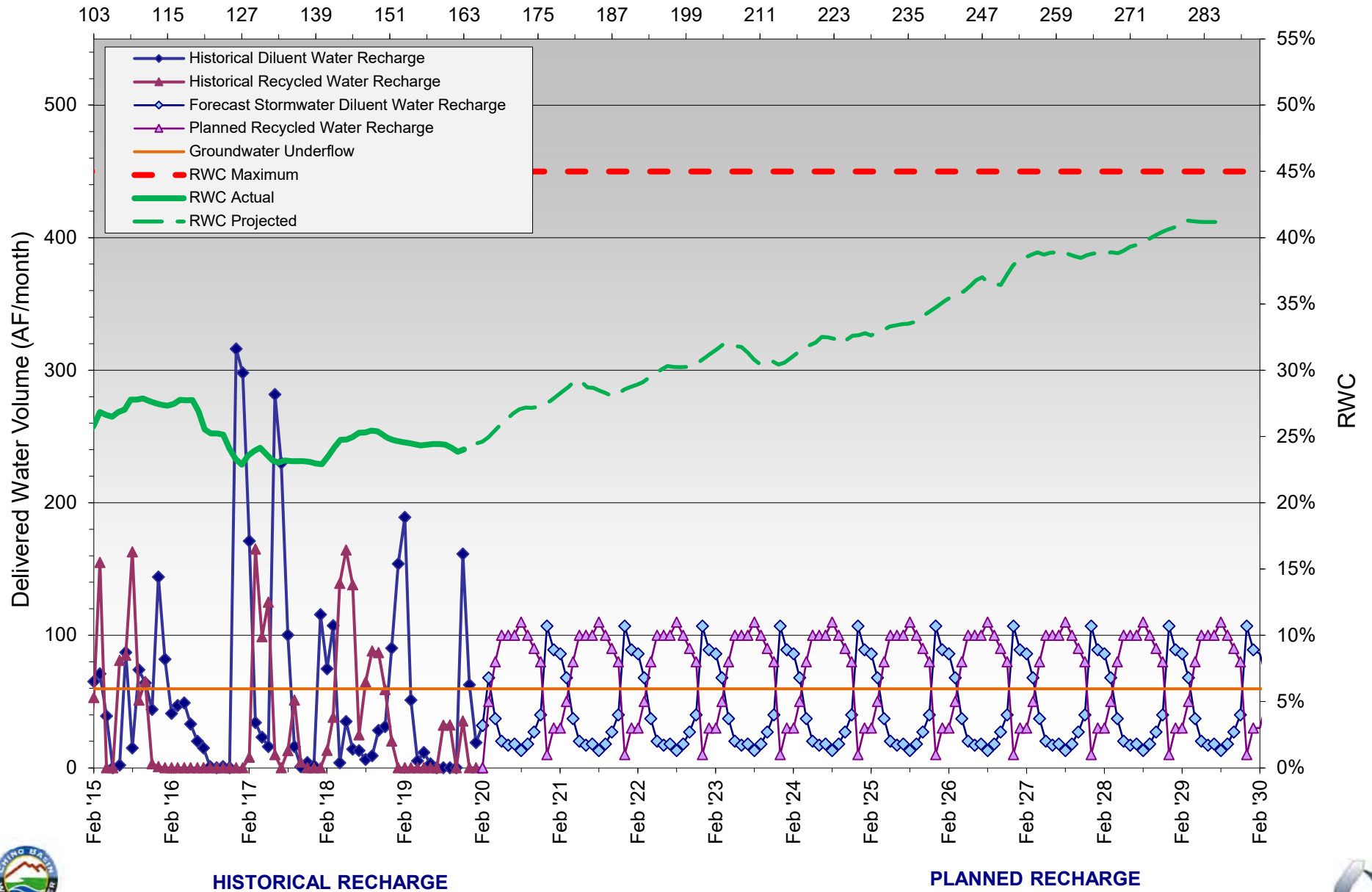
Calculation of Recycled Water Contribution (RWC) from Historical Diluent Water (DW) and Recycled Water (RW) Deliveries

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
2025/26	Jul '25	228	18		60	78	13,368	100	6,525	19,893	33%	P L A N N E D
	Aug '25	229	13		60	73	13,366	110	6,472	19,838	33%	
	Sep '25	230	18		60	78	13,310	100	6,521	19,831	33%	
	Oct '25	231	27		60	87	13,273	90	6,546	19,819	33%	
	Nov '25	232	40		60	100	13,269	80	6,623	19,892	33%	
	Dec '25	233	107		60	167	13,232	10	6,632	19,864	33%	
	Jan '26	234	89		60	149	13,239	30	6,662	19,901	33%	
	Feb '26	235	86		60	146	13,284	30	6,692	19,976	33%	
	Mar '26	236	68		60	128	13,305	50	6,742	20,047	34%	
	Apr '26	237	37		60	97	13,293	80	6,822	20,115	34%	
	May '26	238	20		60	80	13,280	100	6,922	20,202	34%	
	Jun '26	239	17		60	77	13,277	100	7,022	20,299	35%	
2026/27	Jul '26	240	18		60	78	13,280	100	7,122	20,402	35%	
	Aug '26	241	13		60	73	13,292	110	7,232	20,524	35%	
	Sep '26	242	18		60	78	13,310	100	7,332	20,642	36%	
	Oct '26	243	27		60	87	13,336	90	7,422	20,758	36%	
	Nov '26	244	40		60	100	13,376	80	7,502	20,878	36%	
	Dec '26	245	107		60	167	13,167	10	7,512	20,679	36%	
	Jan '27	246	89		60	149	12,958	30	7,542	20,500	37%	
	Feb '27	247	86		60	146	12,873	30	7,564	20,437	37%	
	Mar '27	248	68		60	128	12,907	50	7,449	20,356	37%	
	Apr '27	249	37		60	97	12,921	80	7,430	20,351	37%	
	May '27	250	20		60	80	12,925	100	7,405	20,330	36%	
	Jun '27	251	17		60	77	12,661	100	7,495	20,156	37%	
2027/28	Jul '27	252	18		60	78	12,449	100	7,595	20,044	38%	
	Aug '27	253	13		60	73	12,362	110	7,692	20,054	38%	
	Sep '27	254	18		60	78	12,364	100	7,741	20,105	39%	
	Oct '27	255	27		60	87	12,390	90	7,827	20,217	39%	
	Nov '27	256	40		60	100	12,426	80	7,907	20,333	39%	
	Dec '27	257	107		60	167	12,531	10	7,917	20,448	39%	
	Jan '28	258	89		60	149	12,505	30	7,947	20,451	39%	
	Feb '28	259	86		60	146	12,516	30	7,964	20,480	39%	
	Mar '28	260	68		60	128	12,477	50	7,975	20,452	39%	
	Apr '28	261	37		60	97	12,510	80	7,916	20,426	39%	
	May '28	262	20		60	80	12,495	100	7,852	20,347	39%	
	Jun '28	263	17		60	77	12,498	100	7,814	20,312	38%	
2028/29	Jul '28	264	18		60	78	12,503	100	7,889	20,392	39%	
	Aug '28	265	13		60	73	12,510	110	7,934	20,444	39%	
	Sep '28	266	18		60	78	12,519	100	7,946	20,465	39%	
	Oct '28	267	27		60	87	12,518	90	7,949	20,467	39%	
	Nov '28	268	40		60	100	12,527	80	7,970	20,497	39%	
	Dec '28	269	107		60	167	12,543	10	7,960	20,503	39%	
	Jan '29	270	89		60	149	12,478	30	7,990	20,468	39%	
	Feb '29	271	86		60	146	12,375	30	8,020	20,395	39%	
	Mar '29	272	68		60	128	12,392	50	8,070	20,462	39%	
	Apr '29	273	37		60	97	12,424	80	8,150	20,574	40%	
	May '29	274	20		60	80	12,433	100	8,250	20,682	40%	
	Jun '29	275	17		60	77	12,447	100	8,350	20,796	40%	
2029/30	Jul '29	276	18		60	78	12,465	100	8,450	20,914	40%	
	Aug '29	277	13		60	73	12,478	110	8,528	21,005	41%	
	Sep '29	278	18		60	78	12,496	100	8,595	21,091	41%	
	Oct '29	279	27		60	87	12,523	90	8,685	21,208	41%	
	Nov '29	280	40		60	100	12,401	80	8,730	21,131	41%	
	Dec '29	281	107		60	167	12,446	10	8,740	21,186	41%	
	Jan '30	282	89		60	149	12,516	30	8,770	21,286	41%	
	Feb '30	283	86		60	146	12,570	30	8,800	21,370	41%	
	Mar '30	284	68		60	128	12,570	50	8,800	21,370	41%	
	Apr '30	285	37		60	97	12,570	80	8,800	21,370	41%	
	May '30	286	20		60	80	12,570	100	8,800	21,370	41%	
	Jun '30	287	17		60	77	12,570	100	8,800	21,370	41%	
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





# 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
2013/14	Jul '13	34	2	0	139	141	7,718	74	2,354	10,072	23%
	Aug '13	35	2	0	139	141	7,858	42	2,396	10,254	23%
	Sep '13	36	2	0	139	141	7,999	46	2,442	10,441	23%
	Oct '13	37	7	0	139	146	8,145	0	2,442	10,587	23%
	Nov '13	38	12	0	139	151	8,296	0	2,442	10,738	23%
	Dec '13	39	10	0	139	149	8,445	118	2,560	11,005	23%
	Jan '14	40	2	0	139	141	8,586	158	2,718	11,304	24%
	Feb '14	41	37	0	139	176	8,762	191	2,909	11,671	25%
	Mar '14	42	99	0	139	238	9,000	142	3,051	12,051	25%
	Apr '14	43	15	0	139	154	9,154	250	3,301	12,455	27%
	May '14	44	2	0	139	141	9,295	214	3,515	12,810	27%
	Jun '14	45	2	0	139	141	9,436	144	3,659	13,095	28%
2014/15	Jul '14	46	2	0	139	141	9,577	91	3,750	13,327	28%
	Aug '14	47	5	0	139	144	9,721	107	3,857	13,578	28%
	Sep '14	48	2	0	139	141	9,862	155	4,012	13,874	29%
	Oct '14	49	3	0	139	142	10,004	75	4,087	14,091	29%
	Nov '14	50	57	0	139	196	10,200	4	4,091	14,291	29%
	Dec '14	51	153	0	139	292	10,492	0	4,091	14,583	28%
	Jan '15	52	18	0	139	157	10,649	63	4,154	14,803	28%
	Feb '15	53	40	0	139	179	10,828	57	4,211	15,039	28%
	Mar '15	54	12	0	139	151	10,979	79	4,290	15,269	28%
	Apr '15	55	0	0	139	139	11,059	127	4,417	15,476	29%
	May '15	56	13	0	139	152	11,184	141	4,558	15,742	29%
	Jun '15	57	1	0	139	140	11,312	32	4,590	15,902	29%
2015/16	Jul '15	58	4	0	139	143	11,455	139	4,729	16,184	29%
	Aug '15	59	1	0	139	140	11,595	165	4,894	16,489	30%
	Sep '15	60	37	0	139	176	11,771	136	5,030	16,801	30%
	Oct '15	61	35	0	139	174	11,896	101	5,131	17,027	30%
	Nov '15	62	0	0	139	139	12,035	34	5,165	17,200	30%
	Dec '15	63	86	0	139	225	12,251	60	5,225	17,476	30%
	Jan '16	64	87	0	139	226	12,451	0	5,225	17,676	30%
	Feb '16	65	10	0	139	149	12,557	0	5,225	17,782	29%
	Mar '16	66	79	0	139	218	12,665	0	5,225	17,890	29%
	Apr '16	67	1	0	139	140	12,747	0	5,225	17,972	29%
	May '16	68	2	0	139	141	12,859	0	5,225	18,084	29%
	Jun '16	69	3	0	139	142	12,989	0	5,225	18,214	29%
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%

HISTORICAL



# 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
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	47		278	325	27,046	210	10,360	37,406	28%
	Apr '20	115	20		278	298	27,324	240	10,600	37,924	28%
	May '20	116	14		278	292	27,616	240	10,840	38,456	28%
2020/21	Jun '20	117	3		278	281	27,896	250	11,090	38,986	28%
	Jul '20	118	2		278	280	28,173	250	11,340	39,513	29%
	Aug '20	119	2		278	280	28,451	250	11,590	40,041	29%
	Sep '20	120	4		278	282	28,731	250	11,773	40,504	29%
	Oct '20	121	17		278	295	28,872	240	11,860	40,732	29%
	Nov '20	122	24		278	302	29,001	230	11,973	40,974	29%
	Dec '20	123	80		278	358	28,978	180	12,111	41,089	29%
	Jan '21	124	80		278	358	29,179	180	12,205	41,384	29%
	Feb '21	125	71		278	349	29,317	180	12,318	41,635	30%
	Mar '21	126	47		278	325	29,444	210	12,489	41,933	30%
	Apr '21	127	20		278	298	29,598	240	12,729	42,327	30%
	May '21	128	14		278	292	29,677	240	12,828	42,505	30%
	Jun '21	129	3		278	281	29,816	250	13,017	42,833	30%
	Jul '21	130	2		278	280	29,953	250	13,205	43,158	31%
	Aug '21	131	2		278	280	29,970	250	13,403	43,373	31%
	Sep '21	132	4		278	282	29,955	250	13,653	43,608	31%
	Oct '21	133	17		278	295	30,081	240	13,893	43,974	32%
2021/22	Nov '21	134	24		278	302	30,219	230	14,108	44,327	32%
	Dec '21	135	80		278	358	30,429	180	14,263	44,692	32%
	Jan '22	136	80		278	358	30,637	180	14,443	45,080	32%
	Feb '22	137	71		278	349	30,843	180	14,623	45,466	32%
	Mar '22	138	47		278	325	31,011	210	14,833	45,844	32%
	Apr '22	139	20		278	298	31,074	240	15,055	46,129	33%
	May '22	140	14		278	292	31,207	240	15,024	46,231	32%
	Jun '22	141	3		278	281	31,346	250	15,052	46,398	32%
	Jul '22	142	2		278	280	31,484	250	15,208	46,692	33%
	Aug '22	143	2		278	280	31,620	250	15,340	46,960	33%
	Sep '22	144	4		278	282	31,762	250	15,535	47,297	33%
	Oct '22	145	17		278	295	31,917	240	15,644	47,561	33%
	Nov '22	146	24		278	302	32,075	230	15,803	47,877	33%
	Dec '22	147	80		278	358	32,275	180	15,962	48,236	33%
	Jan '23	148	80		278	358	32,459	180	16,130	48,589	33%
	Feb '23	149	71		278	349	32,659	180	16,300	48,959	33%
	Mar '23	150	47		278	325	32,838	210	16,453	49,291	33%
2022/23	Apr '23	151	20		278	298	32,996	240	16,595	49,591	33%
	May '23	152	14		278	292	33,144	240	16,742	49,886	34%
	Jun '23	153	3		278	281	33,285	250	16,910	50,195	34%
	Jul '23	154	2		278	280	33,424	250	17,086	50,510	34%
	Aug '23	155	2		278	280	33,563	250	17,294	50,857	34%
	Sep '23	156	4		278	282	33,704	250	17,498	51,202	34%
	Oct '23	157	17		278	295	33,853	240	17,738	51,591	34%
	Nov '23	158	24		278	302	34,004	230	17,968	51,972	35%
	Dec '23	159	80		278	358	34,213	180	18,030	52,243	35%
	Jan '24	160	80		278	358	34,430	180	18,052	52,482	34%
	Feb '24	161	71		278	349	34,603	180	18,041	52,644	34%
	Mar '24	162	47		278	325	34,690	210	18,109	52,799	34%
	Apr '24	163	20		278	298	34,834	240	18,099	52,933	34%
	May '24	164	14		278	292	34,985	240	18,125	53,110	34%
	Jun '24	165	3		278	281	35,125	250	18,231	53,356	34%
	Jul '24	166	2		278	280	35,264	250	18,390	53,654	34%
	Aug '24	167	2		278	280	35,401	250	18,533	53,933	34%
2024/25	Sep '24	168	4		278	282	35,542	250	18,628	54,169	34%
	Oct '24	169	17		278	295	35,695	240	18,793	54,488	34%
	Nov '24	170	24		278	302	35,801	230	19,019	54,820	35%
	Dec '24	171	80		278	358	35,867	180	19,199	55,066	35%
	Jan '25	172	80		278	358	36,068	180	19,316	55,384	35%
	Feb '25	173	71		278	349	36,238	180	19,439	55,677	35%
	Mar '25	174	47		278	325	36,412	210	19,570	55,982	35%
	Apr '25	175	20		278	298	36,571	240	19,683	56,254	35%
	May '25	176	14		278	292	36,711	240	19,782	56,493	35%
	Jun '25	177	3		278	281	36,852	250	20,000	56,852	35%



## 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
2025/26	Jul '25	178	2		278	280	36,989	250	20,111	57,100	35%
	Aug '25	179	2		278	280	37,129	250	20,196	57,325	35%
	Sep '25	180	4		278	282	37,235	250	20,310	57,545	35%
	Oct '25	181	17		278	295	37,356	240	20,449	57,805	35%
	Nov '25	182	24		278	302	37,519	230	20,645	58,164	35%
	Dec '25	183	80		278	358	37,652	180	20,765	58,417	36%
	Jan '26	184	80		278	358	37,784	180	20,945	58,729	36%
	Feb '26	185	71		278	349	37,984	180	21,125	59,109	36%
	Mar '26	186	47		278	325	38,091	210	21,335	59,426	36%
	Apr '26	187	20		278	298	38,250	240	21,575	59,824	36%
	May '26	188	14		278	292	38,401	240	21,815	60,215	36%
	Jun '26	189	3		278	281	38,540	250	22,065	60,605	36%
2026/27	Jul '26	190	2		278	280	38,681	250	22,315	60,996	37%
	Aug '26	191	2		278	280	38,822	250	22,565	61,387	37%
	Sep '26	192	4		278	282	38,965	250	22,762	61,727	37%
	Oct '26	193	17		278	295	39,111	240	22,860	61,971	37%
	Nov '26	194	24		278	302	39,243	230	22,872	62,115	37%
	Dec '26	195	80		278	358	39,277	180	22,946	62,223	37%
	Jan '27	196	80		278	358	39,030	180	23,126	62,156	37%
	Feb '27	197	71		278	349	39,036	180	23,253	62,289	37%
	Mar '27	198	47		278	325	39,065	210	23,244	62,309	37%
	Apr '27	199	20		278	298	39,085	240	23,167	62,252	37%
	May '27	200	14		278	292	39,086	240	23,095	62,181	37%
	Jun '27	201	3		278	281	38,968	250	23,144	62,112	37%
2027/28	Jul '27	202	2		278	280	38,735	250	23,254	61,988	38%
	Aug '27	203	2		278	280	38,712	250	23,265	61,977	38%
	Sep '27	204	4		278	282	38,586	250	23,348	61,934	38%
	Oct '27	205	17		278	295	38,454	240	23,544	61,998	38%
	Nov '27	206	24		278	302	38,478	230	23,734	62,212	38%
	Dec '27	207	80		278	358	38,554	180	23,815	62,369	38%
	Jan '28	208	80		278	358	38,541	180	23,989	62,530	38%
	Feb '28	209	71		278	349	38,604	180	24,136	62,739	38%
	Mar '28	210	47		278	325	38,642	210	24,321	62,963	39%
	Apr '28	211	20		278	298	38,622	240	24,561	63,183	39%
	May '28	212	14		278	292	38,633	240	24,801	63,434	39%
	Jun '28	213	3		278	281	38,636	250	25,051	63,687	39%
2028/29	Jul '28	214	2		278	280	38,638	250	25,141	63,780	39%
	Aug '28	215	2		278	280	38,640	250	25,201	63,841	39%
	Sep '28	216	4		278	282	38,644	250	25,291	63,936	40%
	Oct '28	217	17		278	295	38,618	240	25,427	64,044	40%
	Nov '28	218	24		278	302	38,609	230	25,574	64,183	40%
	Dec '28	219	80		278	358	38,643	180	25,655	64,299	40%
	Jan '29	220	80		278	358	38,472	180	25,745	64,216	40%
	Feb '29	221	71		278	349	38,170	180	25,916	64,086	40%
	Mar '29	222	47		278	325	37,994	210	26,050	64,043	41%
	Apr '29	223	20		278	298	38,013	240	25,992	64,005	41%
	May '29	224	14		278	292	37,981	240	25,981	63,962	41%
	Jun '29	225	3		278	281	37,984	250	25,912	63,896	41%
2029/30	Jul '29	226	2		278	280	37,986	250	26,002	63,988	41%
	Aug '29	227	2		278	280	37,644	250	26,110	63,754	41%
	Sep '29	228	4		278	282	37,147	250	26,311	63,458	41%
	Oct '29	229	17		278	295	36,987	240	26,434	63,421	42%
	Nov '29	230	24		278	302	36,886	230	26,590	63,475	42%
	Dec '29	231	80		278	358	36,849	180	26,743	63,592	42%
	Jan '30	232	80		278	358	36,929	180	26,888	63,817	42%
	Feb '30	233	71		278	349	37,000	180	27,000	64,000	42%
	Mar '30	234	47		278	325	37,000	210	27,000	64,000	42%
	Apr '30	235	20		278	298	37,000	240	27,000	64,000	42%
	May '30	236	14		278	292	37,000	240	27,000	64,000	42%
	Jun '30	237	3		278	281	37,000	250	27,000	64,000	42%

### 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.

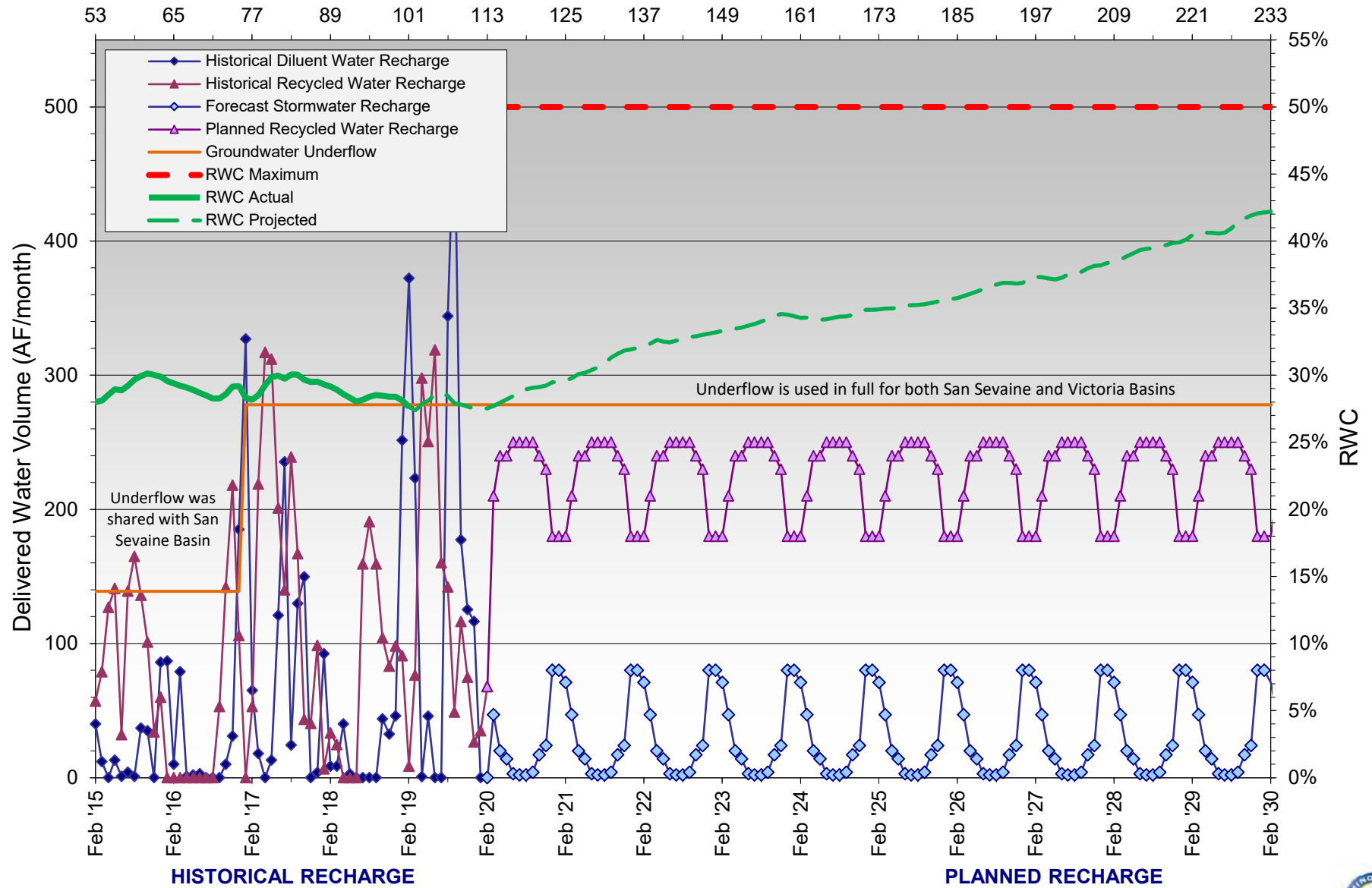
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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 - Victoria Basin

Months Since Initial Recycled Water Delivery



## APPENDIX C

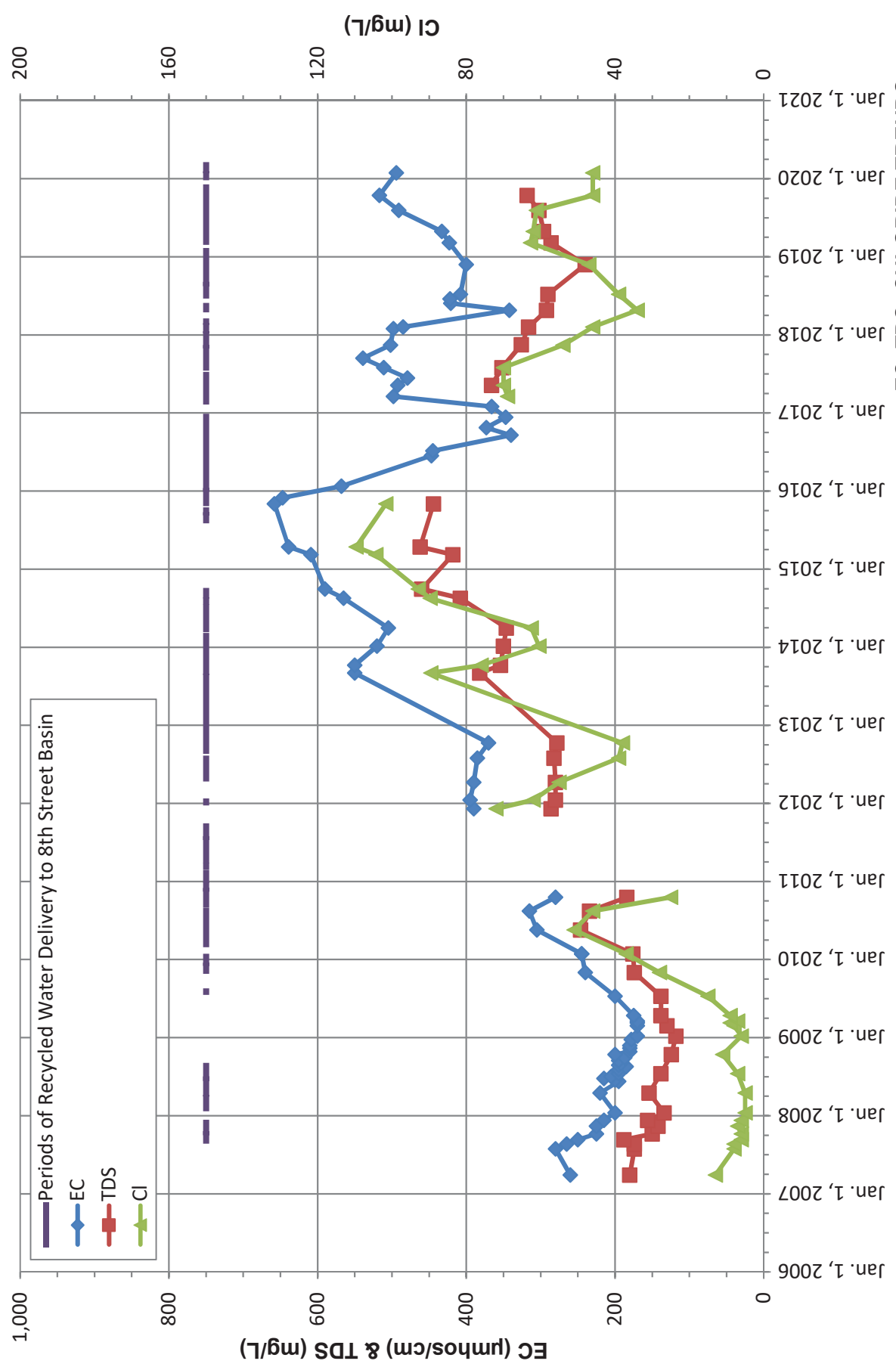
### EVIDENCE FOR BLENDING:

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

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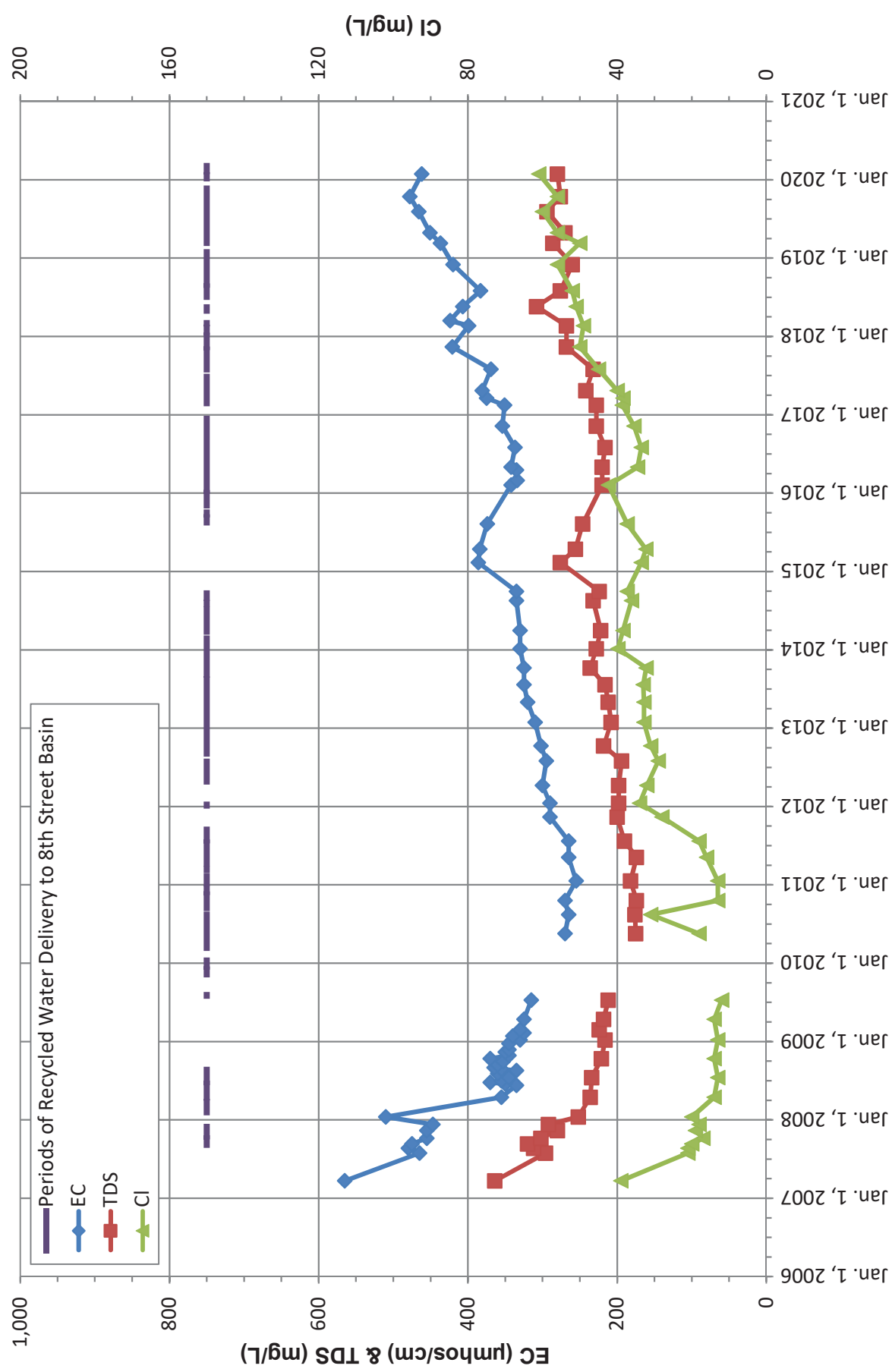


# EC, TDS, CHLORIDE TRENDS 8TH STREET BASIN MW 8TH-1/1



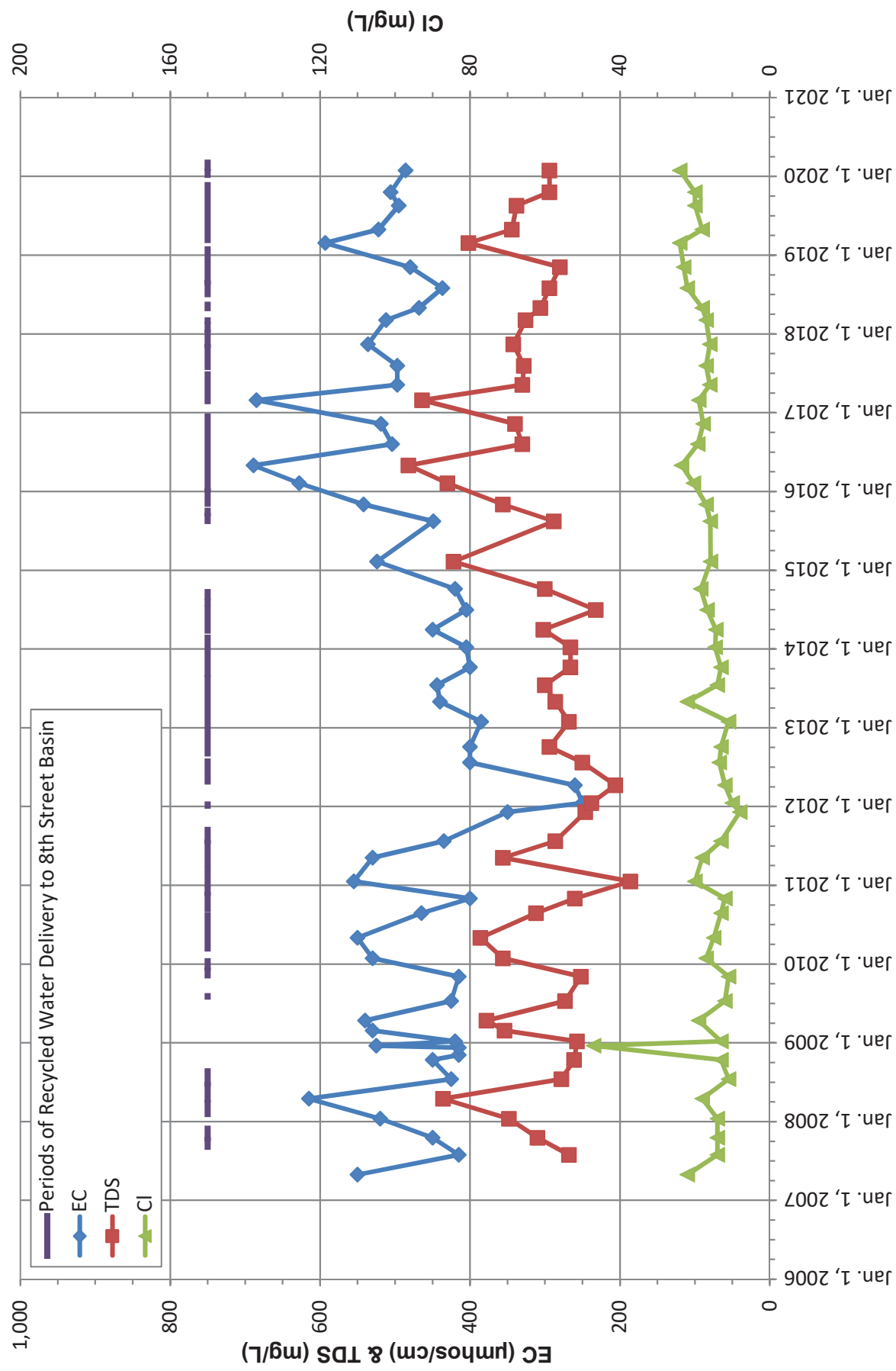


# EC, TDS, CHLORIDE TRENDS 8TH STREET BASIN MW 8TH-1/2



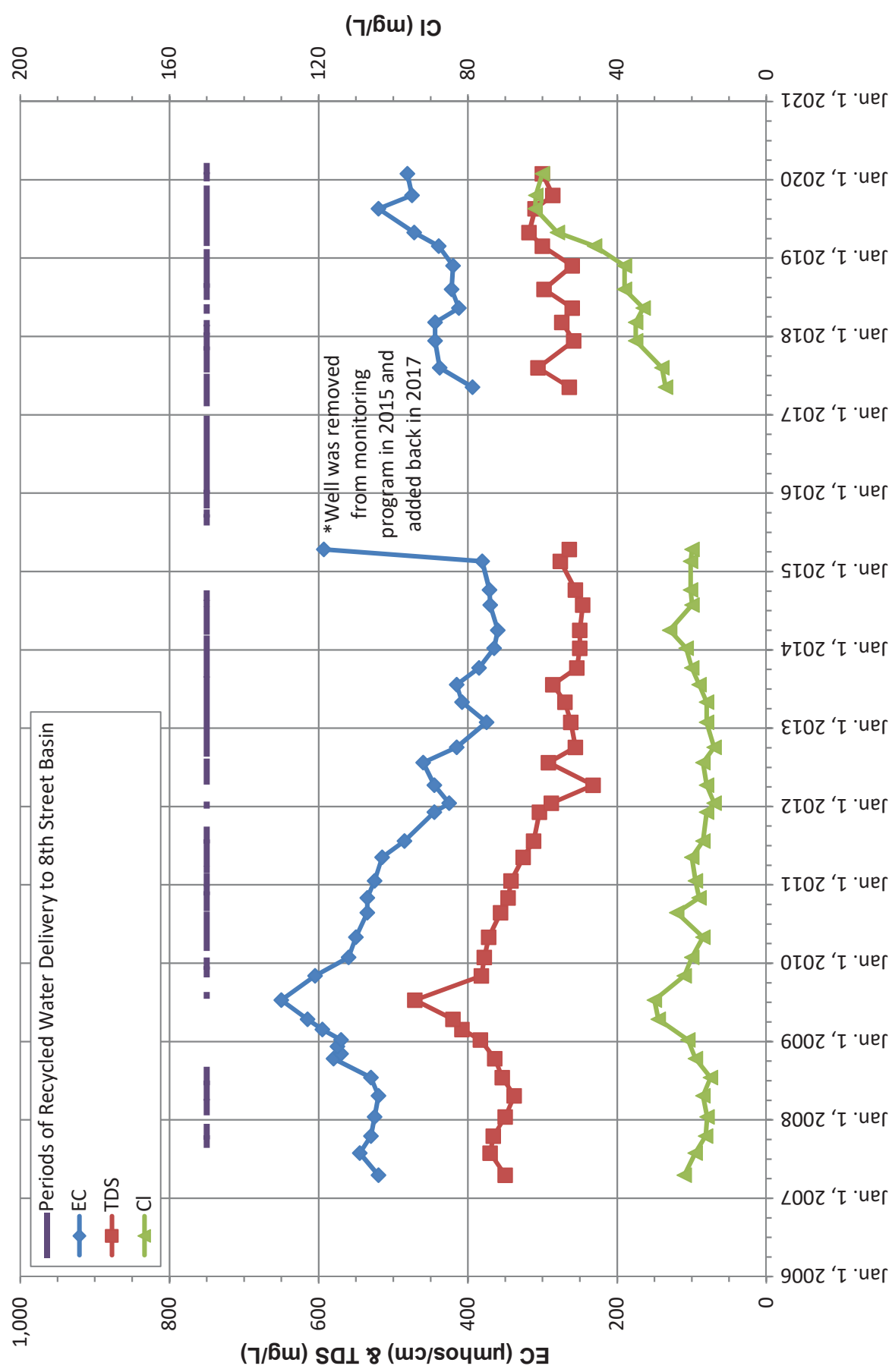


**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-2/1**



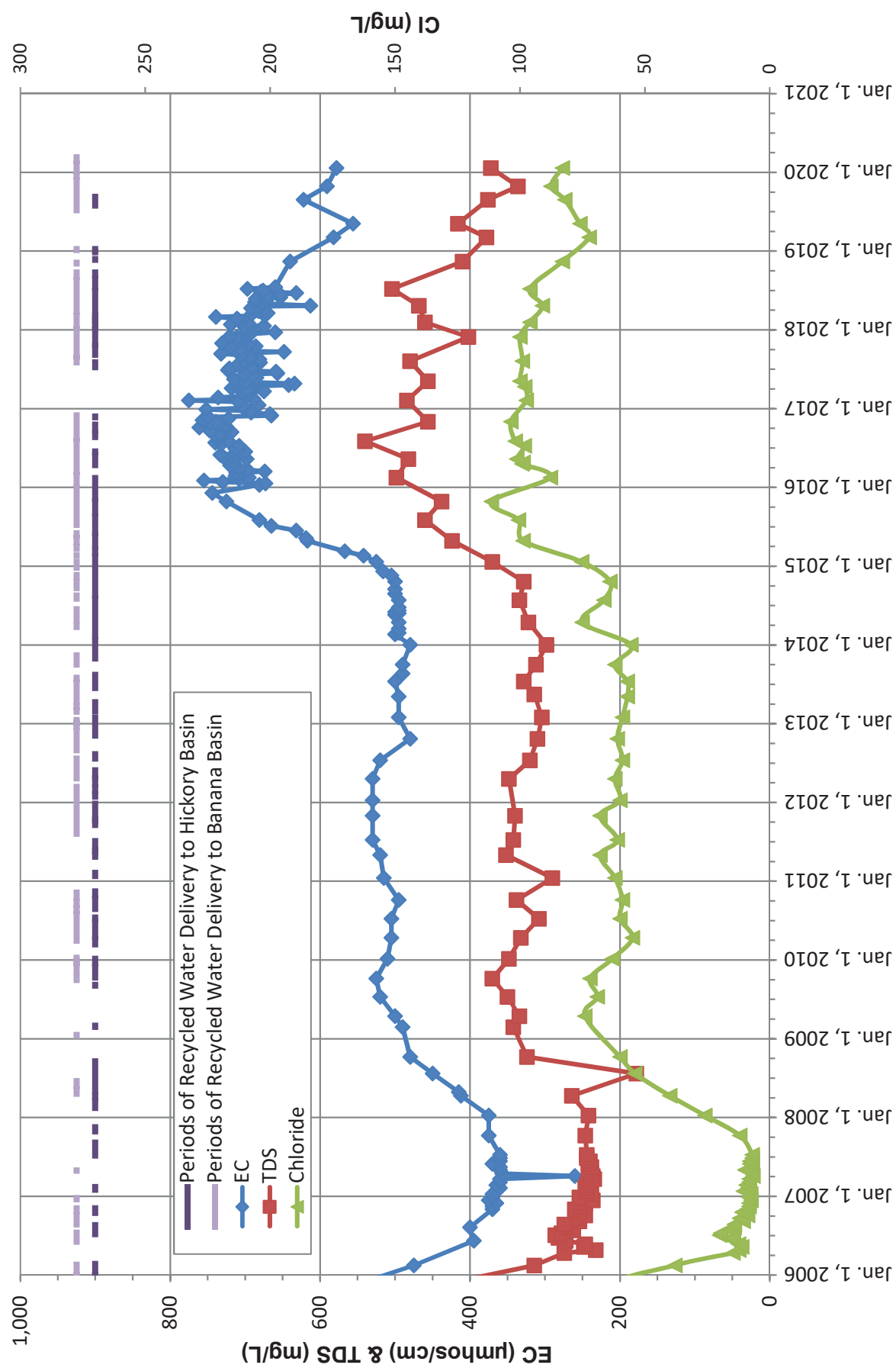


# EC, TDS, CHLORIDE TRENDS 8TH STREET BASIN MW 8TH-2/2





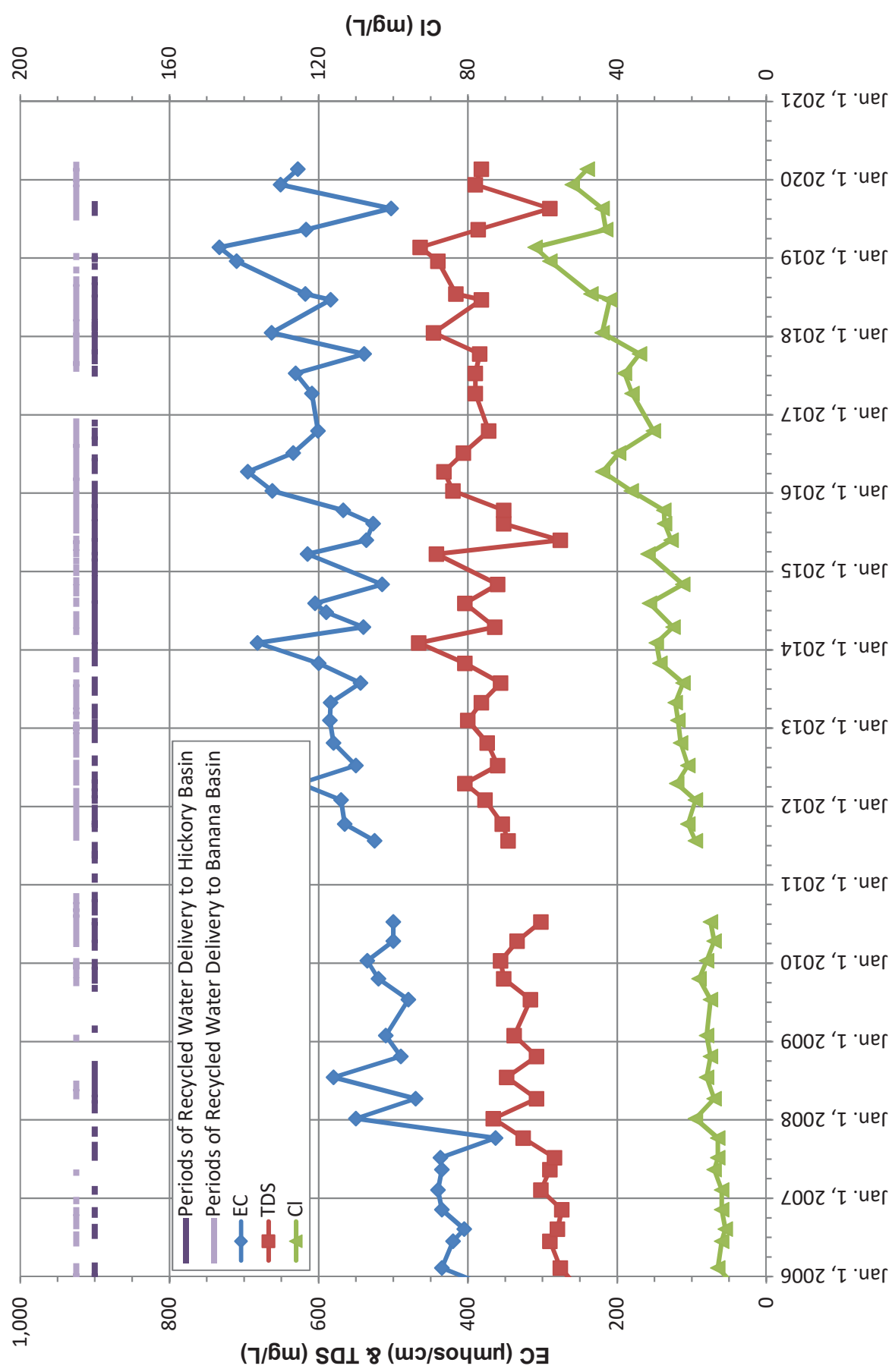
# EC, TDS, CHLORIDE TRENDS HICKORY BANANA BASINS MW BH-1/2





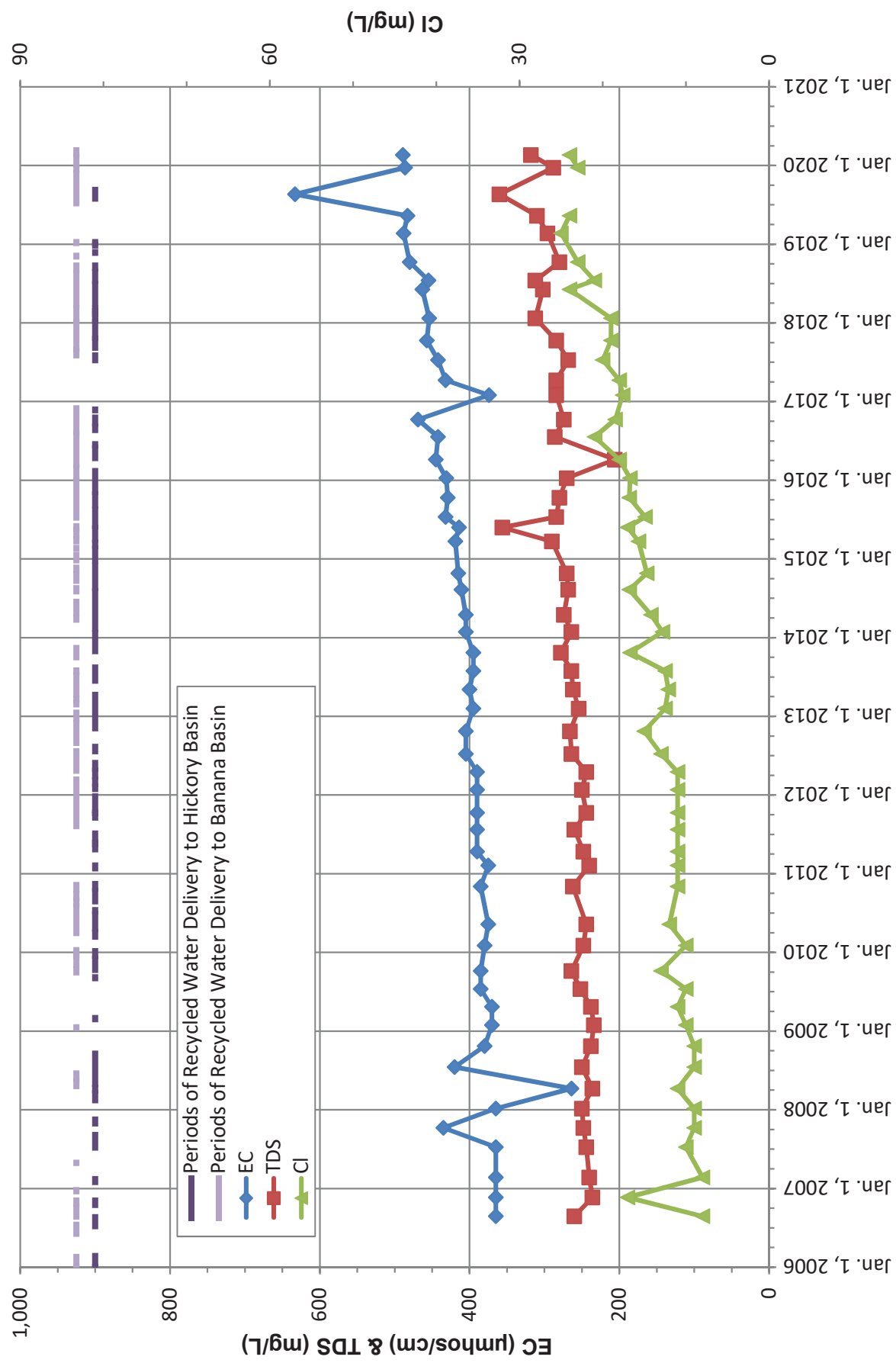


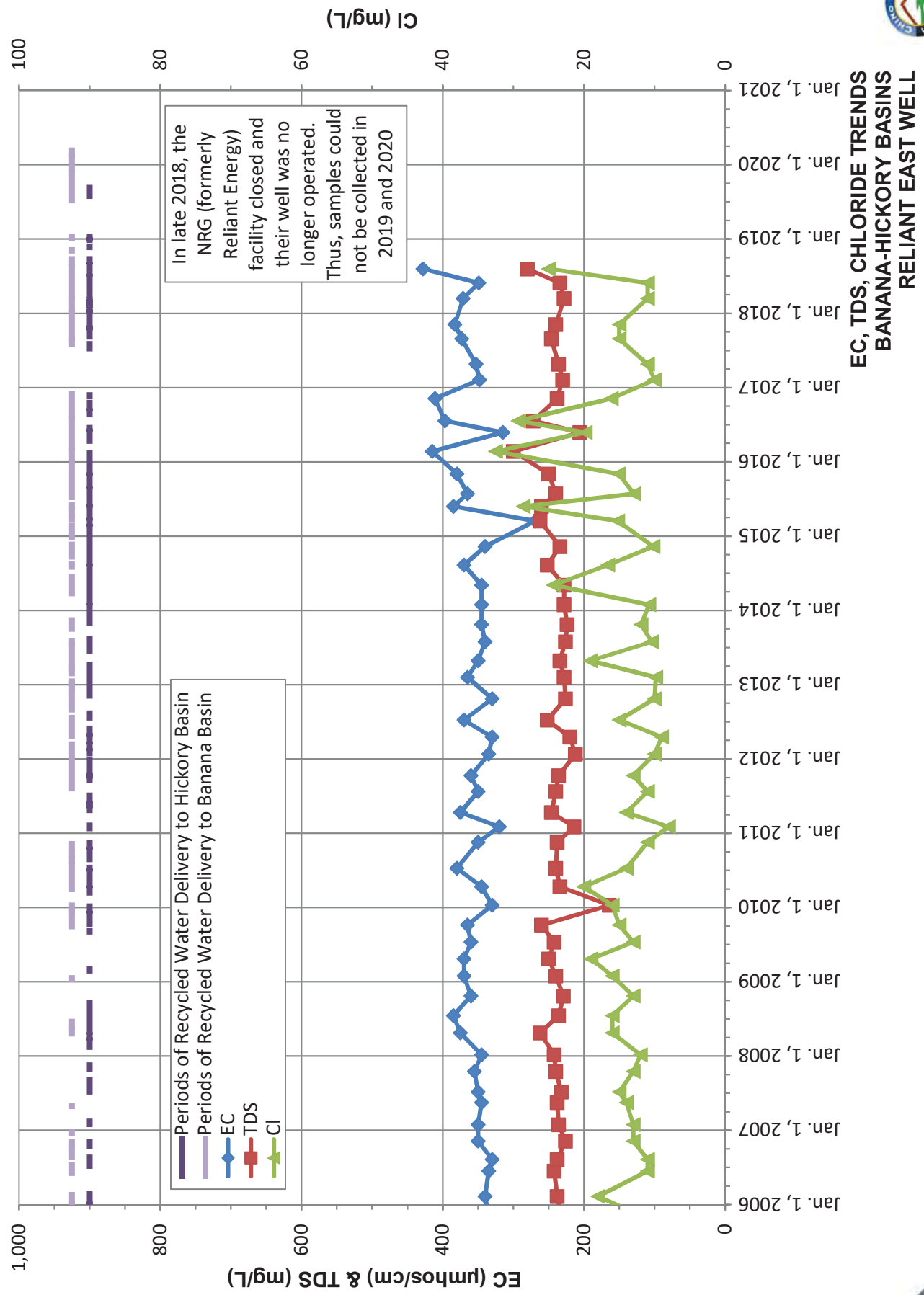
# EC, TDS, CHLORIDE TRENDS BANANA-HICKORY BASINS CALIFORNIA SPEEDWAY INFIELD WELL





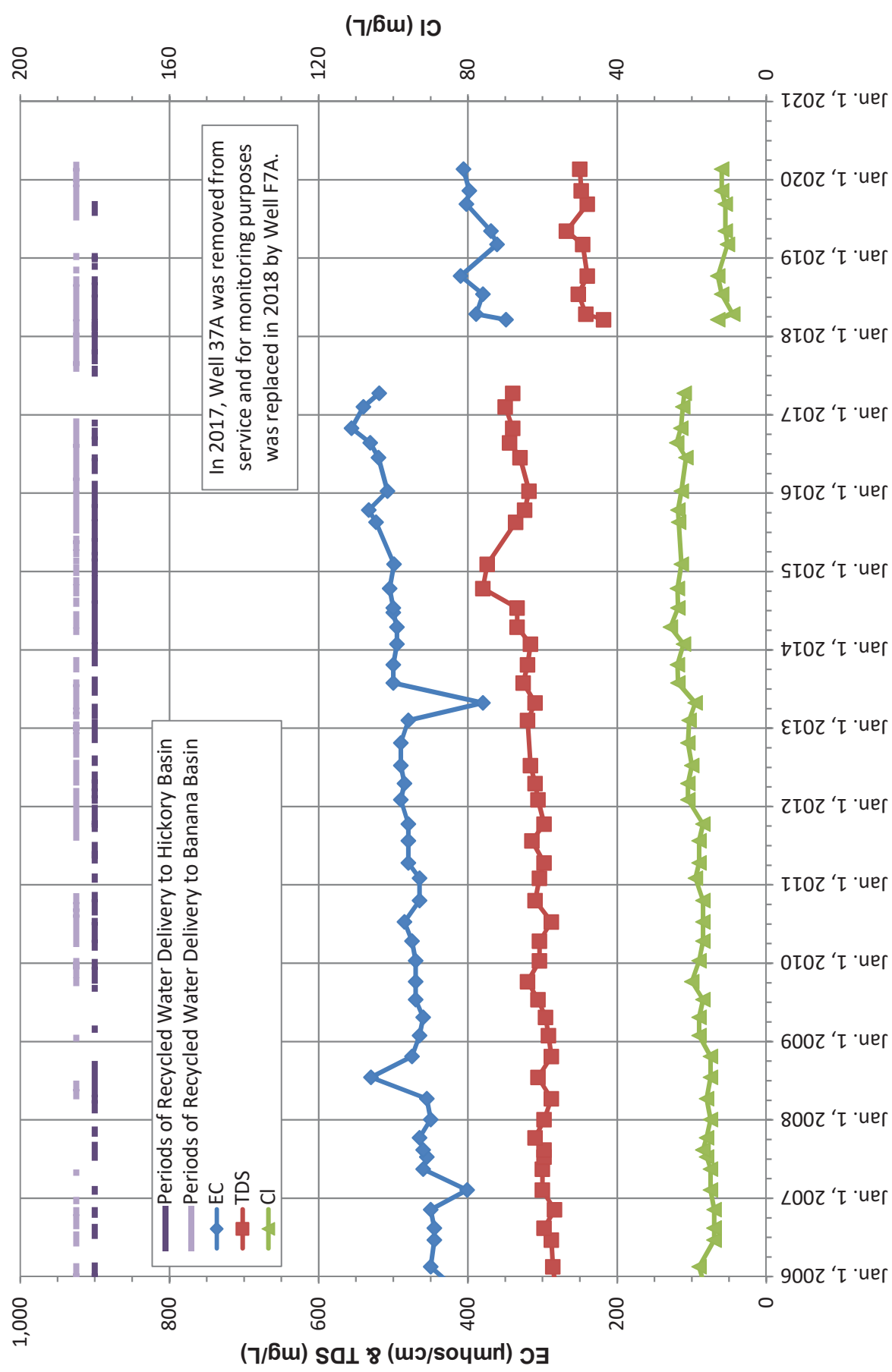
**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
CALIFORNIA SPEEDWAY NO. 2**

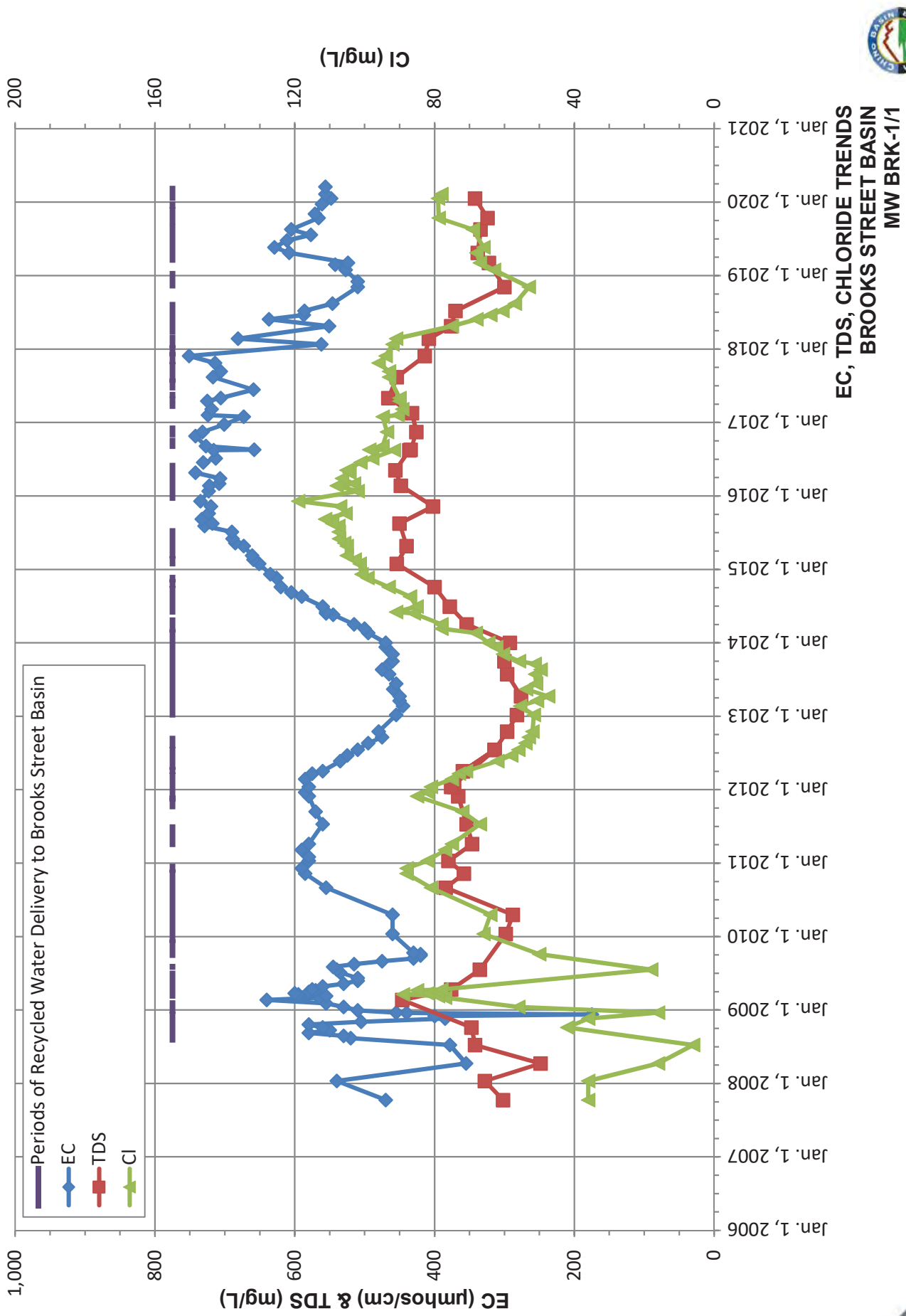






**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
FONTANA WATER CO. WELLS 7A AND 37A**

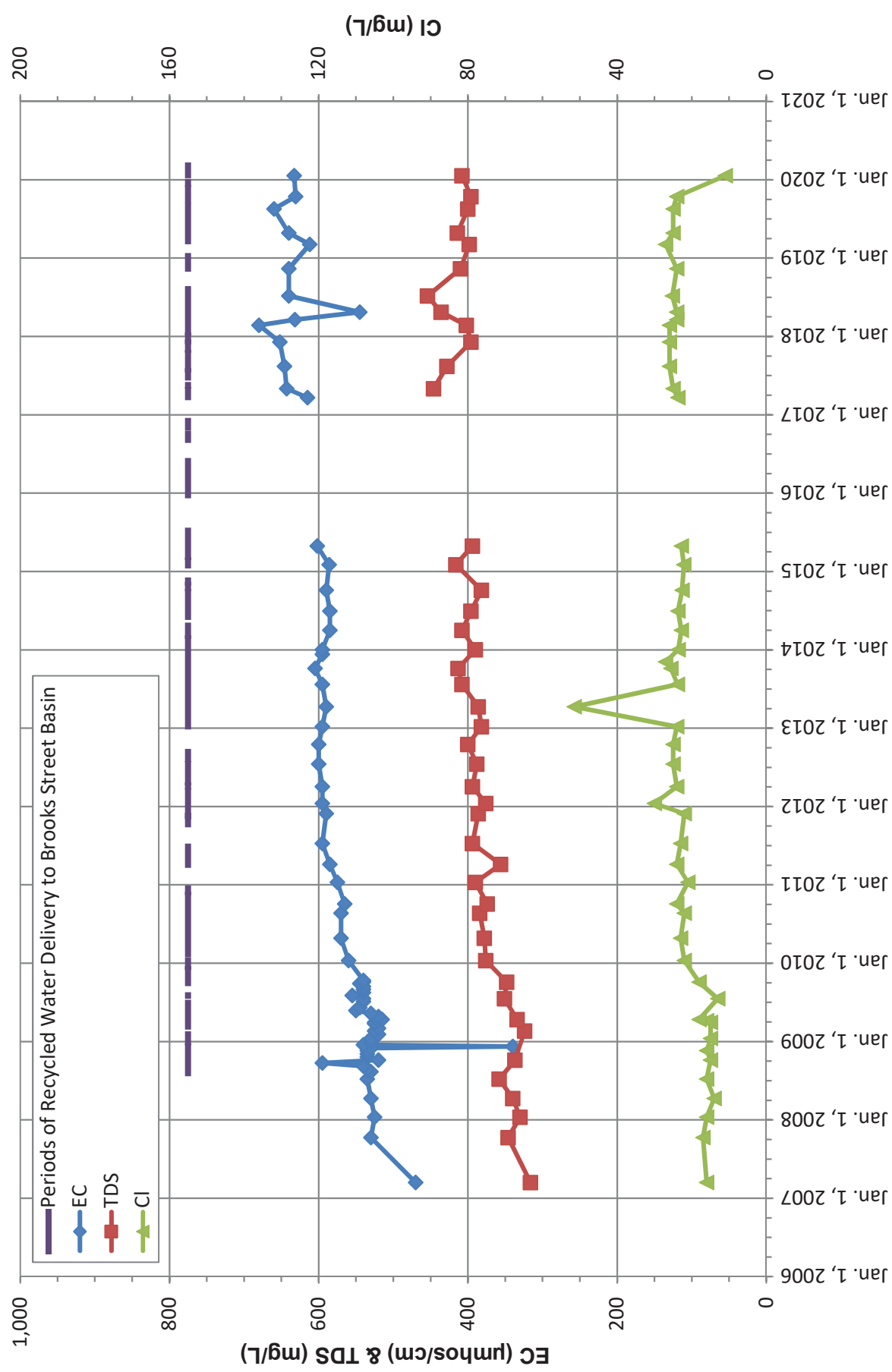






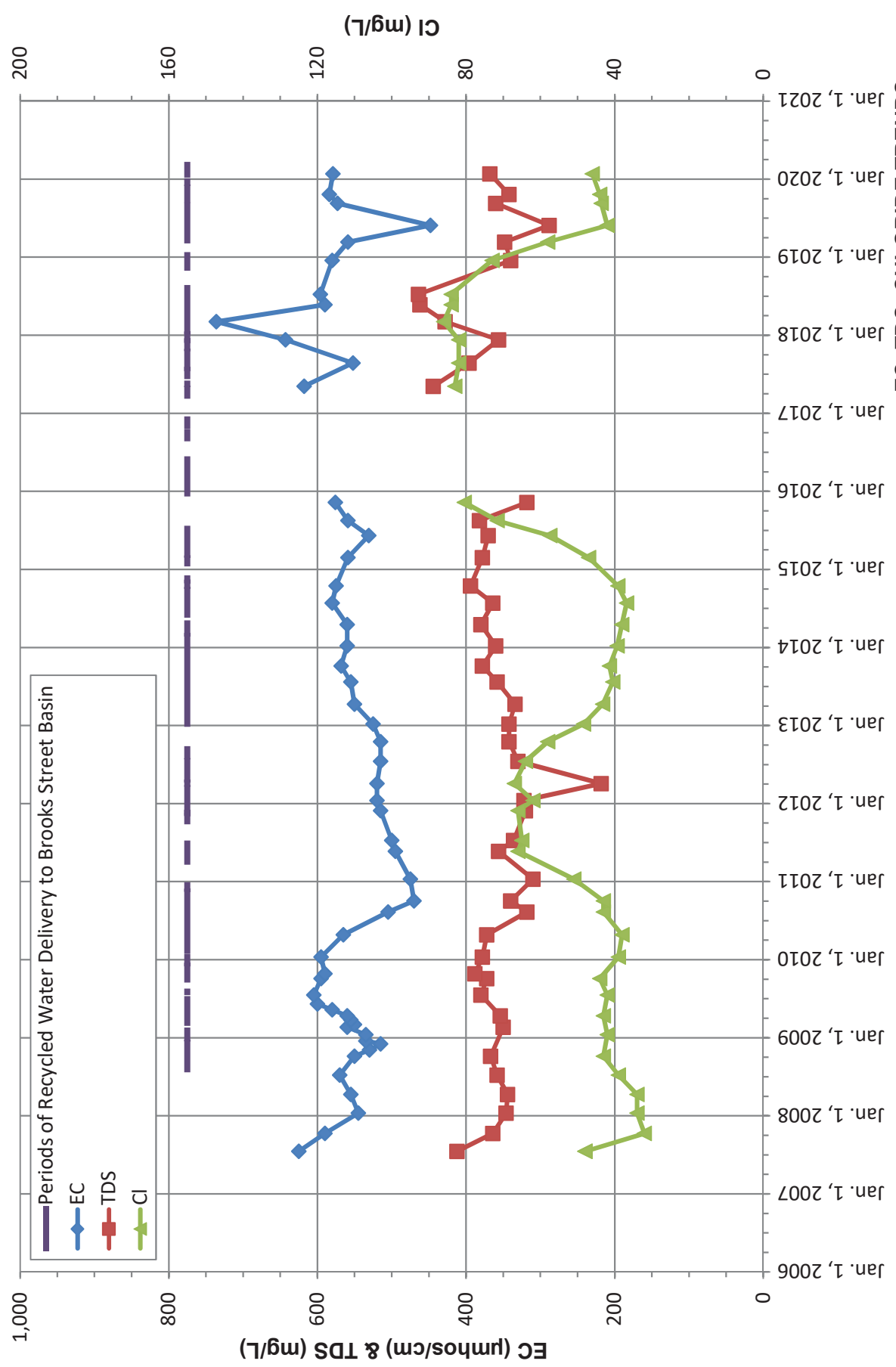


# EC, TDS, CHLORIDE TRENDS BROOKS STREET BASIN MW BRK-1/2



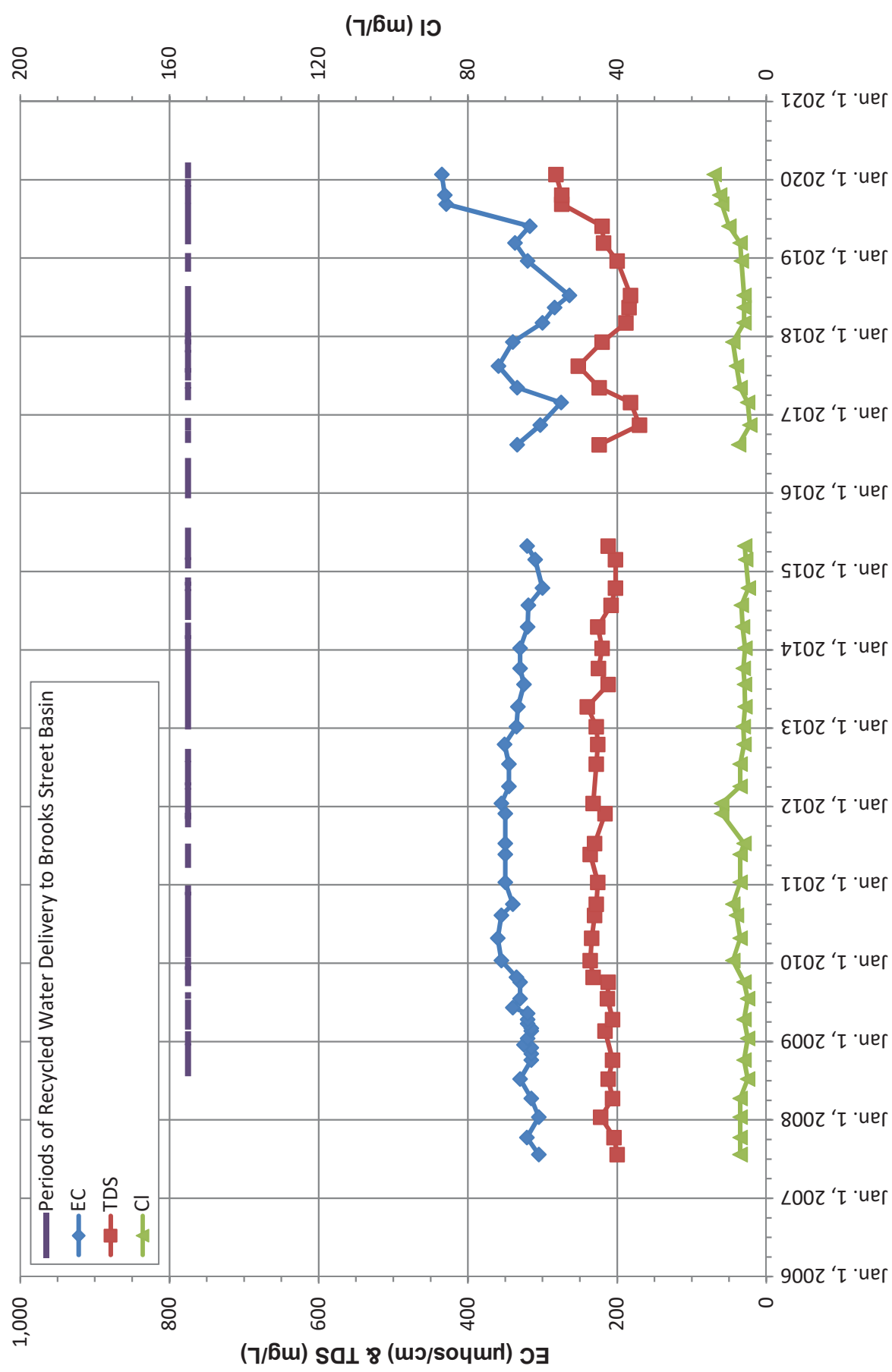


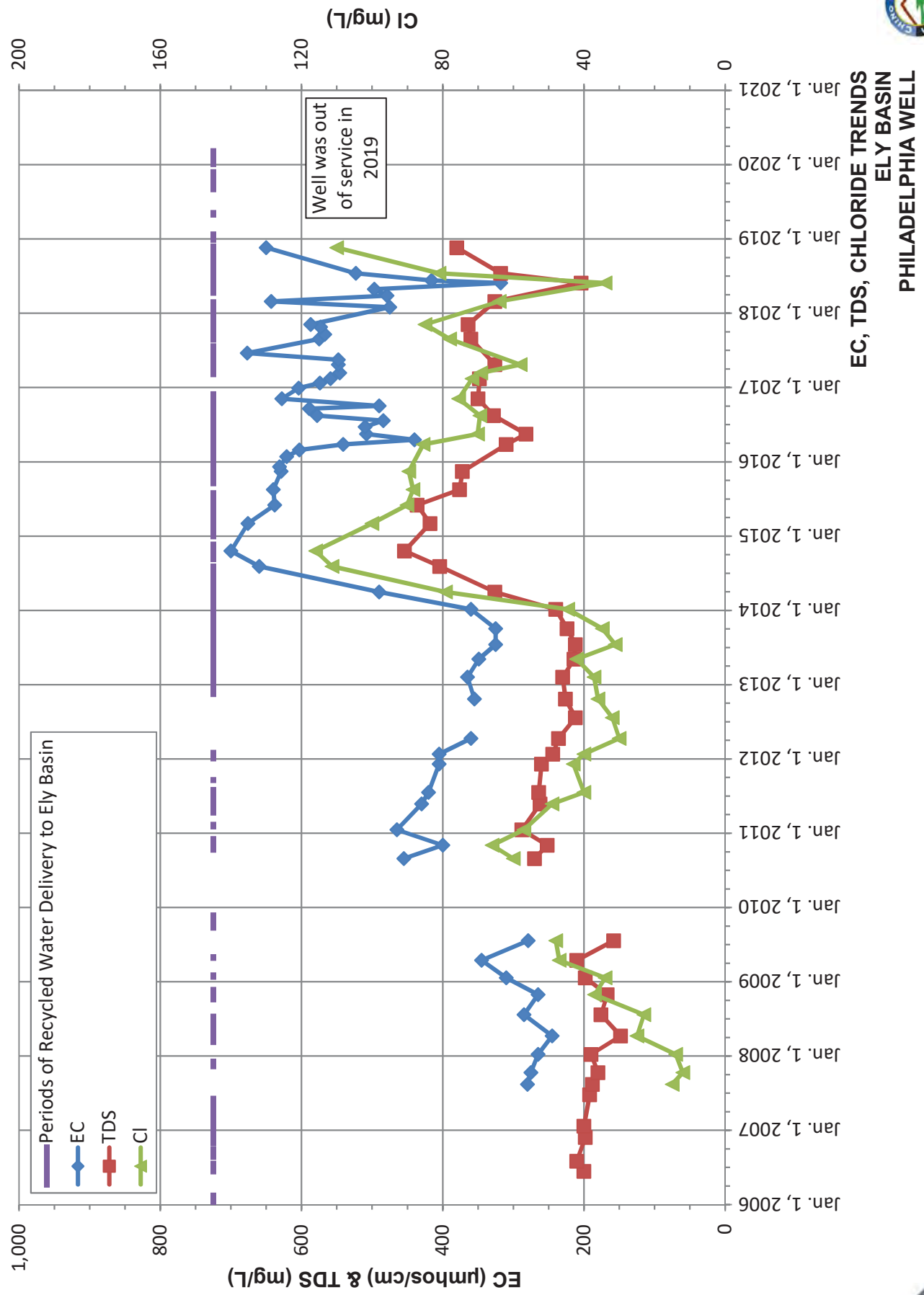
# EC, TDS, CHLORIDE TRENDS BROOKS STREET BASIN MW BRK-2/1





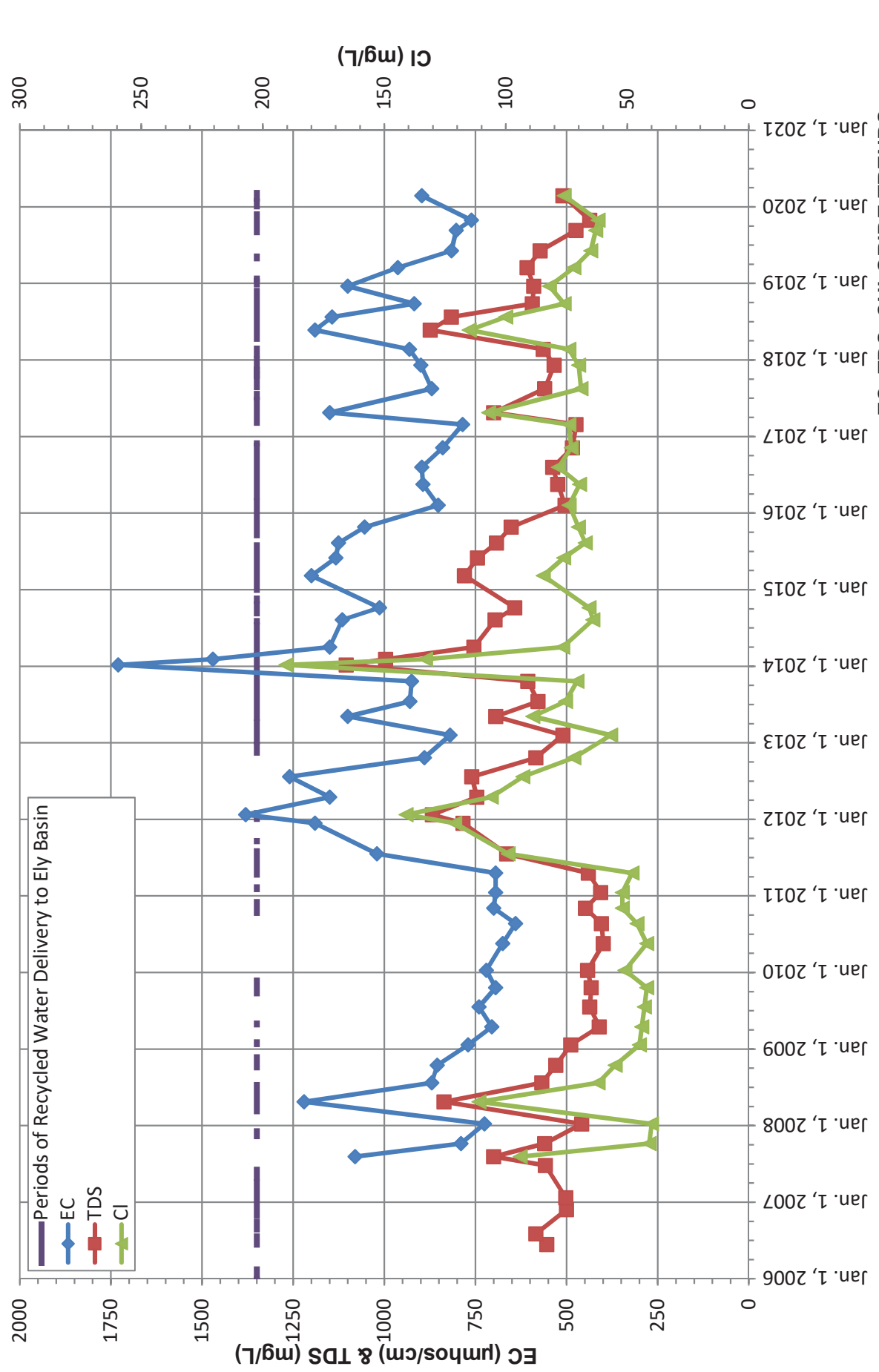
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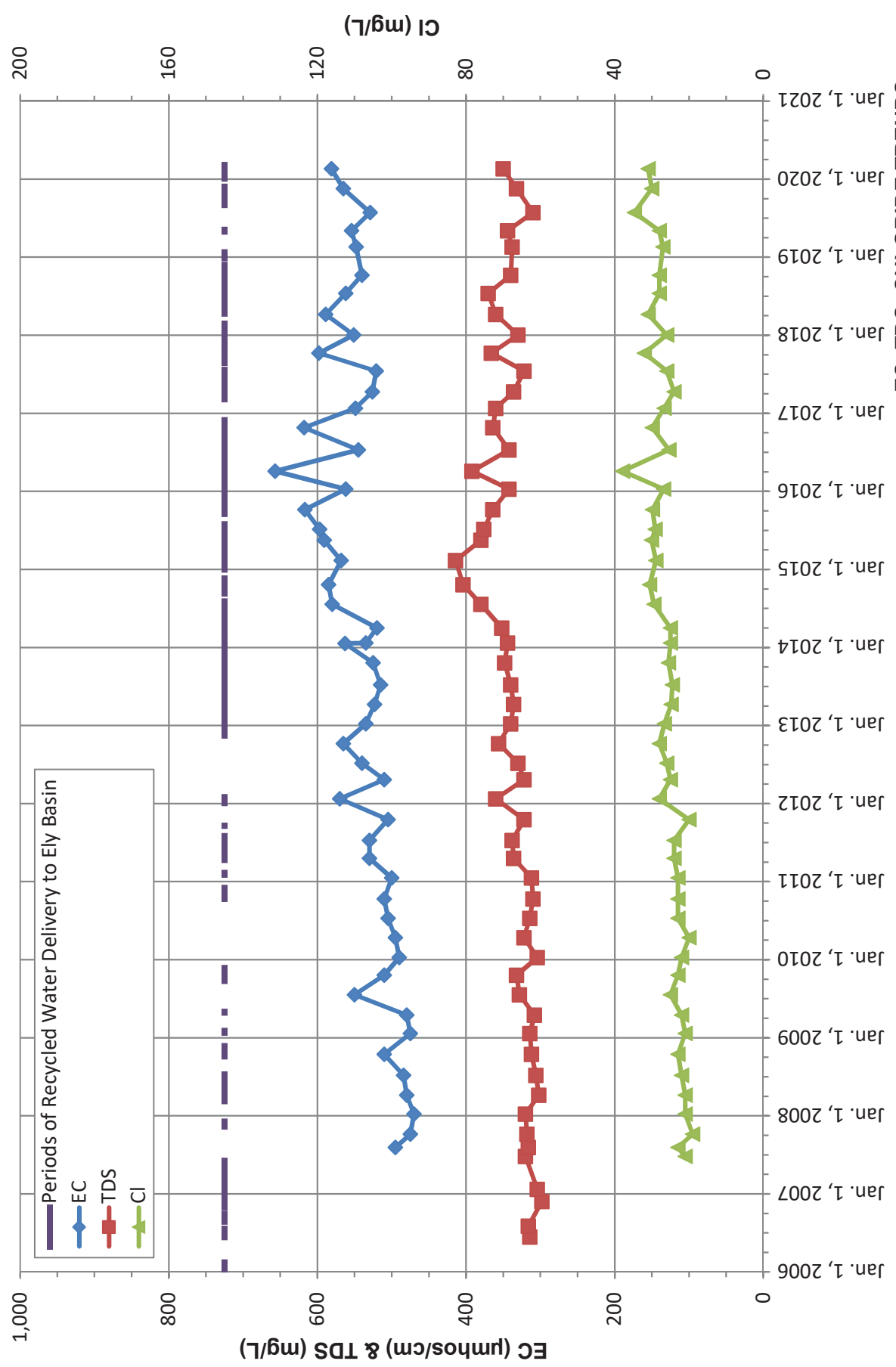
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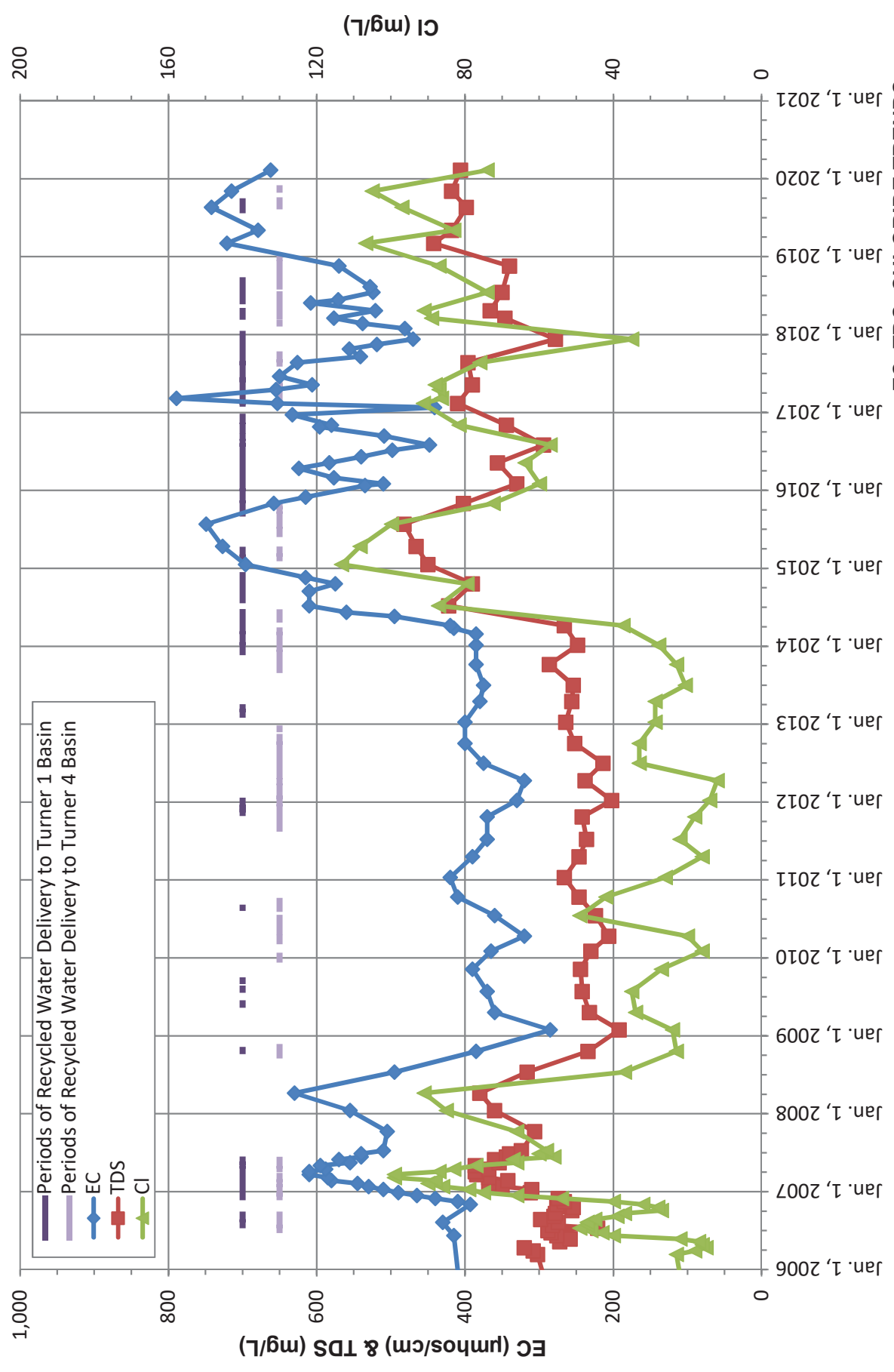


# EC, TDS, CHLORIDE TRENDS ELY BASIN RIVERSIDE WELL



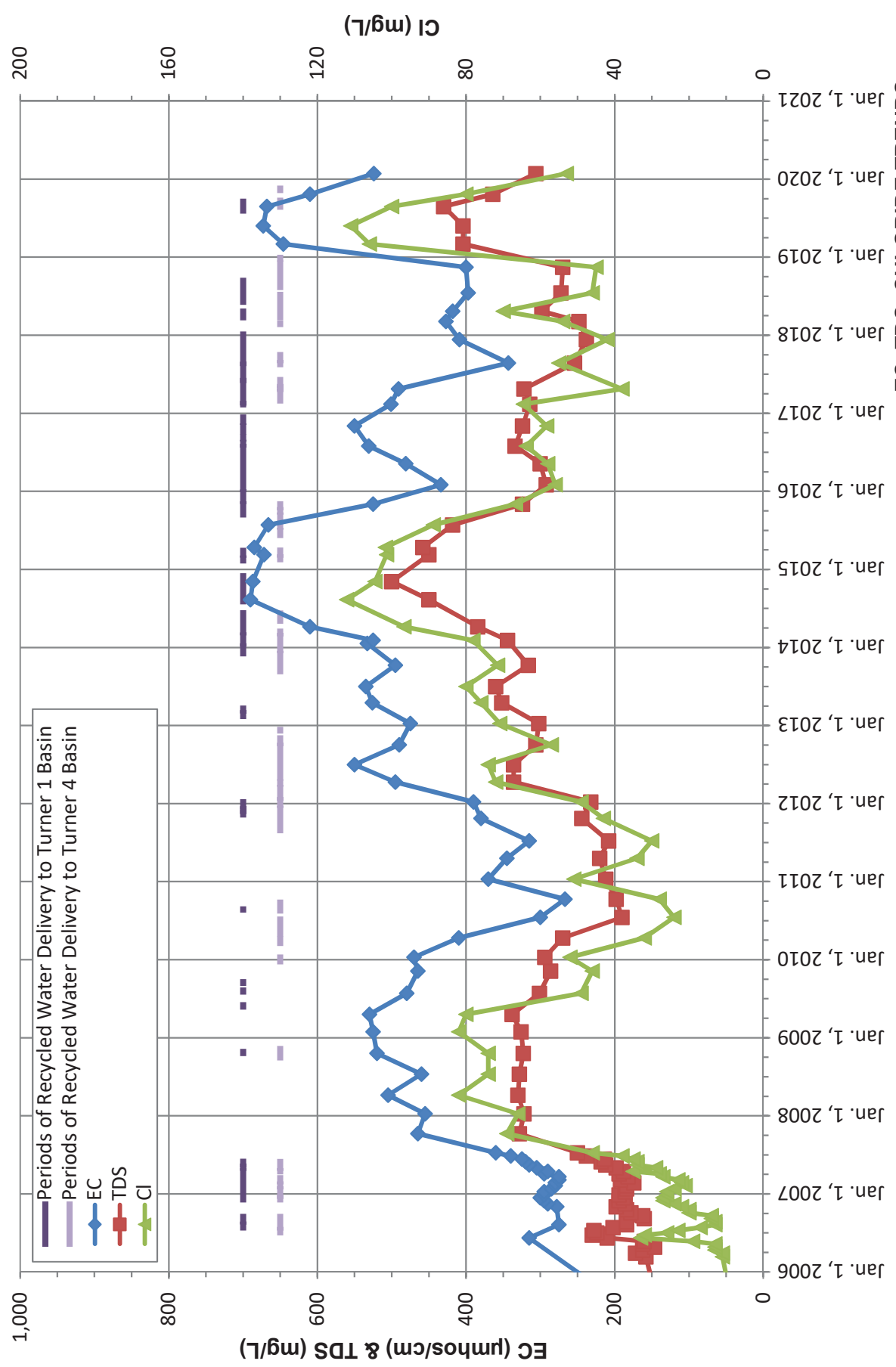


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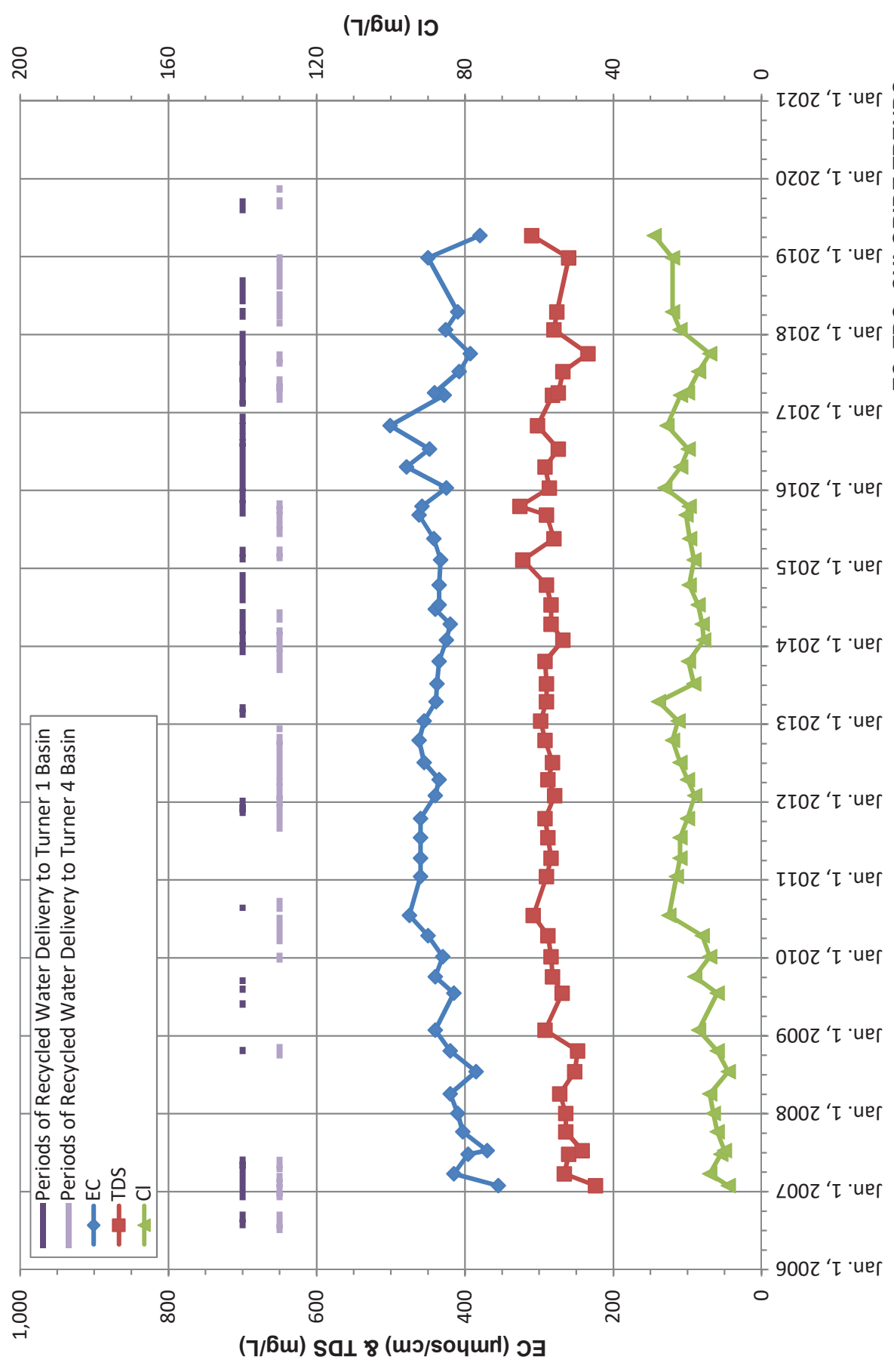


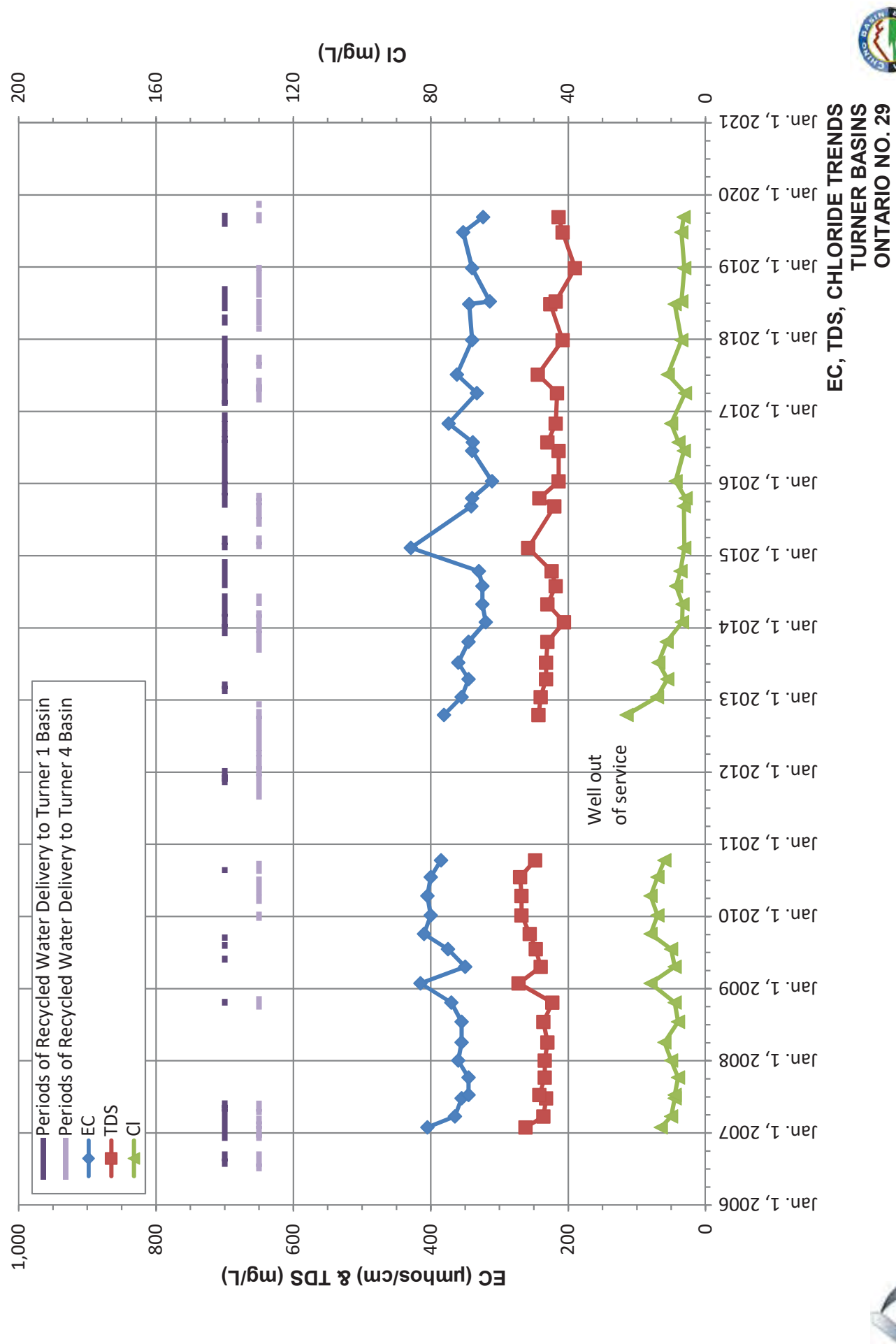


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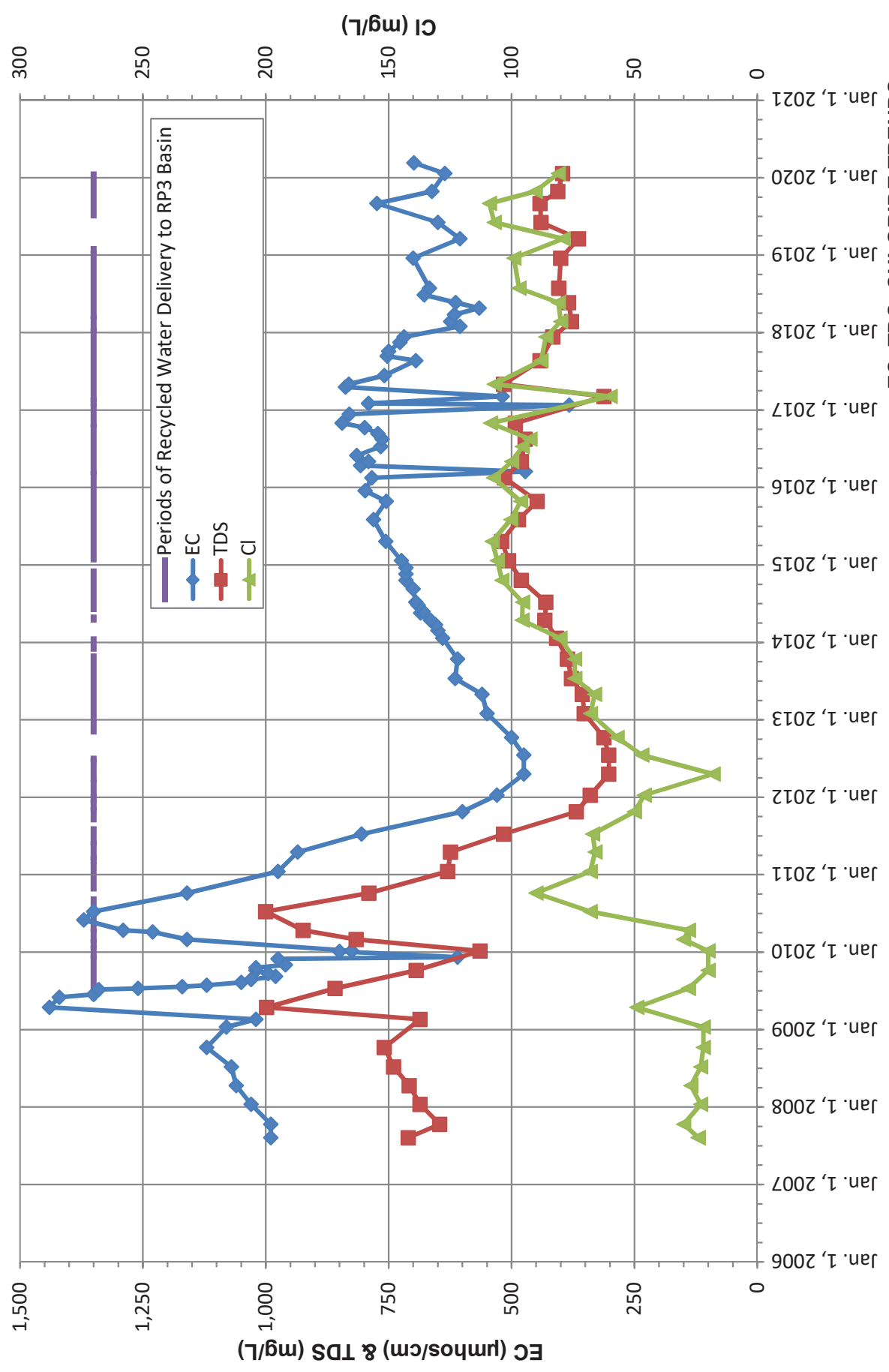
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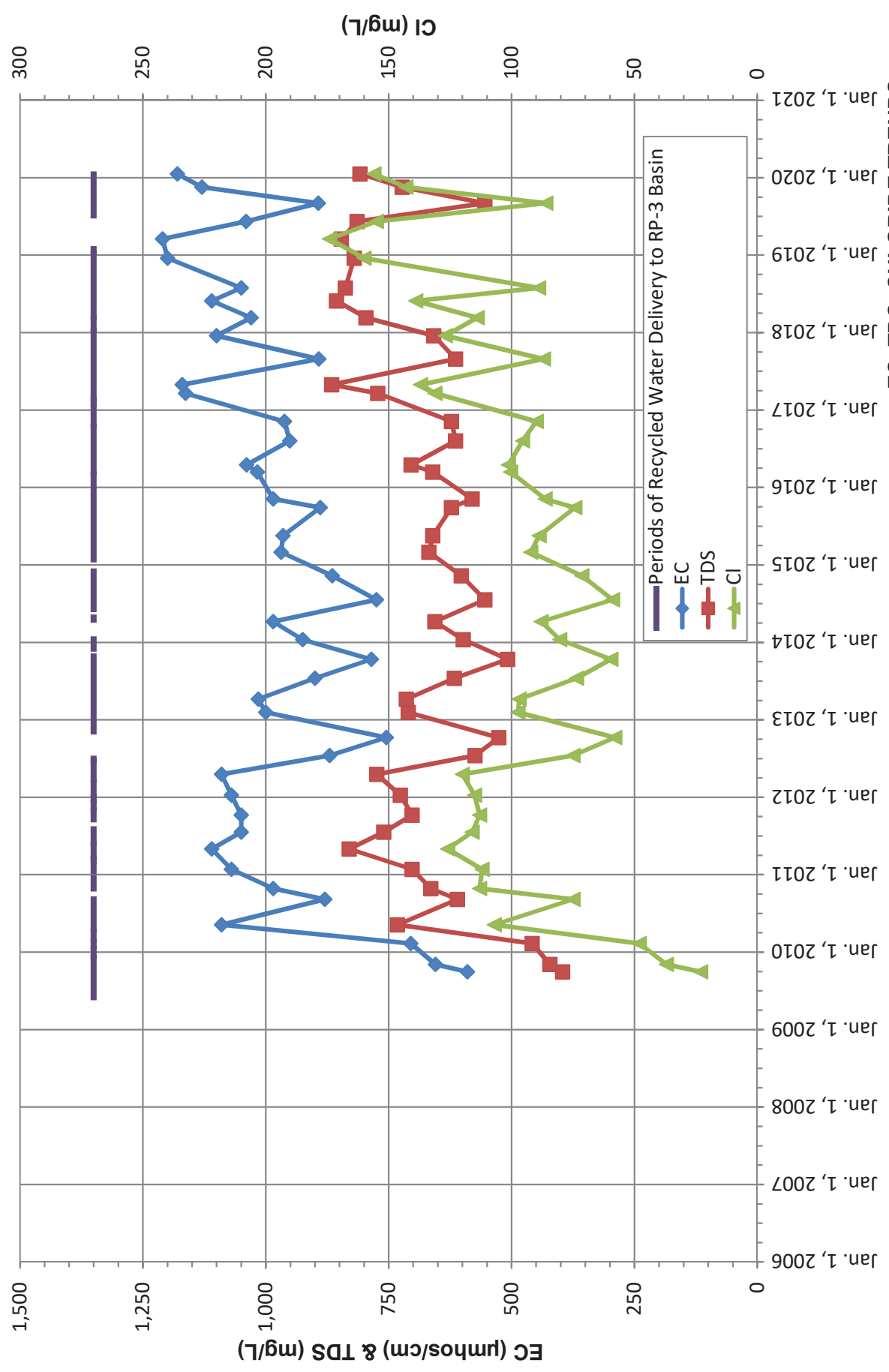


# EC, TDS, CHLORIDE TRENDS RP3 BASINS RP3-1/1



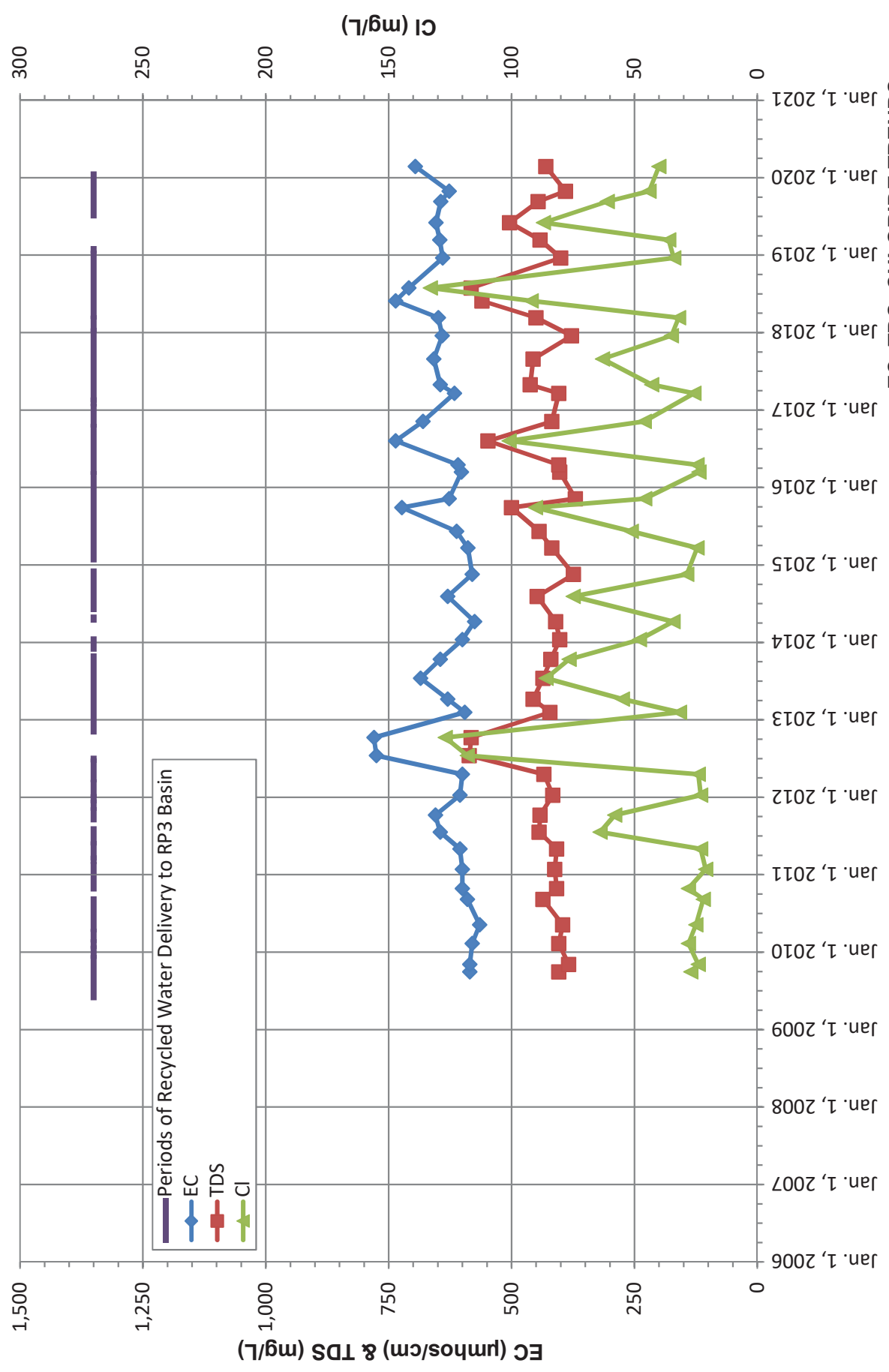


# EC, TDS, CHLORIDE TRENDS RP3 BASINS ALCOA MW-3



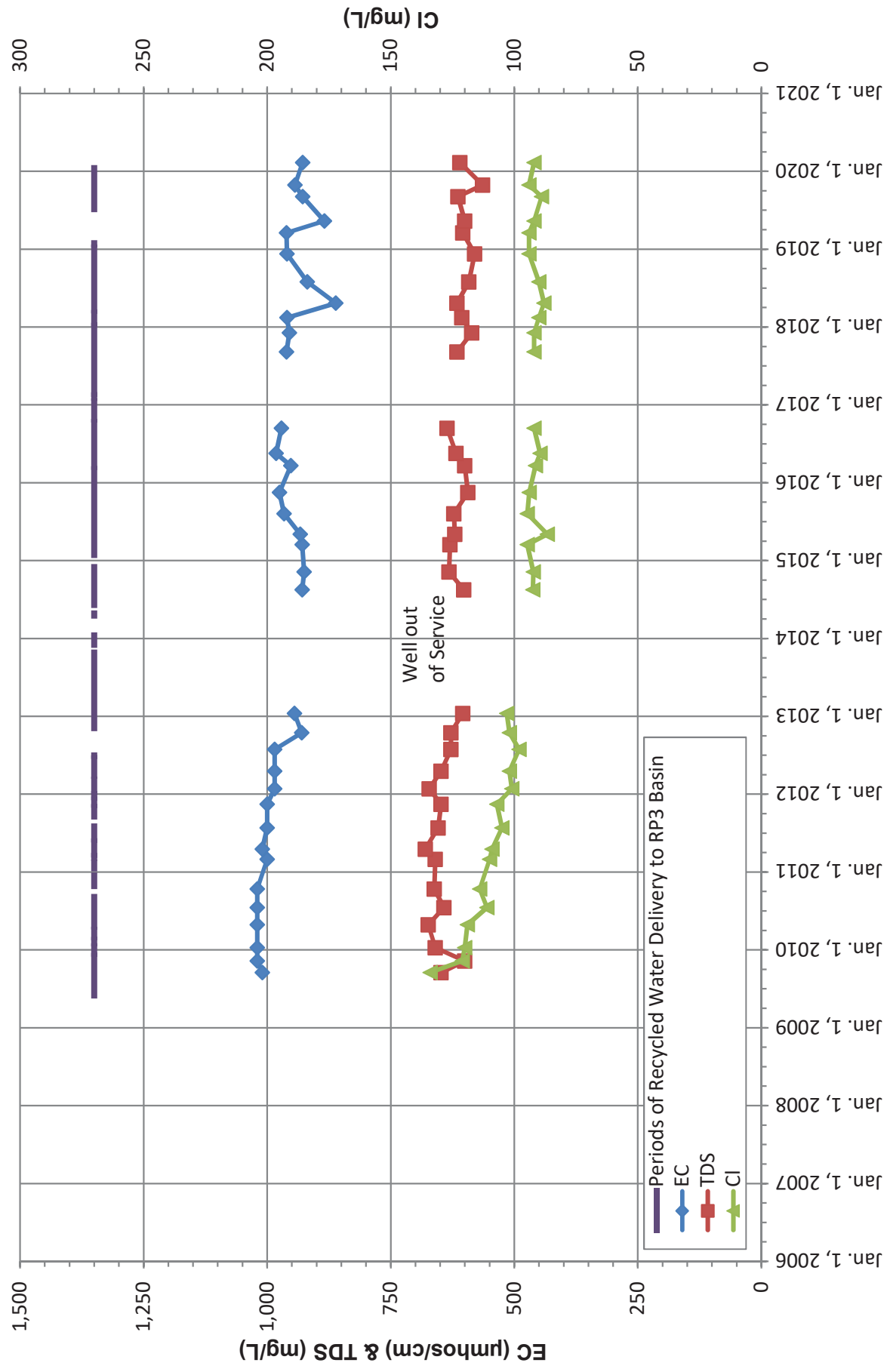


**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
ALCOA MW-1**



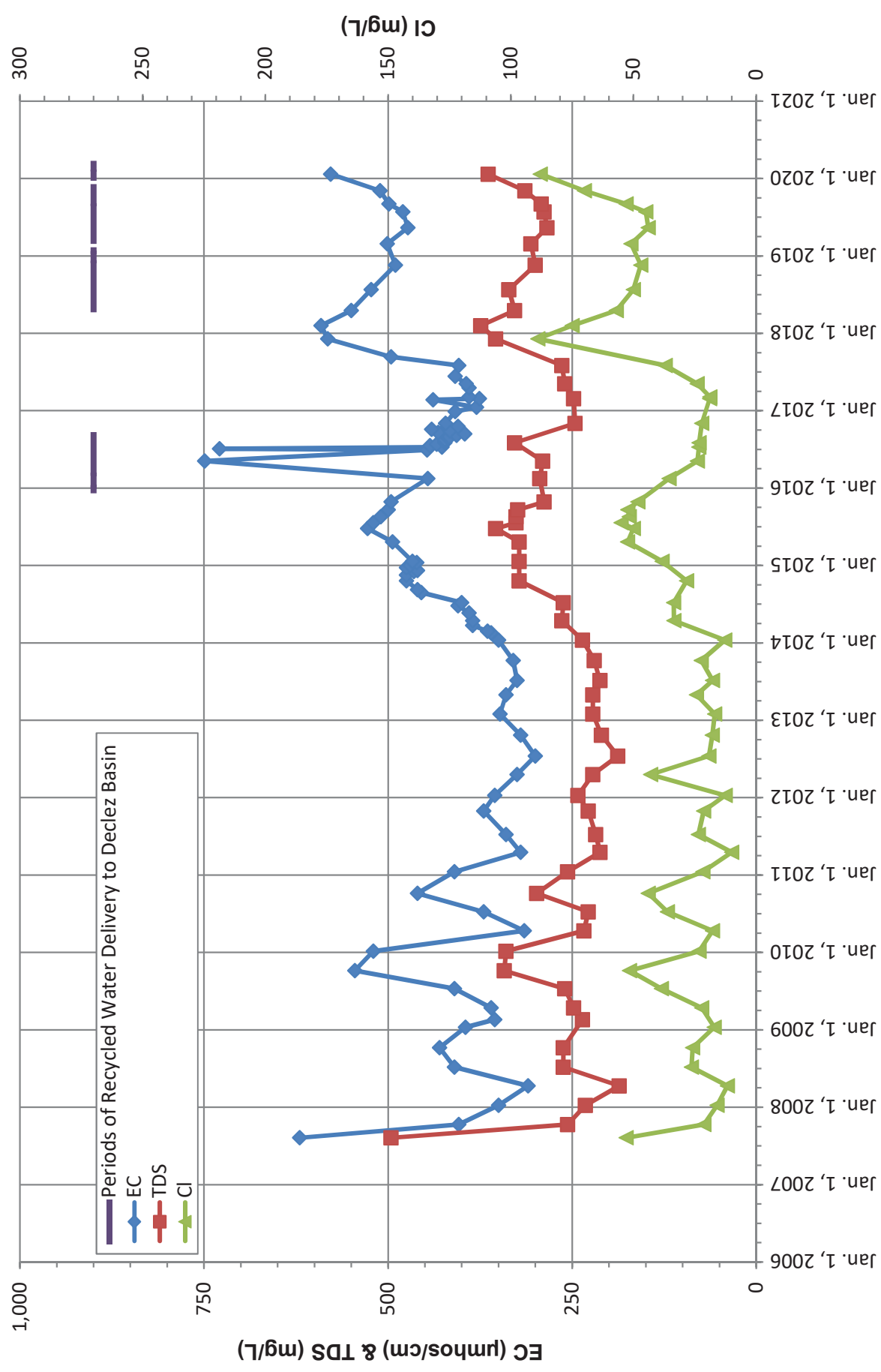


**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
Southridge JHS Well**

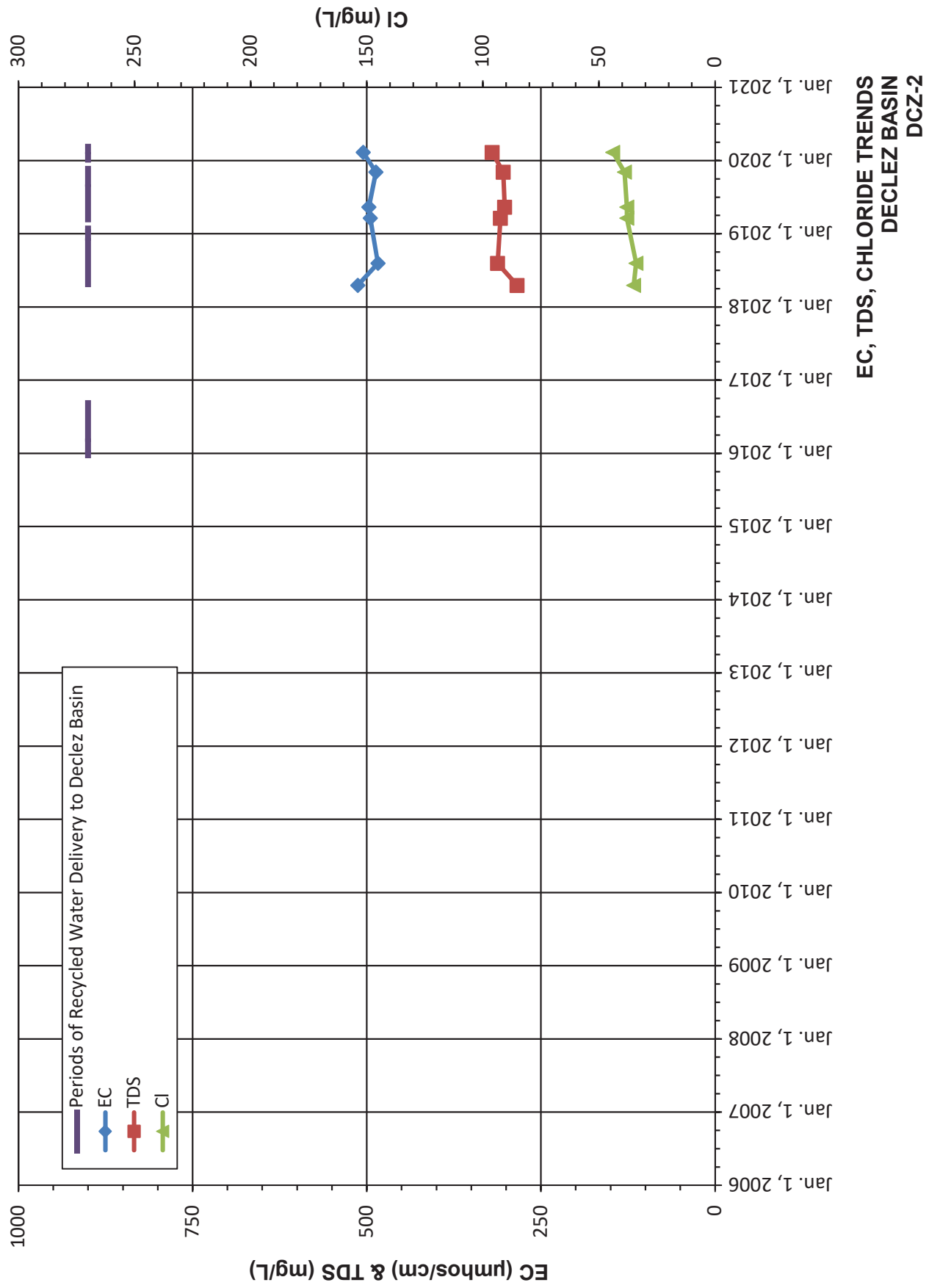




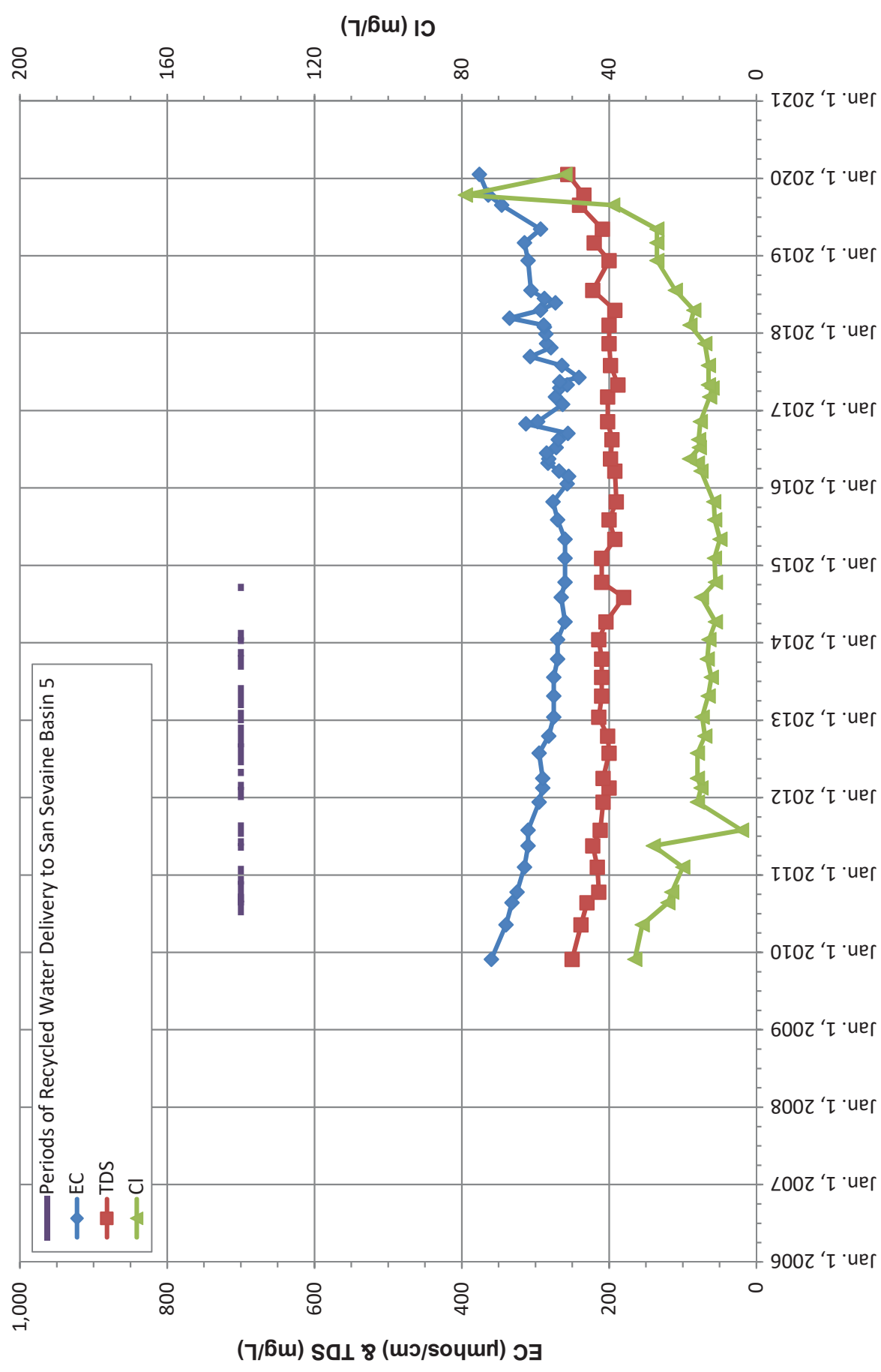
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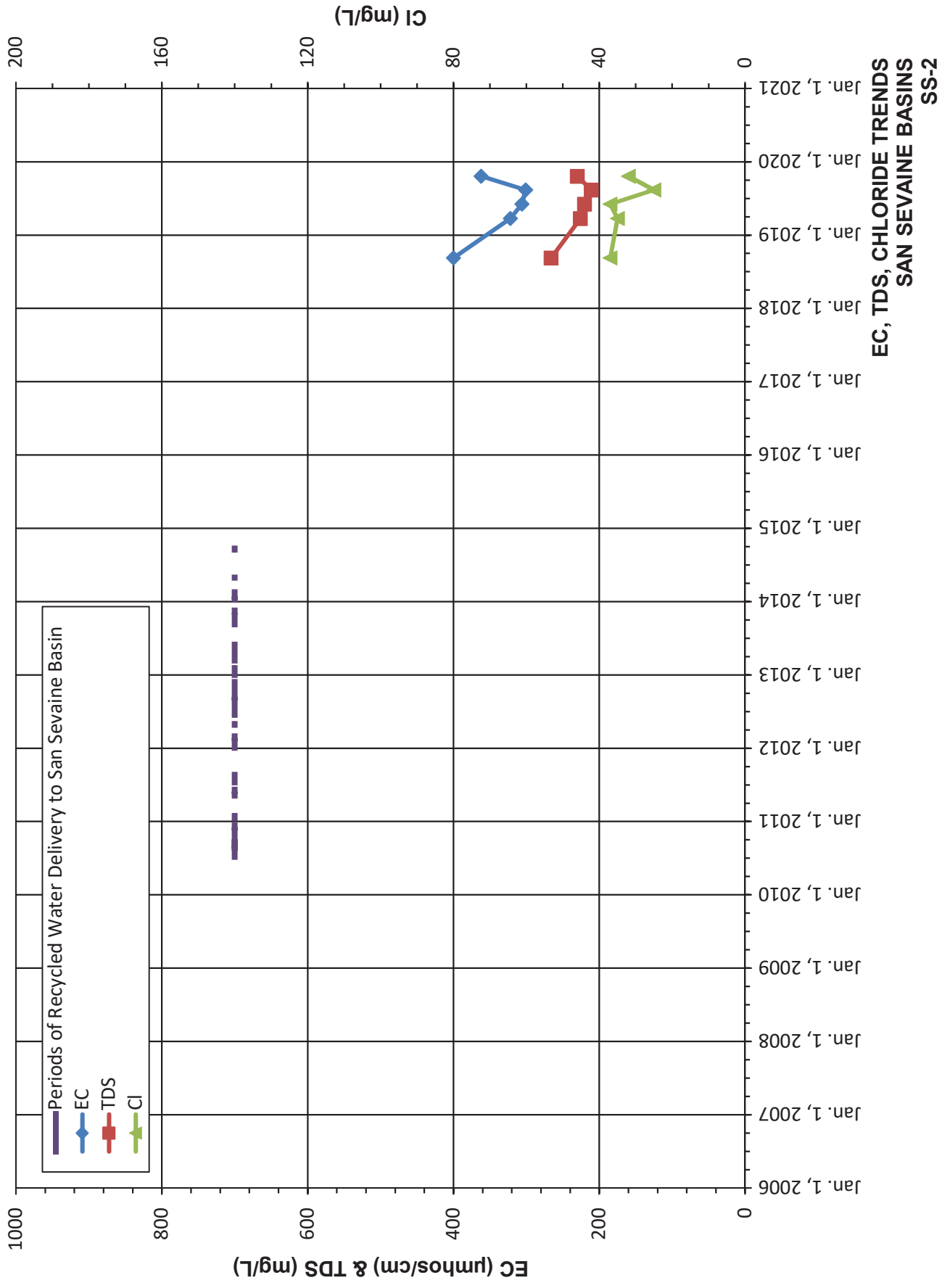


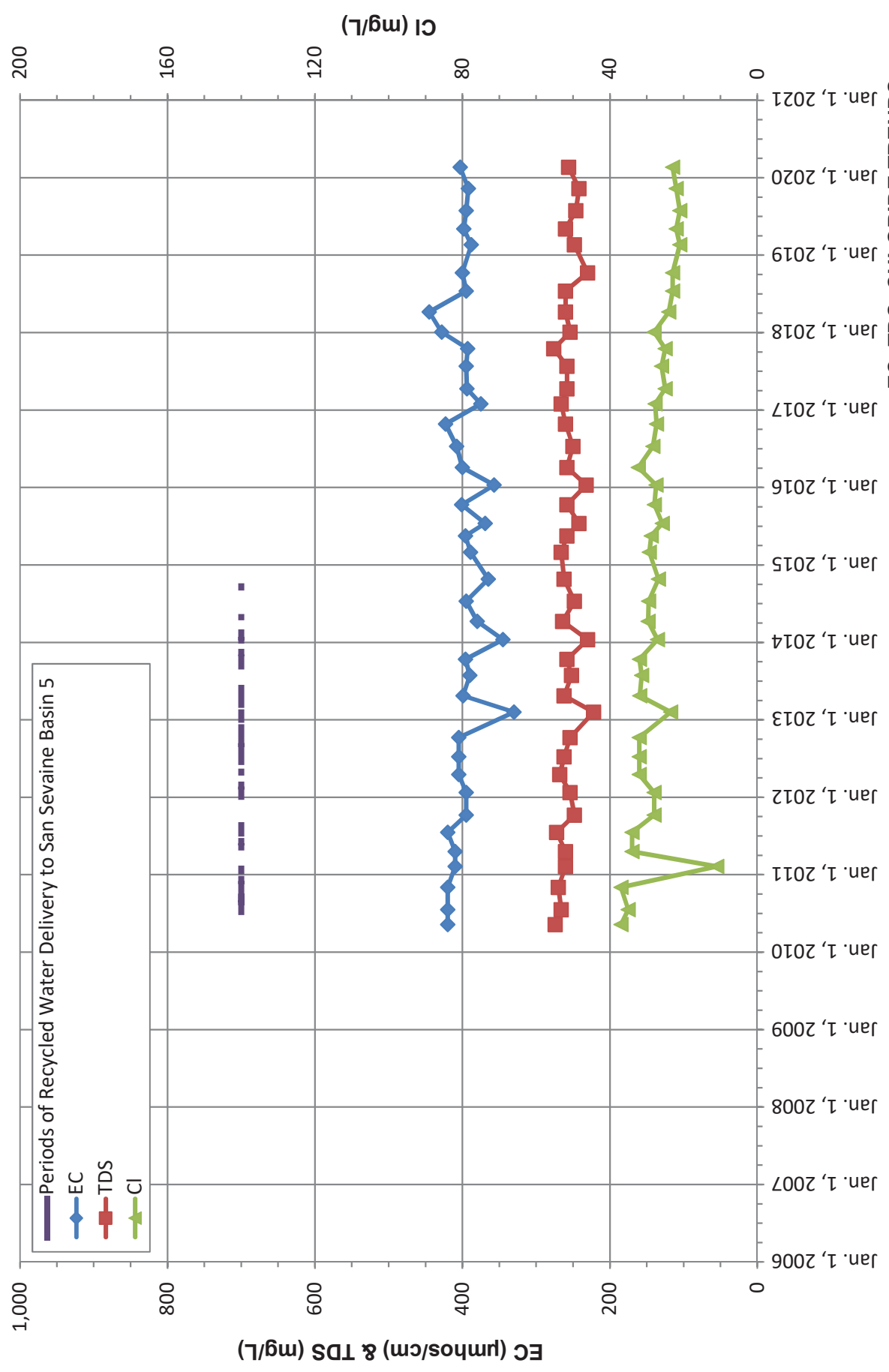




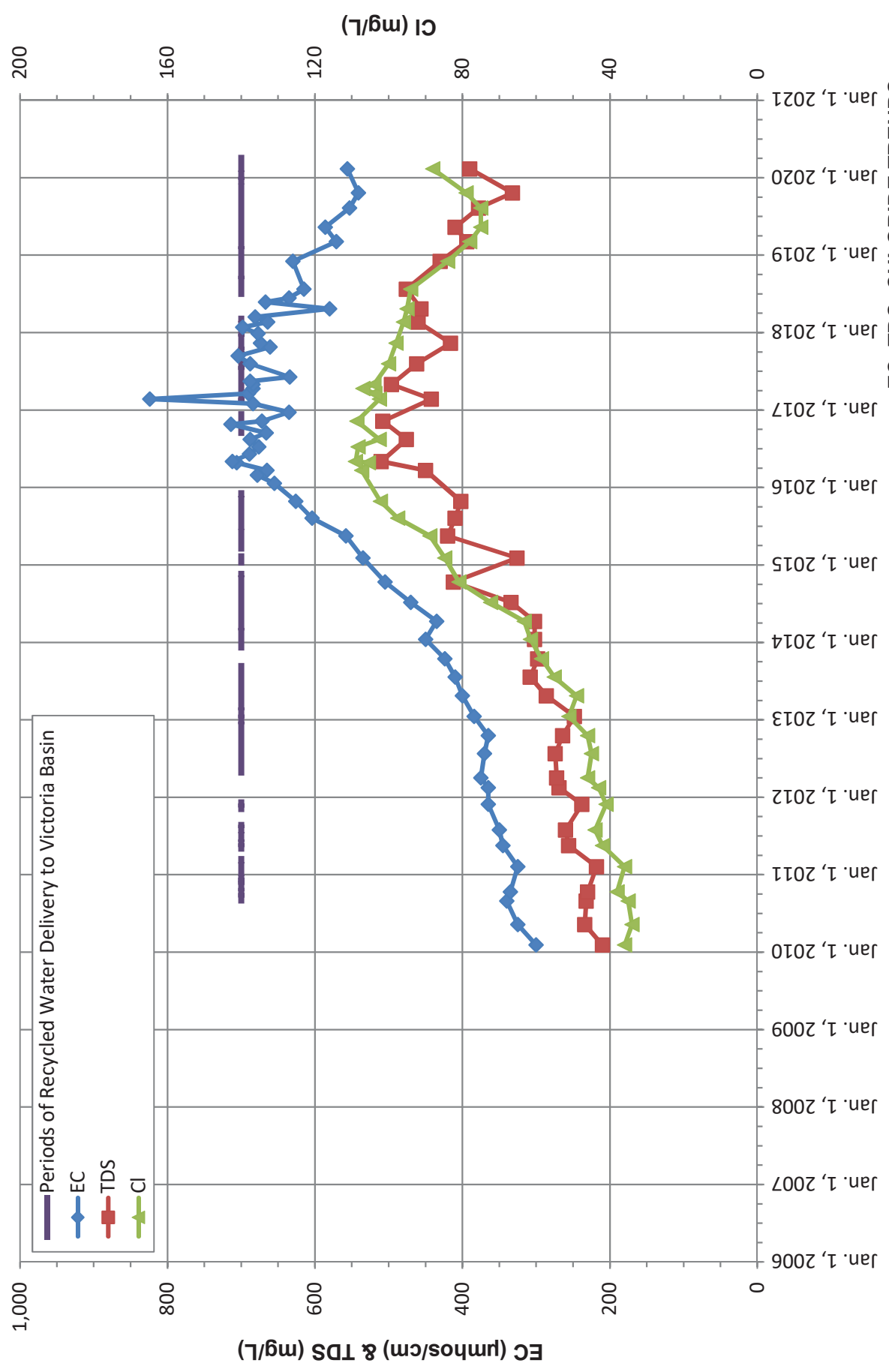
# EC, TDS, CHLORIDE TRENDS SAN SEVAINNE BASINS SS-1/1

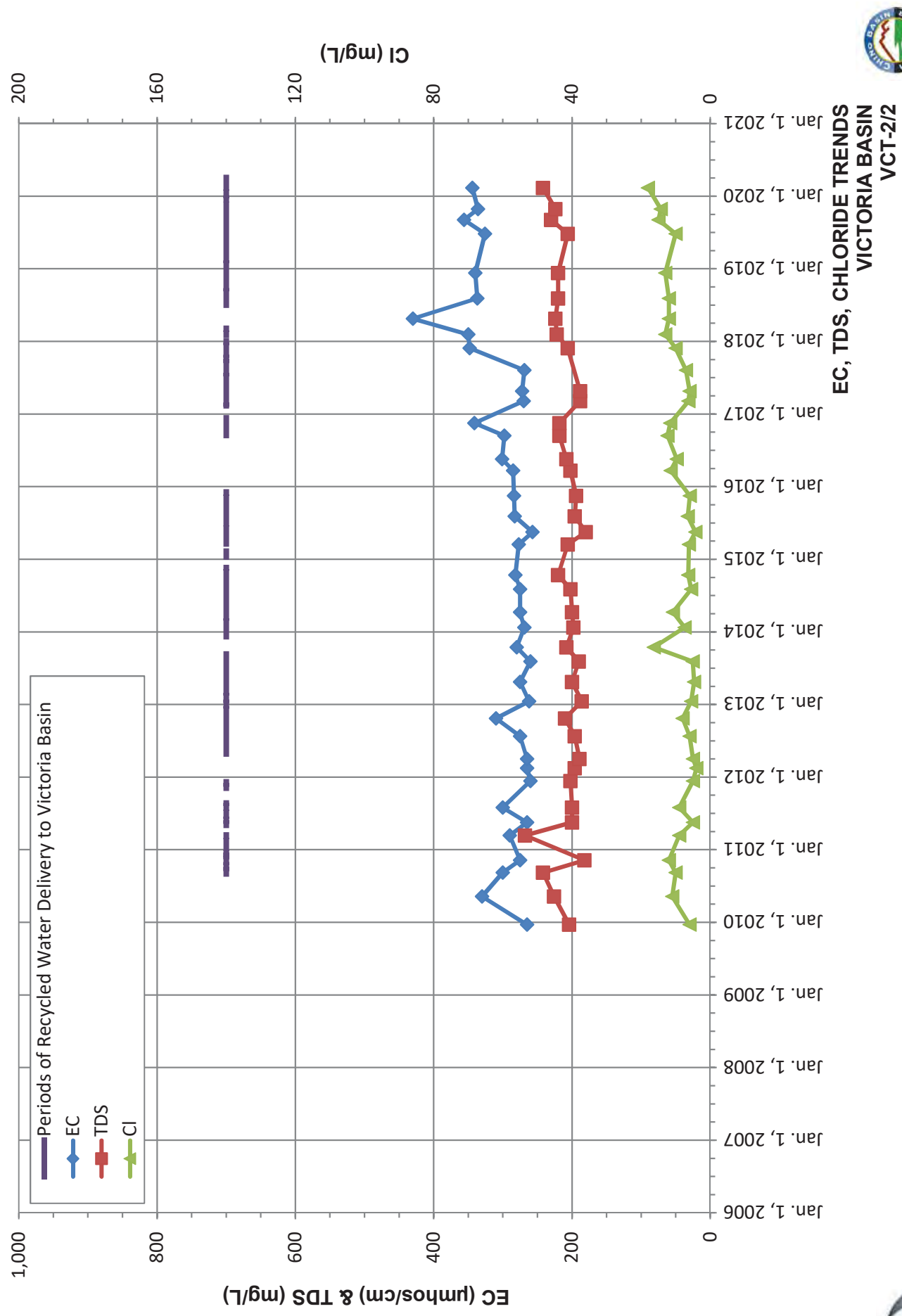






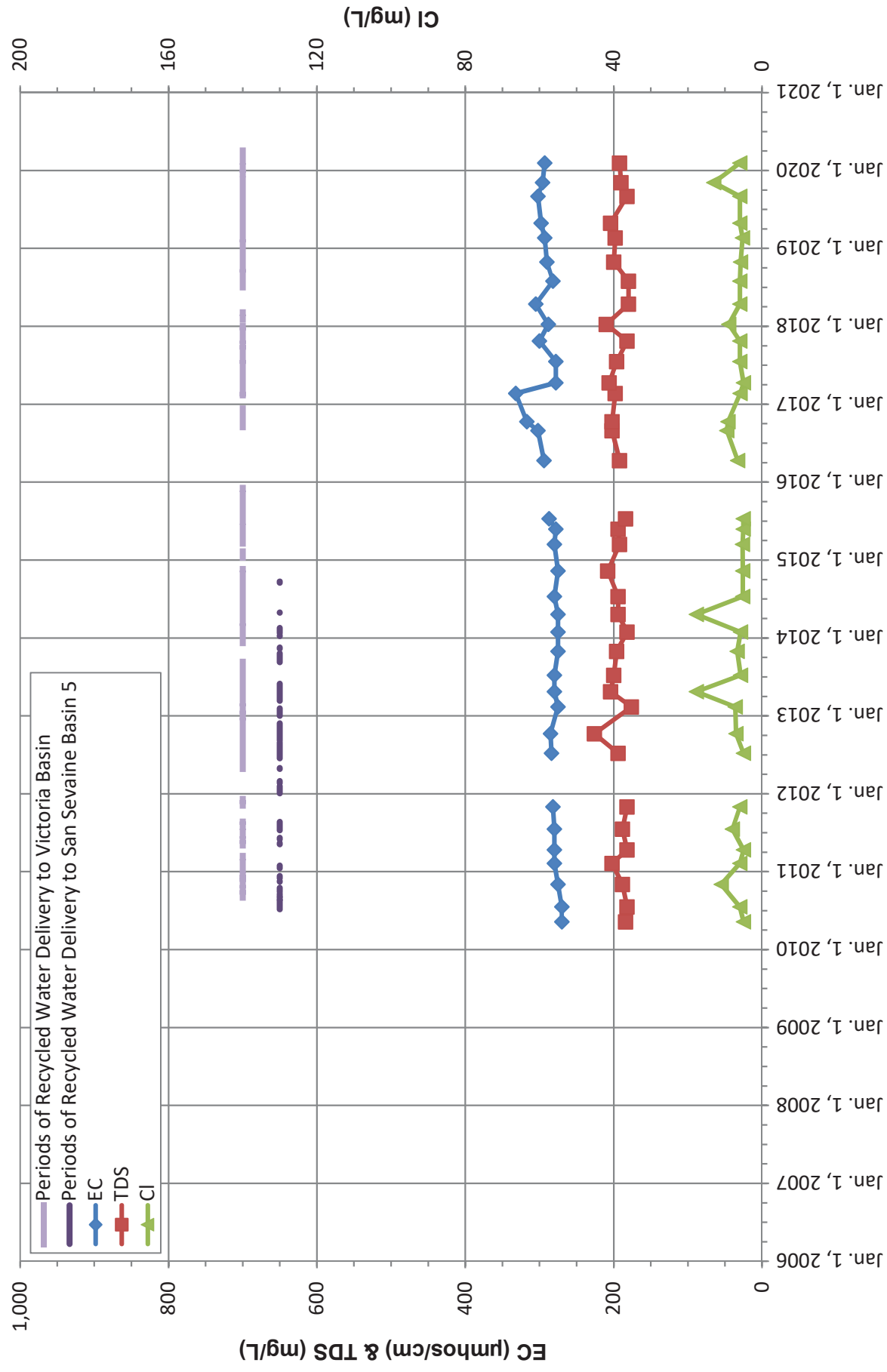
# EC, TDS, CHLORIDE TRENDS VICTORIA BASIN VCT-1/1







# EC, TDS, CHLORIDE TRENDS SAN SEVAINE & VICTORIA BASINS CVWD Well No. 39



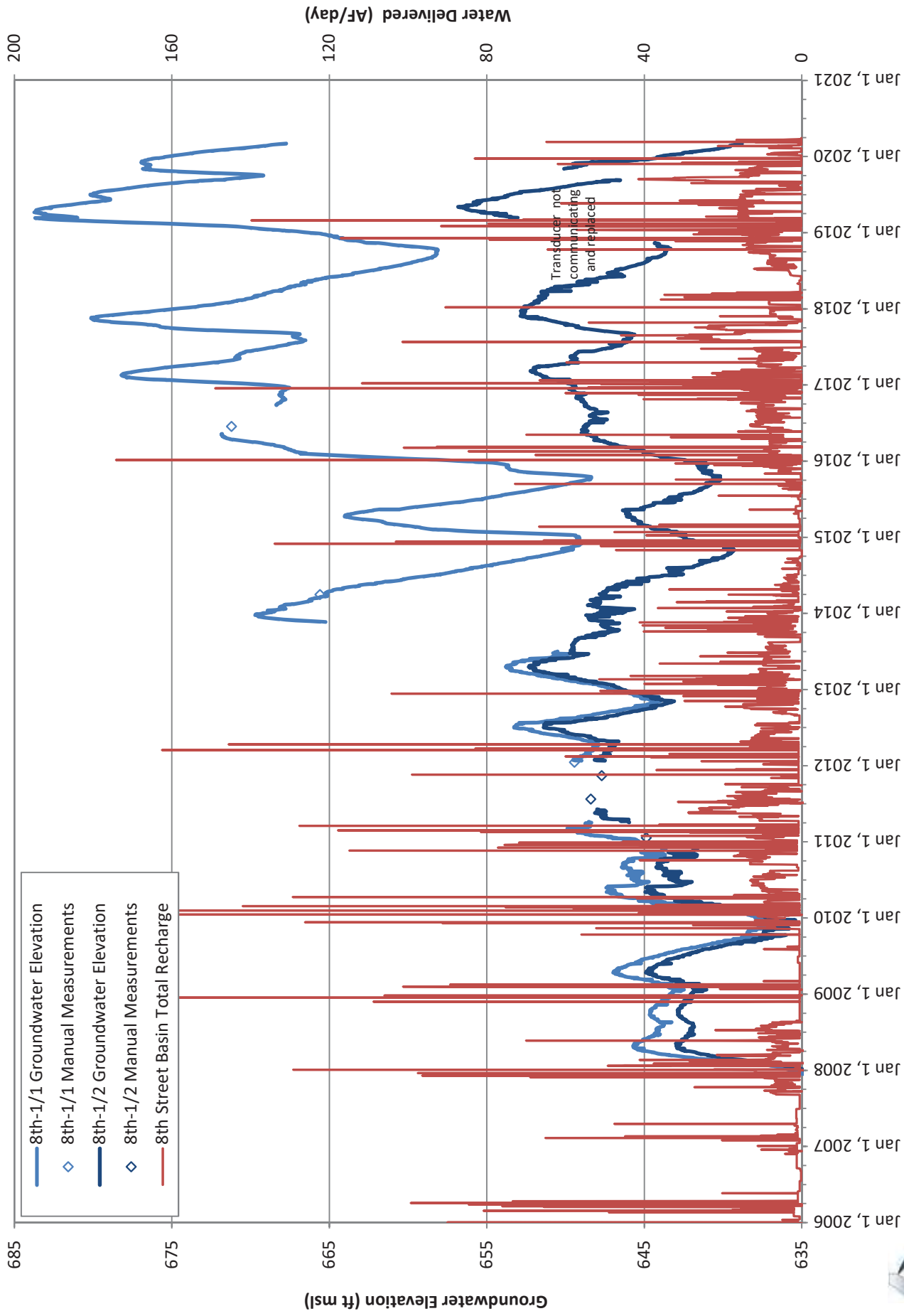
## APPENDIX D

### MONITORING WELL HYDROGRAPHS

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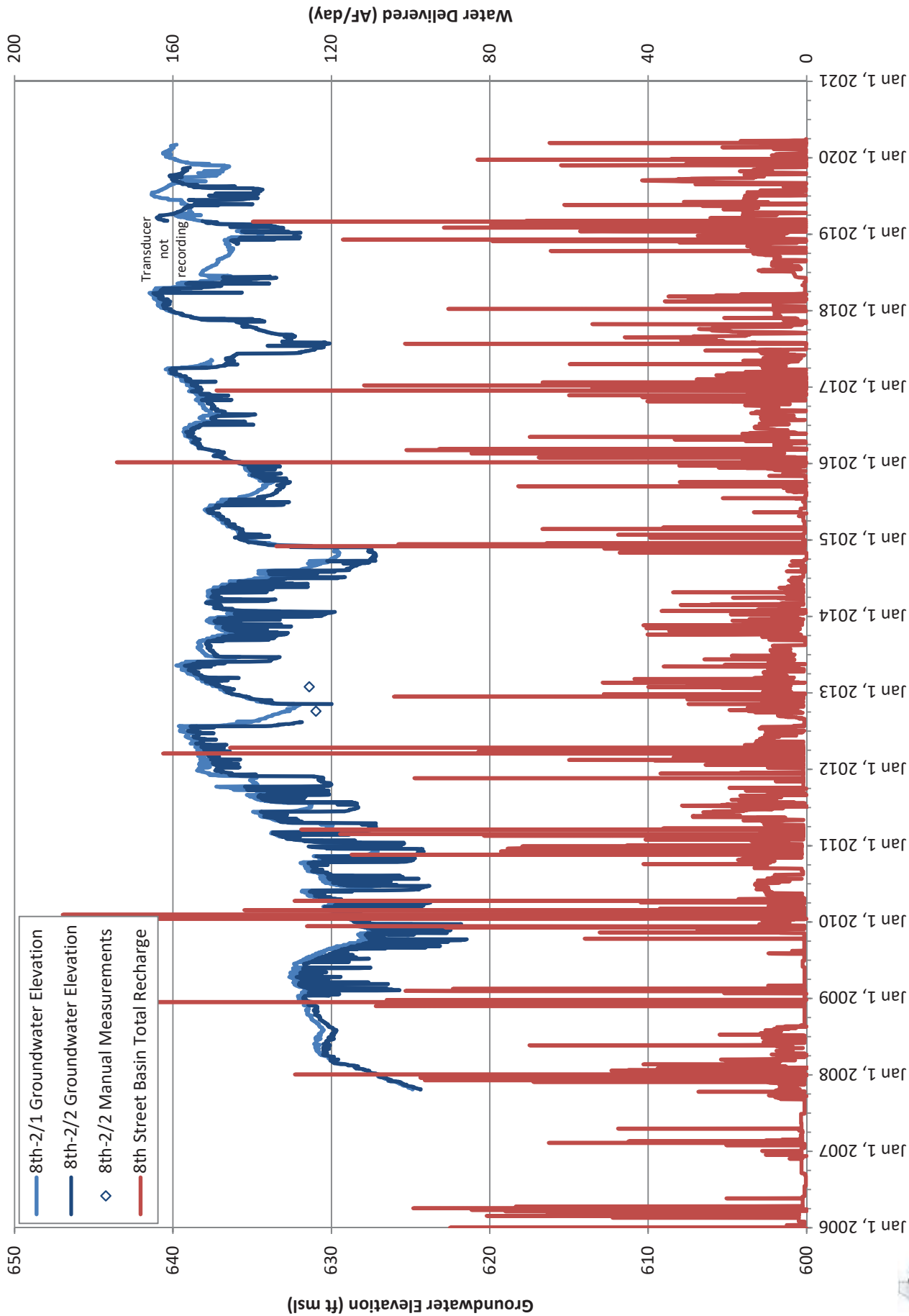


# HYDROGRAPH MW 8TH-1/1 & 8TH-1/2



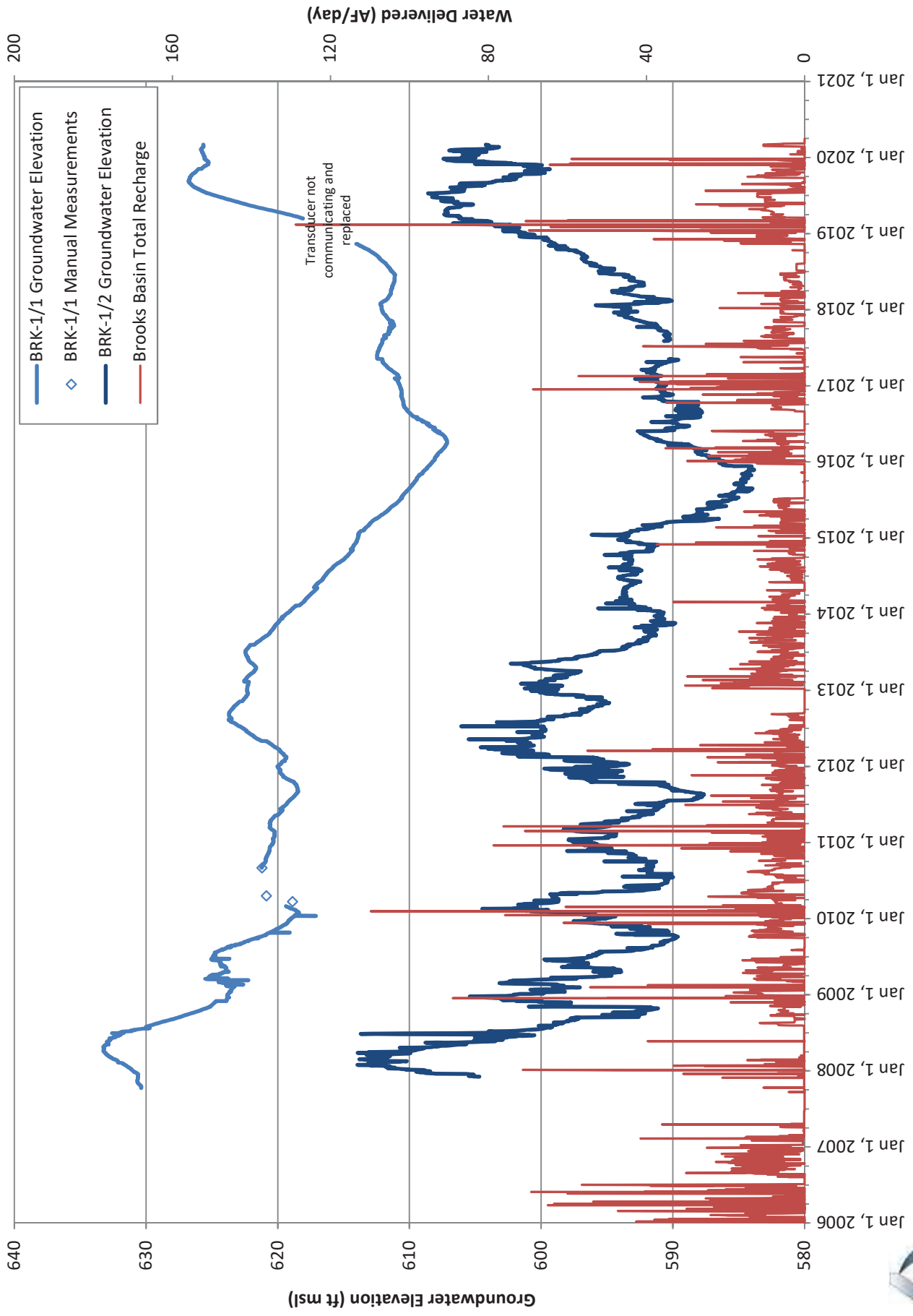


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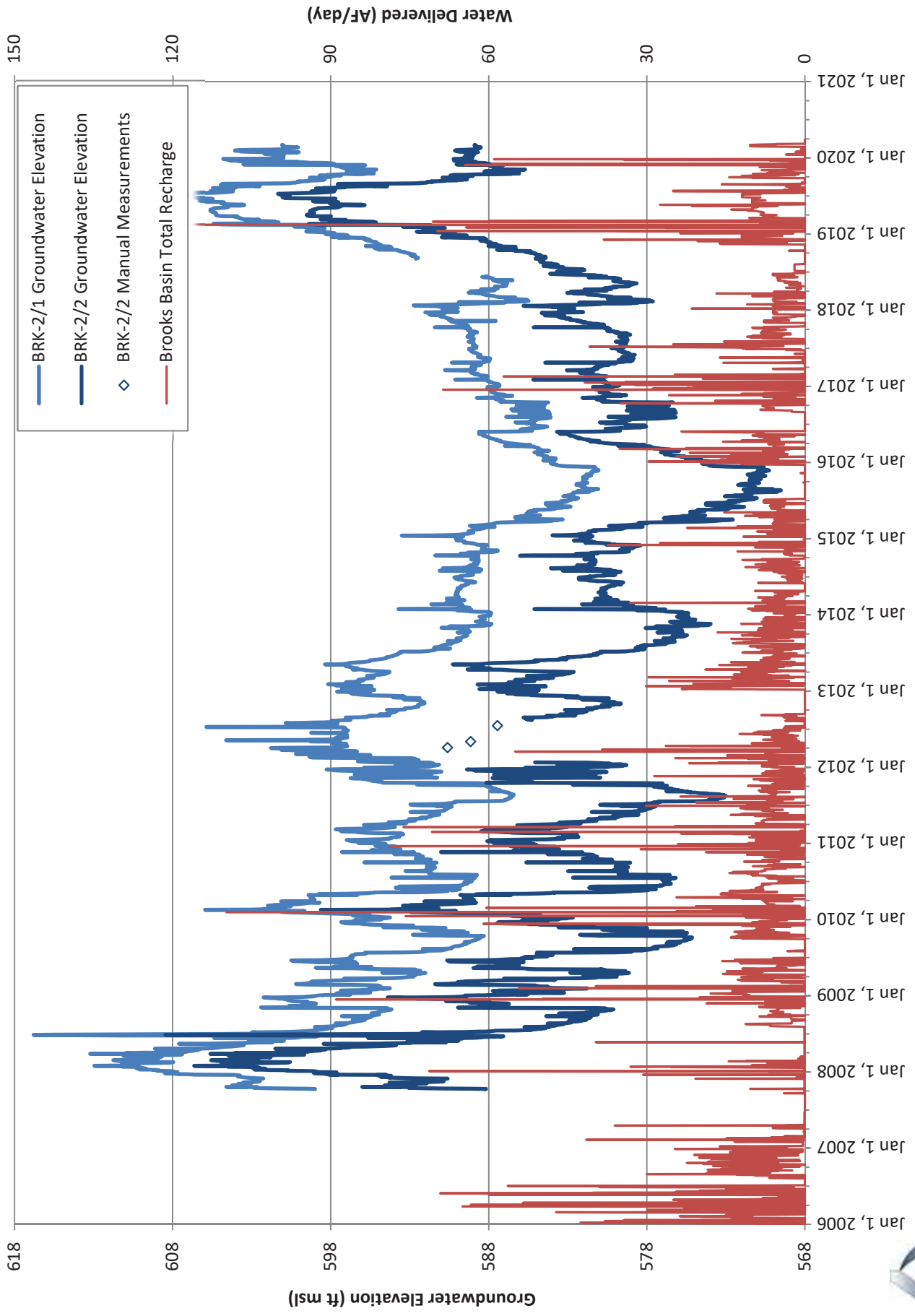


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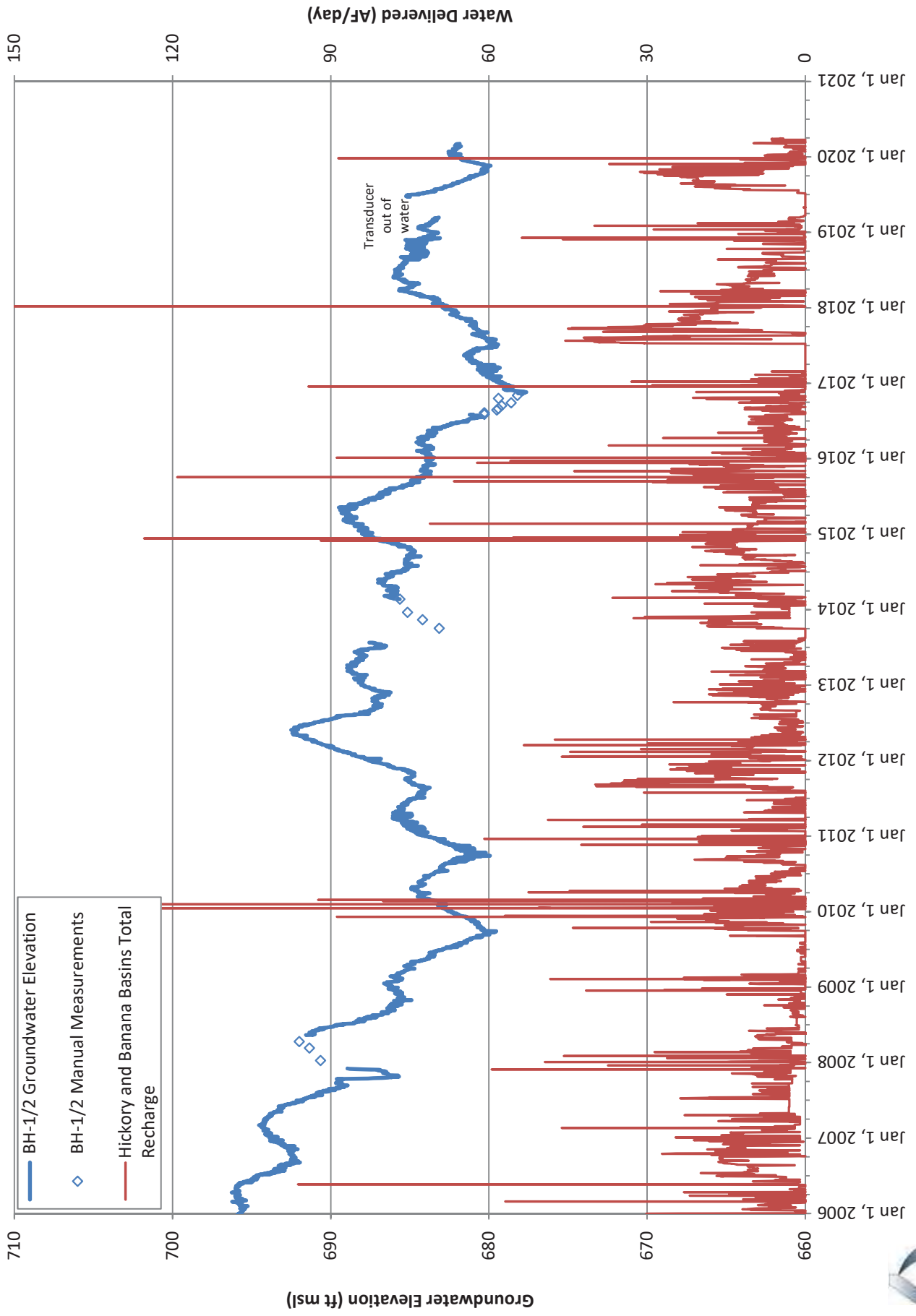
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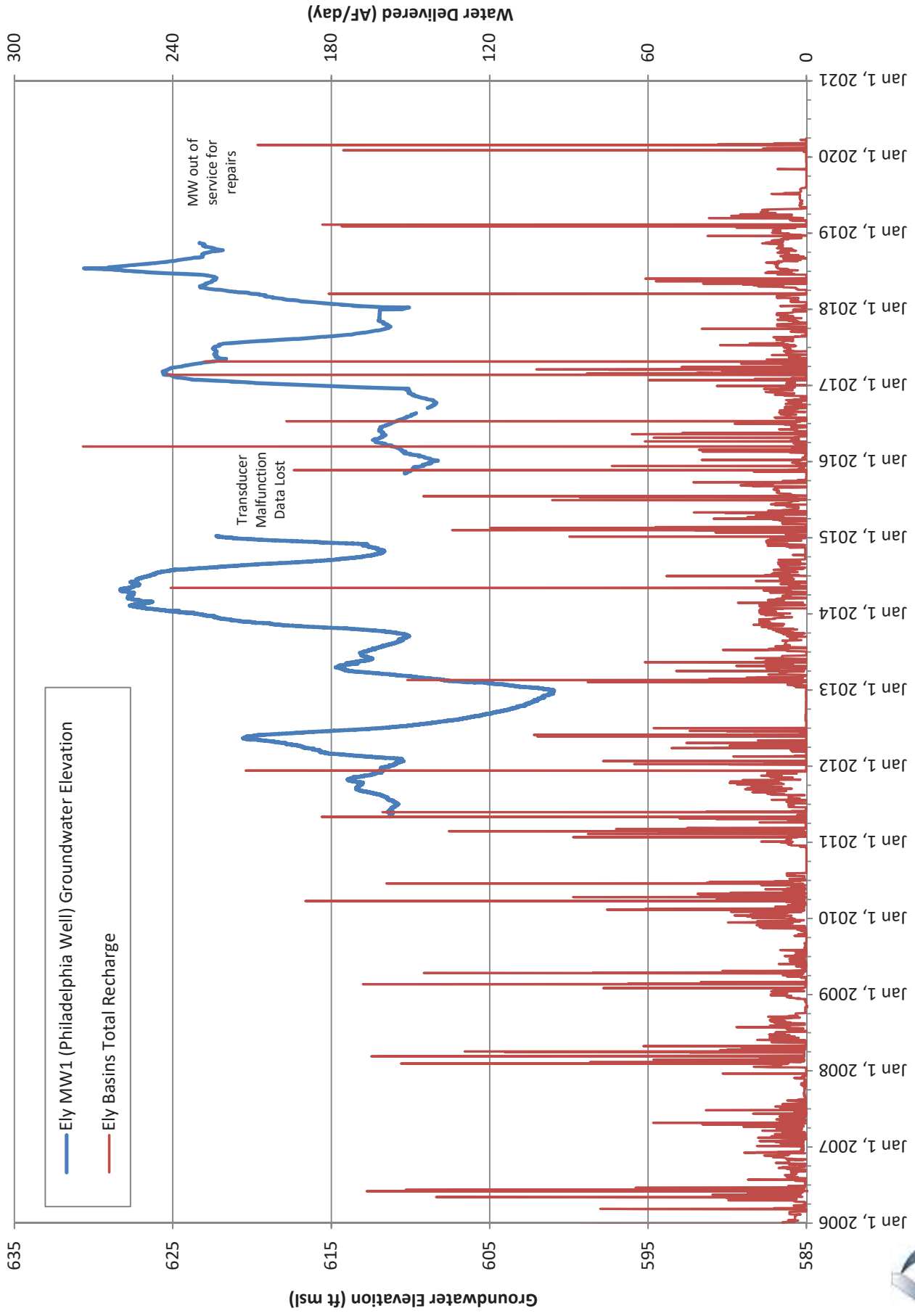


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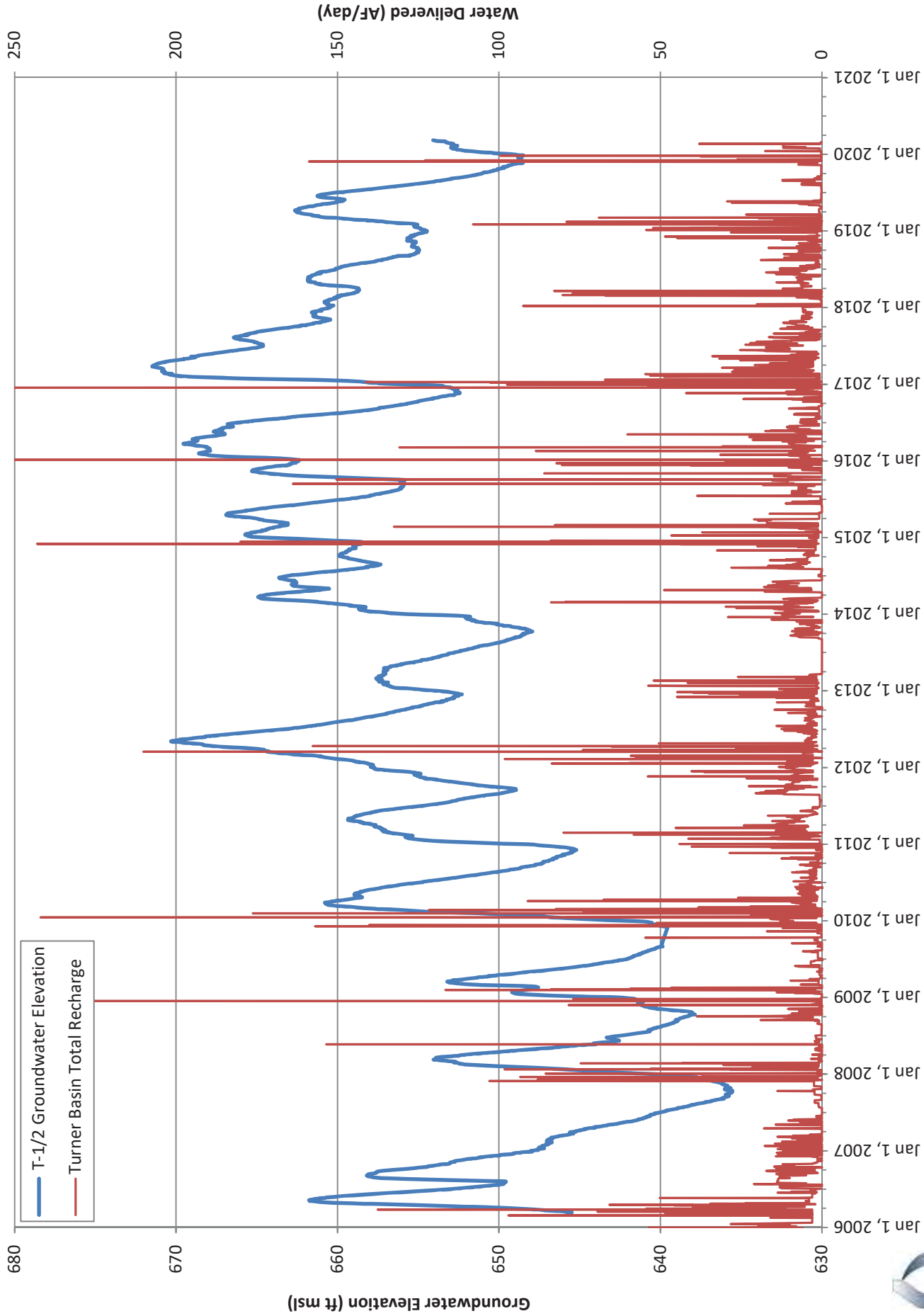


# HYDROGRAPH Ely MW1 (Philadelphia Well)



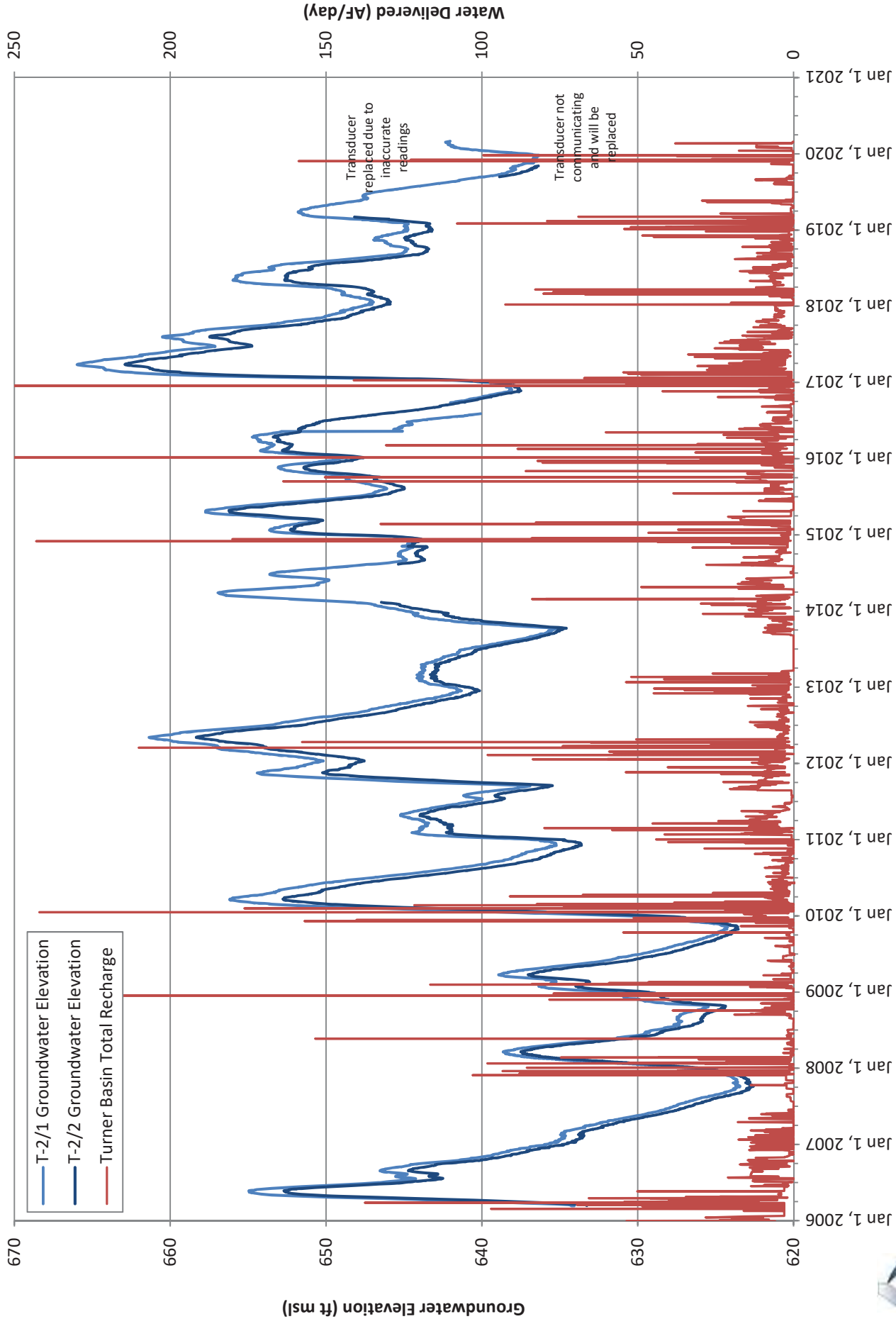


# HYDROGRAPH MW TRN-1/2



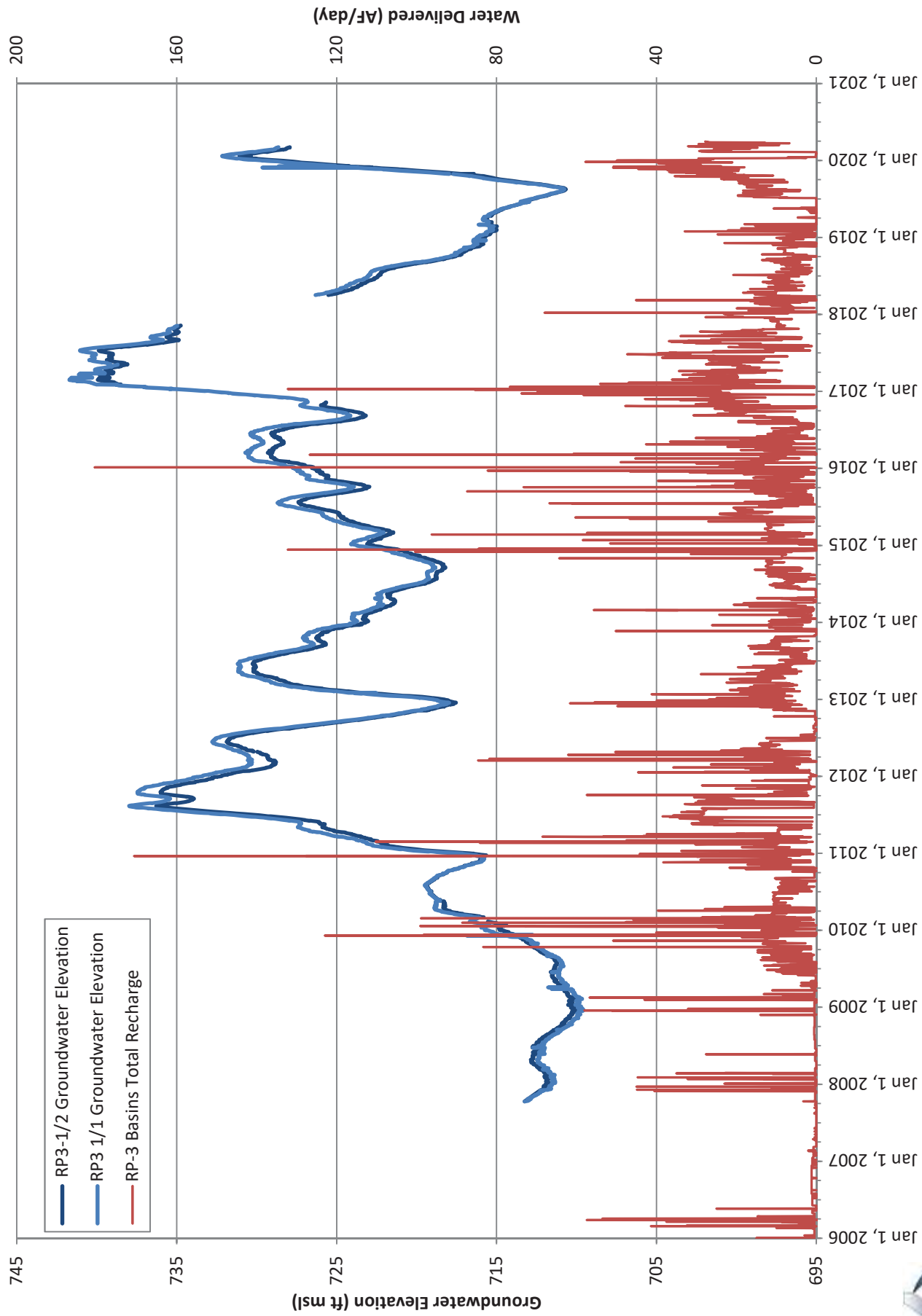


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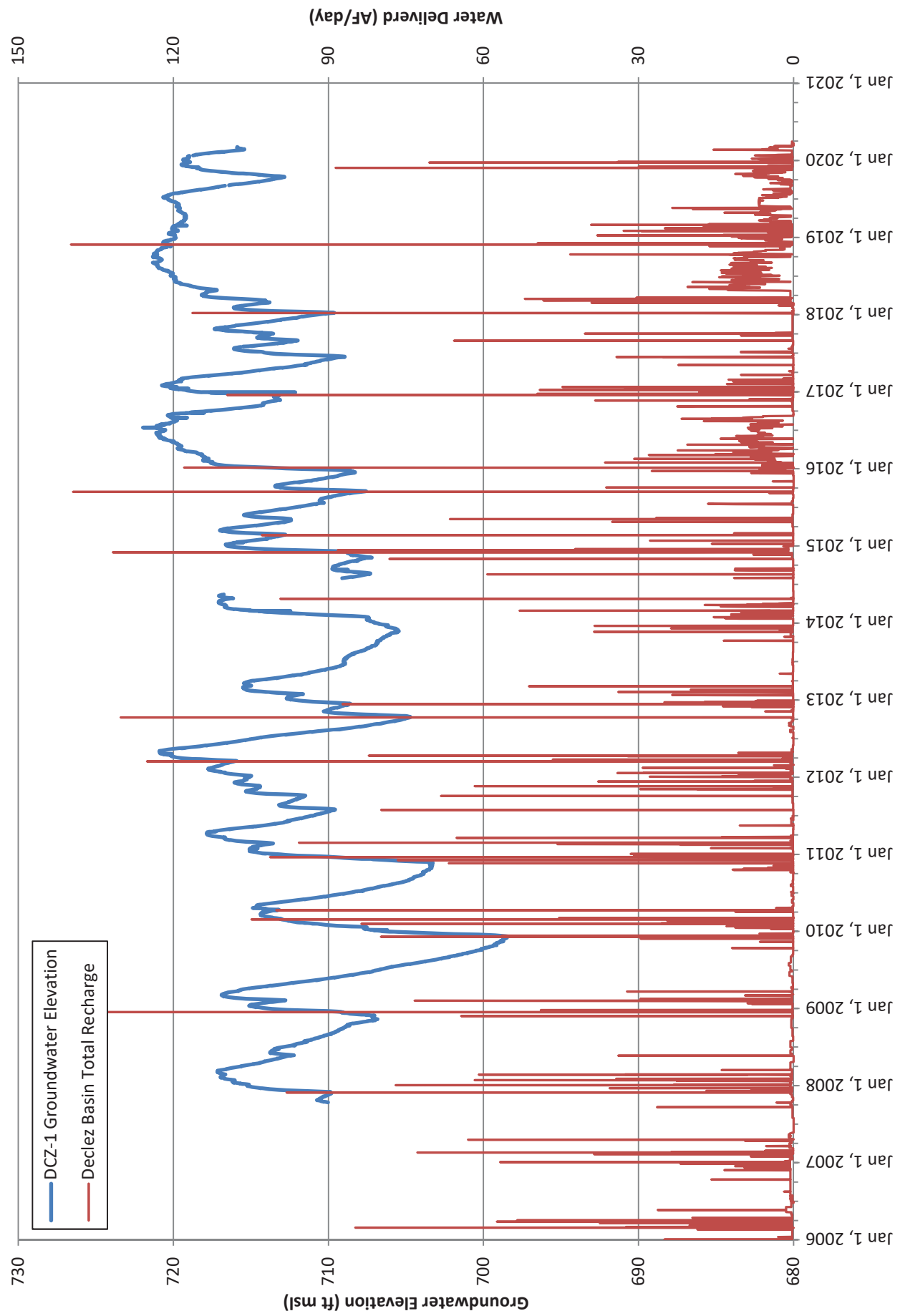


# HYDROGRAPH MW RP3-1/1 & RP3-1/2





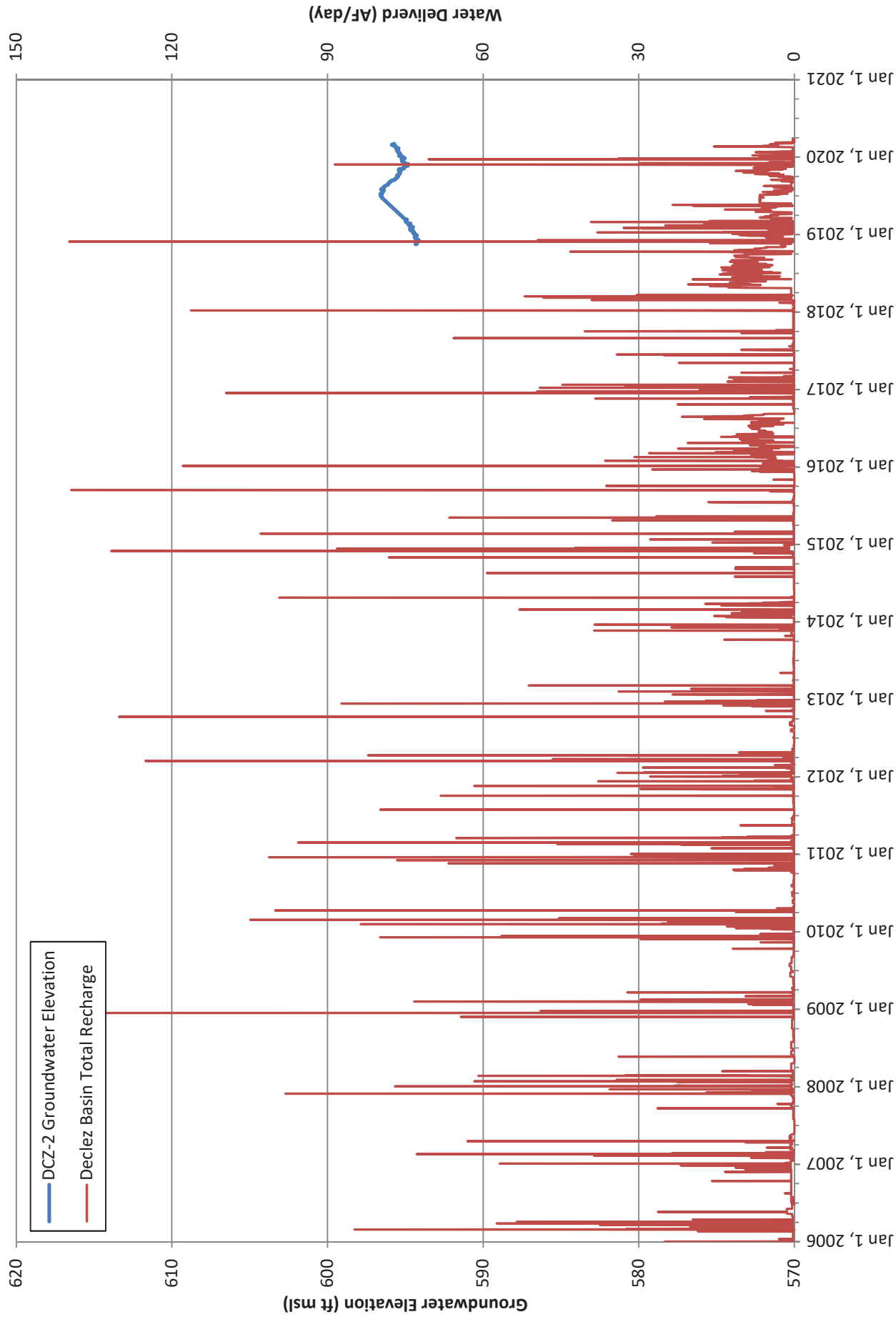
# HYDROGRAPH MW DCZ-1





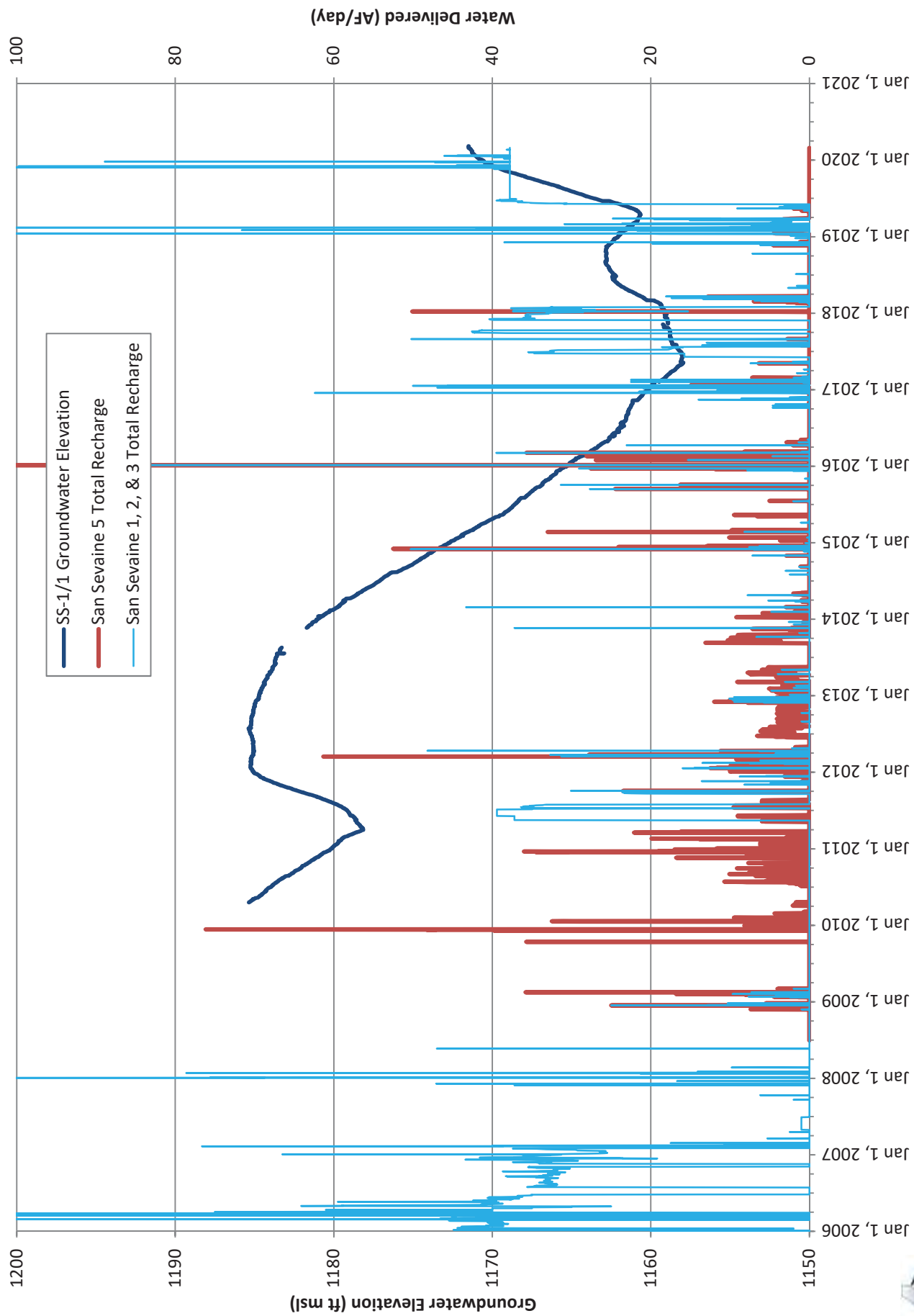


# HYDROGRAPH MW DCZ-2



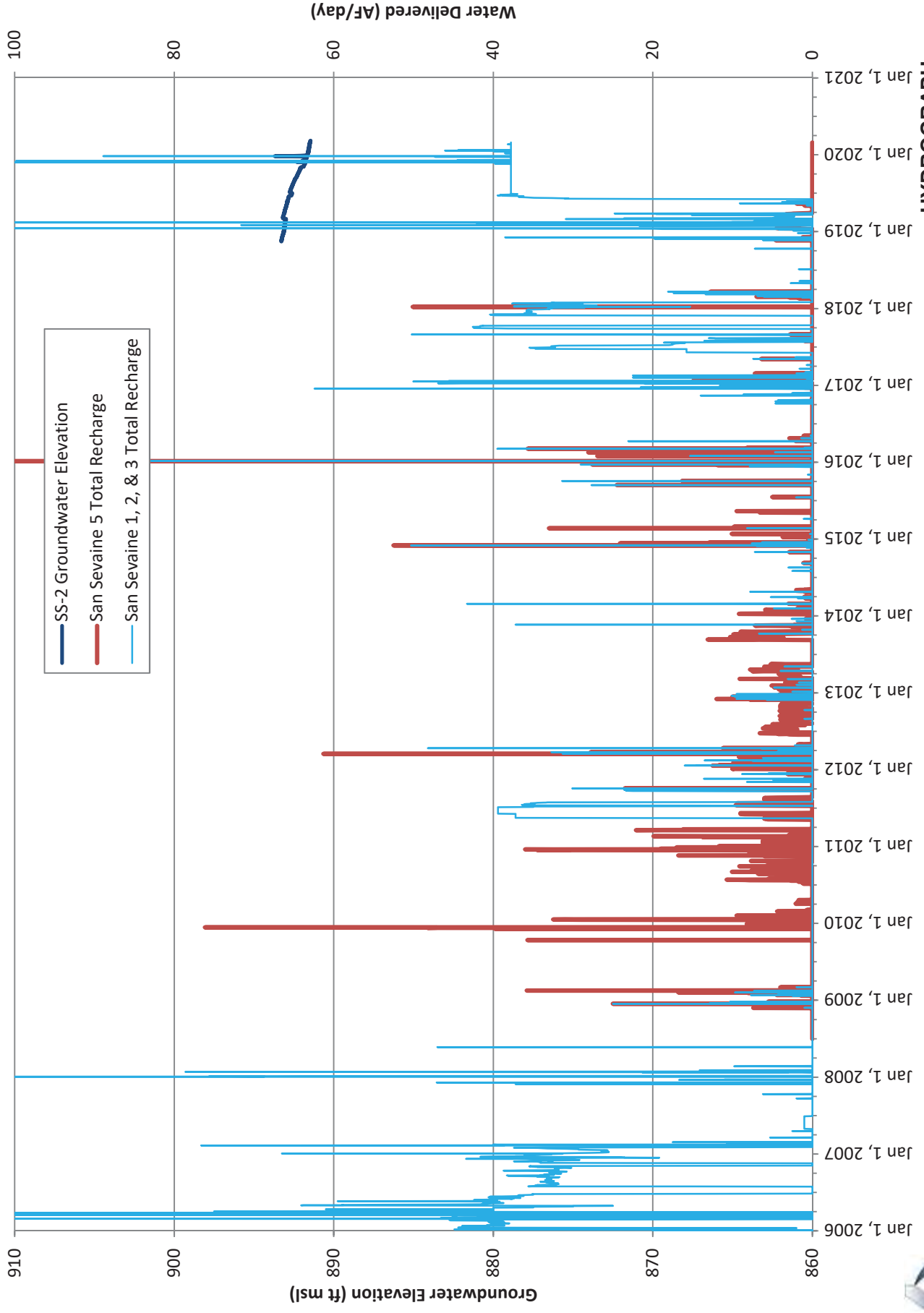


# HYDROGRAPH MW SS-1/1



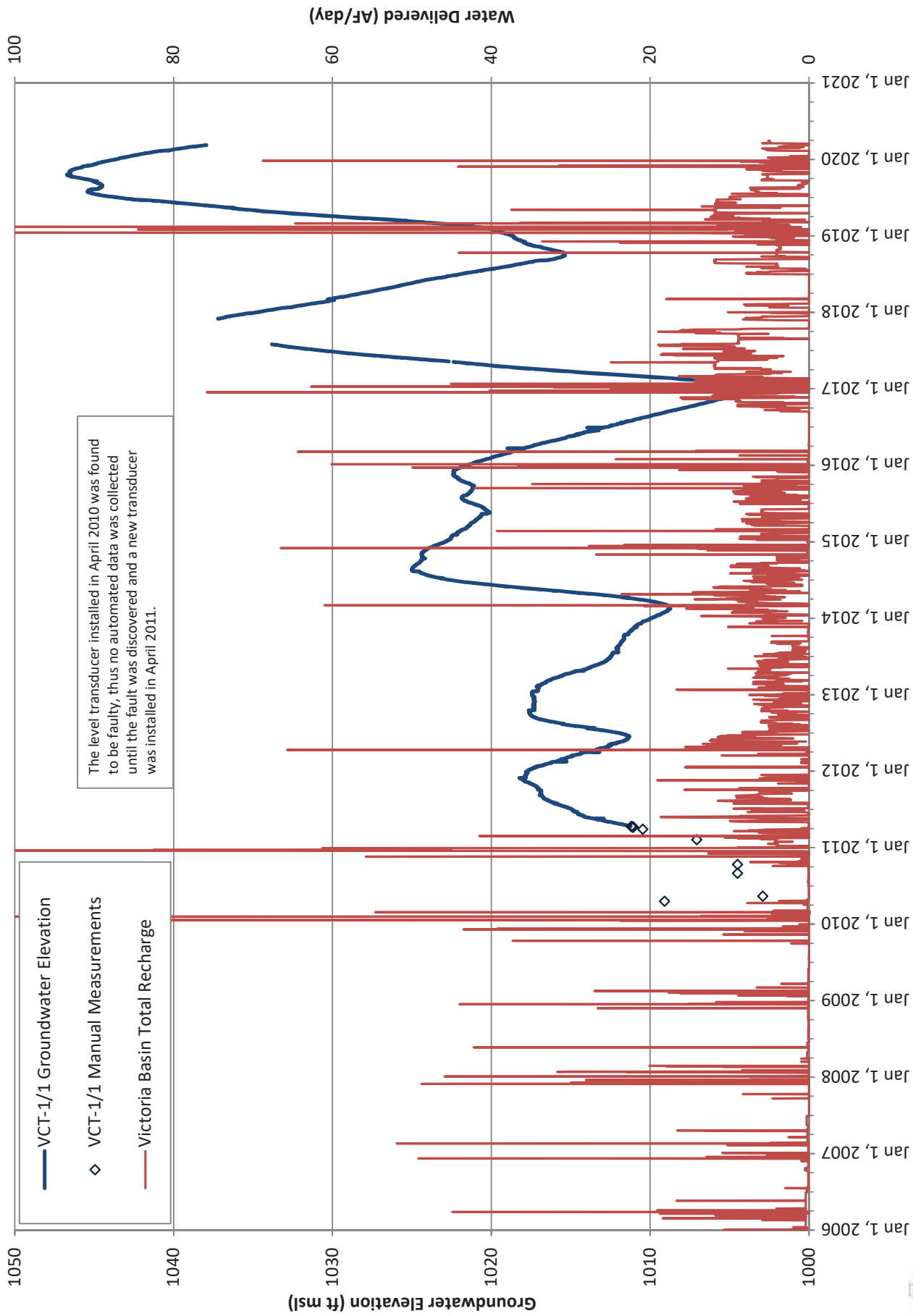


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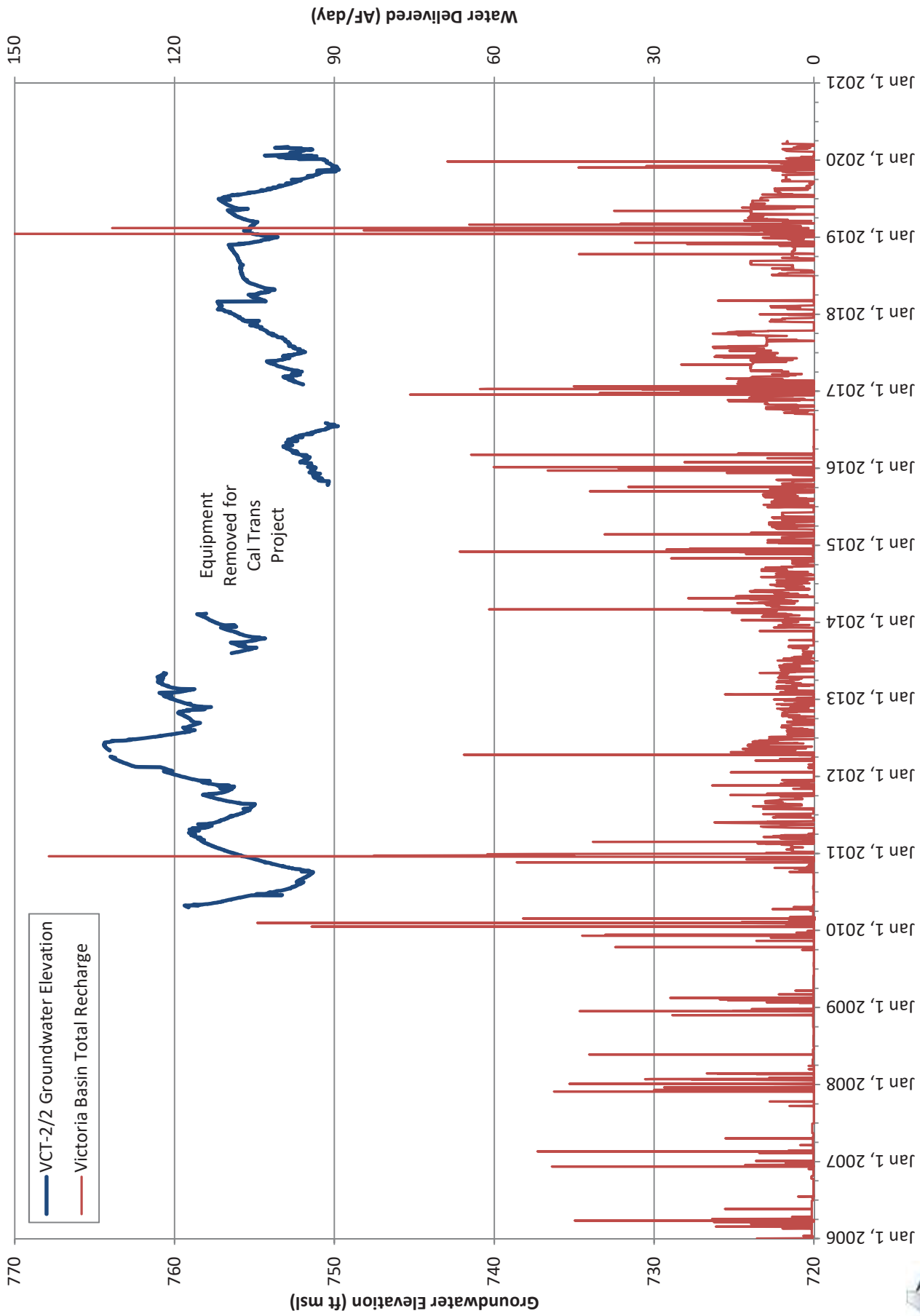


# HYDROGRAPH MW VCT-1/1





# HYDROGRAPH MW VCT-2/2

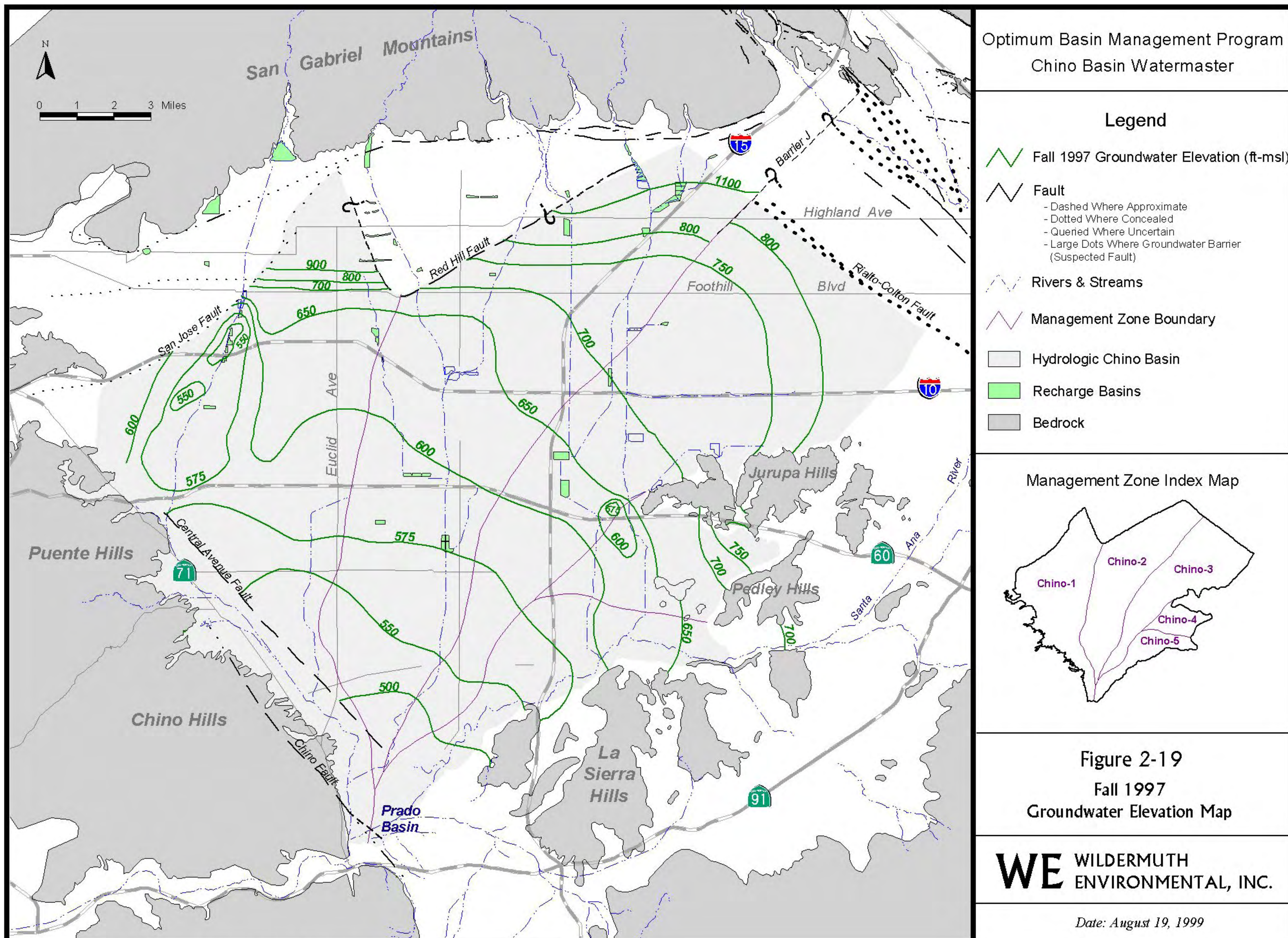


APPENDIX E

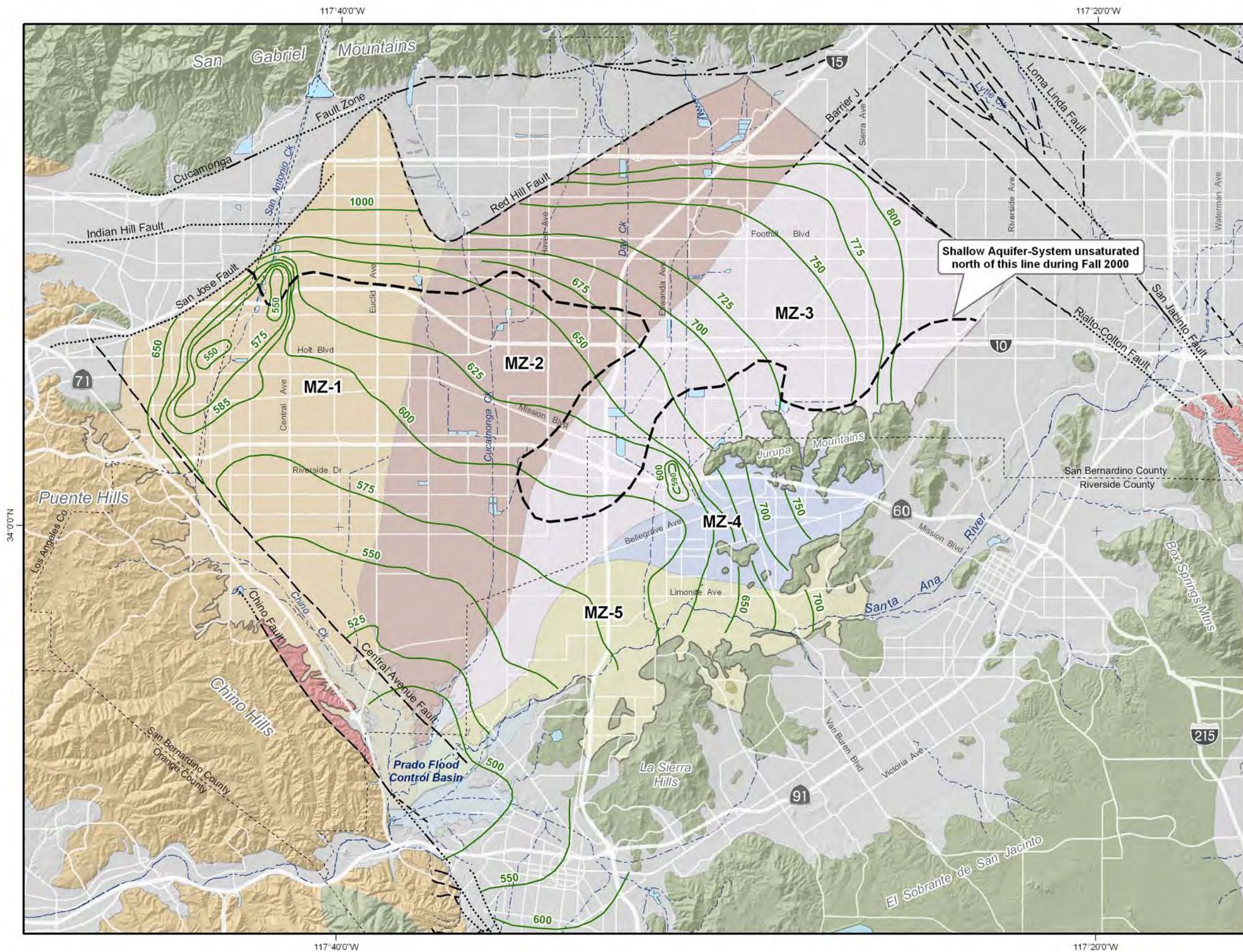
GROUNDWATER ELEVATION CONTOUR MAPS

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### Main Features

800 Groundwater Elevation Contours -- Fall 2000  
775 (feet above mean sea level)

### 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

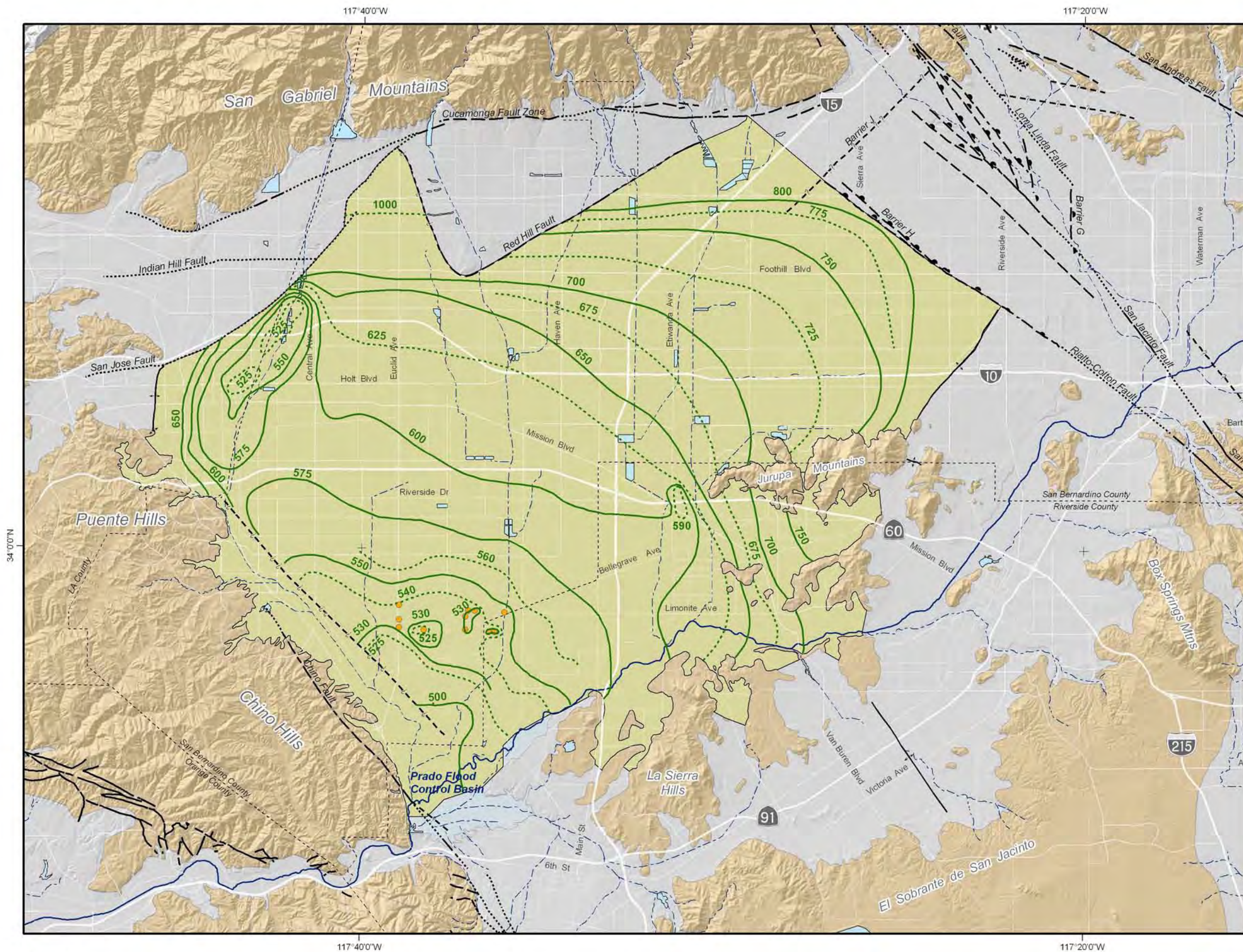


**Inland Empire**  
UTILITIES AGENCY  
Phase II Recycled Water  
Groundwater Recharge Project

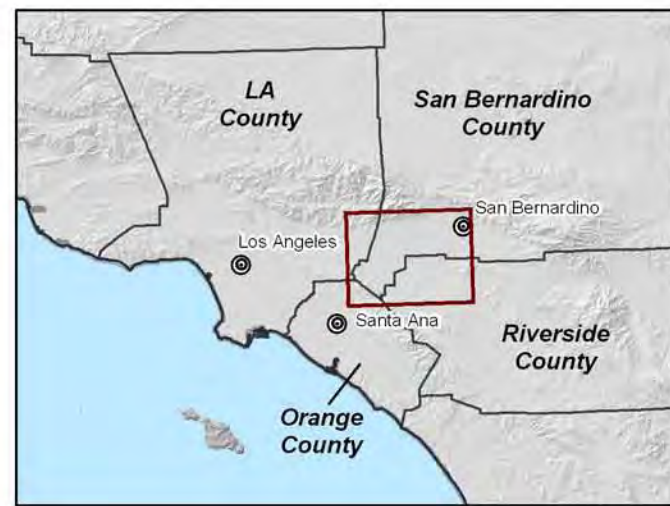
## Groundwater Elevation Map Fall 2000

Figure 8-3



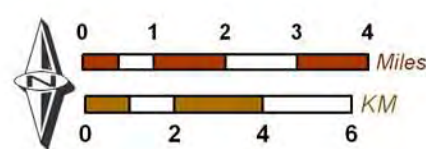


- ### Main Features
- 800  
775  
Groundwater Elevation Contours (feet above mean sea-level)
  - Chino-I Desalter Well
  - Chino Basin Hydrologic Boundary
- ### Geology
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, 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  
 File: Figure\_3-6.mxd



State of the Basin Report -- 2004  
 Groundwater Basin Operation and Response



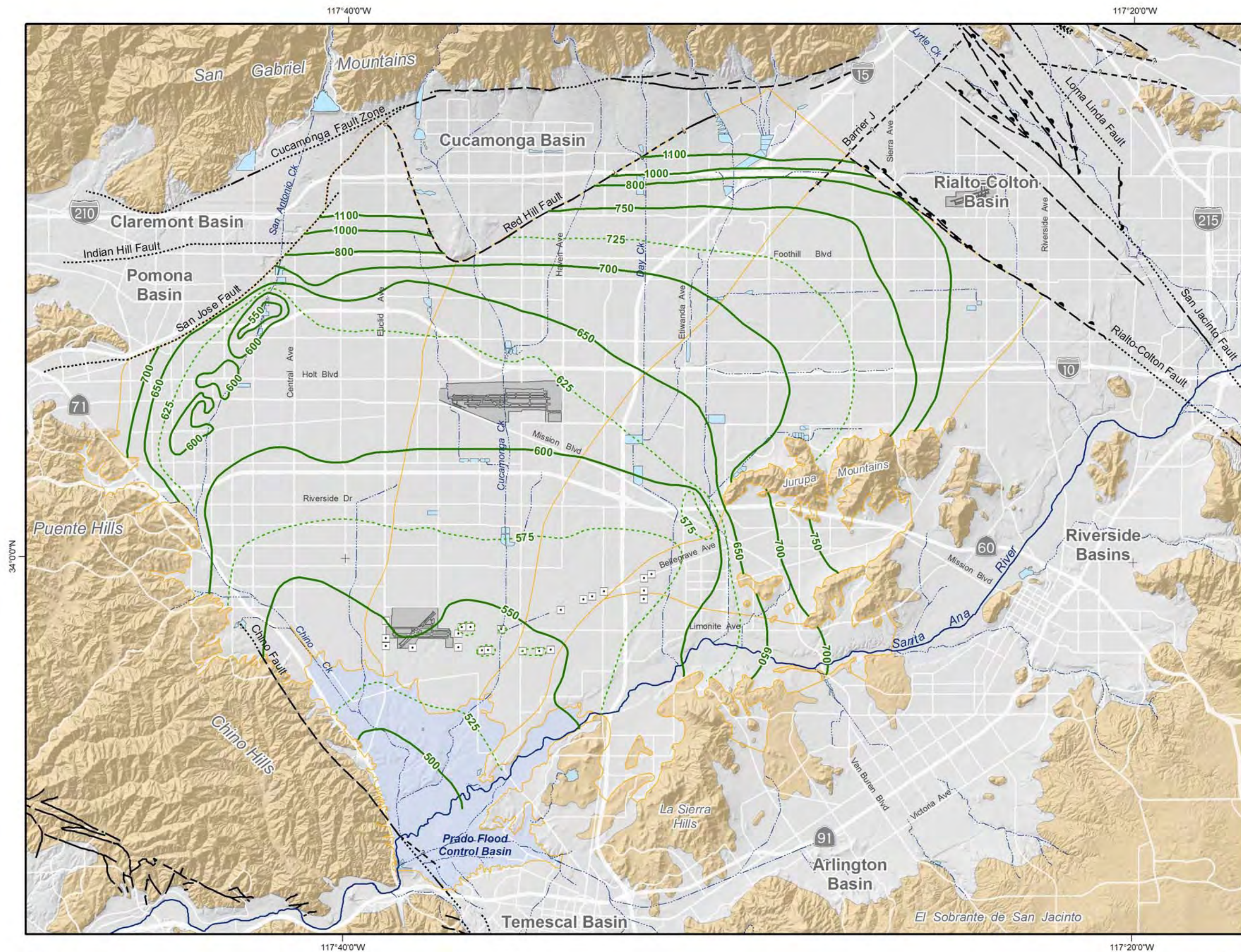
**Groundwater Elevation Contours**  
 Fall 2003 -- Chino Basin

**Figure 3-6**







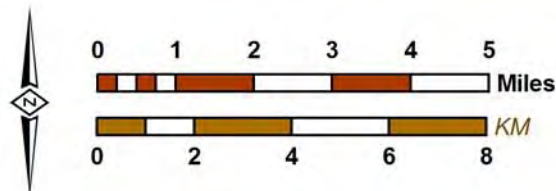


- 800 Groundwater Elevation Contours (feet above mean sea-level)  
775
- Other Features**
- Management Zone Boundary
  - Chino Desalter Well
  - Streams & Flood Control Channels
  - Flood Control & Conservation Basins
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- 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  
 Date: 20090401  
 File: Figure\_3-19.mxd



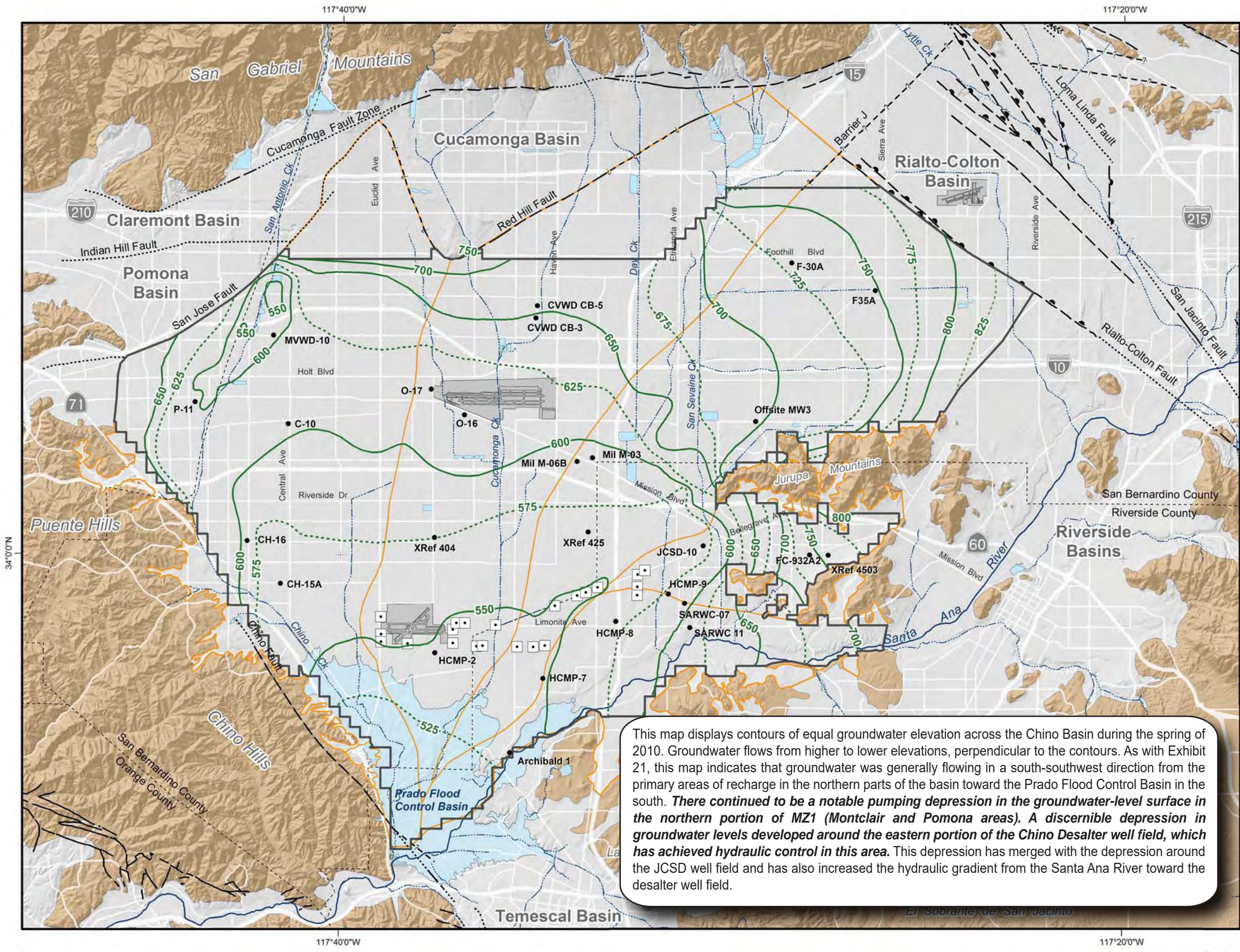
**2008 State of the Basin Report**  
 Groundwater Levels



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

**Figure 3-19**





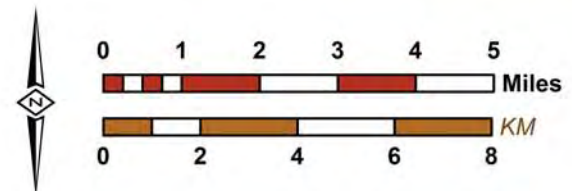
- 800 775 Groundwater Elevation Contours (feet above mean sea-level)
- Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
- Well used for Time History Analysis (Exhibits 16 through 20)
- OBMP Management Zones
- Chino Desalter Wells
- Streams & 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 Approximate
  - Approximate Location of Groundwater Barrier
  - Location Concealed
  - Location Uncertain

This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2010. Groundwater flows from higher to lower elevations, perpendicular to the contours. As with Exhibit 21, this map indicates 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 Flood Control Basin in the south. ***There continued to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas). A discernible depression in groundwater levels developed around the eastern portion of the Chino Desalter well field, which has achieved hydraulic control in this area.*** This depression has merged with the depression around the JCSD well field and has also increased the hydraulic gradient from the Santa Ana River toward the desalter well field.



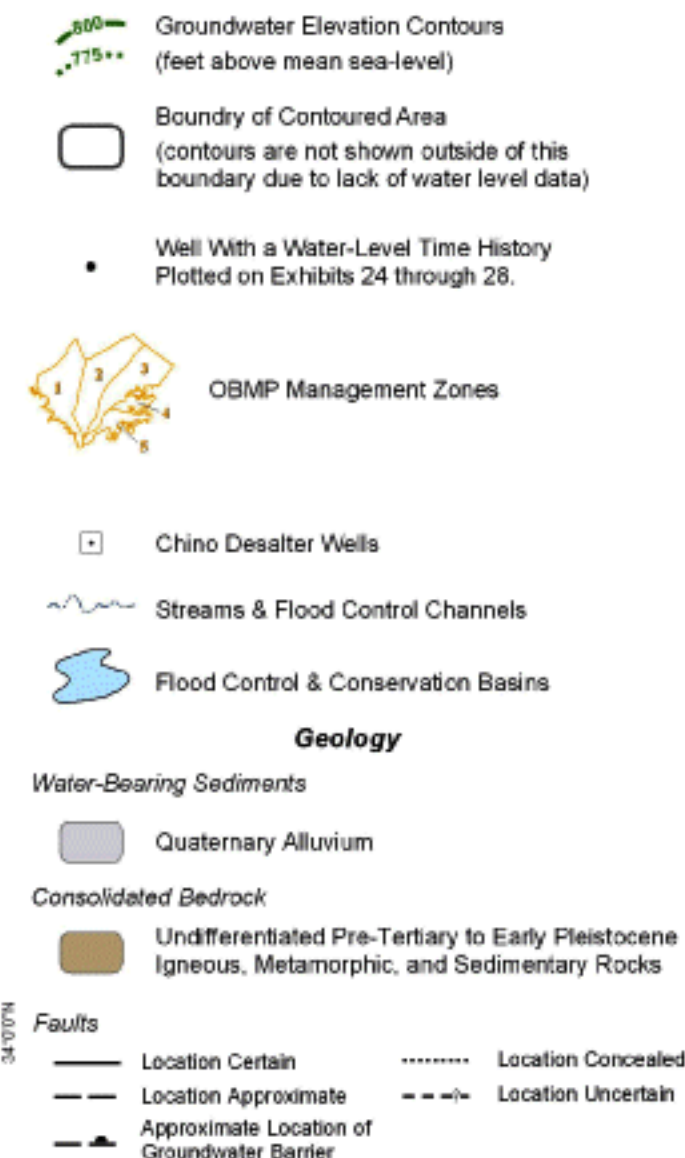
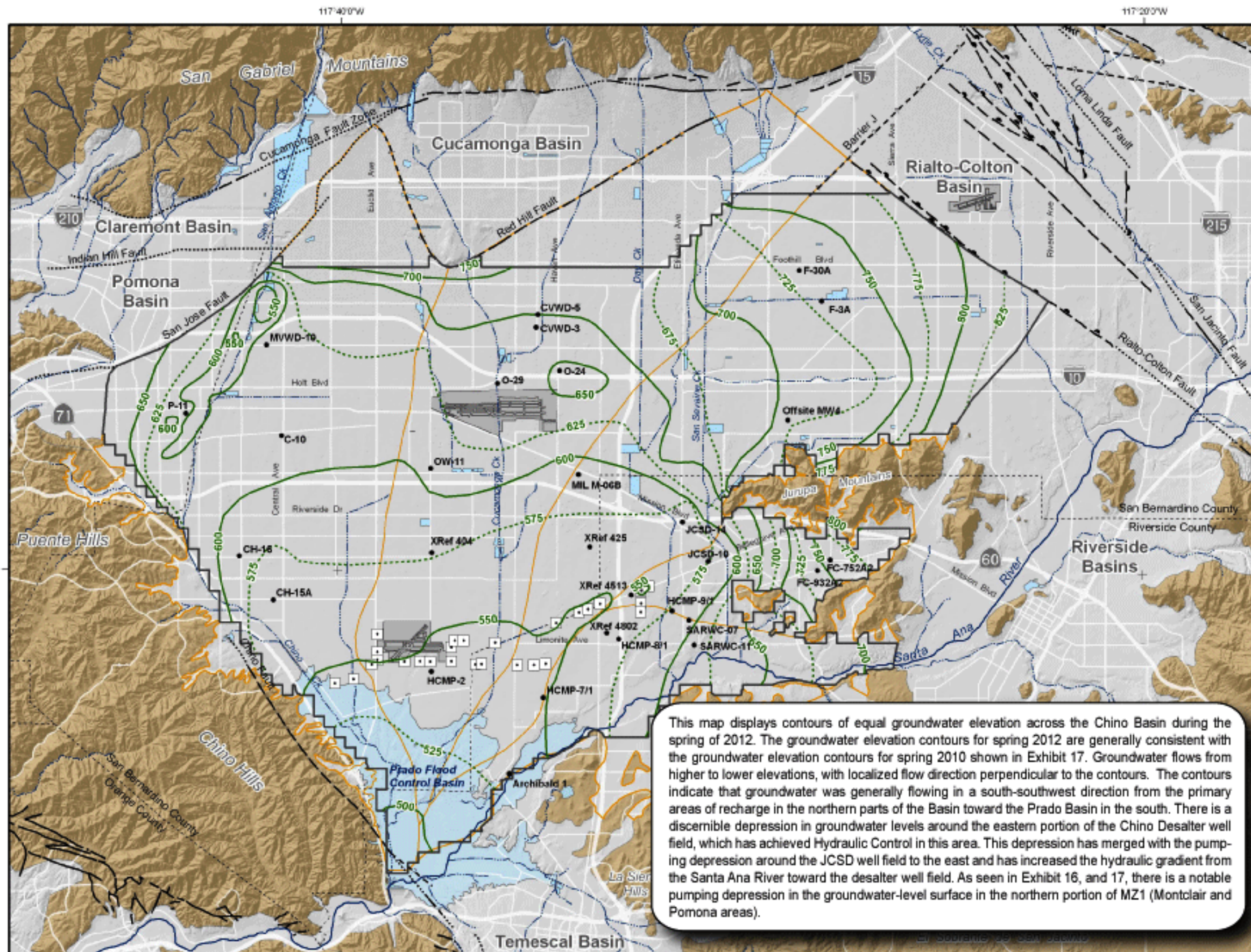
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Author: TCR  
 Date: 20111027  
 File: Exhibit\_22.mxd



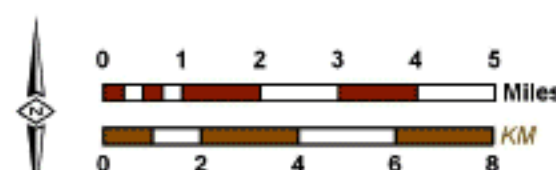
**2010 State of the Basin**  
 Groundwater Levels





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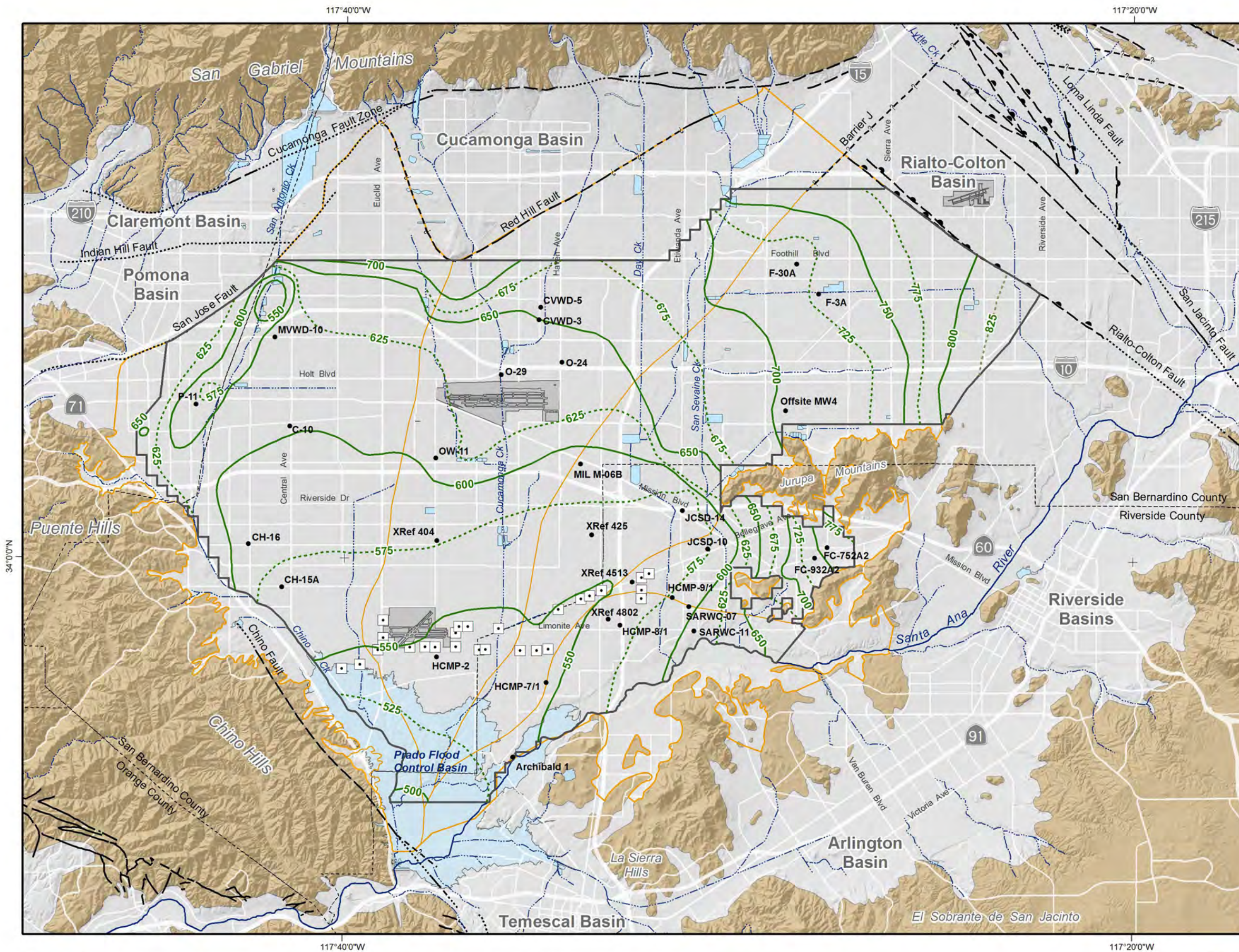
Author: TCR  
Date: 20121130  
File: Exhibit\_18.mxd



**2012 State of the Basin**  
Groundwater Levels

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



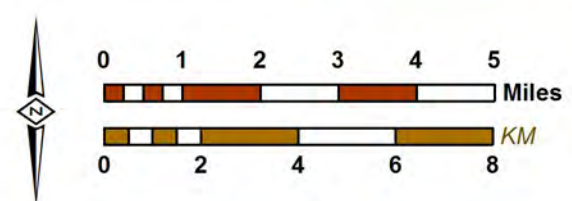


- Groundwater Elevation Contours (feet above mean sea-level)
- Boundry of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater level data)
- Well With a Water-Level Time History Plotted on Exhibits 24 through 28
- OBMP Management Zones
- Chino Desalter Wells
- Streams & 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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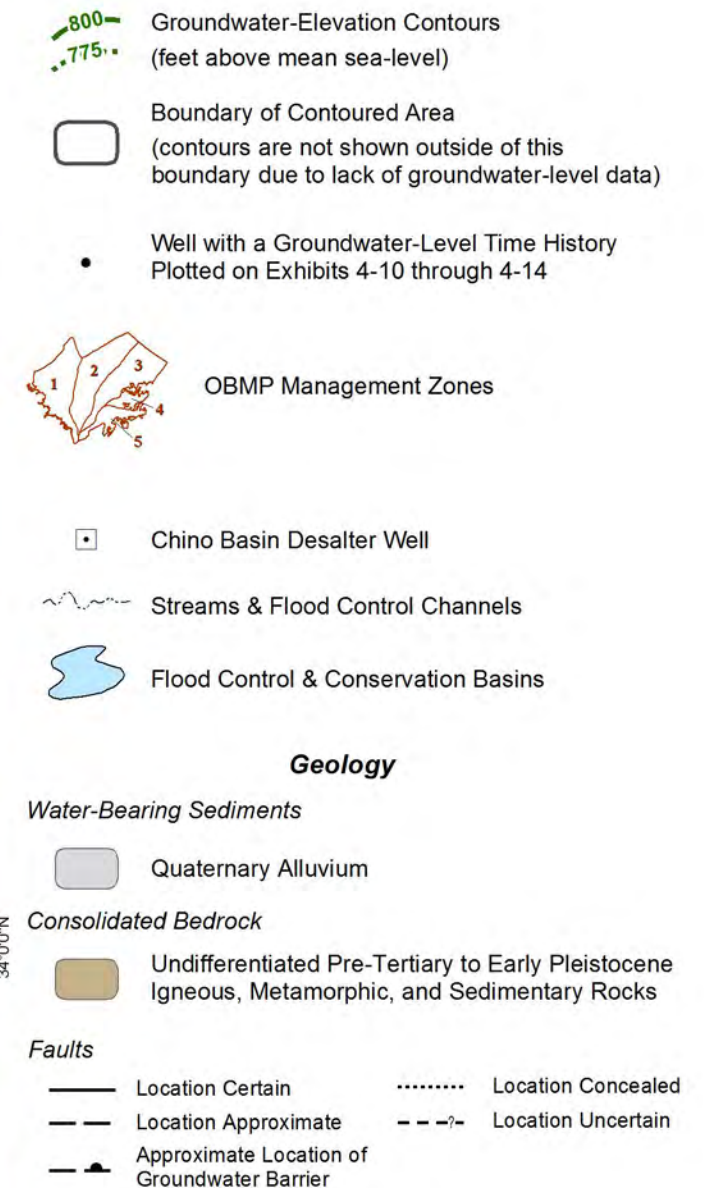
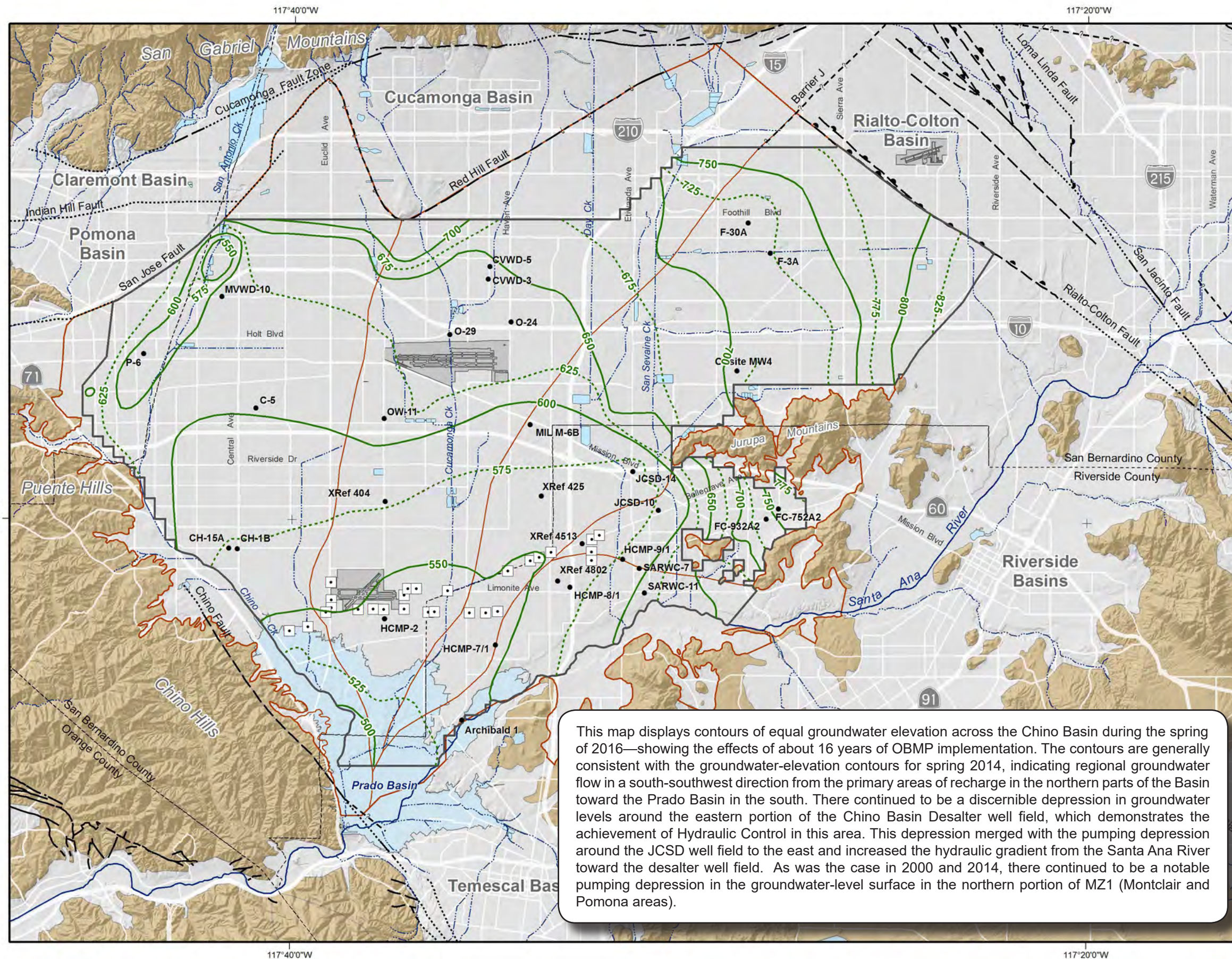
Author: amalone  
 Date: 4/3/2015  
 Document Name: 20150403\_Exhibit\_18\_sp2014\_copyfor IEUA\_Draft



**DRAFT**

**2014 State of the Basin DRAFT**  
 Groundwater Levels





This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2016—showing the effects of about 16 years of OBMP implementation. The contours are generally consistent with the groundwater-elevation contours for spring 2014, 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 2014, there continued to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).

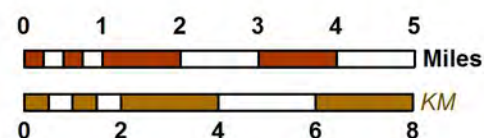
Prepared by:



Author: EM

Date: 6/5/2017

Document Name: Exhibit\_4-4\_sp2016



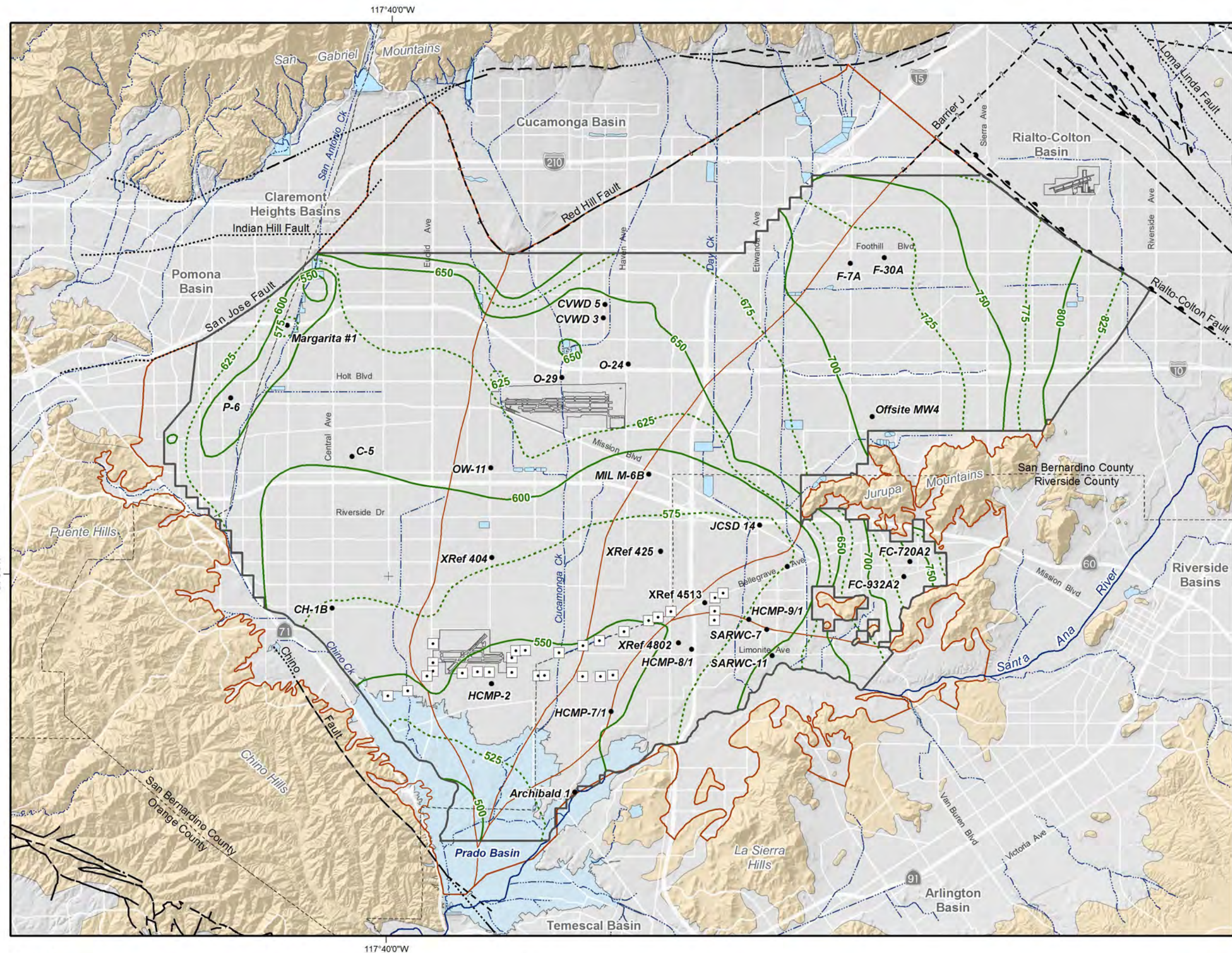
2016 State of the Basin  
Groundwater Levels

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

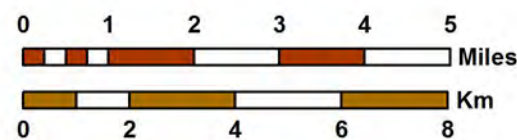
Other key map features are described in the legend of Exhibit 1-1.

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**