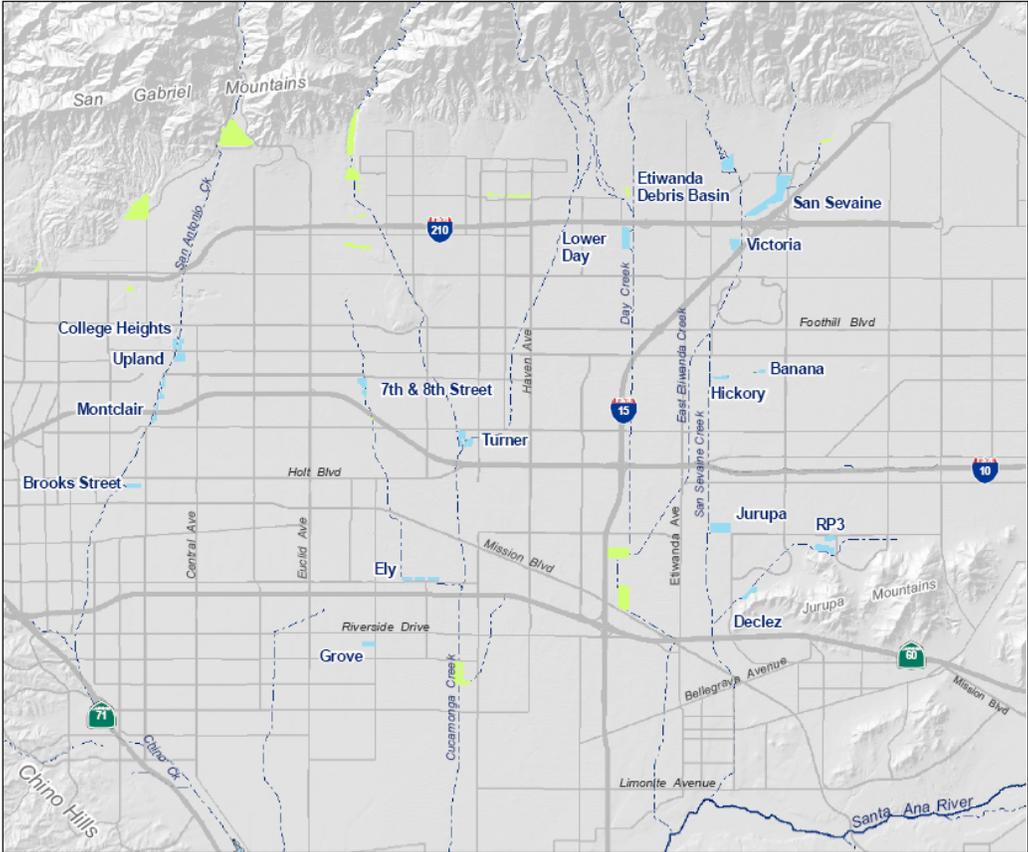


# Chino Basin Recycled Water Groundwater Recharge Program

## 2018 Annual Report



May 1, 2019



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

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

May 1, 2019

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 2018  
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 *2018 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 2018:

- The 2018 calendar year include annual program recharge of 23,944 acre-feet (AF), which includes 6,751 AF of storm water and dry weather flows; 12,942 AF of recycled water; and 4,251 AF of imported water.
- During 2018, recycled water quality monitoring was conducted in accordance with Monitoring and Reporting Program No. R8-2007-0039. No primary or secondary regulated contaminants limits were exceeded during 2018, with the exception of the secondary MCL for odor.
- No corrective actions were necessary for RP-1 and RP-4. No unit process changes occurred during 2018.
- In-aquifer blending of recycled water, diluent water, and native groundwater is evident at monitoring wells near 8<sup>th</sup> Street, Banana, Hickory, Brooks, Ely, Turner, Victoria, and RP3 Basins.

For 8<sup>th</sup> Street, Banana, 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 2018, the volume-based 120-month running average recycled water contributions (RWCs), inclusive of groundwater underflow, by basin were: 8<sup>th</sup> Street - 22%; Banana - 36%; Brooks - 17%; Declez 7%, Ely - 23%, Hickory - 22%, RP3 - 16%; San Sevaine 5 - 6%; Turner Basin Cells 1&2 - 23%; Turner Basin Cells 3&4 - 25%; and Victoria - 28%. 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 2018 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) for 8th Street Basin; BRK-1/1 (5 months) and BRK-1/2 (17 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 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 2016) 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 2018 groundwater contour map was not available at the time of this report. The 2016 groundwater elevations measured in the program monitoring wells have generally changed less than the contour interval (25 feet) used in the 2003, 2006, 2008, 2010, 2012, and 2014 groundwater elevation maps. The only significant differences in groundwater flow direction between the 2003 and 2016 maps is for 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. 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 2019 in the Cities of Chino and Rancho Cucamonga.



Randy Lee, P.E.

*Executive Manager of Operations/  
Assistant General Manager*



Peter Kavounas, P.E.

*General Manager*

# Chino Basin Recycled Water Groundwater Recharge Program

## 2018 Annual Report

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May 1, 2019

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## 1 INTRODUCTION

This is the 2018 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 Sevaine, and Victoria Basins have previously been summarized in the four 2018 quarterly monitoring reports to the Regional Board Water Quality Control Board (Regional Board) for these basins where recharge of recycled water has been initiated. During the 2018 calendar year, 23,445.3acre-feet (AF) of water were recharged in the Chino Basin, which included 6,750.8AF of storm water and dry weather flows; 12,509.8AF of recycled water; and 4,184.7 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 equipments, 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 2018 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 2018, 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 2018a, 2018b, 2018c, 2019).

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

Recycled Water Specifications A.5 through A.9 are narrative limits in the permit. The 2018 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 2018.

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 2018, 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 is the turnout to NRG California South, LP (formerly known as Reliant Energy), as it represents a mixture of recycled water from both RP-1 and RP-4. The 2018 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 2018, the 4-quarter running average concentrations for constituents with constituents with primary MCLs,

secondary MCLs, and action levels did not exceed compliance limits, with the exception of the secondary MCL for 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. In 2018, the annual sampling for the non-regulated contaminants in the recycled water took place during the fourth quarter of 2018.

The compliance sampling point for Total Trihalomethanes (TTHMs), Total Haloacetic Acids (HAA5), and 1,2,3-Trichloropropane are not at the NRG Turnout. Lysimeter or monitoring well compliance sampling for these parameters is performed at groundwater recharge basins actively receiving recycled water prior to sampling. Compliance for TTHMs, HAA5, and 1,2,3-TCP were consistently met throughout 2018 at the selected lysimeters / monitoring well.

## 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 Sevaine & 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 groundwater-quality data collected at the monitoring wells is reported in Table 2-9a and 2-9b of the quarterly monitoring reports. Annual monitoring data for 2018 can be found in Table 2-9c in the 4Q18 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

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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 2018, 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 2019 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 2018 Annual Laboratory QA/QC Data Summary Report was also submitted to the Regional Board as an attachment in IEUA's 2018 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

No operational problems or corrective actions at RP-1 or RP-4 were initiated based on regulatory monitoring at the NRG Turnout and at the recharge basins.

Odor has a secondary MCL of 3 Units in Recycled Water Specification A.3. During every quarter of 2018, the 4-quarter running average threshold odor value exceeded the secondary MCL. The odor has been identified by EEA 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.

During 2018, 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 2018 groundwater sampling, and any DDW notification:

- Turbidity exceeding the secondary MCL of 5 NTU was observed at several wells, namely: 8TH-1/1, 8TH-1/2, BRK-1/1, BRK-2/1, BRK-2/2, DCZ-1/1, Ely MW1, Ely MW2, RP3-1/1, SS-1/1, SSV-2, T-2/1, and VCT-1/1.
- The secondary MCL of 15 units for color was exceeded at several wells, namely: 8TH-1/1, BRK-1/1, BRK-2/1, DCZ-1/1, and Ely MW1.
- The secondary MCL for odor of 3 TON was exceeded at Ely MW1.
- The secondary MCLs of 50 µg/L for manganese at DCZ-1/1, Ely MW2, and RP3-1/1.
- TDS and electrical conductivity (EC) were higher than their secondary MCLs of 500 mg/L and 900 µmhos/cm, respectively, in the RP3 basin area wells (Alcoa MW3 and Southridge JHS) and Ely MW2 (Walnut). Alcoa MW1, BH-1/2, and JCSD Well No. 3 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 2018. 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 2018, as none of wells that showed coliform presence were active municipal drinking water wells.

Unitex 91090 is an active private potable well that has shown coliform presence. No notification was made to the DDW or municipality due to the well not being a municipal well.

- During the 2018 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 CBWM's State of the Basin reports.

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

No unit process changes occurred during the 2018 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 2018 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 2018, IEUA's recycled water recharge totaled 12,509.8 AF. The table below summarizes the volume of recycled water recharged during 2018 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	2018 Recycled Water Recharge (AF)	Percent of 2018 Recycled Water Recharge
8 <sup>th</sup> Street	1,446	11.2%
Banana	1,205	9.3%
Brooks	969	7.5%
Declez	1,786	13.8%
Ely	2,206	17.1%
Hickory	846	6.5%
RP3	2,432	18.8%
San Sevaine	0	0%
Turner	1,223	9.4%
Victoria	829	6.4%
Total	12,942	100.0%

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, 2018a, 2018b, 2018c, and 2019), but are repeated in this section's discussion of RWC (recycled water contribution) management plans. 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.

#### 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

The 2018 monthly recharge volumes by water type are presented in Appendix A and in the historical recharge portion of the RWC Management Plans (Appendix B). Recycled water and diluent water are typically recharged in distinct batches. However, there can be some blending of local runoff with recycled water as it is delivered to the basins, or if storm water enters a basin already containing some recycled water. Variations in the delivery period for batches of diluent water and recycled water provide a 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, initial use of the fraction of groundwater underflow used as a diluent water source in the RWC calculation is either October 2009 (the date the permit amendment was adopted allowing for its use) or 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.

The running average RWC calculation is equal to:

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

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.

At the end of December 2018, the (volume-based) running average RWC for basins having initiated recharge using recycled water were as follows:

Basin	RWC Limit (prior to 6/18/15)	RWC Limit (after 6/18/15)	120-Mo. Running Avg. RWC
8 <sup>th</sup> Street	28%	50%	22%
Banana	36%	50%	36%
Brooks	42%	50%	17%
Ely	29%	50%	23%
Declez	NA	20%	7%
Hickory	36%	50%	22%
RP3	50%	50%	16%
San Sevaine 5	27%	27%	6%
Turner 1&2	24%	24%	23%
Turner 3&4	45%	45%	25%
Victoria	50%	50%	28%

Maximum average RWC and the RWC management plans are discussed in more detail in Section 3.3. The volume-based percentages express reasonably anticipated blending as recharge waters move towards distant monitoring wells.

### 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 2018 was approximately 38% to 56% based on chloride and EC concentrations. After the 2015 peak, recycled water blend at the well has decreased through 2018.

In the deeper casing (8TH-1/2), there were slight increases in the EC, TDS, and chloride concentrations from mid-2011 to 2018 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 2018, 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 values, 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 56 mg/L, the 2018 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 2018 if confirmed would be approximately 35% to 44% 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). 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. In 8TH-2/2, TDS and EC concentrations both showed an increase from 2007 through mid-2009 followed by a consistent decrease through early 2015 to below the initial 2007 concentrations. This increase and then decrease in concentration is sooner than would be expected if it were

caused by recycled water recharge based on the well distance from the recharge basin and is thus considered background variations. Between 2007 and early 2015, these data likely indicate varied concentrations of groundwater are moving past the well site. 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 2018, chloride concentrations trended slowly upwards in to a historical high (38 mg/l). This trend should be monitored further prior to concluding the arrival of recycled water which should include both higher concentrations of chloride and contemporaneous increases in EC and TDS.

### **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 2017 and 2018, concentrations remained fairly stable but slightly lower than the peak of 2016. As presented in Table 3-1 in 2018, the highest percent blend of recycled water the groundwater mound at BH-1/2 based on EC and chloride variations reached approximately 86% to 97%.

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 2018 the highest percent blend of recycled water in the groundwater at the California Speedway Infield Well reached approximately 48 to 93%.

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 2018. 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 2018 the highest percent blend of recycled water in the groundwater at the California Speedway Well No. 2 reached approximately 14% to 31%.

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 is needed to evaluate whether it is being impacted by recycled water recharge. 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. EC and TDS (+50/mg/L) have however increased gradually since to 2005

### **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.

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 have been observed and attributed to the presence of recycled water at BRK-1/1. In 2015, 2016, and 2017, the EC and TDS concentrations have been relatively stable in BRK-1/1. However, chloride concentrations decreased from a high in 2015 of 119 mg/L in 2015 to 90 mg/L in 2016 and 2017, to 53 in 2018. 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 2018 was approximately 82 to 86% 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 2018. Concentration increases of 140 mg/L for TDS and 7 mg/L for chloride have been observed and are attributed to the presence of recycled water at BRK-1/2. Based on the 2018 EC and chloride data, the percent blend of recycled water at BRK-1/2 has been approximately 71% to 74%.

The chloride concentrations at BRK-2/1 show a 35-mg/L stepped increase in 2011 that oddly coincides with a 100  $\mu$ mhos/cm decrease in EC. Then in 2012 and continuing into 2014, chloride concentrations decreased to background levels while EC and TDS increased steadily. In 2015, chloride concentrations in BRK-2/1 increased sharply to historical highs (approximately 20 mg/L higher than the prior high in 2012) and remained just above 80 mg/L through 2018. Between 2015 and 2018, EC and TDS continued to increase on the same trend that began in 2011, yet remain within background concentrations observed in 2007 through 2010. While the chloride trends may indicate pulses of arrival of recycled water recharge in the shallower casing groundwater, continued observations at this well would be necessary to identify, with certainty, the presence of recycled water based on TDS and EC changes. The return to background concentrations through 2013 and 2014 could suggest a change in groundwater flow direction (of Brooks Basin recharge) around this well. Groundwater flow direction west of Brooks Basin is subject to the dynamics of a pumping depression in Pomona which has been observed to gradually shift location and magnitude over the years (see Appendix E). For downgradient well BRK-2/2, the EC, TDS, and chloride data are relatively stable and 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. As presented in Table 3-1 based on EC and chloride variations, during 2018 the highest percent blend of recycled water in the recharge mound groundwater at the Philadelphia well reached approximately 85% to 100%.

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 2015 to 2018. 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 2018 was approximately 64% to 79% 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 2018, Turner 4 mound had a lower percent of recycled water than the prior three years. 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 Turner 4 basin during 2018 was approximately 20% to 60%. The TRN-1/2 and TRN-2/2 data show recycled water blending is occurring with groundwater in the aquifer beneath the Turner Basins.

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 2018 was approximately 10%.

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 and 2018 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. 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. By April 2012, EC, TDS, and chloride concentrations reached historical lows for this well site. From late 2012 through late 2017, EC, TDS, and chloride concentrations steadily increased. Use of the low values in 2012 as baseline conditions followed by a steady rise in EC, TDS, and chloride through 2017, has provided sufficient data to estimate a blend of recycled water beneath the basin. As presented in Table 3-1 based on EC and chloride variations, the percent blend of recycled water in the groundwater during 2018 at well RP3-1/1 was 88%. Due to their similarities in water quality, sampling of the deeper casing RP3-1/2 was discontinued in 2015.

Downgradient well ALCOA MW-1 shows seasonal (summer through early fall) spikes in EC, TDS, and chloride from 2011 through 2018. These spikes of high concentrations are greater in magnitude than their respective concentrations in recycled water, and thus are likely due to salt contamination 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.

Downgradient well ALCOA MW-3 has higher EC, TDS, and chloride concentrations than ALCOA MW-1. In 2017, ALCOA MW-3 groundwater continued to show fluctuating EC, TDS, and chloride concentrations, which suggests salt contamination moving past the well site. The EC has ranged

from 785 to 1,163  $\mu\text{mhos/cm}$  which is higher than the recycled water EC (about 750  $\mu\text{mhos/cm}$ ). More data is required to evaluate the arrival of recycled water at ALCOA MW-3.

The Southridge Junior High School (JHS) well water quality data show 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 2018. The TDS, EC and Chloride background concentrations (2010 and 2011 data) at the Southridge JHS well are higher than that of recycled water. As such, mixing of groundwater with recycled water at this location would appear as a slight downward trend. Alternatively, it could increase as higher salinity upgradient groundwater moves southward. The slight variations in the water quality data do not suggest that 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. Of note, the increase in TDS, EC, and Chloride concentrations in late 2017 and early 2018 occurred prior to the resumption of recycled water recharge in April 2018. Conditions at DCZ-1/1 appear to be similar to the fluctuations at the upstream ALCOA and Southridge monitoring wells. The two DCZ-1/1 EC data spikes during the start-up period are likely anomalous as they do not remain high as does the basin surface water and lysimeter waster (IEUA, draft Start-Up Protocol for Declez Basin). Additional long-term monitoring will be needed to determine the impact of recycled water recharge at this location.

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

Monitoring of San Sevaine and Victoria Basins area wells began in late 2009. Initiation of recycled water recharge began in these two basins in mid-2010. Recycled water recharge at San Sevaine 5 was suspended voluntarily in 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 did not occur in 2018 and will likely occur in 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. Both wells show slightly declining or relatively stable concentrations.

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 2018, these parameters declined slightly. Mound monitoring well VCT-1/1 water quality data support a travel time of approximately 7.5 months based on the initiation of recycled water recharge on September 2, 2010 and its arrival detection with the May 19, 2011 sample. 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 2018 was 81% to 92% 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 actual at the end of 2018 for each recharge site. The recharge sites are all in compliance with their maximum RWC limits. Based on future projections of diluent recharge, the RWC Management Plans show that recycled water deliveries for each basin can continue to be made and remain in compliance with their RWC limits.

### 3.4 Buffer Zone/Travel Time Compliance

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

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

As stated in the cover letters of the 2018 quarterly monitoring reports, CBWM has certified that there was no reported pumping of groundwater in 2018 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 the aforementioned recharge sites.

#### 3.4.1 Recharge Water Arrival Times

As documented in annual reports and 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 and BRK-1/2 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, and RP3-1/1 and RP3-1/2 for RP3 Basins. 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).

#### 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 has demonstrated a small but gradual increase in EC, TDS, and

chloride from September 2005 through the end of 2012. 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 Basin 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 2017. These parameters were relatively stable from 2006 to 2012. Speedway No. 2 is located about one half mile south of Hickory Basin. Due to the groundwater flow gradient direction, the travel time most likely is from travel 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 (being replaced in 2018) showed a similarly gradual increasing trend in these parameters continually from 2006 through 2016, which should not be due to recharge activities at Banana and Hickory Basins. The trend at Speedway No. 2 is interpreted as a recycled water arrival due to its relatively stable concentrations from 2006 to 2012. The downgradient monitoring well, Reliant East, has not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water.

### **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, variations of EC, TDS, and chloride concentrations after recharge are similar to the background variations prior to recycled water recharge, which makes identification of travel time to this well difficult. EC and TDS data at BRK-2 (casings BRK-2/1 and BRK-2/2) continue to be within the range of the background concentration; an increase in chloride concentration at BRK-2/1 was observed through 2011 and 2012 and again in 2015 and 2017 which may suggest brief arrivals of recycled water. In 2013 and 2014, chloride concentration at BRK-2/1 returned to background levels. These brief elevated chloride concentrations may suggest a minimum potential arrival time of 29 months (2.4 years), but is not definitive without a corresponding increase in EC and TDS.

### **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.

### **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. While the initial rise in EC, TDS, and chloride at TRN-1/2 suggested a 3-month travel time, the subsequent decline in EC, TDS, and chloride during summer and fall of 2008 suggested a longer travel time of approximately 10 months, after recycled water recharge stopped in the summer of 2007. 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. 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.

### **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. Recycled water has also been observed as a chloride increase in both the shallow and the deep casing RP3-1/1 and RP3-1/2 in the summer of 2010, approximately 12 months after initiation of the basin with recycled water. The longer time to observe a chloride response is likely due to the purged of the vadose zone. The water quality data from downgradient monitor wells ALCOA MW-1 and MW-3 do not indicate the arrival of recycled water at these locations. Data collected in 2018 are consistent with the prior data interpretations for the RP3 region monitoring wells.

## 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). Both sets of basins appear to have different impacts timing on the well water levels (varying from 2 to 4 months). The timing of water level impacts from these recharge is complicated and warrants further data collection. 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 2019 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 basins show a water quality change 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 2018, 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, and 2016. These groundwater elevation maps from the CBWM's *Biennial State of the Basin Reports* are presented in Appendix E. The Spring 2016 elevation contour map will be used for discussion in this report. At the time of this report preparation, a spring 2018 map is 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 2016) indicates several things. First, local changes in groundwater elevation near the recharge basins due to recharge activities are present, but (apart from Hickory and Ely 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. The only significant differences in groundwater flow direction between the 2003 and 2016 maps is for 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 are evident locally by the well hydrographs at the monitoring wells (Appendix D), but are generally within the contour interval (25 feet) of the maps. Also of note, since 2008 a deeper and larger area pumping depression has developed and stabilized around the Chino Desalter (hydraulic control) well field. 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 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 2010 through 2016 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 2018, that seasonally fluctuate between 640 to 680 feet above mean sea level (MSL). Since 2014, 8<sup>TH</sup>-1/1 has shown increase seasonal fluctuations in water levels likely due to well production changes in this area. 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. There are missing water level data for both casings at 8TH-1 due to the replacement of damaged pumps and/or pressure transducers at the well. Manual water levels supplemented the hydrographs during those times. 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**

The hydrographs for the Brooks Basin mound monitoring well (BRK-1/1) show 2- to 10- foot seasonal fluctuations in water level and relatively annual stability between mid-2009 and mid-2013. From mid-2013 through early 2016, water levels BRK-1/1 steadily decreased approximately 15 feet, from 622 to 607 feet MSL. This decrease is perhaps due to drought and a decrease in stormwater recharge or other nearby groundwater stresses. Beginning in mid 2016 through 2018, BRK-1/1 water levels rose slightly, stabilizing in 2018 at approximately 612 feet MSL.

At the deeper casing, BRK-1/2, groundwater elevations typically range between 584 and 614 feet MSL. The larger groundwater elevation fluctuations in the deeper casing (BRK-1/2) are due to a greater influence from nearby groundwater production at that depth. Recycled recharge began at Brooks Basin in August 2008 at the time when water levels were declining in this casing from their high of 612 feet MSL. Between 2009 and 2013, water levels in BRK-1/2 were generally stable fluctuating between 587 and 605 feet MSL. Like BRK-1/1, BRK-1/2 shows a decrease in water levels from 2013 through 2015. In 2016, BRK-1/2 water levels rose 5 feet. From mid 2016 through 2017 water levels generally stabilized at approximately 590 feet MSL. In 2018 they increased steadily 15 feet over the year apparently not related to recharge in Brooks basin.

The hydrographs of downgradient (intermediate) monitoring well BRK-2 show similar trends as BRK-1/2, suggesting water levels of these two casings are influenced more by regional groundwater changes than local recharge. BRK-2 casings have larger seasonal fluctuations and pumping influences than BRK-1 as BRK-2 is closer to the pumping centers in 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 2018, 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 in 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.

### **Turner Basin Area**

The hydrographs for the two Turner Basin monitoring wells, TRN-1/2 and TRN-2/2, show long term increased in water levels. For these two sites, between 2008 and 2018 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. 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, after initiation in June 2009 of using Jurupa Basin for pumping water to RP3 cell 1 (both recycled water and winter stormwater), delivery/recharge volumes increased. 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 off line for maintenance. In 2013, water levels rebounded 5 to 10 feet upwards with renewed recharge at the RP3 site. 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.

### **Declez Basin Area**

The long-term water level trend at this site is has been stable between 2008 and 2018 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 occurred in Declez basin for its start-up period of December 2015 through September 2016 and appear to provide about a 5-foot increase in the season water level high. Recycled water delivery to Declez Basin stopped in September 2016 and resume in April 2018 upon completion of downgradient monitoring well DCZ-2.

### **San Sevaine & Victoria 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 2018 following removal of the nearby Unitex well from potable service.

The hydrograph for the Victoria Basin mound monitoring well (VCT-1/1) shows seasonal and longer-term water level fluctuations within a 20-foot range. The mound area water levels rose 15 feet from 2010 to 2011, then fell and rose 5 feet in 2012. In 2013, the mound area water levels fell approximately 10 feet. There appears to be about an 11-month delay between recharge and water table changes beneath the Victoria Basin, yet more observations are needed to confirm this delay. In late 2014, water levels rose sharply approximately 15 feet due to relatively higher volume recharge of recycled water in early 2014, and remained relatively stable until the December 2015. In 2016, there was a 20-foot drop in water level most likely due to the basin being off line for maintenance. Water levels recovered 30 feet through the first half of 2017, dropped 20 feet in 2018 and began to rise 10 feet entering 2019.

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 2018. 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.

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## TABLES

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

Month	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-18</i>	27,200	0	5,700	101,800	7,697	1,499	26,987
<i>Feb-18</i>	24,300	0	4,300	93,000	7,000	1,260	21,560
<i>Mar-18</i>	26,300	0	5,400	100,700	6,894	821	21,610
<i>Apr-18</i>	25,500	0	4,125	95,800	6,056	819	22,384
<i>May-18</i>	27,400	0	3,950	106,600	5,276	1,127	31,994
<i>Jun-18</i>	26,300	0	5,300	104,000	4,845	1,163	31,257
<i>Jul-18</i>	27,200	0	6,800	119,300	4,929	1,157	33,099
<i>Aug-18</i>	26,800	0	3,500	106,450	5,458	1,259	33,578
<i>Sep-18</i>	25,900	0	4,700	105,900	5,412	1,222	29,421
<i>Oct-18</i>	25,000	0	8,100	118,600	5,377	1,193	26,575
<i>Nov-18</i>	20,600	0	5,250	105,900	4,910	1,068	27,174
<i>Dec-18</i>	18,700	0	4,500	100,550	4,038	1,218	30,520
<b>Total</b>	301,200	0	61,625	1,258,600	67,892	13,806	336,159

**Table 3-1  
Evidence of Recycled Water Blending Based on Water Quality at  
Monitoring Wells Based on EC and Chloride in 2018**

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	498	56%	110	9	47	38%
	8TH-1/2	Mound	732	255	424	35%	110	13	56	44%
	8TH-2/1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	8TH-2/2	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
Banana & Hickory	BH-1/2	Mound	732	360	719	97%	110	10	96	86%
	California Speedway Infield	Downgradient	732	420	710	93%	110	10	58	48%
	California Speedway No. 2	Downgradient	732	365	480	31%	110	10	24	14%
	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	681	86%	110	11	92	82%
	BRK-1/2	Mound	732	535	680	74%	110	16	83	71%
	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	650	85%	110	34	110	100%
	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	608	64%	110	21	91	79%
	TRN-2/2	Downgradient	732	350	427	20%	110	9	70	60%
	Ontario No. 25	Downgradient	732	420	450	10%	110	14	24	10%
	Ontario No. 29	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
RP-3	RP3-1/1	Mound	732	475	700	88%	110	20	99	88%
	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 Seavaine & 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	698	92%	110	38	96	81%
	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			
Decléz	DCZ-1	Mound	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water			
	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**

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

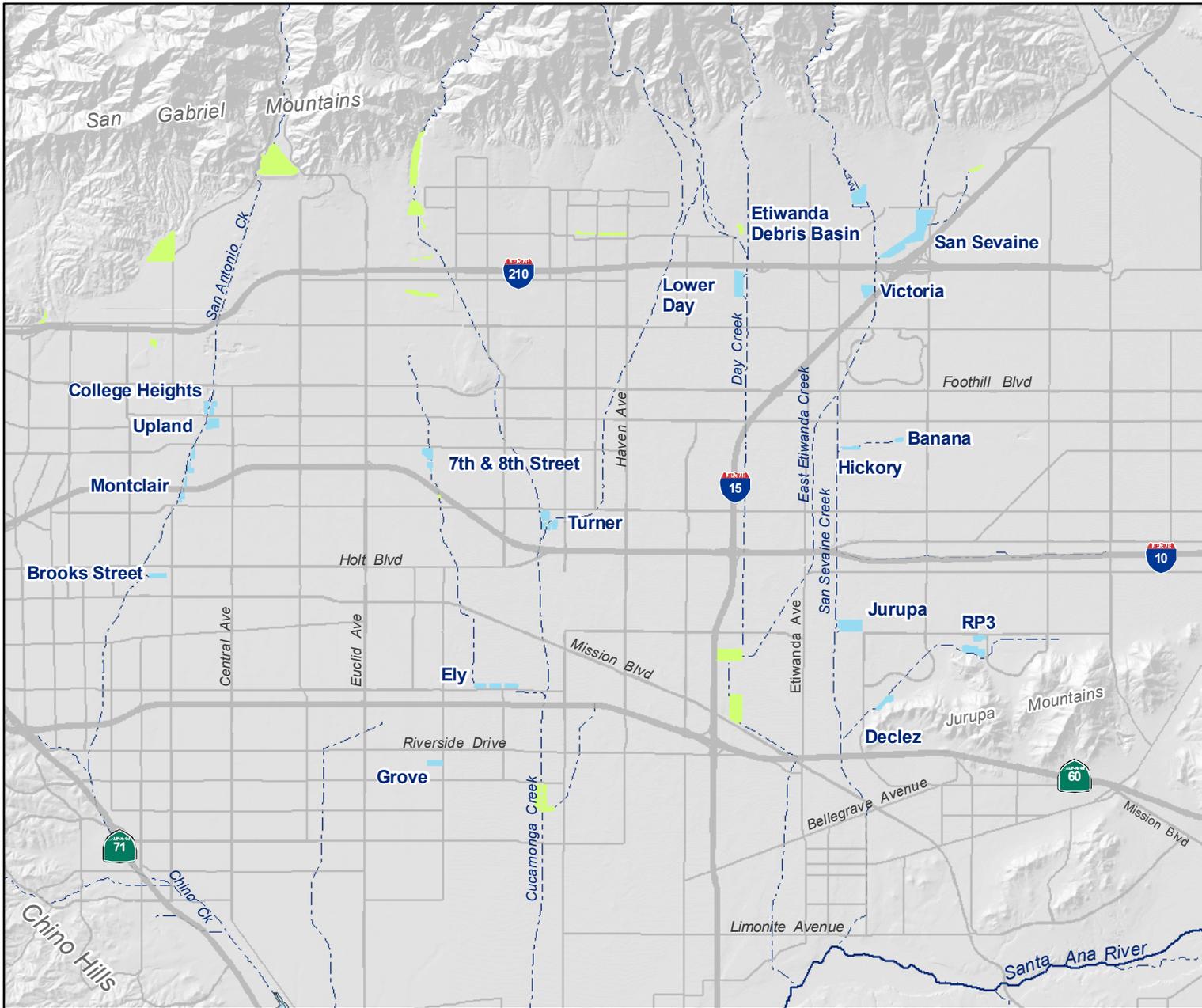
(1) In a letter dated June 18, 2015, the DDW approved IEUA's request to increase the maximum average RWC limit to 50% at all the basins except for Turner Basins and San Sevaine Basin which DDW stated required additional data for consideration of approval.

(2) 2008 RWC Actuals are based on 60-months running average and exclusion of groundwater underflow as diluent water.

(3) 2009 RWC Actuals include groundwater underflow as a diluent source only after the October 2009 recharge permit amendment and upon initiation of recycled water recharge.

## FIGURES

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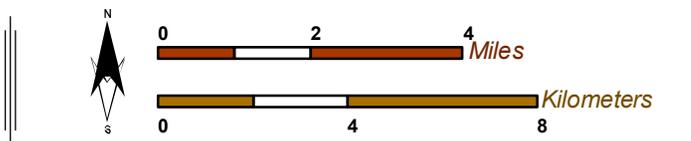
**Main Map Features**

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

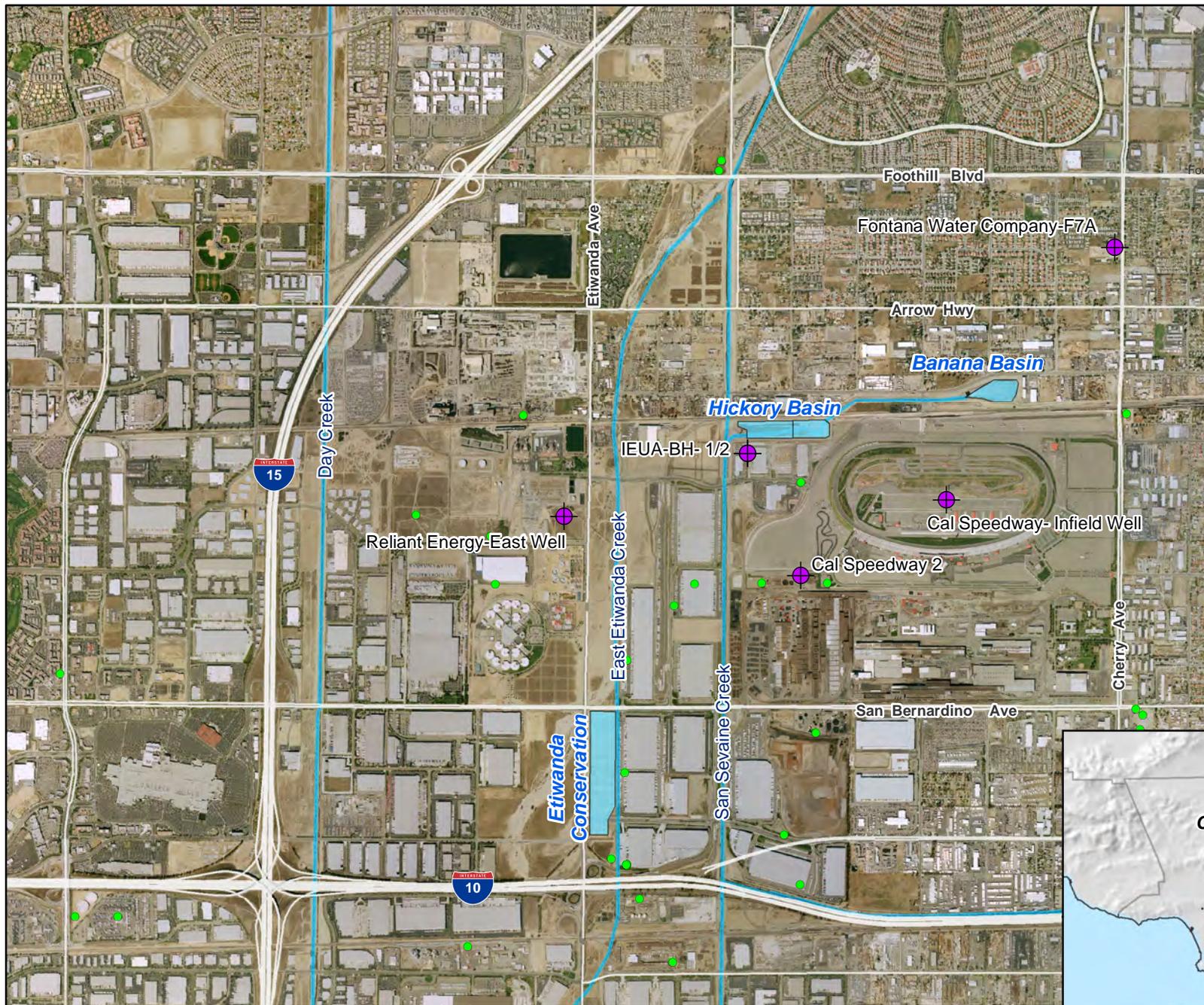


**Chino Basin Recycled Water Groundwater Recharge Program**

*Basin Locations*



**Figure 1-1**



**Main Map Features**

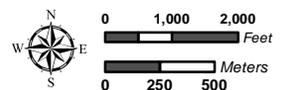
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

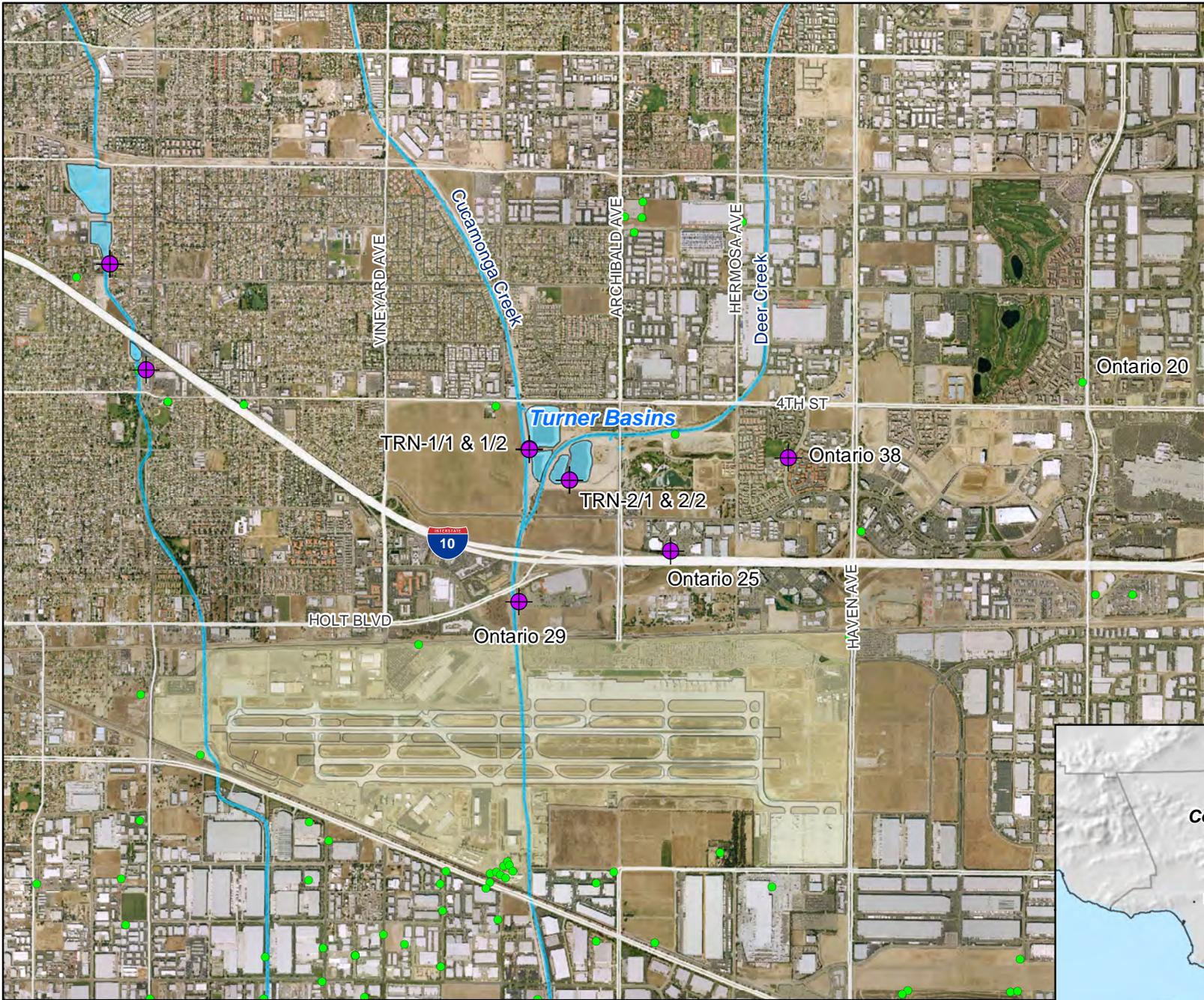


**Monitoring Well Network**  
Hickory and Banana Basins

**Figure 2-1**

Recycled Water Recharge Program





**Main Map Features**

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

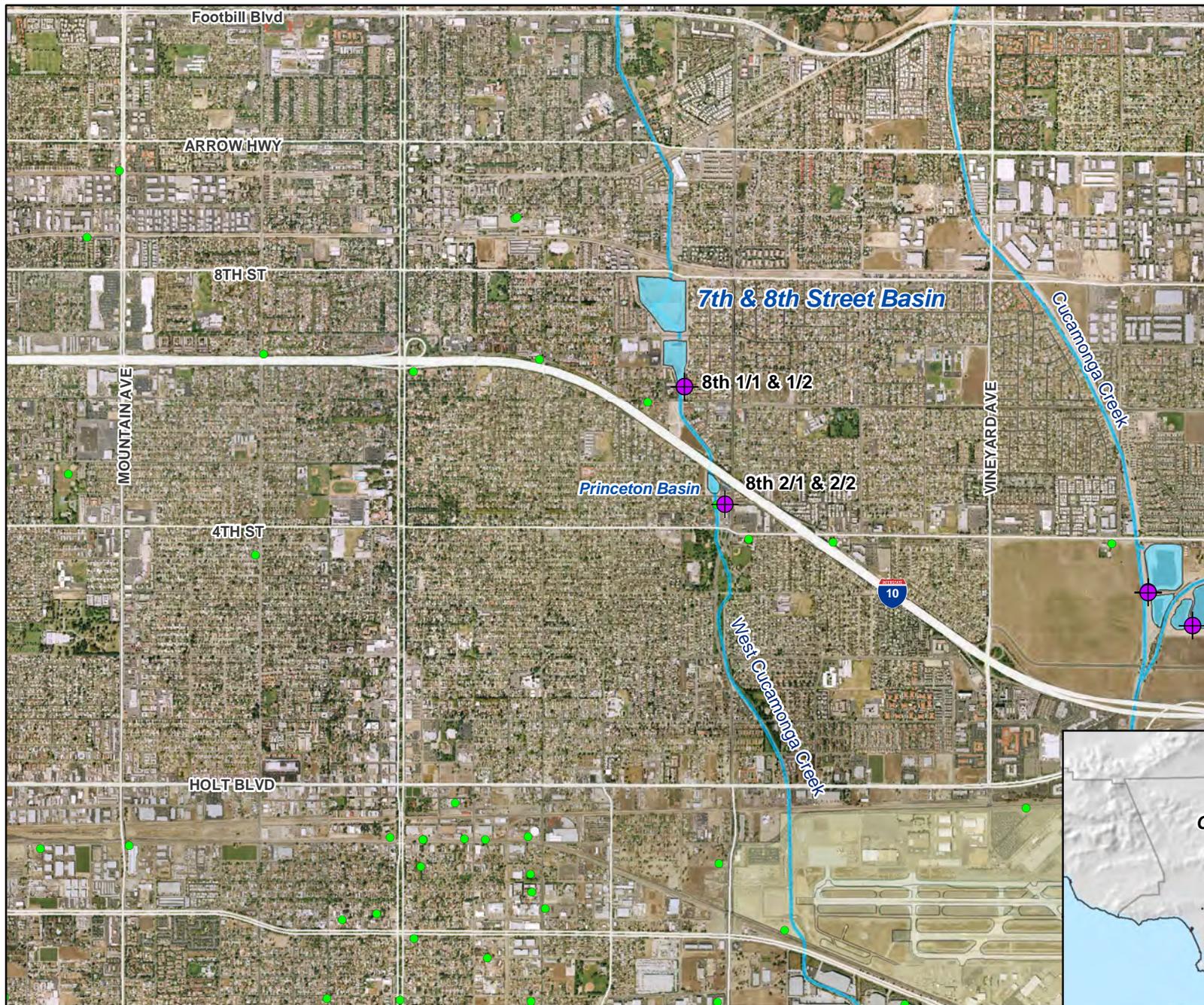


**Monitoring Well Network**  
Turner Basins

**Figure 2-2**

Recycled Water Recharge Program





### Main Map Features

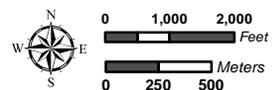
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

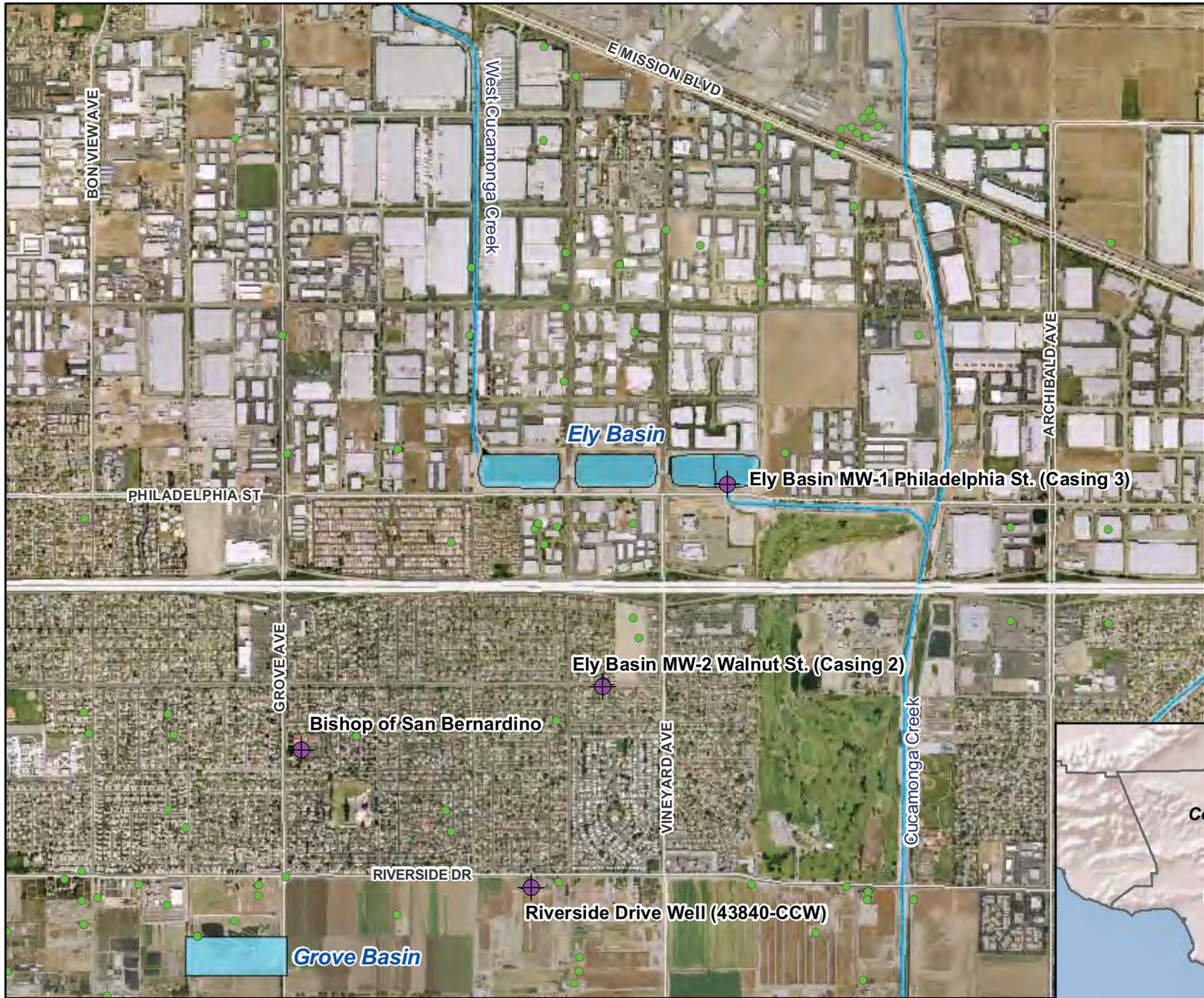


**Monitoring Well Network**  
7th and 8th Street Basin

**Figure 2-3**

Recycled Water Recharge Program





**Main Map Features**

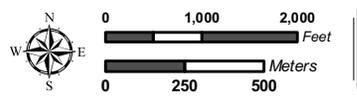
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

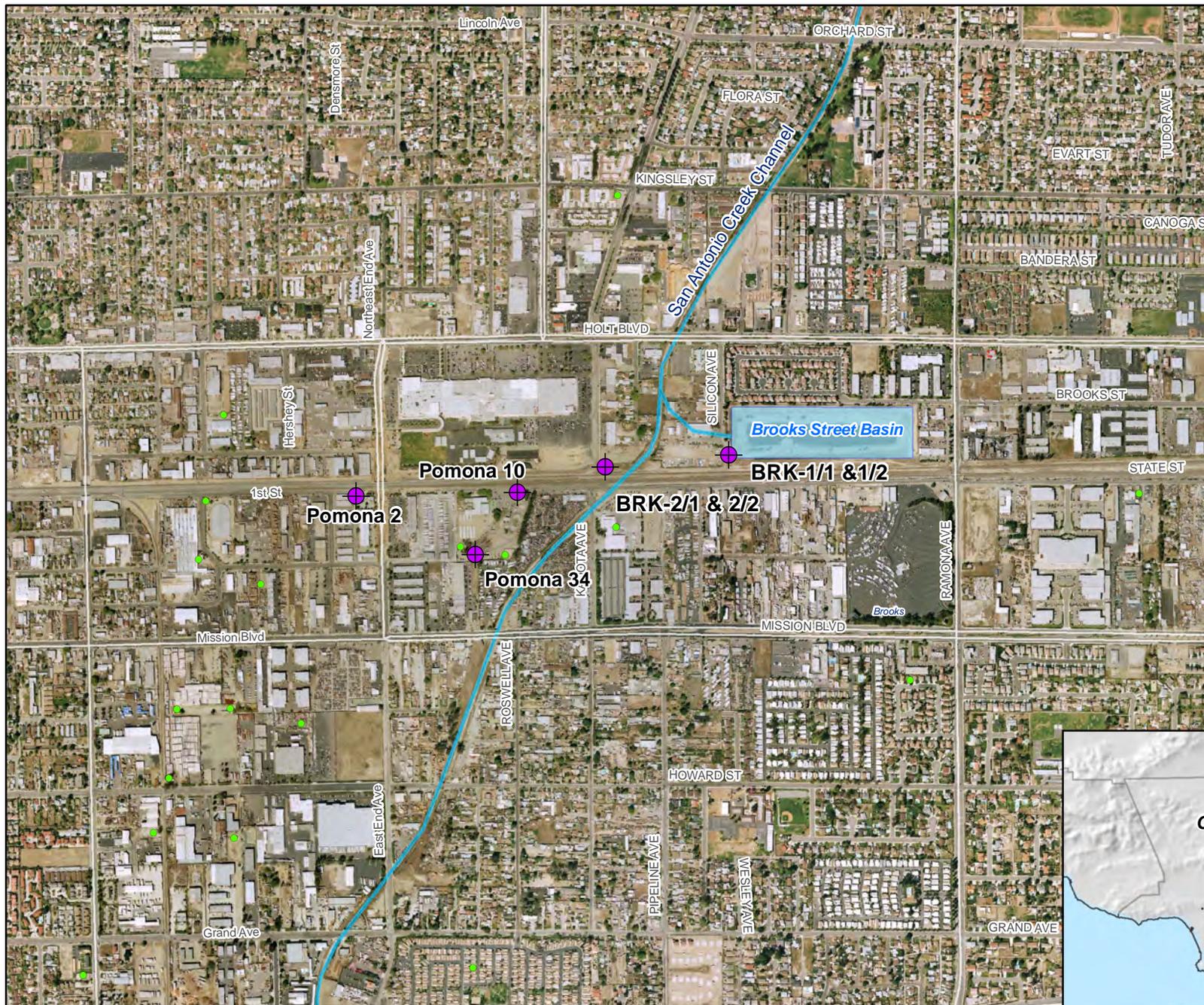


**Monitoring Well Network**  
Ely Basins

**Figure 2-4**

Recycled Water Recharge Program





### Main Map Features

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



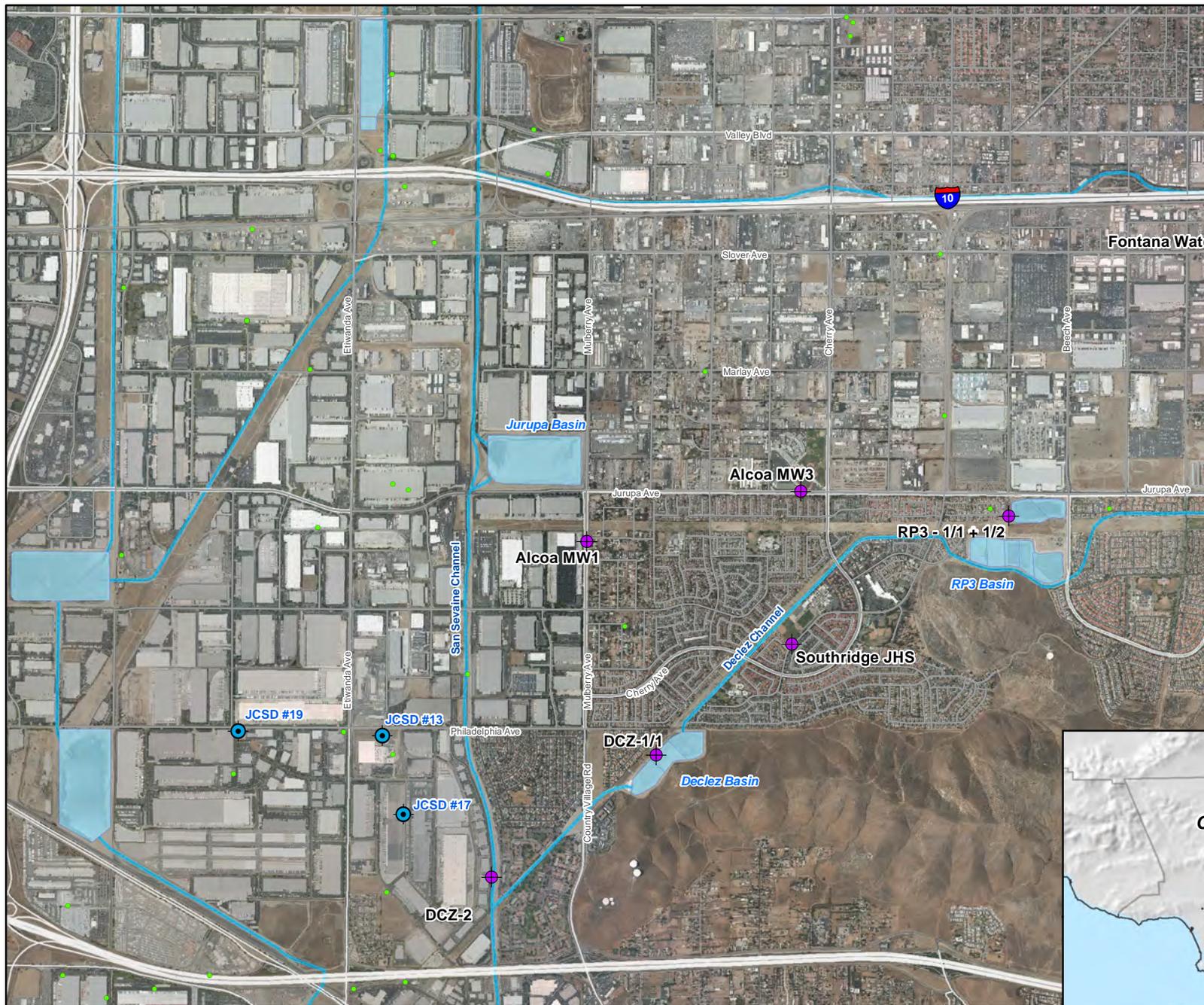
### Monitoring Well Network

Brooks Street Basin

**Figure 2-5**

Recycled Water Recharge Program





### Main Map Features

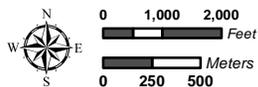
- JCSD Wells
- "Other Wells"
- ⊕ Existing Monitoring Well
- Rivers/Streams/Creeks
- Recharge Basins

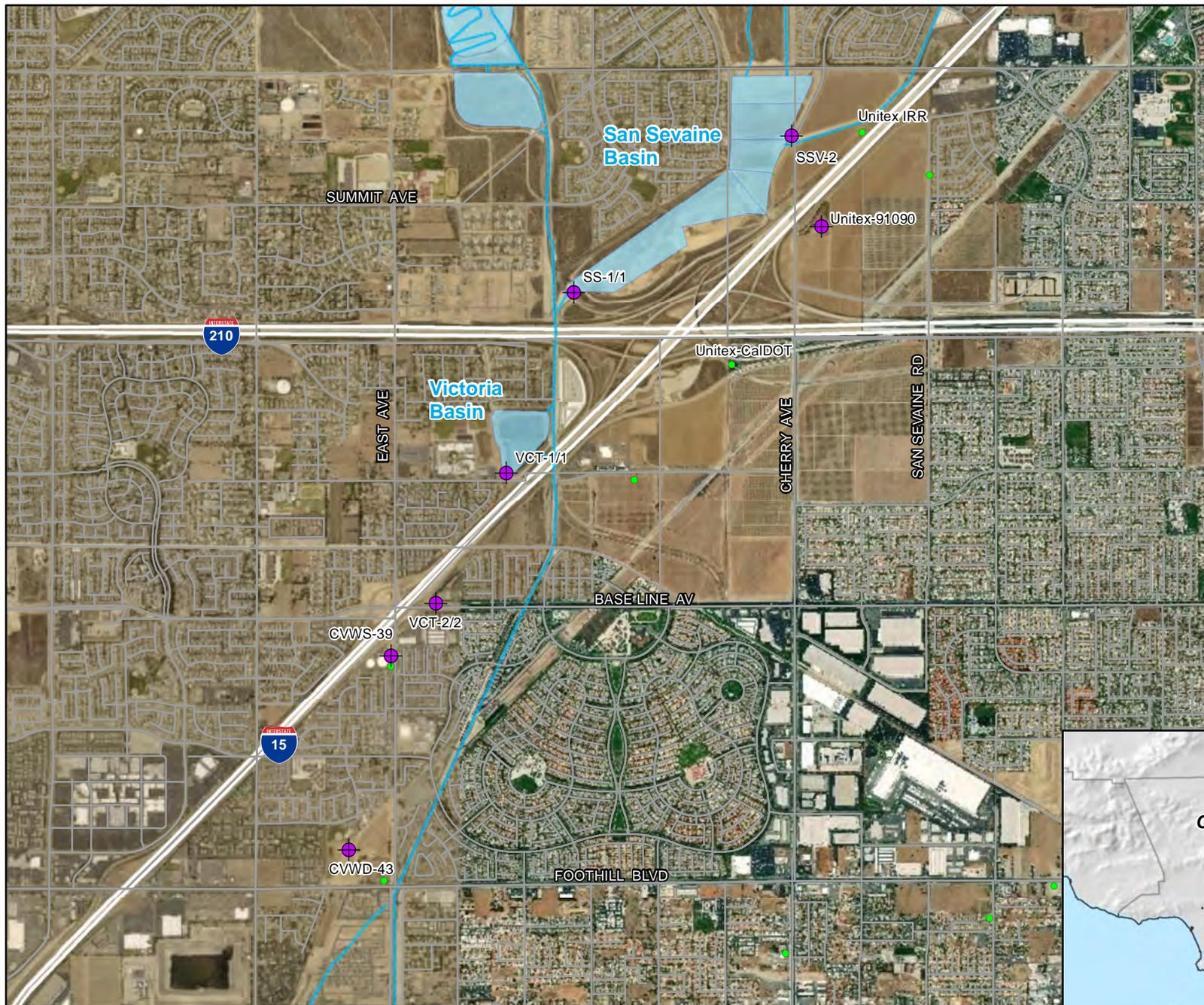


**Monitoring Well Network**  
Declez and RP3 Basins

**Figure 2-6**

Recycled Water Recharge Program





### Main Map Features

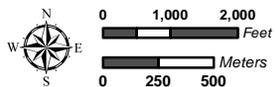
- "Other Wells"
- Existing Monitoring Well
- Rivers/Streams/Creeks
- Recharge Basins



**Monitoring Well Network**  
San Sevaive 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 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	12.5	682.0	( 10.2)	N	N	MZ-1 2,877.8 AF***	
Upland	72.5	107.8	( 1.6)	N	N		
Montclair 1, 2, 3 & 4	132.6	1,563.7	( 23.5)	N	N		
Brooks	28.0	5.0	( 0.1)	95.9	( 1.4)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	83.8	0.0	0.0	100.0	( 1.5)	MZ-2 2,524.3 AF***	
7th Street	37.5	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	254.9	0.0	0.0	30.9	( 0.5)		
<b>Minor Drainage</b>							
Grove	92.1	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	37.1	0.0	0.0	26.4	( 0.4)		
Turner 3 & 4	115.6	0.0	0.0	0.0	0.0		
<b>Day Creek Channel Drainage System</b>							
Lower Day	23.2	428.8	( 6.4)	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	17.9	202.1	( 3.0)	X	0.0		
Victoria	56.9	36.0	( 0.5)	6.6	( 0.1)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	49.9	906.4	( 13.6)	X	0.0		
San Sevaine 5	54.1	0.0	0.0	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	85.2	40.2	( 0.6)	86.4	( 1.3)		
Banana	114.6	94.6	( 1.4)	128.3	( 1.9)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	22.8	0.0	0.0	0.0	0.0	MZ-3 869.9 AF***	
<b>Declaz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	84.8	62.9	( 0.9)	158.3	( 2.4)		
RP3 Cell 2	6.9	0.0	0.0	68.0	( 1.0)		
Declaz	136.3	0.0	0.0	0.0	0.0		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland)	(2.1)						
MZ1: Montclair (MVWC, Upland)	(2.8)						
MZ1: Brooks (MVWD)	(0.3)						
MZ3 & MZ2: (none)	0.0						
<b>Month Total = 6,272.0 AF</b>	<b>1,514.0</b>	<b>4,129.5</b>	<b>( 61.8)</b>	<b>700.8</b>	<b>( 10.5)</b>	January 2018	
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2017 = 43,881.5 AF	1,964.9	34,062.1	(358.7)	8,328.9	(115.7)	Fiscal Year to Date	
		33,703.4		8,213.2			
Calendar Year Delivery (with evaporation) Since July 1, 2017 = 6,272.0 AF	1,514.0	4,129.5	(61.8)	700.8	(10.5)	Calendar Year to Date	
		4,067.7		690.3			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are applied per Watermaster (4.2% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - February 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.5	0.0	0.0	N	N	MZ-1 272.3 AF***	
Upland	10.9	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	27.6	0.0	0.0	N	N		
Brooks	9.1	0.0	0.0	107.4	( 1.6)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	70.1	0.0	0.0	82.0	( 1.2)	MZ-2 617.9 AF***	
7th Street	14.7	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	90.5	0.0	0.0	183.9	( 2.8)		
<b>Minor Drainage</b>							
Grove	18.8	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	19.4	0.0	0.0	0.0	0.0		
Turner 3 & 4	74.7	0.0	0.0	13.3	( 0.2)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	7.3	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.2	0.0	0.0	X	0.0		
Victoria	8.5	0.0	0.0	33.9	( 0.5)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	7.8	0.0	0.0	X	0.0		
San Sevaine 5	13.4	0.0	0.0	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	16.0	0.0	0.0	135.7	( 2.0)		
Banana	11.2	0.0	0.0	208.8	( 3.1)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	7.3	0.0	0.0	0.0	0.0	MZ-3 521.1 AF***	
<b>Declaz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	11.3	0.0	0.0	220.8	( 3.3)		
RP3 Cell 2	7.8	0.0	0.0	12.0	( 0.2)		
Declaz	48.5	0.0	0.0	0.0	0.0		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland)	(1.9)						
MZ1: Montclair (MVWC, Upland)	(5.7)						
MZ1: Brooks (MVWD)	(3.8)						
MZ1: 8th (Upland)	(35.8)						
<b>Month Total = 1,411.3 AF</b>	<b>428.4</b>	<b>0.0</b>	<b>0.0</b>	<b>997.8</b>	<b>( 14.9)</b>	February 2018	
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2017 = 45,292.8 AF	2,393.3	34,062.1	(358.7)	9,326.7	(130.6)	Fiscal Year to Date	
		33,703.4		9,196.1			
Calendar Year Delivery (with evaporation) Since July 1, 2017 = 7,683.3 AF	1,942.4	4,129.5	(61.8)	1,698.6	(25.4)	Calendar Year to Date	
		4,067.7		1,673.2			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation loss applied as set by Watermaster (1.5% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - March 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	2.0	0.0	0.0	N	N	MZ-1 402.9 AF***	
Upland	82.3	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	121.2	0.0	0.0	N	N		
Brooks	43.2	0.0	0.0	12.7	( 0.2)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	110.0	0.0	0.0	8.7	( 0.1)	MZ-2 1,118.5 AF***	
7th Street	32.4	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	265.6	0.0	0.0	0.0	0.0		
<b>Minor Drainage</b>							
Grove	81.3	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	207.7	0.0	0.0	15.2	( 0.2)		
Turner 3 & 4	107.3	0.0	0.0	38.8	( 0.6)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	103.9	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	31.9	0.0	0.0	X	0.0		
Victoria	40.1	0.0	0.0	25.1	( 0.4)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	73.8	0.0	0.0	0.0	0.0		
San Sevaine 5	53.7	0.0	0.0	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	59.0	0.0	0.0	16.5	( 0.2)		
Banana	60.4	0.0	0.0	88.9	( 1.3)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	39.0	0.0	0.0	0.0	0.0	MZ-3 615.8 AF***	
<b>Decléz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	61.5	0.0	0.0	93.7	( 1.4)		
RP3 Cell 2	42.0	0.0	0.0	10.0	( 0.2)		
Decléz	223.2	0.0	0.0	0.0	0.0		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland)	( 2.2)						
MZ1: Montclair (Upland, MVWD)	( 6.6)						
MZ1: Brooks (MVWD)	( 0.5)						
MZ2 & MZ3: (none)	0.0						
<b>Month Total = 2,137.2 AF</b>	<b>1,832.2</b>	<b>0.0</b>	<b>0.0</b>	<b>309.6</b>	<b>( 4.6)</b>	March 2018	
<b>All Sources</b>	<b>SW/LR</b>	<b>0.0</b>		<b>305.0</b>			
<b>Fiscal Year Delivery (with evaporation)</b>		<b>34,062.1</b>	<b>(358.7)</b>	<b>9,636.3</b>	<b>(135.2)</b>	Fiscal Year to Date	
Since July 1, 2017 = 47,430.0 AF	4,225.5	33,703.4		9,501.1			
<b>Calendar Year Delivery (with evaporation)</b>		<b>4,129.5</b>	<b>(61.8)</b>	<b>2,008.2</b>	<b>(30.0)</b>	Calendar Year to Date	
Since July 1, 2017 = 9,820.5 AF	3,774.6	4,067.7		1,978.2			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are applied per Watermaster (4.2% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - April 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 52.3 AF***	
Upland	3.5	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	9.1	0.0	0.0	N	N		
Brooks	2.2	0.0	0.0	37.9	( 1.6)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	6.0	0.0	0.0	0.0	0.0	MZ-2 553.3 AF***	
7th Street	6.0	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	18.9	0.0	0.0	161.2	( 6.8)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	5.9	0.0	0.0	34.8	( 1.5)		
Turner 3 & 4	3.7	0.0	0.0	145.3	( 6.1)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	0.0	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	2.8	0.0	0.0	0.0	0.0		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	0.0	0.0	0.0	X	0.0		
San Sevaine 5	0.0	0.0	0.0	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	10.0	0.0	0.0	193.2	( 8.1)		
Banana	0.0	0.0	0.0	180.0	( 7.6)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	0.0	0.0	0.0	0.0	0.0	MZ-3 558.3 AF***	
<b>Declaz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	29.7	0.0	0.0	219.8	( 9.2)		
RP3 Cell 2	0.0	0.0	0.0	75.2	( 3.2)		
Declaz	18.0	0.0	0.0	58.0	( 2.4)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland)	( 2.2)						
MZ1: Montclair (Upland, MVWD)	( 7.7)						
MZ1: Brooks (MVWD)	( 0.9)						
MZ2 & MZ3: None	0.0						
<b>Month Total = 1,163.9 AF</b>	<b>105.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1,105.4</b>	<b>( 46.5)</b>	April 2018	
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2017 = 48,593.9 AF	4,330.5	34,062.1	(358.7)	10,741.7	(181.7)	Fiscal Year to Date	
Calendar Year Delivery (with evaporation) Since July 1, 2017 = 10,984.4 AF		3,879.6	4,129.5	(61.8)	3,113.6		(76.5)
		4,067.7		3,037.1		Calendar Year to Date	

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are applied per Watermaster (4.2% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - May 2018

Drainage System Basin	SW/LR Delivered	Imported		Recycled Water		Management Zone Subtotals	
		Delivered	Evaporation	Delivered	Evaporation		
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 117.8 AF***	
Upland	4.9	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	17.2	0.0	0.0	N	N		
Brooks	3.4	0.0	0.0	88.7	( 3.7)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	6.2	0.0	0.0	6.7	( 0.3)	MZ-2 642.0 AF***	
7th Street	0.7	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	0.0	0.0	0.0	313.3	( 13.2)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	5.6	0.0	0.0	0.0	0.0		
Turner 3 & 4	34.9	0.0	0.0	171.6	( 7.2)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	0.0	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	0.0	0.0	0.0	0.0	0.0		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	4.3	0.0	0.0	0.0	0.0		
San Sevaine 5	0.0	0.0	0.0	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	0.0	0.0	0.0	138.5	( 5.8)		
Banana	0.4	0.0	0.0	168.5	( 7.1)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	5.7	0.0	0.0	0.0	0.0	MZ-3 748.2 AF***	
<b>Decluz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	4.7	0.0	0.0	179.1	( 7.5)		
RP3 Cell 2	10.2	0.0	0.0	73.4	( 3.1)		
Decluz	29.6	0.0	0.0	307.2	( 12.9)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Montclair and Brooks (MVWD)	( 2.4)					May 2018	
MZ1: Upland and Montclair (Upland)	( 3.6)						
MZ2:							
MZ3:							
Month Total = 1,508.0 AF	121.8	0.0	0.0	1,447.0	( 60.8)		
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2017 = 50,101.9 AF	4,452.3	34,062.1	(358.7)	12,188.7	(242.5)	Fiscal Year to Date	
		33,703.4		11,946.2			
Calendar Year Delivery (with evaporation) Since July 1, 2017 = 12,492.4 AF	4,001.4	4,129.5	(61.8)	4,560.6	(137.3)	Calendar Year to Date	
		4,067.7		4,423.3			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are applied per Watermaster (4.2% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**  
**Water Delivered\* and Evaporation\*\* (AF) - June 2018**

Drainage System Basin	SW/LR	Imported		Recycled Water		Management Zone Subtotals	
	Delivered	Delivered	Evaporation	Delivered	Evaporation		
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 173.9 AF***	
Upland	2.0	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	2.5	0.0	0.0	N	N		
Brooks	1.6	0.0	0.0	113.6	( 4.8)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	4.5	61.7	( 2.6)	0.0	0.0	MZ-2 557.7 AF***	
7th Street	1.5	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	0.0	0.0	0.0	235.8	( 9.9)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	1.9	0.0	0.0	87.1	( 3.7)		
Turner 3 & 4	14.0	0.0	0.0	144.3	( 6.1)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	0.0	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	0.0	0.0	0.0	0.0	0.0		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
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	0.0	0.0		
<b>West Fontana Channel System</b>							
Hickory	2.0	0.0	0.0	96.3	( 4.0)	MZ-3 635.1 AF***	
Banana	0.0	0.0	0.0	135.0	( 5.7)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	0.0	0.0	0.0	0.0	0.0		
<b>Declez Channel Drainage System</b>							
RP3 Cells 1,3, & 4	0.0	0.0	0.0	209.6	( 8.8)		
RP3 Cell 2	0.7	0.0	0.0	51.0	( 2.1)		
Declez	17.1	0.0	0.0	248.7	( 10.4)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland & Montclair (Upland)	( 3.5)						
MZ1: Brooks & Montclair (MVWD)	( 2.6)						
MZ2:							
MZ3:							
Month Total = 1,366.7 AF	41.7	61.7	( 2.6)	1,321.4	( 55.5)	June 2018	
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation)		34,123.8	(361.3)	13,510.1	(298.0)	Fiscal Year to Date	
Since July 1, 2017 = 51,468.6 AF	4,494.0	33,762.5		13,212.1			
Calendar Year Delivery (with evaporation)		4,191.2	(64.4)	5,882.0	(192.8)	Calendar Year to Date	
Since July 1, 2017 = 13,859.1 AF	4,043.1	4,126.8		5,689.2			

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

\*\* : Beginning October 2017, evaporation losses are applied per Watermaster (4.2% April through October and 1.5% November through March).

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

**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - July 2018

Drainage System Basin	SW/LR Delivered	Imported		Recycled Water		Management Zone Subtotals	
		Delivered	Evaporation	Delivered	Evaporation		
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 202.8 AF***	
Upland	2.0	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	5.4	0.0	0.0	N	N		
Brooks	0.0	0.0	0.0	47.3	( 2.0)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	6.2	60.4	( 2.5)	97.5	( 4.1)	MZ-2 442.0 AF***	
7th Street	0.0	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	0.0	0.0	0.0	218.3	( 9.2)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	3.1	0.0	0.0	70.9	( 3.0)		
Turner 3 & 4	12.9	0.0	0.0	25.9	( 1.1)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	1.5	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	0.0	0.0	0.0	104.5	( 4.4)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	1.7	0.0	0.0	0.0	0.0		
San Sevaine 5	0.0	0.0	0.0	X	X		
<b>West Fontana Channel System</b>							
Hickory	3.1	0.0	0.0	18.6	( 0.8)		
Banana	2.4	0.0	0.0	152.9	( 6.4)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	0.0	0.0	0.0	0.0	0.0	MZ-3 621.5 AF***	
<b>Declerz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	29.6	0.0	0.0	141.9	( 6.0)		
RP3 Cell 2	10.9	0.0	0.0	20.0	( 0.8)		
Declerz	10.9	0.0	0.0	277.8	( 11.7)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland, Mont,& 8 <sup>th</sup> /7 <sup>th</sup> )	( 2.0)					July 2018	
MZ1: MVWD (Montclair & Brooks)	( 5.4)						
MZ2: None	0.0						
MZ3: None	0.0						
Month Total = 1,266.3 AF	82.3	60.4	( 2.5)	1,175.6	( 49.5)		
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2018 = 1,266.3 AF	82.3	60.4	(2.5)	1,175.6	(49.5)	Fiscal Year to Date	
Calendar Year Delivery (with evaporation) Since July 1, 2018 = 15,125.4 AF	4,125.4	4,251.6	(66.9)	7,057.6	(242.3)	Calendar Year to Date	
		4,184.7		6,815.3			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, RW : Recycled Water

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

\*\* : Beginning October 2017, evaporation losses are 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 2018

Drainage System Basin	SW/LR Delivered	Imported		Recycled Water		Management Zone Subtotals	
		Delivered	Evaporation	Delivered	Evaporation		
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 171.0 AF***	
Upland	2.0	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	8.0	0.0	0.0	N	N		
Brooks	0.0	0.0	0.0	19.0	( 0.8)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	6.2	0.0	0.0	150.4	( 6.3)	MZ-2 734.9 AF***	
7th Street	0.0	0.0	0.0	2.6	( 0.1)		
Ely 1, 2, & 3	0.0	0.0	0.0	264.0	( 11.1)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	3.1	0.0	0.0	97.7	( 4.1)		
Turner 3 & 4	6.2	0.0	0.0	67.5	( 2.8)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	0.0	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	0.0	0.0	0.0	199.3	( 8.4)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
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		
<b>West Fontana Channel System</b>							
Hickory	1.7	0.0	0.0	127.1	( 5.3)		
Banana	0.0	0.0	0.0	16.9	( 0.7)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	0.0	0.0	0.0	0.0	0.0	MZ-3 467.9 AF***	
<b>Declez Channel Drainage System</b>							
RP3 Cells 1,3, & 4	0.0	0.0	0.0	162.9	( 6.8)		
RP3 Cell 2	9.3	0.0	0.0	2.0	( 0.1)		
Declez	9.3	0.0	0.0	287.2	( 12.1)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland, Montclair, & 8 <sup>th</sup> )	(2.0)					August 2018	
MZ1: MVWD (Montclair)	(8.0)						
MZ2: None	0.0						
MZ3: None	0.0						
Month Total = 1,373.7 AF	35.8	0.0	0.0	1,396.6	( 58.7)		
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2018 = 2,640.0 AF	118.1	60.4	(2.5)	2,572.2	(108.2)	Fiscal Year to Date	
Calendar Year Delivery (with evaporation) Since Jan. 1, 2018 = 16,499.1 AF	4,161.2	4,251.6	(66.9)	8,454.2	(301.0)	Calendar Year to Date	
		0.0	0.0	1,337.9			

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\*\* : Beginning October 2017, evaporation losses are 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 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 255.3 AF***	
Upland	2.0	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	9.5	0.0	0.0	N	N		
Brooks	0.0	0.0	0.0	0.0	0.0		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	6.0	0.0	0.0	203.2	( 8.5)	MZ-2 637.6 AF***	
7th Street	0.0	0.0	0.0	57.0	( 2.4)		
Ely 1, 2, & 3	0.0	0.0	0.0	350.3	( 14.7)		
<b>Minor Drainage</b>							
Grove	0.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	6.9	0.0	0.0	21.3	( 0.9)		
Turner 3 & 4	9.0	0.0	0.0	92.1	( 3.9)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	0.0	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	0.0	0.0	0.0	166.4	( 7.0)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
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		
<b>West Fontana Channel System</b>							
Hickory	3.0	0.0	0.0	15.8	( 0.7)		
Banana	0.0	0.0	0.0	94.7	( 4.0)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	0.0	0.0	0.0	0.0	0.0	MZ-3 564.7 AF***	
<b>Declez Channel Drainage System</b>							
RP3 Cells 1,3, & 4	0.0	0.0	0.0	162.9	( 6.8)		
RP3 Cell 2	6.8	0.0	0.0	44.0	( 1.8)		
Declez	11.2	0.0	0.0	269.0	( 11.3)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland Basin)	( 2.0)						
MZ1: Upland (Montclair Basin)	( 9.5)						
MZ2: None	0.0						
MZ3: None	0.0						
<b>Month Total = 1,457.6 AF</b>	<b>42.9</b>	<b>0.0</b>	<b>0.0</b>	<b>1,476.7</b>	<b>( 62.0)</b>	September 2018	
		<b>0.0</b>		<b>1,414.7</b>			
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation)		60.4	(2.5)	4,048.9	(170.2)	Fiscal Year to Date	
Since July 1, 2018 = 4,097.6 AF	161.0	57.9		3,878.7			
Calendar Year Delivery (with evaporation)		4,251.6	(66.9)	9,930.9	(363.0)	Calendar Year to Date	
Since July 1, 2018 = 17,956.7 AF	4,204.1	4,184.7		9,567.9			

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**SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS**

Water Delivered\* and Evaporation\*\* (AF) - October 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 304.7 AF***	
Upland	6.7	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	50.6	0.0	0.0	N	N		
Brooks	3.1	0.0	0.0	0.0	0.0		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	54.4	0.0	0.0	186.7	( 7.8)	MZ-2 511.0 AF***	
7th Street	13.8	0.0	0.0	9.4	( 0.4)		
Ely 1, 2, & 3	35.4	0.0	0.0	162.3	( 6.8)		
<b>Minor Drainage</b>							
Grove	19.0	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	14.5	0.0	0.0	0.1	0.0		
Turner 3 & 4	28.3	0.0	0.0	90.7	( 3.8)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	5.4	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	6.2	0.0	0.0	X	0.0		
Victoria	43.8	0.0	0.0	109.0	( 4.6)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	7.2	0.0	0.0	0.0	0.0		
San Sevaine 5	0.0	0.0	0.0	X	X		
<b>West Fontana Channel System</b>							
Hickory	4.3	0.0	0.0	0.0	0.0		
Banana	11.8	0.0	0.0	0.0	0.0		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	3.5	0.0	0.0	0.0	0.0	MZ-3 413.3 AF***	
<b>Declaz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	0.0	0.0	0.0	165.2	( 6.9)		
RP3 Cell 2	12.0	0.0	0.0	0.0	0.0		
Declaz	60.6	0.0	0.0	174.4	( 7.3)		
<b>Non-Replenishment Recharge**</b>							
MZ1: Upland (Upland Basin)	( 1.7)						
MZ1: Upland (Montclair Basin)	( 10.1)						
MZ2: None							
MZ3: None							
<b>Month Total = 1,229.0 AF</b>	<b>368.8</b>	<b>0.0</b>	<b>0.0</b>	<b>897.8</b>	<b>( 37.6)</b>	October 2017	
<b>All Sources</b>	<b>SW/LR</b>	<b>0.0</b>		<b>860.2</b>			
<b>Fiscal Year Delivery (with evaporation)</b>		<b>60.4</b>	<b>(2.5)</b>	<b>4,946.7</b>	<b>(207.8)</b>	Fiscal Year to Date	
Since July 1, 2018 = 5,326.6 AF	<b>529.8</b>	<b>57.9</b>		<b>4,738.9</b>			
<b>Calendar Year Delivery (with evaporation)</b>		<b>4,251.6</b>	<b>(66.9)</b>	<b>10,828.7</b>	<b>(400.6)</b>	Calendar Year to Date	
Since July 1, 2018 = 19,185.7 AF	<b>4,572.9</b>	<b>4,184.7</b>		<b>10,428.1</b>			

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\*\* : Beginning October 2017, evaporation losses are 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 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 730.5 AF***	
Upland	37.5	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	103.9	0.0	0.0	N	N		
Brooks	22.1	0.0	0.0	186.0	( 2.8)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	112.2	0.0	0.0	287.5	( 4.3)	MZ-2 895.4 AF***	
7th Street	3.2	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	201.9	0.0	0.0	260.3	( 3.9)		
<b>Minor Drainage</b>							
Grove	51.8	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	58.9	0.0	0.0	0.0	0.0		
Turner 3 & 4	31.1	0.0	0.0	59.9	( 0.9)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	42.5	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	32.5	0.0	0.0	84.5	( 1.3)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	26.0	0.0	0.0	0.0	0.0		
San Sevaine 5	5.0	0.0	0.0	X	X		
<b>West Fontana Channel System</b>							
Hickory	36.8	0.0	0.0	10.5	( 0.2)		
Banana	22.7	0.0	0.0	30.7	( 0.5)		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	11.3	0.0	0.0	0.0	0.0	MZ-3 483.9 AF***	
<b>Declerz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	0.5	0.0	0.0	124.4	( 1.9)		
RP3 Cell 2	3.9	0.0	0.0	66.3	( 1.0)		
Declerz	170.1	0.0	0.0	58.3	( 0.9)		
<b>Non-Replenishment Recharge** Agency (GWR Basins)</b>							
MZ1: Upland (Upland & Montclair)	( 9.7)					November 2017	
MZ1: MVWD (Montclair)	( 5.1)						
MZ2: None							
MZ3: None							
<b>Month Total = 2,109.8 AF</b>	<b>959.1</b>	<b>0.0</b>	<b>0.0</b>	<b>1,168.4</b>	<b>( 17.7)</b>		
<b>All Sources</b>	<b>SW/LR</b>	<b>0.0</b>		<b>1,150.7</b>			
<b>Fiscal Year Delivery (with evaporation)</b>		<b>60.4</b>	<b>0.0</b>	<b>6,115.1</b>	<b>(225.5)</b>	Fiscal Year to Date	
Since July 1, 2018 = 7,438.9 AF	<b>1,488.9</b>	<b>60.4</b>		<b>5,889.6</b>			
<b>Calendar Year Delivery (with evaporation)</b>		<b>4,251.6</b>	<b>(66.9)</b>	<b>11,997.1</b>	<b>(418.3)</b>	Calendar Year to Date	
Since July 1, 2018 = 21,295.5 AF	<b>5,532.0</b>	<b>4,184.7</b>		<b>11,578.8</b>			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are 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 2018

<b>Drainage System</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>		<b>Management</b>	
<b>Basin</b>	Delivered	Delivered	Evaporation	Delivered	Evaporation	<b>Zone Subtotals</b>	
<b>San Antonio Channel Drainage System</b>							
College Heights	0.0	0.0	0.0	N	N	MZ-1 948.5 AF***	
Upland	77.5	0.0	0.0	N	N		
Montclair 1, 2, 3 & 4	157.0	0.0	0.0	N	N		
Brooks	42.6	0.0	0.0	260.9	( 3.9)		
<b>West Cucamonga Channel Drainage System</b>							
8th Street	137.7	0.0	0.0	254.3	( 3.8)	MZ-2 802.8 AF***	
7th Street	26.2	0.0	0.0	0.0	0.0		
Ely 1, 2, & 3	222.3	0.0	0.0	25.9	( 0.4)		
<b>Minor Drainage</b>							
Grove	79.7	N	N	N	N		
<b>Cucamonga and Deer Creek Channel Drainage Systems</b>							
Turner 1 & 2	54.5	0.0	0.0	0.0	0.0		
Turner 3 & 4	90.3	0.0	0.0	20.6	( 0.3)		
<b>Day Creek Channel Drainage System</b>							
Lower Day	53.5	0.0	0.0	X	0.0		
<b>Etiwanda Channel Drainage System</b>							
Etiwanda Debris	0.0	0.0	0.0	X	0.0		
Victoria	46.0	0.0	0.0	99.6	( 1.5)		
<b>San Sevaine Channel Drainage System (MZ-2)</b>							
San Sevaine 1, 2, 3, & 4	44.1	0.0	0.0	0.0	0.0		
San Sevaine 5	1.3	0.0	0.0	X	X		
<b>West Fontana Channel System</b>							
Hickory	59.7	0.0	0.0	7.6	( 0.1)		
Banana	12.4	0.0	0.0	0.0	0.0		
<b>San Sevaine Channel Drainage System (MZ-3)</b>							
Jurupa	8.9	0.0	0.0	0.0	0.0	MZ-3 398.5 AF***	
<b>Declaz Channel Drainage System</b>							
RP3 Cells 1,3, & 4	13.9	0.0	0.0	144.0	( 2.2)		
RP3 Cell 2	30.3	0.0	0.0	27.1	( 0.4)		
Declaz	60.9	0.0	0.0	105.2	( 1.6)		
<b>Non-Replenishment Recharge**</b>							
MZ1: none	0.0						
	0.0						
	0.0						
MZ2 and MZ3: none	0.0						
<b>Month Total = 2,149.8 AF</b>	<b>1,218.8</b>	<b>0.0</b>	<b>0.0</b>	<b>945.2</b>	<b>( 14.2)</b>	December 2017	
<b>All Sources</b>	<b>SW/LR</b>	<b>Imported</b>		<b>Recycled Water</b>			
Fiscal Year Delivery (with evaporation) Since July 1, 2018 = 9,588.7 AF	2,707.7	60.4	0.0	7,060.3	(239.7)	Fiscal Year to Date	
		60.4		6,820.6			
Calendar Year Delivery (with evaporation) Since July 1, 2018 = 23,445.3 AF	6,750.8	4,251.6	(66.9)	12,942.3	(432.5)	Calendar Year to Date	
		4,184.7		12,509.8			

SW : Storm Water, LR : Local Runoff (and GE, MVWD), IW : Imported Water, 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.

\*\* : Beginning October 2017, evaporation losses are 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	13,000	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	115	0	310	425	47,728	140	13,696	61,424	22%
	Apr '19	139	85	0	310	395	48,108	170	13,866	61,974	22%
	May '19	140	42	0	310	352	48,444	210	14,076	62,520	23%
	Jun '19	141	18	0	310	328	48,773	230	14,306	63,078	23%

H I S T O R I C A L



## 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	24		310	334	49,088	230	14,536	63,623	23%
	Aug '19	143	15		310	325	49,380	240	14,752	64,132	23%
	Sep '19	144	24		310	334	49,696	230	14,982	64,678	23%
	Oct '19	145	49		310	359	49,671	200	15,182	64,853	23%
	Nov '19	146	85		310	395	49,663	170	15,219	64,882	23%
	Dec '19	147	209		310	519	49,569	40	15,166	64,735	23%
	Jan '20	148	154		310	464	49,336	100	15,164	64,500	24%
	Feb '20	149	180		310	490	49,039	70	15,234	64,273	24%
	Mar '20	150	115		310	425	49,081	140	15,260	64,341	24%
	Apr '20	151	85		310	395	48,960	170	15,330	64,290	24%
	May '20	152	42		310	352	48,968	210	15,341	64,309	24%
	Jun '20	153	18		310	328	48,953	230	15,269	64,222	24%
2020/21	Jul '20	154	24		310	334	48,947	230	15,281	64,228	24%
	Aug '20	155	15		310	325	48,934	240	15,415	64,349	24%
	Sep '20	156	24		310	334	48,922	230	15,468	64,390	24%
	Oct '20	157	49		310	359	48,882	200	15,380	64,262	24%
	Nov '20	158	85		310	395	48,780	170	15,387	64,167	24%
	Dec '20	159	209		310	519	48,490	40	15,407	63,897	24%
	Jan '21	160	154		310	464	48,534	100	15,340	63,874	24%
	Feb '21	161	180		310	490	48,438	70	15,327	63,765	24%
	Mar '21	162	115		310	425	48,303	140	15,444	63,747	24%
	Apr '21	163	85		310	395	48,364	170	15,433	63,797	24%
	May '21	164	42		310	352	48,155	210	15,400	63,555	24%
	Jun '21	165	18		310	328	47,827	230	15,428	63,254	24%
2021/2022	Jul '21	166	24		310	334	47,650	230	15,570	63,220	25%
	Aug '21	167	15		310	325	47,433	240	15,764	63,196	25%
	Sep '21	168	24		310	334	47,289	230	15,992	63,280	25%
	Oct '21	169	49		310	359	47,295	200	16,192	63,486	26%
	Nov '21	170	85		310	395	47,242	170	16,362	63,603	26%
	Dec '21	171	209		310	519	47,375	40	16,402	63,776	26%
	Jan '22	172	154		310	464	47,472	100	16,475	63,946	26%
	Feb '22	173	180		310	490	47,498	70	16,545	64,042	26%
	Mar '22	174	115		310	425	47,332	140	16,685	64,016	26%
	Apr '22	175	85		310	395	47,194	170	16,821	64,014	26%
	May '22	176	42		310	352	47,211	210	16,775	63,985	26%
	Jun '22	177	18		310	328	47,208	230	16,817	64,024	26%
2022/2023	Jul '22	178	24		310	334	47,212	230	16,910	64,121	26%
	Aug '22	179	15		310	325	47,206	240	17,150	64,355	27%
	Sep '22	180	24		310	334	47,197	230	17,256	64,452	27%
	Oct '22	181	49		310	359	47,217	200	17,147	64,363	27%
	Nov '22	182	85		310	395	47,236	170	17,069	64,304	27%
	Dec '22	183	209		310	519	47,167	40	17,006	64,172	26%
	Jan '23	184	154		310	464	47,251	100	16,876	64,126	26%
	Feb '23	185	180		310	490	47,341	70	16,720	64,060	26%
	Mar '23	186	115		310	425	47,391	140	16,620	64,010	26%
	Apr '23	187	85		310	395	47,452	170	16,638	64,089	26%
	May '23	188	42		310	352	47,451	210	16,627	64,077	26%
	Jun '23	189	18		310	328	47,457	230	16,586	64,042	26%
2023/2024	Jul '23	190	24		310	334	47,468	230	16,630	64,097	26%
	Aug '23	191	15		310	325	47,470	240	16,752	64,221	26%
	Sep '23	192	24		310	334	47,483	230	16,832	64,314	26%
	Oct '23	193	49		310	359	47,484	200	16,793	64,276	26%
	Nov '23	194	85		310	395	47,520	170	16,714	64,233	26%
	Dec '23	195	209		310	519	47,683	40	16,633	64,315	26%
	Jan '24	196	154		310	464	47,810	100	16,625	64,434	26%
	Feb '24	197	180		310	490	47,931	70	16,607	64,537	26%
	Mar '24	198	115		310	425	47,994	140	16,721	64,715	26%
	Apr '24	199	85		310	395	48,000	170	16,870	64,870	26%
	May '24	200	42		310	352	48,016	210	17,015	65,031	26%
	Jun '24	201	18		310	328	48,010	230	17,193	65,203	26%
2024/2025	Jul '24	202	24		310	334	48,009	230	17,415	65,424	27%
	Aug '24	203	15		310	325	48,009	240	17,647	65,656	27%
	Sep '24	204	24		310	334	48,019	230	17,845	65,864	27%
	Oct '24	205	49		310	359	48,068	200	18,045	66,113	27%
	Nov '24	206	85		310	395	48,007	170	18,215	66,222	28%
	Dec '24	207	209		310	519	47,863	40	18,255	66,118	28%
	Jan '25	208	154		310	464	47,907	100	18,355	66,262	28%
	Feb '25	209	180		310	490	48,045	70	18,425	66,470	28%
	Mar '25	210	115		310	425	48,118	140	18,565	66,683	28%
	Apr '25	211	85		310	395	48,178	170	18,735	66,913	28%
	May '25	212	42		310	352	48,163	210	18,945	67,108	28%
	Jun '25	213	18		310	328	48,169	230	19,175	67,344	28%

P L A N N E D



## 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	48,149	230	19,405	67,554	29%
	Aug '25	215	15		310	325	48,160	240	19,622	67,782	29%
	Sep '25	216	24		310	334	48,108	230	19,792	67,900	29%
	Oct '25	217	49		310	359	48,118	200	19,979	68,097	29%
	Nov '25	218	85		310	395	48,184	170	20,054	68,238	29%
	Dec '25	219	209		310	519	48,307	40	19,935	68,242	29%
	Jan '26	220	154		310	464	48,212	100	19,976	68,188	29%
	Feb '26	221	180		310	490	48,299	70	19,840	68,139	29%
	Mar '26	222	115		310	425	48,214	140	19,820	68,034	29%
	Apr '26	223	85		310	395	48,265	170	19,795	68,060	29%
	May '26	224	42		310	352	48,235	210	19,801	68,036	29%
	Jun '26	225	18		310	328	48,248	230	19,735	67,983	29%
2026/27	Jul '26	226	24		310	334	48,268	230	19,706	67,974	29%
	Aug '26	227	15		310	325	48,275	240	19,678	67,953	29%
	Sep '26	228	24		310	334	48,294	230	19,660	67,954	29%
	Oct '26	229	49		310	359	48,308	200	19,575	67,883	29%
	Nov '26	230	85		310	395	48,311	170	19,517	67,828	29%
	Dec '26	231	209		310	519	48,157	40	19,436	67,593	29%
	Jan '27	232	154		310	464	47,988	100	19,536	67,524	29%
	Feb '27	233	180		310	490	48,068	70	19,572	67,640	29%
	Mar '27	234	115		310	425	48,161	140	19,536	67,697	29%
	Apr '27	235	85		310	395	48,189	170	19,426	67,615	29%
	May '27	236	42		310	352	48,215	210	19,452	67,667	29%
	Jun '27	237	18		310	328	48,196	230	19,484	67,680	29%
2027/28	Jul '27	238	24		310	334	48,115	230	19,713	67,828	29%
	Aug '27	239	15		310	325	47,526	240	19,757	67,283	29%
	Sep '27	240	24		310	334	47,260	230	19,856	67,116	30%
	Oct '27	241	49		310	359	47,058	200	19,852	66,910	30%
	Nov '27	242	85		310	395	47,140	170	19,922	67,062	30%
	Dec '27	243	209		310	519	47,346	40	19,750	67,096	29%
	Jan '28	244	154		310	464	47,379	100	19,752	67,131	29%
	Feb '28	245	180		310	490	47,474	70	19,741	67,215	29%
	Mar '28	246	115		310	425	47,447	140	19,872	67,319	30%
	Apr '28	247	85		310	395	47,520	170	20,042	67,562	30%
	May '28	248	42		310	352	47,555	210	20,246	67,801	30%
	Jun '28	249	18		310	328	47,508	230	20,476	67,984	30%
2028/29	Jul '28	250	24		310	334	48,214	230	19,820	68,034	29%
	Aug '28	251	15		310	325	48,265	240	19,795	68,060	29%
	Sep '28	252	24		310	334	48,235	230	19,801	68,036	29%
	Oct '28	253	49		310	359	48,248	200	19,735	67,983	29%
	Nov '28	254	85		310	395	48,268	170	19,706	67,974	29%
	Dec '28	255	209		310	519	48,275	40	19,678	67,953	29%
	Jan '29	256	154		310	464	48,294	100	19,660	67,954	29%
	Feb '29	257	180		310	490	48,308	70	19,575	67,883	29%
	Mar '29	258	115		310	425	48,311	140	19,517	67,828	29%
	Apr '29	259	85		310	395	48,157	170	19,436	67,593	29%
	May '29	260	42		310	352	47,988	210	19,536	67,524	29%
	Jun '29	261	18		310	328	48,068	230	19,572	67,640	29%

P L A N N E D

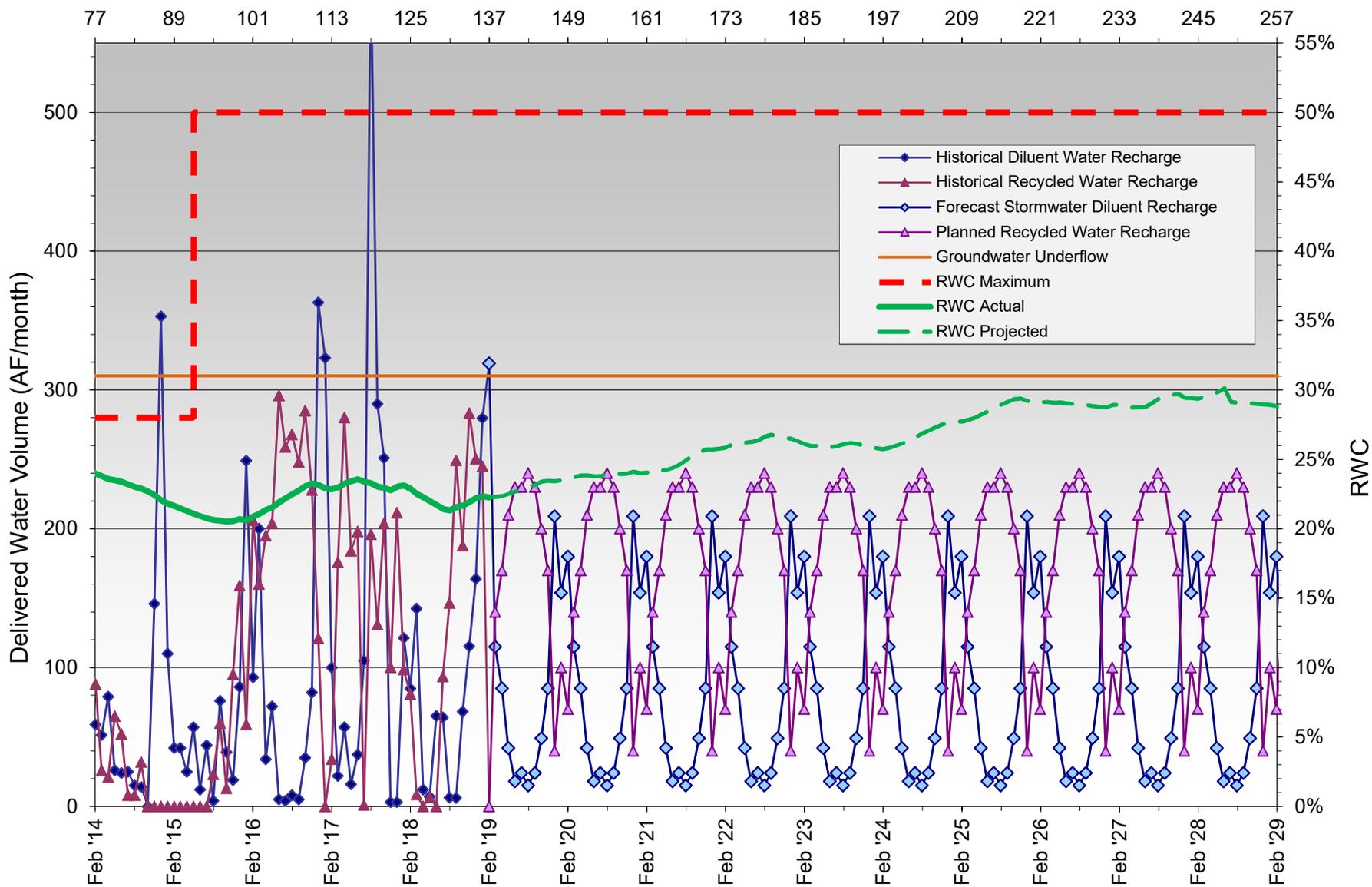
**Notes:**

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 - 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	19	0	151	170	19,792	110	11,113	30,904	36%
	Apr '19	165	13	0	151	164	19,956	110	11,223	31,178	36%
	May '19	166	9	0	151	160	20,116	120	11,343	31,459	36%
	Jun '19	167	1	0	151	152	20,268	120	11,463	31,731	36%

H I S T O R I C A L



## 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	5		151	156	120	11,583	32,007	36%	P L A N E D
	Aug '19	169	3		151	154	120	11,703	32,282	36%	
	Sep '19	170	6		151	157	120	11,823	32,559	36%	
	Oct '19	171	18		151	169	110	11,804	32,543	36%	
	Nov '19	172	17		151	168	110	11,733	32,489	36%	
	Dec '19	173	46		151	197	80	11,746	32,473	36%	
	Jan '20	174	46		151	197	80	11,751	32,424	36%	
	Feb '20	175	44		151	195	80	11,831	32,405	37%	
	Mar '20	176	19		151	170	110	11,941	32,517	37%	
	Apr '20	177	13		151	164	110	11,911	32,434	37%	
May '20	178	9		151	160	120	11,854	32,386	37%		
Jun '20	179	1		151	152	120	11,845	32,378	37%		
2020/2021	Jul '20	180	5		151	156	120	11,888	32,426	37%	
	Aug '20	181	3		151	154	120	11,954	32,495	37%	
	Sep '20	182	6		151	157	120	12,015	32,562	37%	
	Oct '20	183	18		151	169	110	12,077	32,637	37%	
	Nov '20	184	17		151	168	110	12,158	32,719	37%	
	Dec '20	185	46		151	197	80	12,238	32,794	37%	
	Jan '21	186	46		151	197	80	12,318	32,910	37%	
	Feb '21	187	44		151	195	80	12,398	33,008	38%	
	Mar '21	188	19		151	170	110	12,508	33,137	38%	
	Apr '21	189	13		151	164	110	12,618	33,260	38%	
May '21	190	9		151	160	120	12,738	33,389	38%		
Jun '21	191	1		151	152	120	12,858	33,510	38%		
2021/2022	Jul '21	192	5		151	156	120	12,978	33,604	39%	
	Aug '21	193	3		151	154	120	12,963	33,592	39%	
	Sep '21	194	6		151	157	120	12,688	33,323	38%	
	Oct '21	195	18		151	169	110	12,394	33,027	38%	
	Nov '21	196	17		151	168	110	12,343	32,963	37%	
	Dec '21	197	46		151	197	80	12,178	32,826	37%	
	Jan '22	198	46		151	197	80	12,097	32,743	37%	
	Feb '22	199	44		151	195	80	12,010	32,679	37%	
	Mar '22	200	19		151	170	110	12,048	32,692	37%	
	Apr '22	201	13		151	164	110	12,107	32,729	37%	
May '22	202	9		151	160	120	12,182	32,813	37%		
Jun '22	203	1		151	152	120	12,223	32,855	37%		
2022/2023	Jul '22	204	5		151	156	120	12,302	32,939	37%	
	Aug '22	205	3		151	154	120	12,420	33,060	38%	
	Sep '22	206	6		151	157	120	12,352	32,998	37%	
	Oct '22	207	18		151	169	110	12,359	33,012	37%	
	Nov '22	208	17		151	168	110	12,349	33,014	37%	
	Dec '22	209	46		151	197	80	12,414	33,076	38%	
	Jan '23	210	46		151	197	80	12,466	33,156	38%	
	Feb '23	211	44		151	195	80	12,544	33,258	38%	
	Mar '23	212	19		151	170	110	12,612	33,337	38%	
	Apr '23	213	13		151	164	110	12,667	33,405	38%	
May '23	214	9		151	160	120	12,748	33,492	38%		
Jun '23	215	1		151	152	120	12,833	33,578	38%		
2023/2024	Jul '23	216	5		151	156	120	12,938	33,688	38%	
	Aug '23	217	3		151	154	120	13,046	33,799	39%	
	Sep '23	218	6		151	157	120	13,166	33,925	39%	
	Oct '23	219	18		151	169	110	12,891	33,668	38%	
	Nov '23	220	17		151	168	110	12,899	33,671	38%	
	Dec '23	221	46		151	197	80	12,979	33,791	38%	
	Jan '24	222	46		151	197	80	13,059	33,900	39%	
	Feb '24	223	44		151	195	80	13,139	33,969	39%	
	Mar '24	224	19		151	170	110	13,164	34,004	39%	
	Apr '24	225	13		151	164	110	13,186	34,037	39%	
May '24	226	9		151	160	120	13,112	33,972	39%		
Jun '24	227	1		151	152	120	13,042	33,903	38%		
2024/2025	Jul '24	228	5		151	156	120	13,162	34,028	39%	
	Aug '24	229	3		151	154	120	13,200	34,069	39%	
	Sep '24	230	6		151	157	120	13,248	34,123	39%	
	Oct '24	231	18		151	169	110	13,152	34,045	39%	
	Nov '24	232	17		151	168	110	13,089	33,992	39%	
	Dec '24	233	46		151	197	80	13,102	33,906	39%	
	Jan '25	234	46		151	197	80	13,038	33,864	39%	
	Feb '25	235	44		151	195	80	13,071	33,925	39%	
	Mar '25	236	19		151	170	110	13,101	33,972	39%	
	Apr '25	237	13		151	164	110	13,121	34,002	39%	
May '25	238	9		151	160	120	13,080	33,970	39%		
Jun '25	239	1		151	152	120	13,174	34,065	39%		



## 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	5		151	156	120	13,240	34,136	39%	P L A N E D
	Aug '25	241	3		151	154	120	13,204	34,103	39%	
	Sep '25	242	6		151	157	120	12,948	33,813	38%	
	Oct '25	243	18		151	169	110	12,709	33,487	38%	
	Nov '25	244	17		151	168	110	12,557	33,322	38%	
	Dec '25	245	46		151	197	80	12,354	33,106	37%	
	Jan '26	246	46		151	197	80	12,359	33,086	37%	
	Feb '26	247	44		151	195	80	12,329	33,093	37%	
	Mar '26	248	19		151	170	110	12,365	33,110	37%	
	Apr '26	249	13		151	164	110	12,378	33,136	37%	
	May '26	250	9		151	160	120	12,385	33,137	37%	
	Jun '26	251	1		151	152	120	12,348	33,101	37%	
2026/2027	Jul '26	252	5		151	156	120	12,285	33,043	37%	
	Aug '26	253	3		151	154	120	12,356	33,117	37%	
	Sep '26	254	6		151	157	120	12,379	33,146	37%	
	Oct '26	255	18		151	169	110	12,374	33,153	37%	
	Nov '26	256	17		151	168	110	12,429	33,204	37%	
	Dec '26	257	46		151	197	80	12,508	33,258	38%	
	Jan '27	258	46		151	197	80	12,588	33,334	38%	
	Feb '27	259	44		151	195	80	12,668	33,440	38%	
	Mar '27	260	19		151	170	110	12,778	33,569	38%	
	Apr '27	261	13		151	164	110	12,888	33,692	38%	
	May '27	262	9		151	160	120	13,008	33,821	38%	
	Jun '27	263	1		151	152	120	13,128	33,942	39%	
2027/28	Jul '27	264	3		151	154	120	13,248	34,065	39%	
	Aug '27	265	6		151	157	120	13,237	34,058	39%	
	Sep '27	266	18		151	169	120	13,196	33,899	39%	
	Oct '27	267	17		151	168	110	13,065	33,662	39%	
	Nov '27	268	46		151	197	110	12,712	33,355	38%	
	Dec '27	269	46		151	197	80	12,540	33,089	38%	
	Jan '28	270	44		151	195	80	12,493	32,879	38%	
	Feb '28	271	19		151	170	80	12,368	32,761	38%	
	Mar '28	272	13		151	164	110	12,390	32,736	38%	
	Apr '28	273	9		151	160	110	12,328	32,683	38%	
	May '28	274	1		151	152	120	12,286	32,642	38%	
	Jun '28	275	3		151	154	120	12,277	32,636	38%	
2028/29	Jul '28	276	3		151	154	120	12,251	32,610	38%	
	Aug '28	277	6		151	157	120	12,354	32,720	38%	
	Sep '28	278	18		151	169	120	12,384	32,767	38%	
	Oct '28	279	17		151	168	110	12,494	32,882	38%	
	Nov '28	280	46		151	197	110	12,573	32,985	38%	
	Dec '28	281	46		151	197	80	12,653	33,099	38%	
	Jan '29	282	44		151	195	80	12,720	33,182	38%	
	Feb '29	283	19		151	170	80	12,800	33,239	39%	
	Mar '29	284	13		151	164	110	12,800	33,233	39%	
	Apr '29	285	9		151	160	110	12,800	33,229	39%	
	May '29	286	1		151	152	120	12,800	33,221	39%	
	Jun '29	287	3		151	154	120	12,800	33,223	39%	

**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.

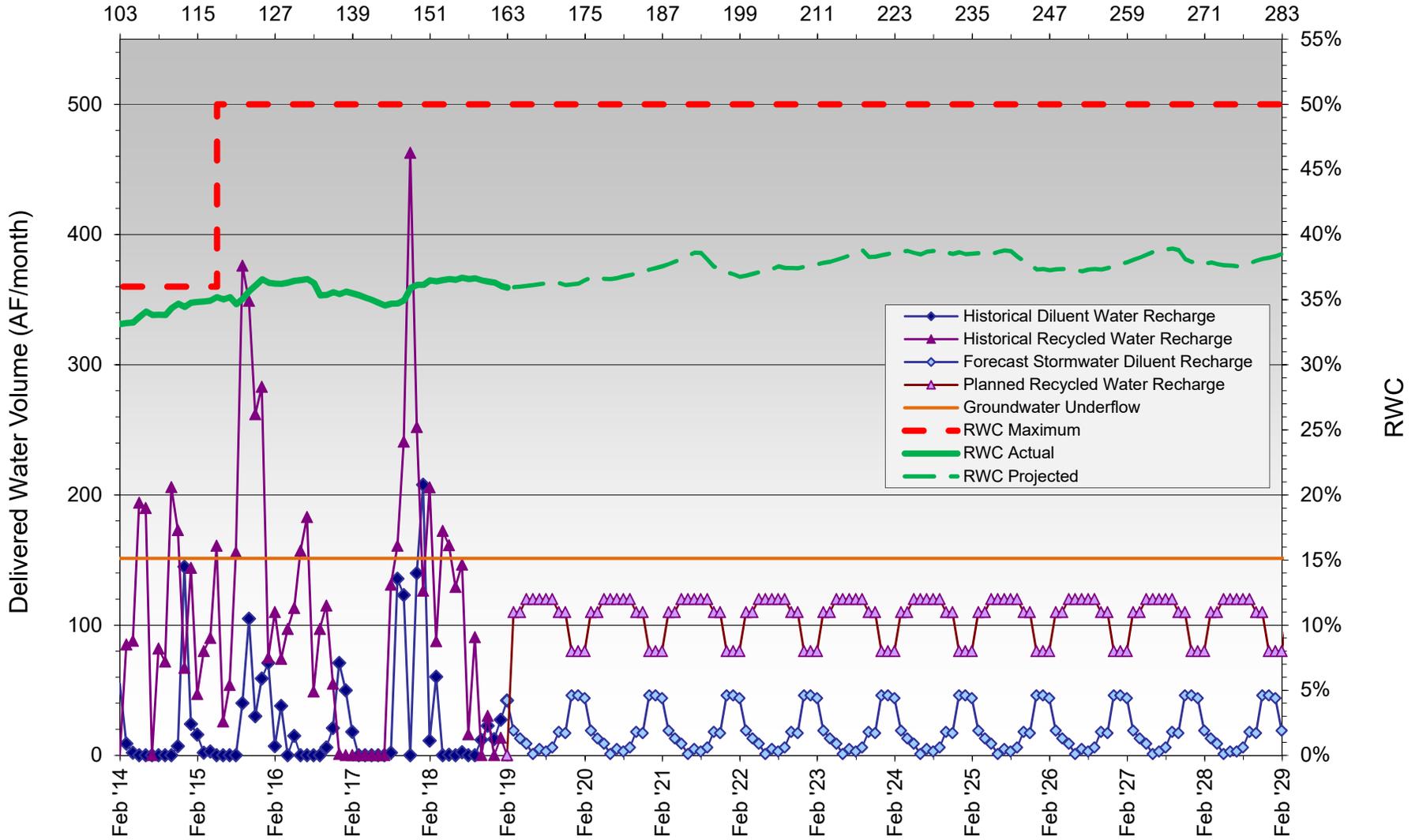
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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 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	55	0	509	564	63,040	100	11,854	74,894	16%
	Apr '19	128	30	0	509	539	63,578	120	11,678	75,256	16%
May '19	129	11	0	509	520	64,081	140	11,703	75,785	15%	
Jun '19	130	2	0	509	511	64,593	150	11,675	76,268	15%	

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	3		509	512	65,104	150	11,819	76,923	15%
	Aug '19	132	4		509	513	65,617	150	11,961	77,578	15%
	Sep '19	133	9		509	518	66,135	140	12,101	78,236	15%
	Oct '19	134	11		509	520	66,133	140	12,057	78,190	15%
	Nov '19	135	24		509	533	66,153	130	11,941	78,094	15%
	Dec '19	136	74		509	583	66,098	80	11,877	77,975	15%
	Jan '20	137	100		509	609	65,947	50	11,853	77,800	15%
	Feb '20	138	110		509	619	65,842	40	11,839	77,681	15%
	Mar '20	139	55		509	564	65,870	100	11,759	77,629	15%
	Apr '20	140	30		509	539	65,877	120	11,644	77,521	15%
May '20	141	11		509	520	65,886	140	11,428	77,314	15%	
Jun '20	142	2		509	511	65,887	150	11,370	77,257	15%	
2020/21	Jul '20	143	3		509	512	65,889	150	11,373	77,262	15%
	Aug '20	144	4		509	513	65,875	150	11,248	77,123	15%
	Sep '20	145	9		509	518	65,883	140	11,247	77,130	15%
	Oct '20	146	11		509	520	65,870	140	11,257	77,127	15%
	Nov '20	147	24		509	533	65,850	130	11,300	77,150	15%
	Dec '20	148	74		509	583	65,642	80	11,346	76,988	15%
	Jan '21	149	100		509	609	65,630	50	11,396	77,026	15%
	Feb '21	150	110		509	619	65,576	40	11,436	77,012	15%
	Mar '21	151	55		509	564	65,489	100	11,536	77,025	15%
	Apr '21	152	30		509	539	65,518	120	11,482	77,000	15%
May '21	153	11		509	520	65,519	140	11,460	76,979	15%	
Jun '21	154	2		509	511	65,520	150	11,387	76,907	15%	
2021/22	Jul '21	155	3		509	512	65,286	150	11,537	76,823	15%
	Aug '21	156	4		509	513	65,104	150	11,687	76,791	15%
	Sep '21	157	9		509	518	64,960	140	11,827	76,787	15%
	Oct '21	158	11		509	520	64,953	140	11,887	76,840	15%
	Nov '21	159	24		509	533	64,927	130	11,981	76,908	16%
	Dec '21	160	74		509	583	64,985	80	11,963	76,948	16%
	Jan '22	161	100		509	609	65,040	50	11,871	76,911	15%
	Feb '22	162	110		509	619	65,100	40	11,834	76,934	15%
	Mar '22	163	55		509	564	65,052	100	11,849	76,901	15%
	Apr '22	164	30		509	539	65,018	120	11,937	76,955	16%
May '22	165	11		509	520	65,028	140	11,952	76,980	16%	
Jun '22	166	2		509	511	65,030	150	11,941	76,971	16%	
2022/23	Jul '22	167	3		509	512	65,032	150	12,058	77,090	16%
	Aug '22	168	4		509	513	65,034	150	12,169	77,203	16%
	Sep '22	169	9		509	518	65,041	140	12,258	77,299	16%
	Oct '22	170	11		509	520	65,052	140	12,398	77,450	16%
	Nov '22	171	24		509	533	65,076	130	12,528	77,604	16%
	Dec '22	172	74		509	583	65,150	80	12,608	77,758	16%
	Jan '23	173	100		509	609	65,215	50	12,316	77,531	16%
	Feb '23	174	110		509	619	65,299	40	12,057	77,356	16%
	Mar '23	175	55		509	564	65,322	100	11,919	77,241	15%
	Apr '23	176	30		509	539	65,352	120	11,808	77,160	15%
May '23	177	11		509	520	65,346	140	11,796	77,142	15%	
Jun '23	178	2		509	511	65,347	150	11,826	77,173	15%	
2023/24	Jul '23	179	3		509	512	65,349	150	11,807	77,156	15%
	Aug '23	180	4		509	513	65,352	150	11,760	77,112	15%
	Sep '23	181	9		509	518	65,333	140	11,718	77,051	15%
	Oct '23	182	11		509	520	65,321	140	11,750	77,071	15%
	Nov '23	183	24		509	533	65,341	130	11,786	77,127	15%
	Dec '23	184	74		509	583	65,407	80	11,762	77,169	15%
	Jan '24	185	100		509	609	65,504	50	11,703	77,207	15%
	Feb '24	186	110		509	619	65,567	40	11,641	77,208	15%
	Mar '24	187	55		509	564	65,610	100	11,611	77,221	15%
	Apr '24	188	30		509	539	65,626	120	11,666	77,292	15%
May '24	189	11		509	520	65,637	140	11,806	77,443	15%	
Jun '24	190	2		509	511	65,620	150	11,908	77,528	15%	
2024/25	Jul '24	191	3		509	512	65,616	150	11,986	77,602	15%
	Aug '24	192	4		509	513	65,619	150	11,995	77,614	15%
	Sep '24	193	9		509	518	65,627	140	11,978	77,605	15%
	Oct '24	194	11		509	520	65,632	140	12,062	77,694	16%
	Nov '24	195	24		509	533	65,628	130	12,155	77,783	16%
	Dec '24	196	74		509	583	65,607	80	12,235	77,842	16%
	Jan '25	197	100		509	609	65,688	50	12,275	77,963	16%
	Feb '25	198	110		509	619	65,771	40	12,223	77,994	16%
	Mar '25	199	55		509	564	65,813	100	12,254	78,067	16%
	Apr '25	200	30		509	539	65,833	120	12,273	78,106	16%
May '25	201	11		509	520	65,823	140	12,293	78,116	16%	
Jun '25	202	2		509	511	65,825	150	12,287	78,112	16%	

P L A N N E D



### RWC Management Plan for Brooks Street Basins

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2025/26	Jul '25	203	3		509	512	65,828	150	12,374	78,202	16%
	Aug '25	204	4		509	513	65,832	150	12,524	78,356	16%
	Sep '25	205	9		509	518	65,840	140	12,664	78,504	16%
	Oct '25	206	11		509	520	65,851	140	12,804	78,655	16%
	Nov '25	207	24		509	533	65,874	130	12,934	78,808	16%
	Dec '25	208	74		509	583	65,948	80	12,913	78,861	16%
	Jan '26	209	100		509	609	65,994	50	12,709	78,703	16%
	Feb '26	210	110		509	619	66,013	40	12,633	78,646	16%
	Mar '26	211	55		509	564	65,977	100	12,522	78,499	16%
	Apr '26	212	30		509	539	65,994	120	12,450	78,444	16%
May '26	213	11		509	520	66,004	140	12,312	78,316	16%	
Jun '26	214	2		509	511	66,006	150	12,462	78,468	16%	
2026/27	Jul '26	215	3		509	512	66,009	150	12,612	78,621	16%
	Aug '26	216	4		509	513	66,013	150	12,762	78,775	16%
	Sep '26	217	9		509	518	65,991	140	12,757	78,748	16%
	Oct '26	218	11		509	520	65,815	140	12,878	78,693	16%
	Nov '26	219	24		509	533	65,800	130	12,892	78,692	16%
	Dec '26	220	74		509	583	65,678	80	12,959	78,637	16%
	Jan '27	221	100		509	609	65,524	50	13,009	78,533	17%
	Feb '27	222	110		509	619	65,492	40	13,049	78,541	17%
	Mar '27	223	55		509	564	65,546	100	13,133	78,679	17%
	Apr '27	224	30		509	539	65,560	120	13,245	78,805	17%
May '27	225	11		509	520	65,570	140	13,347	78,917	17%	
Jun '27	226	2		509	511	65,570	150	13,467	79,037	17%	
2027/28	Jul '27	227	3		509	512	65,479	150	13,389	78,868	17%
	Aug '27	228	4		509	513	65,388	150	13,484	78,872	17%
	Sep '27	229	9		509	518	65,393	140	13,455	78,848	17%
	Oct '27	230	11		509	520	65,402	140	13,496	78,898	17%
	Nov '27	231	24		509	533	65,423	130	13,475	78,898	17%
	Dec '27	232	74		509	583	65,497	80	13,433	78,929	17%
	Jan '28	233	100		509	609	65,564	50	13,388	78,952	17%
	Feb '28	234	110		509	619	65,665	40	13,322	78,987	17%
	Mar '28	235	55		509	564	65,676	100	13,410	79,086	17%
	Apr '28	236	30		509	539	65,704	120	13,493	79,198	17%
May '28	237	11		509	520	65,712	140	13,548	79,260	17%	
Jun '28	238	2		509	511	65,712	150	13,590	79,302	17%	
2027/28	Jul '28	239	3		509	512	65,715	150	13,694	79,409	17%
	Aug '28	240	4		509	513	65,719	150	13,826	79,545	17%
	Sep '28	241	9		509	518	65,728	140	13,966	79,694	18%
	Oct '28	242	11		509	520	65,736	140	14,106	79,842	18%
	Nov '28	243	24		509	533	65,738	130	14,053	79,791	18%
	Dec '28	244	74		509	583	65,769	80	13,876	79,645	17%
	Jan '29	245	100		509	609	65,610	50	13,860	79,470	17%
	Feb '29	246	110		509	619	65,437	40	13,900	79,337	18%
	Mar '29	247	55		509	564	65,437	100	13,900	79,337	18%
	Apr '29	248	30		509	539	65,437	120	13,900	79,337	18%
May '29	249	11		509	520	65,437	140	13,900	79,337	18%	
Jun '29	250	2		509	511	65,437	150	13,900	79,337	18%	

P L A N N E D

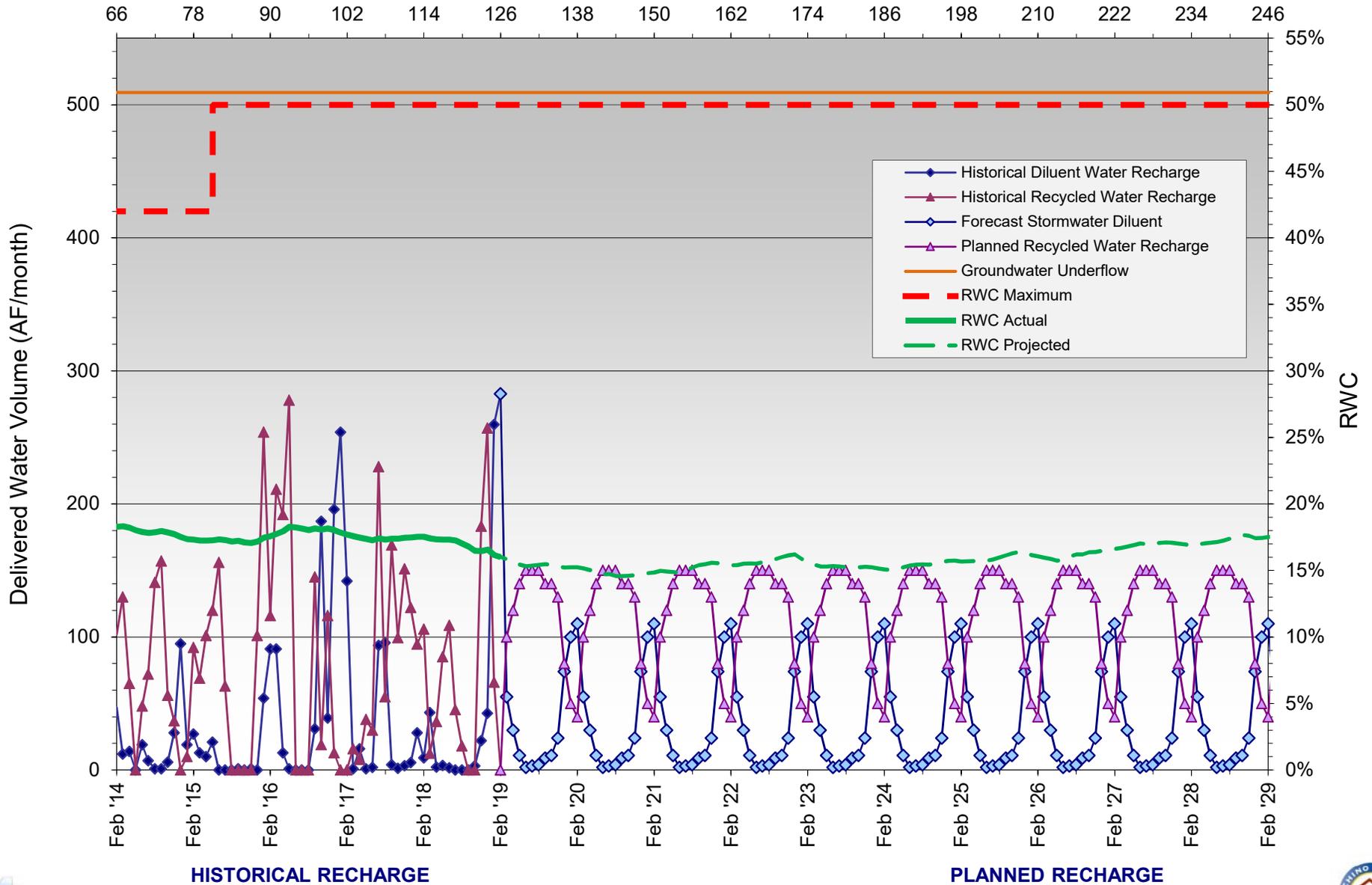
**Notes:**

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 Declaz 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%	H I S T O R I C A L
	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	81	0	904	985	43,374	100	3,409	46,784	7%	
	Apr '19	40	58	0	904	962	44,331	140	3,549	47,880	7%	
May '19	41	24	0	904	928	45,253	170	3,719	48,972	8%		
Jun '19	42	7	0	904	911	46,144	180	3,899	50,043	8%		

H I S T O R I C A L

S T A R T - U P



### RWC Management Plan for Declaz 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	17	904	921	47,044	170	4,069	51,113	8%	P L A N E D
	Aug '19	44	13	904	917	47,943	170	4,239	52,183	8%	
	Sep '19	45	25	904	929	48,866	170	4,409	53,275	8%	
	Oct '19	46	46	904	949	49,800	150	4,559	54,360	8%	
	Nov '19	47	61	904	964	50,726	130	4,689	55,415	8%	
	Dec '19	48	147	904	1,050	51,603	60	4,749	56,353	8%	
	Jan '20	49	86	904	990	52,520	100	4,849	57,370	8%	
	Feb '20	50	117	904	1,021	53,300	80	4,929	58,229	8%	
	Mar '20	51	81	904	985	54,230	100	5,029	59,259	8%	
	Apr '20	52	58	904	962	55,069	140	5,169	60,239	9%	
	May '20	53	24	904	928	55,991	170	5,339	61,330	9%	
	Jun '20	54	7	904	911	56,896	180	5,519	62,415	9%	
2020/21	Jul '20	55	17	904	921	57,814	170	5,689	63,503	9%	
	Aug '20	56	13	904	917	58,723	170	5,859	64,582	9%	
	Sep '20	57	25	904	929	59,649	170	6,029	65,678	9%	
	Oct '20	58	46	904	949	60,553	150	6,179	66,733	9%	
	Nov '20	59	61	904	964	61,423	130	6,309	67,732	9%	
	Dec '20	60	147	904	1,050	62,160	60	6,369	68,530	9%	
	Jan '21	61	86	904	990	63,098	100	6,469	69,568	9%	
	Feb '21	62	117	904	1,021	63,923	80	6,549	70,472	9%	
	Mar '21	63	81	904	985	64,770	100	6,649	71,419	9%	
	Apr '21	64	58	904	962	65,729	140	6,789	72,519	9%	
	May '21	65	24	904	928	66,643	170	6,959	73,602	9%	
	Jun '21	66	7	904	911	67,545	180	7,139	74,684	10%	
2021/22	Jul '21	67	17	904	921	68,385	170	7,309	75,694	10%	
	Aug '21	68	13	904	917	69,299	170	7,479	76,778	10%	
	Sep '21	69	25	904	929	70,221	170	7,649	77,870	10%	
	Oct '21	70	46	904	949	71,097	150	7,799	78,896	10%	
	Nov '21	71	61	904	964	71,941	130	7,929	79,870	10%	
	Dec '21	72	147	904	1,050	72,936	60	7,989	80,925	10%	
	Jan '22	73	86	904	990	73,839	100	8,024	81,863	10%	
	Feb '22	74	117	904	1,021	74,813	80	8,104	82,917	10%	
	Mar '22	75	81	904	985	75,614	100	8,204	83,818	10%	
	Apr '22	76	58	904	962	76,443	140	8,344	84,787	10%	
	May '22	77	24	904	928	77,363	170	8,514	85,878	10%	
	Jun '22	78	7	904	911	78,273	180	8,694	86,967	10%	
2022/23	Jul '22	79	17	904	921	79,193	170	8,864	88,057	10%	
	Aug '22	80	13	904	917	80,100	170	9,034	89,134	10%	
	Sep '22	81	25	904	929	81,013	170	9,204	90,218	10%	
	Oct '22	82	46	904	949	81,829	150	9,354	91,183	10%	
	Nov '22	83	61	904	964	82,772	130	9,484	92,257	10%	
	Dec '22	84	147	904	1,050	83,655	60	9,544	93,199	10%	
	Jan '23	85	86	904	990	84,597	100	9,644	94,241	10%	
	Feb '23	86	117	904	1,021	85,559	80	9,724	95,284	10%	
	Mar '23	87	81	904	985	86,483	100	9,824	96,307	10%	
	Apr '23	88	58	904	962	87,441	140	9,964	97,405	10%	
	May '23	89	24	904	928	88,362	170	10,134	98,497	10%	
	Jun '23	90	7	904	911	89,269	180	10,314	99,584	10%	
2023/24	Jul '23	91	17	904	921	90,184	170	10,484	100,669	10%	
	Aug '23	92	13	904	917	91,098	170	10,654	101,752	10%	
	Sep '23	93	25	904	929	92,025	170	10,824	102,849	11%	
	Oct '23	94	46	904	949	92,956	150	10,974	103,930	11%	
	Nov '23	95	61	904	964	93,868	130	11,104	104,973	11%	
	Dec '23	96	147	904	1,050	94,853	60	11,164	106,017	11%	
	Jan '24	97	86	904	990	95,741	100	11,264	107,006	11%	
	Feb '24	98	117	904	1,021	96,586	80	11,344	107,930	11%	
	Mar '24	99	81	904	985	97,398	100	11,444	108,842	11%	
	Apr '24	100	58	904	962	98,245	140	11,584	109,829	11%	
	May '24	101	24	904	928	99,171	170	11,754	110,925	11%	
	Jun '24	102	7	904	911	100,080	180	11,934	112,014	11%	
2024/25	Jul '24	103	17	904	921	100,999	170	12,104	113,103	11%	
	Aug '24	104	13	904	917	101,844	170	12,274	114,118	11%	
	Sep '24	105	25	904	929	102,742	170	12,444	115,187	11%	
	Oct '24	106	46	904	949	103,689	150	12,594	116,283	11%	
	Nov '24	107	61	904	964	104,553	130	12,724	117,277	11%	
	Dec '24	108	147	904	1,050	105,289	60	12,784	118,073	11%	
	Jan '25	109	86	904	990	106,232	100	12,884	119,116	11%	
	Feb '25	110	117	904	1,021	107,146	80	12,964	120,111	11%	
	Mar '25	111	81	904	985	108,116	100	13,064	121,180	11%	
	Apr '25	112	58	904	962	109,037	140	13,204	122,241	11%	
	May '25	113	24	904	928	109,865	170	13,374	123,240	11%	
	Jun '25	114	7	904	911	110,773	180	13,554	124,327	11%	



### RWC Management Plan for Decluz 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	111,645	170	13,724	125,369	11%	P L A N E D
	Aug '25	116	13		904	917	112,559	170	13,894	126,453	11%	
	Sep '25	117	25		904	929	113,340	170	14,064	127,405	11%	
	Oct '25	118	46		904	949	114,254	150	14,214	128,468	11%	
	Nov '25	119	61		904	964	115,214	130	14,344	129,559	11%	
	Dec '25	120	147		904	1,050	115,312	60	14,354	129,666	11%	
	Jan '26	121	86		904	990	115,240	100	14,376	129,617	11%	
	Feb '26	122	117		904	1,021	115,323	80	14,303	129,626	11%	
	Mar '26	123	81		904	985	115,312	100	14,277	129,589	11%	
	Apr '26	124	58		904	962	115,350	140	14,284	129,634	11%	
May '26	125	24		904	928	115,362	170	14,226	129,588	11%		
Jun '26	126	7		904	911	115,366	180	14,205	129,571	11%		
2026/27	Jul '26	127	17		904	921	115,383	170	14,174	129,558	11%	
	Aug '26	128	13		904	917	115,396	170	14,083	129,480	11%	
	Sep '26	129	25		904	929	115,420	170	14,201	129,621	11%	
	Oct '26	130	46		904	949	115,419	150	14,351	129,770	11%	
	Nov '26	131	61		904	964	115,424	130	14,481	129,906	11%	
	Dec '26	132	147		904	1,050	115,354	60	14,541	129,896	11%	
	Jan '27	133	86		904	990	115,273	100	14,641	129,915	11%	
	Feb '27	134	117		904	1,021	115,320	80	14,721	130,042	11%	
	Mar '27	135	81		904	985	115,381	100	14,821	130,203	11%	
	Apr '27	136	58		904	962	115,436	140	14,961	130,398	11%	
May '27	137	24		904	928	115,436	170	15,131	130,567	12%		
Jun '27	138	7		904	911	115,341	180	15,311	130,652	12%		
2027/28	Jul '27	139	17		904	921	115,306	170	15,481	130,788	12%	
	Aug '27	140	13		904	917	115,249	170	15,651	130,901	12%	
	Sep '27	141	25		904	929	115,248	170	15,821	131,070	12%	
	Oct '27	142	46		904	949	115,221	150	15,971	131,193	12%	
	Nov '27	143	61		904	964	115,276	130	16,101	131,377	12%	
	Dec '27	144	147		904	1,050	115,417	60	16,161	131,578	12%	
	Jan '28	145	86		904	990	115,367	100	16,261	131,628	12%	
	Feb '28	146	117		904	1,021	115,435	80	16,341	131,776	12%	
	Mar '28	147	81		904	985	115,293	100	16,441	131,734	12%	
	Apr '28	148	58		904	962	115,333	140	16,526	131,858	13%	
May '28	149	24		904	928	115,327	170	16,401	131,728	12%		
Jun '28	150	7		904	911	115,317	180	16,343	131,660	12%		
2028/29	Jul '28	151	17		904	921	115,323	170	16,247	131,570	12%	
	Aug '28	152	13		904	917	115,327	170	16,142	131,469	12%	
	Sep '28	153	25		904	929	115,341	170	16,054	131,395	12%	
	Oct '28	154	46		904	949	115,326	150	16,037	131,363	12%	
	Nov '28	155	61		904	964	115,216	130	16,110	131,326	12%	
	Dec '28	156	147		904	1,050	115,302	60	16,066	131,368	12%	
	Jan '29	157	86		904	990	115,276	100	16,120	131,396	12%	
	Feb '29	158	117		904	1,021	115,262	80	16,200	131,462	12%	
	Mar '29	159	81		904	985	115,262	100	16,200	131,462	12%	
	Apr '29	160	58		904	962	115,262	140	16,200	131,462	12%	
May '29	161	24		904	928	115,262	170	16,200	131,462	12%		
Jun '29	162	7		904	911	115,262	180	16,200	131,462	12%		

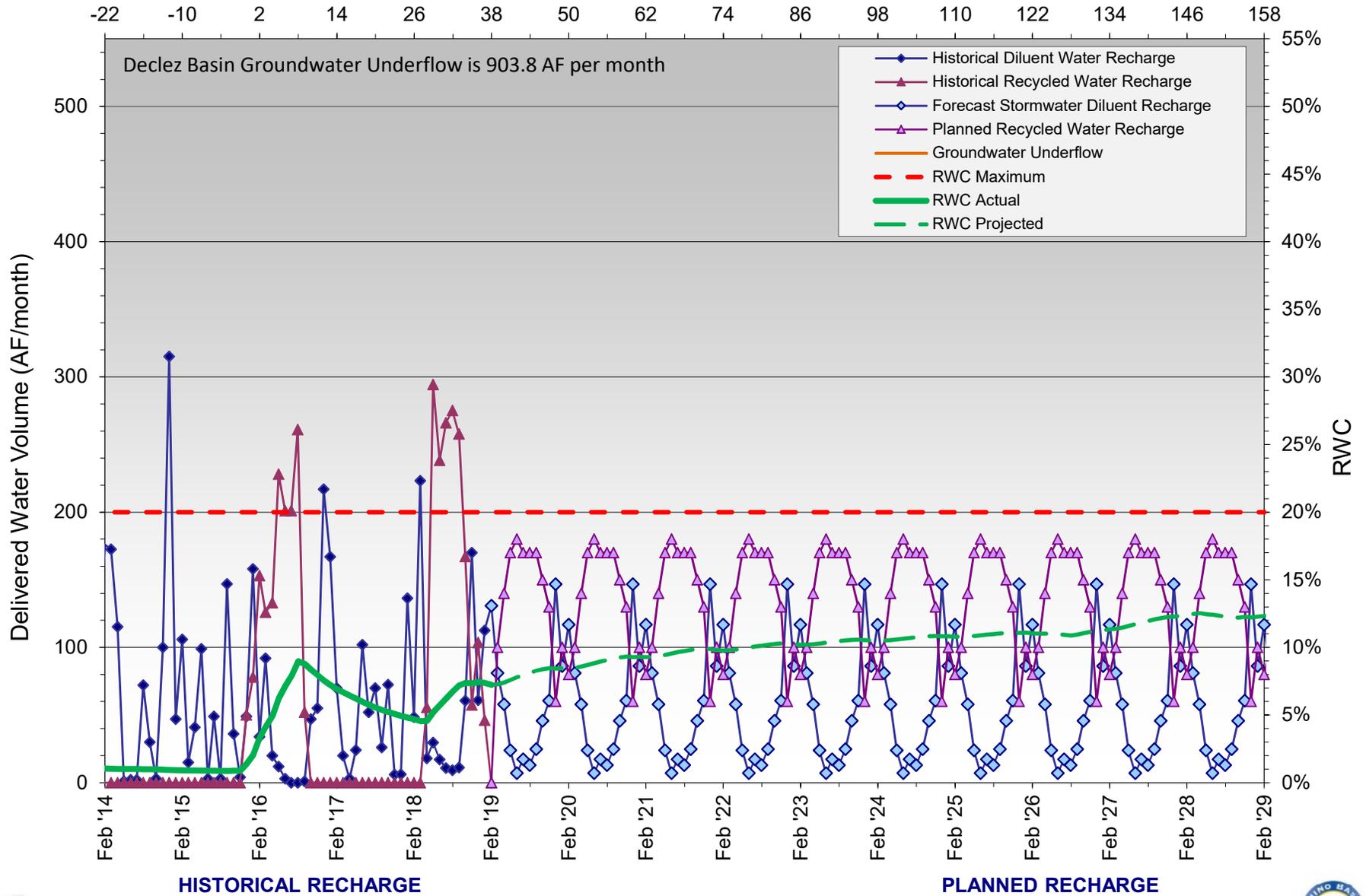
**Notes:**

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.  
 RW = Recycled Water  
 RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.  
 While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.  
 RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - Declez Basin

Months Since Initial Recycled Water Delivery



## RWC Management Plan for Ely Basin

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
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	166	0	286	452	45,529	50	13,257	58,787	23%
	Apr '19	235	154	0	286	440	45,835	60	13,302	59,137	22%
	May '19	236	95	0	286	381	46,148	120	13,411	59,559	23%
	Jun '19	237	28	0	286	314	46,438	190	13,601	60,039	23%

H I S T O R I C A L



### 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	42		286	328	46,766	180	13,781	60,547	23%
	Aug '19	239	32		286	318	47,063	190	13,971	61,035	23%
	Sep '19	240	55		286	341	47,202	160	14,107	61,310	23%
	Oct '19	241	88		286	374	47,103	130	14,135	61,239	23%
	Nov '19	242	141		286	427	46,962	80	14,095	61,058	23%
	Dec '19	243	215		286	501	46,935	0	14,095	61,031	23%
	Jan '20	244	212		286	498	46,828	10	14,105	60,934	23%
	Feb '20	245	232		286	518	46,839	0	14,105	60,945	23%
	Mar '20	246	166		286	452	46,901	50	14,155	61,057	23%
	Apr '20	247	154		286	440	46,661	60	14,215	60,877	23%
May '20	248	95		286	381	46,658	120	14,335	60,994	24%	
Jun '20	249	28		286	314	46,686	190	14,525	61,212	24%	
2020/21	Jul '20	250	42		286	328	46,728	180	14,705	61,434	24%
	Aug '20	251	32		286	318	46,760	190	14,895	61,656	24%
	Sep '20	252	55		286	341	46,815	160	15,055	61,871	24%
	Oct '20	253	88		286	374	46,874	130	15,071	61,946	24%
	Nov '20	254	141		286	427	46,888	80	15,031	61,920	24%
	Dec '20	255	215		286	501	46,531	0	15,019	61,551	24%
	Jan '21	256	212		286	498	46,639	10	15,029	61,669	24%
	Feb '21	257	232		286	518	46,548	0	14,986	61,535	24%
	Mar '21	258	166		286	452	46,478	50	15,036	61,515	24%
	Apr '21	259	154		286	440	46,629	60	14,989	61,619	24%
May '21	260	95		286	381	46,711	120	14,954	61,666	24%	
Jun '21	261	28		286	314	46,649	190	14,938	61,587	24%	
2021/22	Jul '21	262	42		286	328	46,388	180	14,942	61,330	24%
	Aug '21	263	32		286	318	46,129	190	14,991	61,120	25%
	Sep '21	264	55		286	341	45,840	160	15,145	60,985	25%
	Oct '21	265	88		286	374	45,713	130	15,275	60,988	25%
	Nov '21	266	141		286	427	45,643	80	15,355	60,998	25%
	Dec '21	267	215		286	501	45,822	0	15,355	61,177	25%
	Jan '22	268	212		286	498	45,945	10	15,301	61,246	25%
	Feb '22	269	232		286	518	46,082	0	15,295	61,377	25%
	Mar '22	270	166		286	452	46,001	50	15,345	61,346	25%
	Apr '22	271	154		286	440	46,020	60	15,405	61,425	25%
May '22	272	95		286	381	46,112	120	15,525	61,637	25%	
Jun '22	273	28		286	314	46,128	190	15,715	61,843	25%	
2022/23	Jul '22	274	42		286	328	46,163	180	15,895	62,058	26%
	Aug '22	275	32		286	318	46,188	190	16,085	62,273	26%
	Sep '22	276	55		286	341	46,238	160	16,245	62,483	26%
	Oct '22	277	88		286	374	46,321	130	16,375	62,696	26%
	Nov '22	278	141		286	427	46,453	80	16,375	62,828	26%
	Dec '22	279	215		286	501	46,333	0	16,308	62,641	26%
	Jan '23	280	212		286	498	46,473	10	16,173	62,646	26%
	Feb '23	281	232		286	518	46,668	0	15,948	62,616	25%
	Mar '23	282	166		286	452	46,771	50	15,684	62,455	25%
	Apr '23	283	154		286	440	46,924	60	15,665	62,589	25%
May '23	284	95		286	381	46,996	120	15,526	62,522	25%	
Jun '23	285	28		286	314	47,020	190	15,507	62,527	25%	
2023/24	Jul '23	286	42		286	328	47,056	180	15,530	62,586	25%
	Aug '23	287	32		286	318	47,084	190	15,386	62,470	25%
	Sep '23	288	55		286	341	47,133	160	15,089	62,222	24%
	Oct '23	289	88		286	374	47,221	130	14,861	62,082	24%
	Nov '23	290	141		286	427	47,341	80	14,520	61,861	23%
	Dec '23	291	215		286	501	47,532	0	14,107	61,639	23%
	Jan '24	292	212		286	498	47,736	10	13,906	61,642	23%
	Feb '24	293	232		286	518	47,674	0	13,712	61,386	22%
	Mar '24	294	166		286	452	47,777	50	13,654	61,431	22%
	Apr '24	295	154		286	440	47,848	60	13,496	61,344	22%
May '24	296	95		286	381	47,934	120	13,375	61,309	22%	
Jun '24	297	28		286	314	47,947	190	13,379	61,326	22%	
2024/25	Jul '24	298	42		286	328	47,973	180	13,458	61,431	22%
	Aug '24	299	32		286	318	47,989	190	13,640	61,629	22%
	Sep '24	300	55		286	341	48,029	160	13,679	61,708	22%
	Oct '24	301	88		286	374	48,101	130	13,523	61,624	22%
	Nov '24	302	141		286	427	48,072	80	13,533	61,605	22%
	Dec '24	303	215		286	501	47,895	0	13,528	61,423	22%
	Jan '25	304	212		286	498	48,063	10	13,355	61,418	22%
	Feb '25	305	232		286	518	48,223	0	13,133	61,356	21%
	Mar '25	306	166		286	452	48,374	50	13,026	61,400	21%
	Apr '25	307	154		286	440	48,428	60	12,921	61,349	21%
May '25	308	95		286	381	48,292	120	12,881	61,173	21%	
Jun '25	309	28		286	314	48,320	190	12,798	61,118	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	42		286	328	48,077	180	12,876	60,953	21%
	Aug '25	311	32		286	318	48,106	190	13,065	61,171	21%
	Sep '25	312	55		286	341	47,946	160	13,194	61,140	22%
	Oct '25	313	88		286	374	47,959	130	13,248	61,207	22%
	Nov '25	314	141		286	427	48,059	80	13,307	61,366	22%
	Dec '25	315	215		286	501	48,182	0	13,179	61,361	21%
	Jan '26	316	212		286	498	48,057	10	13,128	61,185	21%
	Feb '26	317	232		286	518	48,230	0	13,039	61,269	21%
	Mar '26	318	166		286	452	48,219	50	13,042	61,261	21%
	Apr '26	319	154		286	440	48,349	60	12,975	61,324	21%
May '26	320	95		286	381	48,247	120	12,976	61,223	21%	
Jun '26	321	28		286	314	48,274	190	12,956	61,230	21%	
2026/27	Jul '26	322	42		286	328	48,314	180	13,023	61,337	21%
	Aug '26	323	32		286	318	48,346	190	13,124	61,470	21%
	Sep '26	324	55		286	341	48,398	160	13,052	61,450	21%
	Oct '26	325	88		286	374	48,439	130	12,949	61,388	21%
	Nov '26	326	141		286	427	48,494	80	12,917	61,411	21%
	Dec '26	327	215		286	501	48,186	0	12,917	61,103	21%
	Jan '27	328	212		286	498	48,081	10	12,927	61,008	21%
	Feb '27	329	232		286	518	47,975	0	12,927	60,902	21%
	Mar '27	330	232		286	518	48,191	50	12,854	61,045	21%
	Apr '27	331	232		286	518	48,414	60	12,724	61,138	21%
	May '27	332	232		286	518	48,609	120	12,594	61,203	21%
	Jun '27	333	232		286	518	48,841	190	12,635	61,476	21%
2027/28	Jul '27	334	166		286	452	48,219	180	13,042	61,261	21%
	Aug '27	335	154		286	440	48,349	190	12,975	61,324	21%
	Sep '27	336	95		286	381	48,247	160	12,976	61,223	21%
	Oct '27	337	28		286	314	48,274	130	12,956	61,230	21%
	Nov '27	338	42		286	328	48,314	80	13,023	61,337	21%
	Dec '27	339	32		286	318	48,346	0	13,124	61,470	21%
	Jan '28	340	55		286	341	48,398	10	13,052	61,450	21%
	Feb '28	341	88		286	374	48,439	0	12,949	61,388	21%
	Mar '28	342	141		286	427	48,494	50	12,917	61,411	21%
	Apr '28	343	215		286	501	48,186	60	12,917	61,103	21%
	May '28	344	212		286	498	48,081	120	12,927	61,008	21%
	Jun '28	345	232		286	518	47,975	190	12,927	60,902	21%
2028/29	Jul '28	346	166		286	452	48,191	180	12,854	61,045	21%
	Aug '28	347	154		286	440	48,414	190	12,724	61,138	21%
	Sep '28	348	95		286	381	48,609	160	12,594	61,203	21%
	Oct '28	349	28		286	314	48,841	130	12,635	61,476	21%
	Nov '28	350	42		286	328	48,970	80	12,781	61,261	21%
	Dec '28	351	32		286	318	48,998	0	12,944	61,324	21%
	Jan '29	352	55		286	341	49,093	10	12,888	61,223	21%
	Feb '29	353	88		286	374	49,064	0	12,931	61,230	21%
	Mar '29	354	141		286	427	49,106	50	12,974	61,337	21%
	Apr '29	355	215		286	501	49,138	60	12,756	61,470	21%
	May '29	356	212		286	498	48,938	120	12,736	61,450	21%
	Jun '29	357	232		286	518	48,936	190	12,555	61,388	20%

P L A N N E D

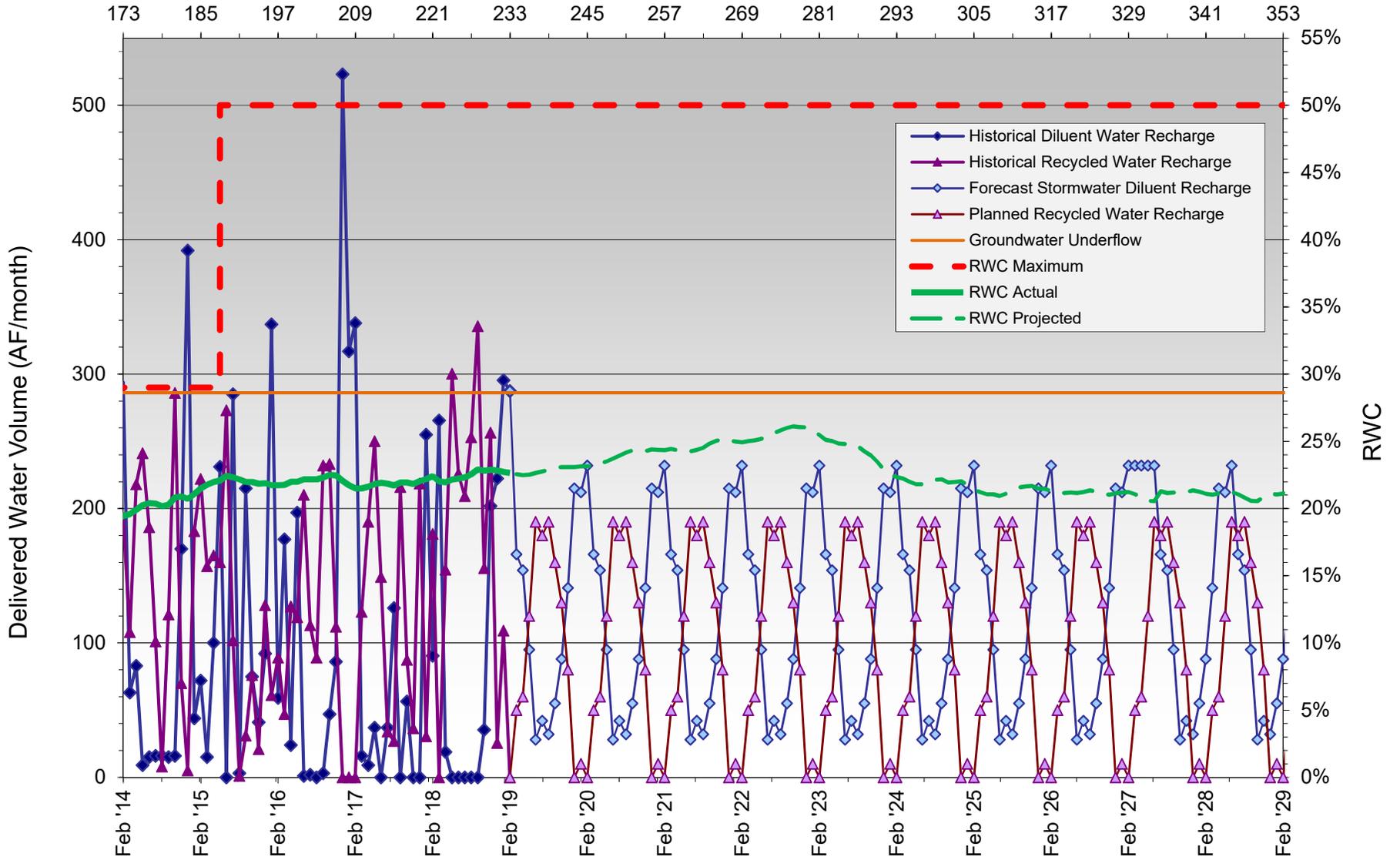
**Notes:**

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 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	29	0	267	296	35,194	120	9,653	44,847	22%
	Apr '19	163	23	0	267	290	35,475	130	9,783	45,258	22%
	May '19	164	18	0	267	285	35,742	130	9,913	45,655	22%
	Jun '19	165	12	0	267	279	36,018	140	10,053	46,071	22%

H I C K O R Y B A S I N



## 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	22		267	289	36,297	130	10,183	46,480	22%
	Aug '19	167	20		267	287	36,580	130	10,313	46,893	22%
	Sep '19	168	24		267	291	36,867	130	10,409	47,276	22%
	Oct '19	169	20		267	287	36,856	130	10,350	47,206	22%
	Nov '19	170	25		267	292	36,855	130	10,237	47,092	22%
	Dec '19	171	65		267	332	36,762	90	10,234	46,996	22%
	Jan '20	172	45		267	312	36,593	110	10,325	46,918	22%
	Feb '20	173	54		267	321	36,447	100	10,425	46,872	22%
	Mar '20	174	29		267	296	36,460	120	10,484	46,944	22%
	Apr '20	175	23		267	290	36,437	130	10,558	46,995	22%
	May '20	176	18		267	285	36,455	130	10,577	47,032	22%
	Jun '20	177	12		267	279	36,467	140	10,667	47,134	23%
2020/2021	Jul '20	178	22		267	289	36,489	130	10,776	47,265	23%
	Aug '20	179	20		267	287	36,509	130	10,878	47,387	23%
	Sep '20	180	24		267	291	36,521	130	10,723	47,244	23%
	Oct '20	181	20		267	287	36,528	130	10,759	47,287	23%
	Nov '20	182	25		267	292	36,517	130	10,838	47,355	23%
	Dec '20	183	65		267	332	36,433	90	10,928	47,361	23%
	Jan '21	184	45		267	312	36,466	110	10,988	47,454	23%
	Feb '21	185	54		267	321	36,441	100	11,051	47,492	23%
	Mar '21	186	29		267	296	36,400	120	11,171	47,571	23%
	Apr '21	187	23		267	290	36,423	130	11,249	47,672	24%
	May '21	188	18		267	285	36,439	130	11,295	47,734	24%
	Jun '21	189	12		267	279	36,443	140	11,361	47,804	24%
2021/2022	Jul '21	190	22		267	289	36,465	130	11,477	47,942	24%
	Aug '21	191	20		267	287	36,413	130	11,607	48,020	24%
	Sep '21	192	24		267	291	35,958	130	11,717	47,675	25%
	Oct '21	193	20		267	287	35,961	130	11,812	47,773	25%
	Nov '21	194	25		267	292	35,975	130	11,740	47,715	25%
	Dec '21	195	65		267	332	36,039	90	11,604	47,643	24%
	Jan '22	196	45		267	312	36,035	110	11,698	47,733	25%
	Feb '22	197	54		267	321	36,030	100	11,715	47,745	25%
	Mar '22	198	29		267	296	36,006	120	11,756	47,762	25%
	Apr '22	199	23		267	290	35,999	130	11,820	47,819	25%
	May '22	200	18		267	285	36,017	130	11,910	47,927	25%
	Jun '22	201	12		267	279	36,027	140	12,048	48,075	25%
2022/2023	Jul '22	202	22		267	289	36,027	130	12,121	48,148	25%
	Aug '22	203	20		267	287	35,997	130	12,207	48,204	25%
	Sep '22	204	24		267	291	35,992	130	12,337	48,329	26%
	Oct '22	205	20		267	287	35,961	130	12,467	48,428	26%
	Nov '22	206	25		267	292	35,973	130	12,420	48,393	26%
	Dec '22	207	65		267	332	36,032	90	12,366	48,398	26%
	Jan '23	208	45		267	312	36,077	110	12,361	48,438	26%
	Feb '23	209	54		267	321	36,123	100	12,458	48,581	26%
	Mar '23	210	29		267	296	36,139	120	12,431	48,570	26%
	Apr '23	211	23		267	290	36,162	130	12,490	48,652	26%
	May '23	212	18		267	285	36,174	130	12,620	48,794	26%
	Jun '23	213	12		267	279	36,185	140	12,644	48,829	26%
2023/2024	Jul '23	214	22		267	289	36,203	130	12,573	48,776	26%
	Aug '23	215	20		267	287	36,223	130	12,692	48,915	26%
	Sep '23	216	24		267	291	36,247	130	12,822	49,069	26%
	Oct '23	217	20		267	287	36,266	130	12,951	49,217	26%
	Nov '23	218	25		267	292	36,232	130	12,742	48,974	26%
	Dec '23	219	65		267	332	36,289	90	12,724	49,013	26%
	Jan '24	220	45		267	312	36,323	110	12,748	49,071	26%
	Feb '24	221	54		267	321	36,357	100	12,781	49,138	26%
	Mar '24	222	29		267	296	36,373	120	12,677	49,050	26%
	Apr '24	223	23		267	290	36,363	130	12,428	48,791	25%
	May '24	224	18		267	285	36,348	130	12,266	48,614	25%
	Jun '24	225	12		267	279	36,358	140	12,194	48,552	25%
2024/2025	Jul '24	226	22		267	289	36,380	130	12,206	48,586	25%
	Aug '24	227	20		267	287	36,400	130	12,254	48,654	25%
	Sep '24	228	24		267	291	36,424	130	12,148	48,572	25%
	Oct '24	229	20		267	287	36,444	130	12,052	48,496	25%
	Nov '24	230	25		267	292	36,469	130	11,910	48,379	25%
	Dec '24	231	65		267	332	36,349	90	11,954	48,303	25%
	Jan '25	232	45		267	312	36,386	110	11,870	48,256	25%
	Feb '25	233	54		267	321	36,393	100	11,790	48,183	24%
	Mar '25	234	29		267	296	36,422	120	11,795	48,217	24%
	Apr '25	235	23		267	290	36,445	130	11,696	48,141	24%
	May '25	236	18		267	285	36,460	130	11,687	48,147	24%
	Jun '25	237	12		267	279	36,472	140	11,630	48,102	24%

P L A N N E D



## RWC Management Plan for Hickory Basin

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2025/26	Jul '25	238		267	289	36,494	130	11,721	48,215	24%	P L A N E D
	Aug '25	239	20	267	287	36,514	130	11,795	48,309	24%	
	Sep '25	240	24	267	291	36,529	130	11,818	48,347	24%	
	Oct '25	241	20	267	287	36,535	130	11,875	48,410	25%	
	Nov '25	242	25	267	292	36,546	130	11,921	48,467	25%	
	Dec '25	243	65	267	332	36,547	90	11,958	48,505	25%	
	Jan '26	244	45	267	312	36,557	110	12,045	48,602	25%	
	Feb '26	245	54	267	321	36,606	100	12,118	48,724	25%	
	Mar '26	246	54	267	321	36,638	120	12,238	48,876	25%	
	Apr '26	247	54	267	321	36,671	130	12,325	48,996	25%	
	May '26	248	54	267	321	36,725	130	12,403	49,128	25%	
	Jun '26	249	54	267	321	36,779	140	12,525	49,304	25%	
2026/27	Jul '26	250	22	267	289	36,801	130	12,655	49,456	26%	
	Aug '26	251	20	267	287	36,821	130	12,736	49,557	26%	
	Sep '26	252	24	267	291	36,845	130	12,837	49,682	26%	
	Oct '26	253	20	267	287	36,840	130	12,912	49,752	26%	
	Nov '26	254	25	267	292	36,856	130	13,039	49,895	26%	
	Dec '26	255	65	267	332	36,836	90	13,129	49,965	26%	
	Jan '27	256	45	267	312	36,862	110	13,239	50,101	26%	
	Feb '27	257	54	267	321	36,912	100	13,339	50,251	27%	
	Mar '27	258	54	267	321	36,966	120	13,459	50,425	27%	
	Apr '27	259	54	267	321	37,020	130	13,589	50,609	27%	
	May '27	260	54	267	321	37,074	130	13,719	50,793	27%	
	Jun '27	261	54	267	321	37,128	140	13,859	50,987	27%	
2027/28	Jul '27	262	22	267	289	36,623	130	13,821	50,444	27%	
	Aug '27	263	20	267	287	36,223	130	13,931	50,154	28%	
	Sep '27	264	24	267	291	35,974	130	13,942	49,916	28%	
	Oct '27	265	20	267	287	35,830	130	13,901	49,731	28%	
	Nov '27	266	25	267	292	35,840	130	13,861	49,702	28%	
	Dec '27	267	65	267	332	35,829	90	13,846	49,675	28%	
	Jan '28	268	45	267	312	35,749	110	13,871	49,620	28%	
	Feb '28	269	54	267	321	35,787	100	13,837	49,624	28%	
	Mar '28	270	54	267	321	35,782	120	13,941	49,723	28%	
	Apr '28	271	54	267	321	35,826	130	13,886	49,712	28%	
	May '28	272	54	267	321	35,880	130	13,883	49,763	28%	
	Jun '28	273	54	267	321	35,932	140	13,931	49,863	28%	
2028/29	Jul '28	274	22	267	289	35,951	130	14,043	49,994	28%	
	Aug '28	275	20	267	287	35,970	130	14,051	50,020	28%	
	Sep '28	276	24	267	291	35,991	130	14,166	50,156	28%	
	Oct '28	277	20	267	287	36,006	130	14,296	50,302	28%	
	Nov '28	278	25	267	292	35,994	130	14,416	50,410	29%	
	Dec '28	279	65	267	332	36,000	90	14,498	50,498	29%	
	Jan '29	280	45	267	312	36,001	110	14,600	50,601	29%	
	Feb '29	281	54	267	321	35,965	100	14,700	50,665	29%	
	Mar '29	282	54	267	321	35,990	120	14,700	50,690	29%	
	Apr '29	283	54	267	321	36,021	130	14,700	50,721	29%	
	May '29	284	54	267	321	36,057	130	14,700	50,757	29%	
	Jun '29	285	54	267	321	36,099	140	14,700	50,799	29%	

**Notes:**

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

RW = Recycled Water

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

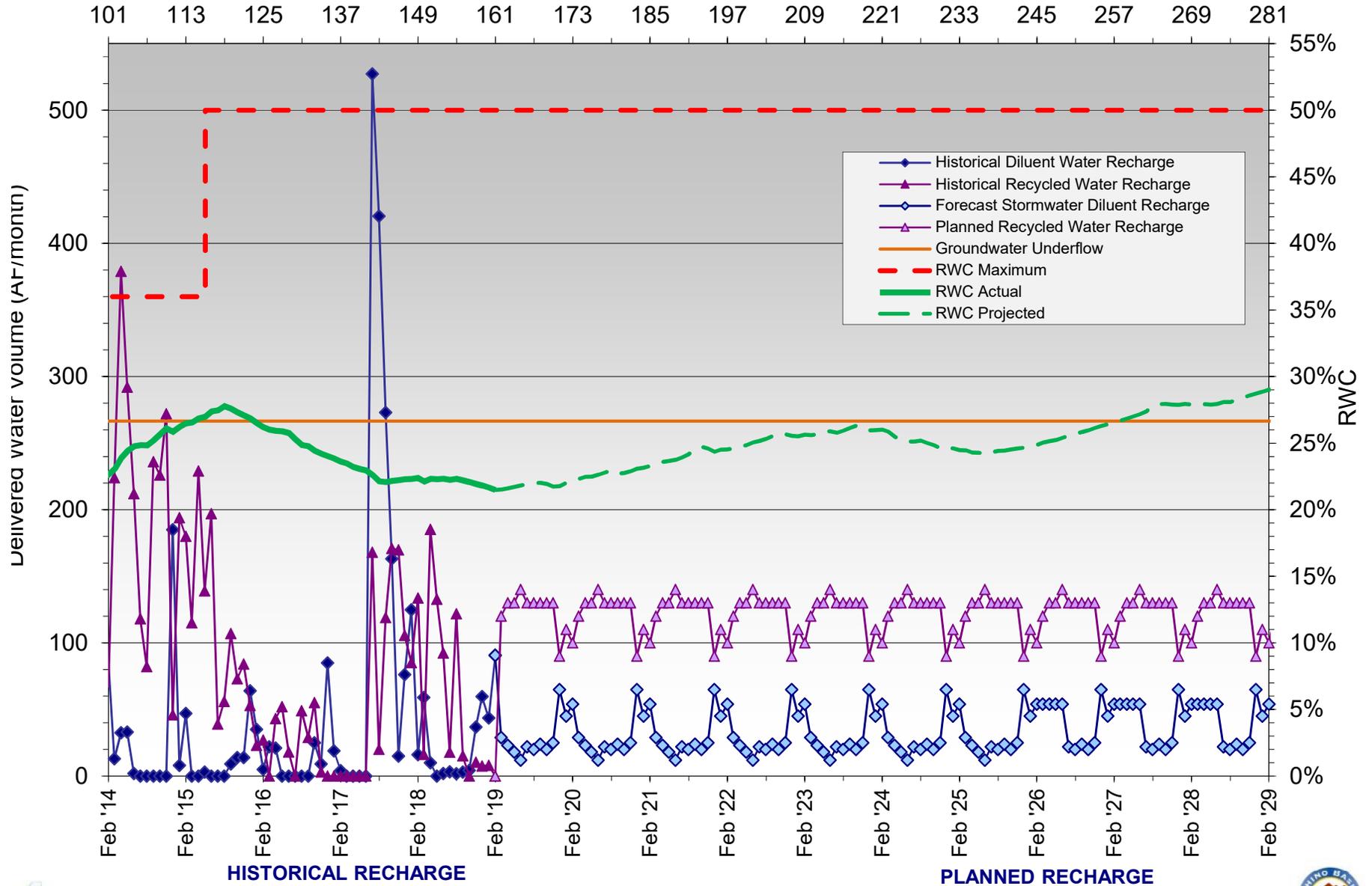
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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



# RWC Management Plan for Hickory Basin

Months Since Initial Recycled Water Delivery



## RWC Management Plan for RP3 Basins

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2013/14	Jul '13	49	72	0	904	976	52,813	74	8,017	60,830	13%
	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	19	22,424	134,325	17%
	Aug '18	110	9	0	904	913	112,798	2	22,426	135,224	17%
	Sep '18	111	7	0	904	911	113,693	42	22,468	136,161	17%
	Oct '18	112	12	0	904	916	114,596	0	22,468	137,064	16%
	Nov '18	113	4	0	904	908	115,477	65	22,533	138,010	16%
	Dec '18	114	44	0	904	948	116,269	27	22,560	138,829	16%
	Jan '19	115	97	0	904	1,001	117,258	18	22,578	139,836	16%
	Feb '19	116	125	0	904	1,029	118,013	0	22,578	140,591	16%
	Mar '19	117	118	0	904	1,022	118,988	450	23,028	142,016	16%
	Apr '19	118	67	0	904	971	119,941	500	23,528	143,469	16%
	May '19	119	38	0	904	942	120,877	530	24,058	144,934	17%
	Jun '19	120	19	0	904	923	121,799	550	24,502	146,301	17%

H I S T O R I C A L



## 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	35	904	939	122,716	540	24,958	147,674	17%	P L A N E D
	Aug '19	122	25	904	929	123,615	550	25,360	148,975	17%	
	Sep '19	123	34	904	938	124,517	540	25,680	150,196	17%	
	Oct '19	124	55	904	959	124,449	520	25,997	150,445	17%	
	Nov '19	125	67	904	971	124,416	500	26,210	150,625	17%	
	Dec '19	126	212	904	1,116	124,255	360	26,467	150,721	18%	
	Jan '20	127	174	904	1,078	123,903	400	26,791	150,693	18%	
	Feb '20	128	151	904	1,055	123,684	420	27,098	150,781	18%	
	Mar '20	129	118	904	1,022	123,698	450	27,335	151,032	18%	
	Apr '20	130	67	904	971	123,637	500	27,764	151,400	18%	
	May '20	131	38	904	942	123,626	530	28,022	151,647	18%	
	Jun '20	132	19	904	923	123,603	550	28,311	151,913	19%	
2020/21	Jul '20	133	35	904	939	123,631	540	28,622	152,252	19%	
	Aug '20	134	25	904	929	123,650	550	28,991	152,640	19%	
	Sep '20	135	34	904	938	123,659	540	29,483	153,141	19%	
	Oct '20	136	55	904	959	123,643	520	29,980	153,622	20%	
	Nov '20	137	67	904	971	123,564	500	30,287	153,850	20%	
	Dec '20	138	212	904	1,116	123,032	360	30,525	153,556	20%	
	Jan '21	139	174	904	1,078	122,971	400	30,822	153,792	20%	
	Feb '21	140	151	904	1,055	122,807	420	31,065	153,871	20%	
	Mar '21	141	118	904	1,022	122,511	450	31,389	153,899	20%	
	Apr '21	142	67	904	971	122,436	500	31,652	154,087	21%	
	May '21	143	38	904	942	122,113	530	32,006	154,119	21%	
	Jun '21	144	19	904	923	121,515	550	32,372	153,886	21%	
2021/22	Jul '21	145	35	904	939	120,682	540	32,659	153,341	21%	
	Aug '21	146	25	904	929	120,390	550	33,194	153,583	22%	
	Sep '21	147	34	904	938	119,809	540	33,704	153,513	22%	
	Oct '21	148	55	904	959	119,644	520	34,042	153,685	22%	
	Nov '21	149	67	904	971	119,589	500	34,445	154,033	22%	
	Dec '21	150	212	904	1,116	119,723	360	34,641	154,363	22%	
	Jan '22	151	174	904	1,078	119,793	400	34,950	154,742	23%	
	Feb '22	152	151	904	1,055	119,768	420	35,210	154,977	23%	
	Mar '22	153	118	904	1,022	119,664	450	35,566	155,229	23%	
	Apr '22	154	67	904	971	119,511	500	35,919	155,429	23%	
	May '22	155	38	904	942	119,488	530	36,074	155,561	23%	
	Jun '22	156	19	904	923	119,447	550	36,443	155,889	23%	
2022/23	Jul '22	157	35	904	939	119,432	540	36,971	156,402	24%	
	Aug '22	158	25	904	929	119,445	550	37,521	156,965	24%	
	Sep '22	159	34	904	938	119,475	540	38,061	157,535	24%	
	Oct '22	160	55	904	959	119,512	520	38,581	158,092	24%	
	Nov '22	161	67	904	971	119,478	500	38,927	158,404	25%	
	Dec '22	162	212	904	1,116	119,329	360	39,067	158,395	25%	
	Jan '23	163	174	904	1,078	119,356	400	39,114	158,469	25%	
	Feb '23	164	151	904	1,055	119,394	420	39,237	158,630	25%	
	Mar '23	165	118	904	1,022	119,434	450	39,412	158,845	25%	
	Apr '23	166	67	904	971	119,461	500	39,526	158,986	25%	
	May '23	167	38	904	942	119,445	530	39,794	159,238	25%	
	Jun '23	168	19	904	923	119,421	550	40,105	159,525	25%	
2023/24	Jul '23	169	35	904	939	119,384	540	40,571	159,954	25%	
	Aug '23	170	25	904	929	119,341	550	40,905	160,245	26%	
	Sep '23	171	34	904	938	119,317	540	41,092	160,408	26%	
	Oct '23	172	55	904	959	119,319	520	41,448	160,766	26%	
	Nov '23	173	67	904	971	119,326	500	41,944	161,269	26%	
	Dec '23	174	212	904	1,116	119,466	360	42,053	161,518	26%	
	Jan '24	175	174	904	1,078	119,511	400	42,381	161,891	26%	
	Feb '24	176	151	904	1,055	119,464	420	42,801	162,265	26%	
	Mar '24	177	118	904	1,022	119,319	450	43,251	162,570	27%	
	Apr '24	178	67	904	971	119,301	500	43,702	163,002	27%	
	May '24	179	38	904	942	119,336	530	44,232	163,567	27%	
	Jun '24	180	19	904	923	119,349	550	44,610	163,958	27%	
2024/25	Jul '24	181	35	904	939	119,375	540	44,966	164,340	27%	
	Aug '24	182	25	904	929	119,377	550	45,324	164,700	28%	
	Sep '24	183	34	904	938	119,371	540	45,621	164,991	28%	
	Oct '24	184	55	904	959	119,401	520	45,806	165,206	28%	
	Nov '24	185	67	904	971	119,356	500	46,056	165,411	28%	
	Dec '24	186	212	904	1,116	119,149	360	46,410	165,558	28%	
	Jan '25	187	174	904	1,078	119,191	400	46,781	165,971	28%	
	Feb '25	188	151	904	1,055	119,247	420	46,958	166,204	28%	
	Mar '25	189	118	904	1,022	119,296	450	47,083	166,378	28%	
	Apr '25	190	67	904	971	119,322	500	47,301	166,622	28%	
	May '25	191	38	904	942	119,239	530	47,483	166,721	28%	
	Jun '25	192	19	904	923	119,246	550	47,502	166,747	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

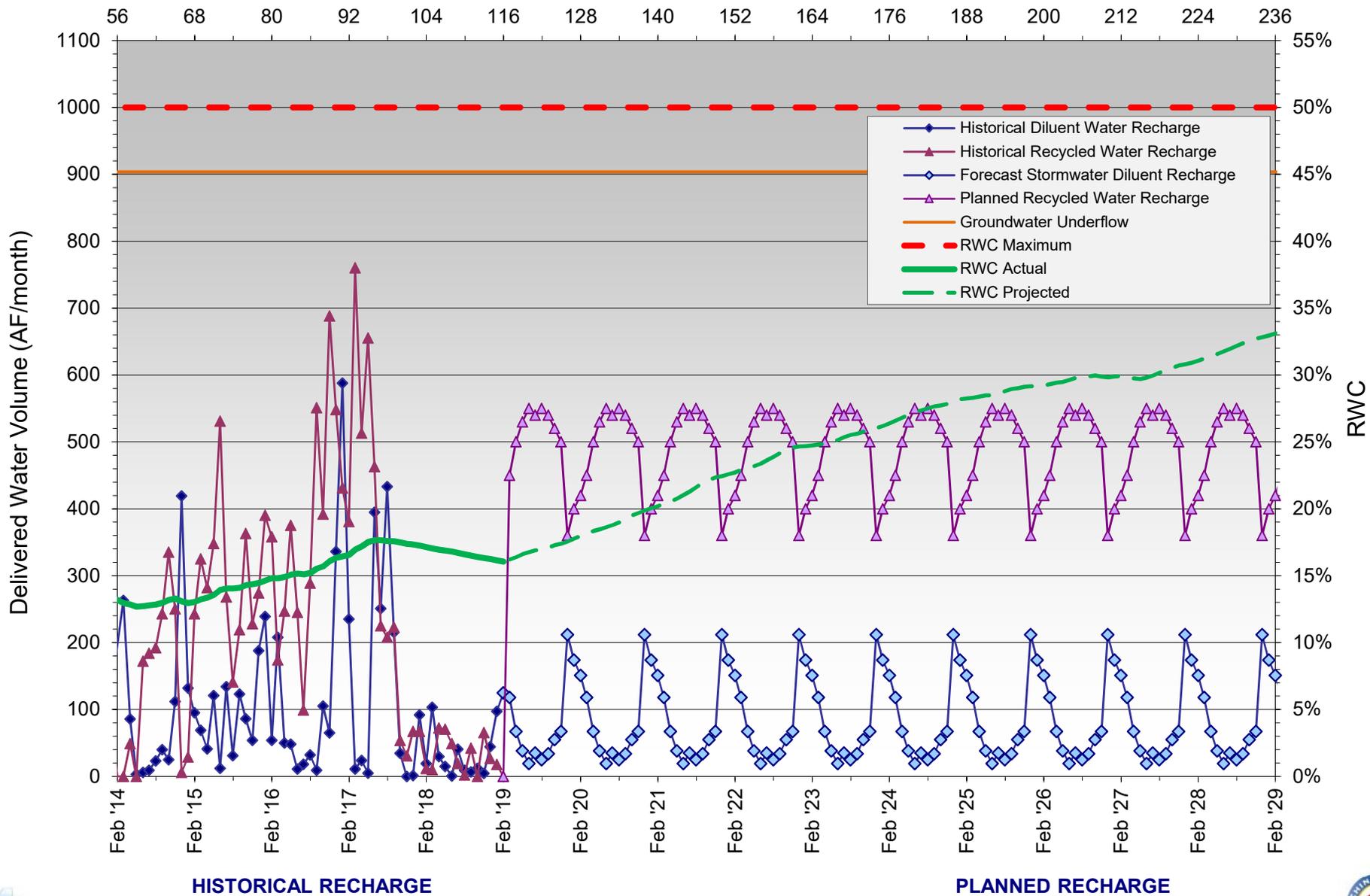
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2025/26	Jul '25	193	35	904	939	119,147	540	47,774	166,920	29%	P L A N E D
	Aug '25	194	25	904	929	119,141	550	48,183	167,323	29%	
	Sep '25	195	34	904	938	119,052	540	48,504	167,555	29%	
	Oct '25	196	55	904	959	119,021	520	48,661	167,681	29%	
	Nov '25	197	67	904	971	119,034	500	48,933	167,966	29%	
	Dec '25	198	212	904	1,116	119,058	360	49,019	168,076	29%	
	Jan '26	199	174	904	1,078	118,993	400	49,029	168,021	29%	
	Feb '26	200	151	904	1,055	119,090	420	49,091	168,180	29%	
	Mar '26	201	118	904	1,022	119,000	450	49,367	168,366	29%	
	Apr '26	202	67	904	971	119,017	500	49,620	168,636	29%	
	May '26	203	38	904	942	119,007	530	49,775	168,781	29%	
	Jun '26	204	19	904	923	119,015	550	50,080	169,094	30%	
2026/27	Jul '26	205	35	904	939	119,032	540	50,521	169,552	30%	
	Aug '26	206	25	904	929	119,025	550	50,782	169,806	30%	
	Sep '26	207	34	904	938	119,050	540	50,771	169,820	30%	
	Oct '26	208	55	904	959	119,000	520	50,899	169,898	30%	
	Nov '26	209	67	904	971	119,002	500	50,711	169,712	30%	
	Dec '26	210	212	904	1,116	118,878	360	50,523	169,400	30%	
	Jan '27	211	174	904	1,078	118,464	400	50,492	168,955	30%	
	Feb '27	212	151	904	1,055	118,380	420	50,531	168,910	30%	
	Mar '27	213	118	904	1,022	118,487	450	50,221	168,707	30%	
	Apr '27	214	67	904	971	118,530	500	50,208	168,737	30%	
	May '27	215	38	904	942	118,563	530	50,083	168,645	30%	
	Jun '27	216	19	904	923	118,187	550	50,170	168,356	30%	
2027/28	Jul '27	217	35	904	939	117,971	540	50,485	168,456	30%	
	Aug '27	218	25	904	929	117,563	550	50,827	168,389	30%	
	Sep '27	219	34	904	938	117,381	540	51,144	168,525	30%	
	Oct '27	220	55	904	959	117,402	520	51,610	169,012	31%	
	Nov '27	221	67	904	971	117,469	500	52,080	169,549	31%	
	Dec '27	222	212	904	1,116	117,679	360	52,373	170,052	31%	
	Jan '28	223	174	904	1,078	117,762	400	52,706	170,468	31%	
	Feb '28	224	151	904	1,055	117,894	420	53,114	171,008	31%	
	Mar '28	225	118	904	1,022	117,908	450	53,554	171,462	31%	
	Apr '28	226	67	904	971	117,945	500	53,982	171,928	31%	
	May '28	227	38	904	942	117,969	530	54,442	172,410	32%	
	Jun '28	228	19	904	923	117,987	550	54,943	172,930	32%	
2028/29	Jul '28	229	35	904	939	117,981	540	55,464	173,445	32%	
	Aug '28	230	25	904	929	117,997	550	56,012	174,009	32%	
	Sep '28	231	34	904	938	118,024	540	56,510	174,534	32%	
	Oct '28	232	55	904	959	118,067	520	57,030	175,097	33%	
	Nov '28	233	67	904	971	118,130	500	57,464	175,594	33%	
	Dec '28	234	212	904	1,116	118,298	360	57,798	176,095	33%	
	Jan '29	235	174	904	1,078	118,374	400	58,180	176,554	33%	
	Feb '29	236	151	904	1,055	118,401	420	58,600	177,001	33%	
	Mar '29	237	118	904	1,022	118,401	450	58,600	177,001	33%	
	Apr '29	238	67	904	971	118,401	500	58,600	177,001	33%	
	May '29	239	38	904	942	118,401	530	58,600	177,001	33%	
	Jun '29	240	19	904	923	118,401	550	58,600	177,001	33%	

**Notes:**  
 DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.  
 RW = Recycled Water  
 RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.  
 While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.  
 RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - RP3 Basin

Months Since Initial Recycled Water Delivery



**HISTORICAL RECHARGE**

**PLANNED RECHARGE**



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

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
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	86		278	364	30,213	60	1,819	32,032	6%
	Apr '19	105	105		278	383	30,596	50	1,869	32,465	6%
	May '19	106	20		278	298	30,894	130	1,999	32,893	6%
	Jun '19	107	2		278	280	31,174	150	2,149	33,323	6%

H I S T O R I C A L



## 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	1		278	279	150	2,299	33,752	7%	P L A N E D
	Aug '19	109	4		278	282	150	2,449	34,184	7%	
	Sep '19	110	4		278	282	150	2,599	34,616	8%	
	Oct '19	111	21		278	299	130	2,729	34,989	8%	
	Nov '19	112	21		278	299	130	2,859	35,397	8%	
	Dec '19	113	128		278	406	20	2,879	35,489	8%	
	Jan '20	114	154		278	432	0	2,879	35,630	8%	
	Feb '20	115	104		278	382	50	2,929	35,839	8%	
	Mar '20	116	86		278	364	60	2,989	36,247	8%	
	Apr '20	117	105		278	383	50	3,039	36,627	8%	
	May '20	118	20		278	298	130	3,169	37,055	9%	
	Jun '20	119	2		278	280	150	3,319	37,485	9%	
2020/21	Jul '20	120	1		278	279	150	3,419	37,864	9%	
	Aug '20	121	4		278	282	150	3,525	38,252	9%	
	Sep '20	122	4		278	282	150	3,633	38,642	9%	
	Oct '20	123	21		278	299	130	3,690	38,903	9%	
	Nov '20	124	21		278	299	130	3,807	39,099	10%	
	Dec '20	125	128		278	406	20	3,795	38,776	10%	
	Jan '21	126	154		278	432	0	3,723	38,984	10%	
	Feb '21	127	104		278	382	50	3,773	39,134	10%	
	Mar '21	128	86		278	364	60	3,833	39,286	10%	
	Apr '21	129	105		278	383	50	3,883	39,580	10%	
	May '21	130	20		278	298	130	3,977	39,288	10%	
	Jun '21	131	2		278	280	150	4,093	38,376	11%	
2021/22	Jul '21	132	1		278	279	150	4,130	37,542	11%	
	Aug '21	133	4		278	282	150	4,190	37,734	11%	
	Sep '21	134	4		278	282	150	4,340	37,821	11%	
	Oct '21	135	21		278	299	130	4,470	38,072	12%	
	Nov '21	136	21		278	299	130	4,600	38,330	12%	
	Dec '21	137	128		278	406	20	4,620	38,597	12%	
	Jan '22	138	154		278	432	0	4,461	38,676	12%	
	Feb '22	139	104		278	382	50	4,437	38,841	11%	
	Mar '22	140	86		278	364	60	4,481	38,950	12%	
	Apr '22	141	105		278	383	50	4,527	39,164	12%	
	May '22	142	20		278	298	130	4,654	39,450	12%	
	Jun '22	143	2		278	280	150	4,750	39,687	12%	
2022/23	Jul '22	144	1		278	279	150	4,778	39,855	12%	
	Aug '22	145	4		278	282	150	4,844	40,063	12%	
	Sep '22	146	4		278	282	150	4,955	40,317	12%	
	Oct '22	147	21		278	299	130	5,022	40,543	12%	
	Nov '22	148	21		278	299	130	5,086	40,753	12%	
	Dec '22	149	128		278	406	20	5,105	40,960	12%	
	Jan '23	150	154		278	432	0	5,046	41,173	12%	
	Feb '23	151	104		278	382	50	5,077	41,438	12%	
	Mar '23	152	86		278	364	60	5,084	41,657	12%	
	Apr '23	153	105		278	383	50	5,093	41,905	12%	
	May '23	154	20		278	298	130	5,197	42,163	12%	
	Jun '23	155	2		278	280	150	5,345	42,452	13%	
2023/24	Jul '23	156	1		278	279	150	5,495	42,742	13%	
	Aug '23	157	4		278	282	150	5,645	43,035	13%	
	Sep '23	158	4		278	282	150	5,641	43,174	13%	
	Oct '23	159	21		278	299	130	5,702	43,384	13%	
	Nov '23	160	21		278	299	130	5,823	43,626	13%	
	Dec '23	161	128		278	406	20	5,843	43,907	13%	
	Jan '24	162	154		278	432	0	5,831	44,188	13%	
	Feb '24	163	104		278	382	50	5,865	44,396	13%	
	Mar '24	164	86		278	364	60	5,925	44,661	13%	
	Apr '24	165	105		278	383	50	5,973	44,936	13%	
	May '24	166	20		278	298	130	6,091	45,213	13%	
	Jun '24	167	2		278	280	150	6,241	45,504	14%	
2024/25	Jul '24	168	1		278	279	150	6,391	45,794	14%	
	Aug '24	169	4		278	282	150	6,541	46,081	14%	
	Sep '24	170	4		278	282	150	6,690	46,372	14%	
	Oct '24	171	21		278	299	130	6,820	46,662	15%	
	Nov '24	172	21		278	299	130	6,950	46,934	15%	
	Dec '24	173	128		278	406	20	6,970	46,974	15%	
	Jan '25	174	154		278	432	0	6,970	47,273	15%	
	Feb '25	175	104		278	382	50	7,020	47,526	15%	
	Mar '25	176	86		278	364	60	7,080	47,809	15%	
	Apr '25	177	105		278	383	50	7,130	48,103	15%	
	May '25	178	20		278	298	130	7,260	48,375	15%	
	Jun '25	179	2		278	280	150	7,410	48,666	15%	



### 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	150	7,560	48,947	15%	P L A N N E D
	Aug '25	181	4		278	282	150	7,710	49,240	16%	
	Sep '25	182	4		278	282	150	7,860	49,480	16%	
	Oct '25	183	21		278	299	130	7,990	49,723	16%	
	Nov '25	184	21		278	299	130	8,120	50,012	16%	
	Dec '25	185	128		278	406	20	8,140	50,219	16%	
	Jan '26	186	154		278	432	0	8,140	50,268	16%	
	Feb '26	187	104		278	382	50	8,190	50,528	16%	
	Mar '26	188	86		278	364	60	8,250	50,725	16%	
	Apr '26	189	105		278	383	50	8,300	50,990	16%	
	May '26	190	20		278	298	130	8,430	51,278	16%	
	Jun '26	191	2		278	280	150	8,580	51,569	17%	
2026/27	Jul '26	192	1		278	279	150	8,730	51,859	17%	
	Aug '26	193	4		278	282	150	8,880	52,152	17%	
	Sep '26	194	4		278	282	150	9,030	52,445	17%	
	Oct '26	195	21		278	299	130	9,160	52,719	17%	
	Nov '26	196	21		278	299	130	9,290	52,982	18%	
	Dec '26	197	128		278	406	20	9,310	53,113	18%	
	Jan '27	198	154		278	432	0	9,310	52,918	18%	
	Feb '27	199	104		278	382	50	9,360	52,979	18%	
	Mar '27	200	86		278	364	60	9,420	53,122	18%	
	Apr '27	201	105		278	383	50	9,470	53,276	18%	
	May '27	202	20		278	298	130	9,600	53,410	18%	
	Jun '27	203	2		278	280	150	9,750	53,036	18%	
2027/28	Jul '27	204	1		278	279	150	9,900	52,620	19%	
	Aug '27	205	4		278	282	150	10,050	52,610	19%	
	Sep '27	206	4		278	282	150	10,200	52,613	19%	
	Oct '27	207	21		278	299	130	10,330	52,261	20%	
	Nov '27	208	21		278	299	130	10,460	52,358	20%	
	Dec '27	209	128		278	406	20	10,480	51,402	20%	
	Jan '28	210	154		278	432	0	10,480	50,559	21%	
	Feb '28	211	104		278	382	50	10,530	50,692	21%	
	Mar '28	212	104		278	382	60	10,590	50,729	21%	
	Apr '28	213	104		278	382	50	10,640	50,883	21%	
	May '28	214	104		278	382	130	10,770	51,112	21%	
	Jun '28	215	104		278	382	150	10,920	51,366	21%	
2028/29	Jul '28	216	1		278	279	150	11,070	51,516	21%	
	Aug '28	217	4		278	282	150	11,220	51,670	22%	
	Sep '28	218	4		278	282	150	11,370	51,824	22%	
	Oct '28	219	21		278	299	130	11,500	51,967	22%	
	Nov '28	220	21		278	299	130	11,630	52,087	22%	
	Dec '28	221	128		278	406	20	11,650	52,190	22%	
	Jan '29	222	154		278	432	0	11,650	52,026	22%	
	Feb '29	223	104		278	382	50	11,700	51,751	23%	
	Mar '29	224	104		278	382	60	11,700	51,769	23%	
	Apr '29	225	104		278	382	50	11,700	51,768	23%	
	May '29	226	104		278	382	130	11,700	51,852	23%	
	Jun '29	227	104		278	382	150	11,700	51,954	23%	

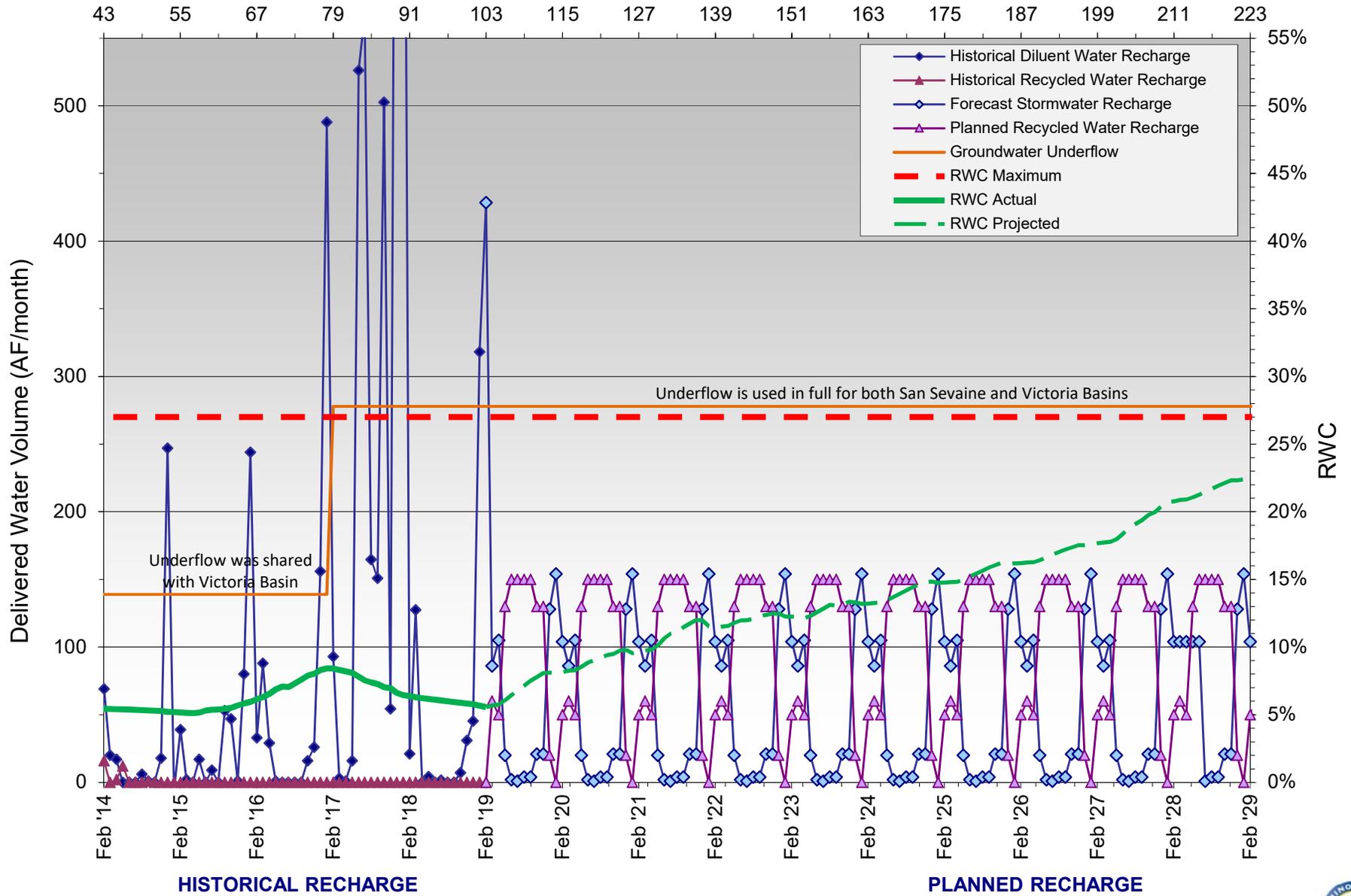
**Notes:**

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.  
 RW = Recycled Water  
 RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.  
 While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.  
 RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - San Sevaine Basins 1 through 5

Months Since Initial Recycled Water Delivery



## RWC Management Plan for Turner Basin Cells 1 & 2

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
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	128	0	67	195	17,140	0	5,125	22,265	23%
	Apr '19	153	97	0	67	164	17,293	0	5,125	22,418	23%
	May '19	154	44	0	67	111	17,387	0	5,095	22,481	23%
	Jun '19	155	19	0	67	86	17,396	0	5,086	22,482	23%

H I S T O R I C A L



## 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	13	67	80	17,444	0	5,086	22,530	23%	P L A N E D
	Aug '19	157	21	67	88	17,514	0	5,066	22,579	22%	
	Sep '19	158	42	67	109	17,595	0	5,048	22,642	22%	
	Oct '19	159	50	67	117	17,565	0	5,048	22,612	22%	
	Nov '19	160	73	67	140	17,589	0	5,048	22,636	22%	
	Dec '19	161	193	67	260	17,381	0	5,048	22,428	23%	
	Jan '20	162	158	67	225	17,245	0	5,048	22,292	23%	
	Feb '20	163	160	67	227	17,075	0	5,048	22,122	23%	
	Mar '20	164	128	67	195	17,169	0	5,048	22,216	23%	
	Apr '20	165	97	67	164	17,108	0	5,048	22,155	23%	
	May '20	166	44	67	111	17,114	0	5,048	22,161	23%	
	Jun '20	167	19	67	86	17,133	0	5,048	22,180	23%	
2020/21	Jul '20	168	13	67	80	17,123	0	5,048	22,170	23%	
	Aug '20	169	21	67	88	17,091	0	5,040	22,130	23%	
	Sep '20	170	42	67	109	17,076	0	5,040	22,115	23%	
	Oct '20	171	50	67	117	17,036	0	5,040	22,075	23%	
	Nov '20	172	73	67	140	16,944	0	5,040	21,983	23%	
	Dec '20	173	193	67	260	16,772	0	5,040	21,811	23%	
	Jan '21	174	158	67	225	16,740	0	5,040	21,779	23%	
	Feb '21	175	160	67	227	16,667	0	5,040	21,706	23%	
	Mar '21	176	128	67	195	16,531	0	5,040	21,570	23%	
	Apr '21	177	97	67	164	16,295	0	5,040	21,334	24%	
	May '21	178	44	67	111	16,158	0	5,040	21,197	24%	
	Jun '21	179	19	67	86	16,087	0	5,040	21,126	24%	
2021/22	Jul '21	180	13	67	80	16,084	0	5,040	21,123	24%	
	Aug '21	181	21	67	88	16,083	0	5,040	21,122	24%	
	Sep '21	182	42	67	109	16,123	0	5,040	21,162	24%	
	Oct '21	183	50	67	117	16,173	0	5,040	21,212	24%	
	Nov '21	184	73	67	140	16,165	0	4,999	21,163	24%	
	Dec '21	185	193	67	260	16,270	0	4,939	21,208	23%	
	Jan '22	186	158	67	225	16,282	0	4,910	21,191	23%	
	Feb '22	187	160	67	227	16,221	0	4,910	21,130	23%	
	Mar '22	188	128	67	195	16,054	0	4,910	20,963	23%	
	Apr '22	189	97	67	164	15,893	0	4,910	20,802	24%	
	May '22	190	44	67	111	15,923	0	4,910	20,832	24%	
	Jun '22	191	19	67	86	15,922	0	4,910	20,831	24%	
2022/23	Jul '22	192	13	67	80	15,852	0	4,910	20,761	24%	
	Aug '22	193	21	67	88	15,837	0	4,910	20,746	24%	
	Sep '22	194	42	67	109	15,848	0	4,910	20,757	24%	
	Oct '22	195	50	67	117	15,837	0	4,910	20,746	24%	
	Nov '22	196	73	67	140	15,849	0	4,910	20,758	24%	
	Dec '22	197	193	67	260	15,752	0	4,910	20,661	24%	
	Jan '23	198	158	67	225	15,761	0	4,910	20,670	24%	
	Feb '23	199	160	67	227	15,805	0	4,884	20,688	24%	
	Mar '23	200	128	67	195	15,885	0	4,863	20,747	23%	
	Apr '23	201	97	67	164	15,982	0	4,863	20,844	23%	
	May '23	202	44	67	111	16,026	0	4,863	20,888	23%	
	Jun '23	203	19	67	86	16,045	0	4,863	20,907	23%	
2023/24	Jul '23	204	13	67	80	16,058	50	4,913	20,970	23%	
	Aug '23	205	21	67	88	16,079	30	4,943	21,021	24%	
	Sep '23	206	42	67	109	16,121	10	4,953	21,073	24%	
	Oct '23	207	50	67	117	16,171	0	4,953	21,123	24%	
	Nov '23	208	73	67	140	16,244	0	4,953	21,196	23%	
	Dec '23	209	193	67	260	16,365	100	4,879	21,243	23%	
	Jan '24	210	158	67	225	16,478	100	4,877	21,354	23%	
	Feb '24	211	160	67	227	16,544	100	4,907	21,450	23%	
	Mar '24	212	128	67	195	16,609	100	4,987	21,595	23%	
	Apr '24	213	97	67	164	16,645	100	4,982	21,626	23%	
	May '24	214	44	67	111	16,668	100	4,946	21,613	23%	
	Jun '24	215	19	67	86	16,664	90	5,004	21,667	23%	
2024/25	Jul '24	216	13	67	80	16,677	50	5,054	21,730	23%	
	Aug '24	217	21	67	88	16,622	30	4,879	21,500	23%	
	Sep '24	218	42	67	109	16,610	10	4,761	21,370	22%	
	Oct '24	219	50	67	117	16,621	0	4,698	21,318	22%	
	Nov '24	220	73	67	140	16,586	0	4,640	21,225	22%	
	Dec '24	221	193	67	260	16,524	100	4,738	21,261	22%	
	Jan '25	222	158	67	225	16,565	100	4,838	21,402	23%	
	Feb '25	223	160	67	227	16,632	100	4,878	21,509	23%	
	Mar '25	224	128	67	195	16,708	100	4,835	21,542	22%	
	Apr '25	225	97	67	164	16,805	100	4,935	21,739	23%	
	May '25	226	44	67	111	16,849	100	5,035	21,883	23%	
	Jun '25	227	19	67	86	16,868	90	5,125	21,992	23%	



## 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

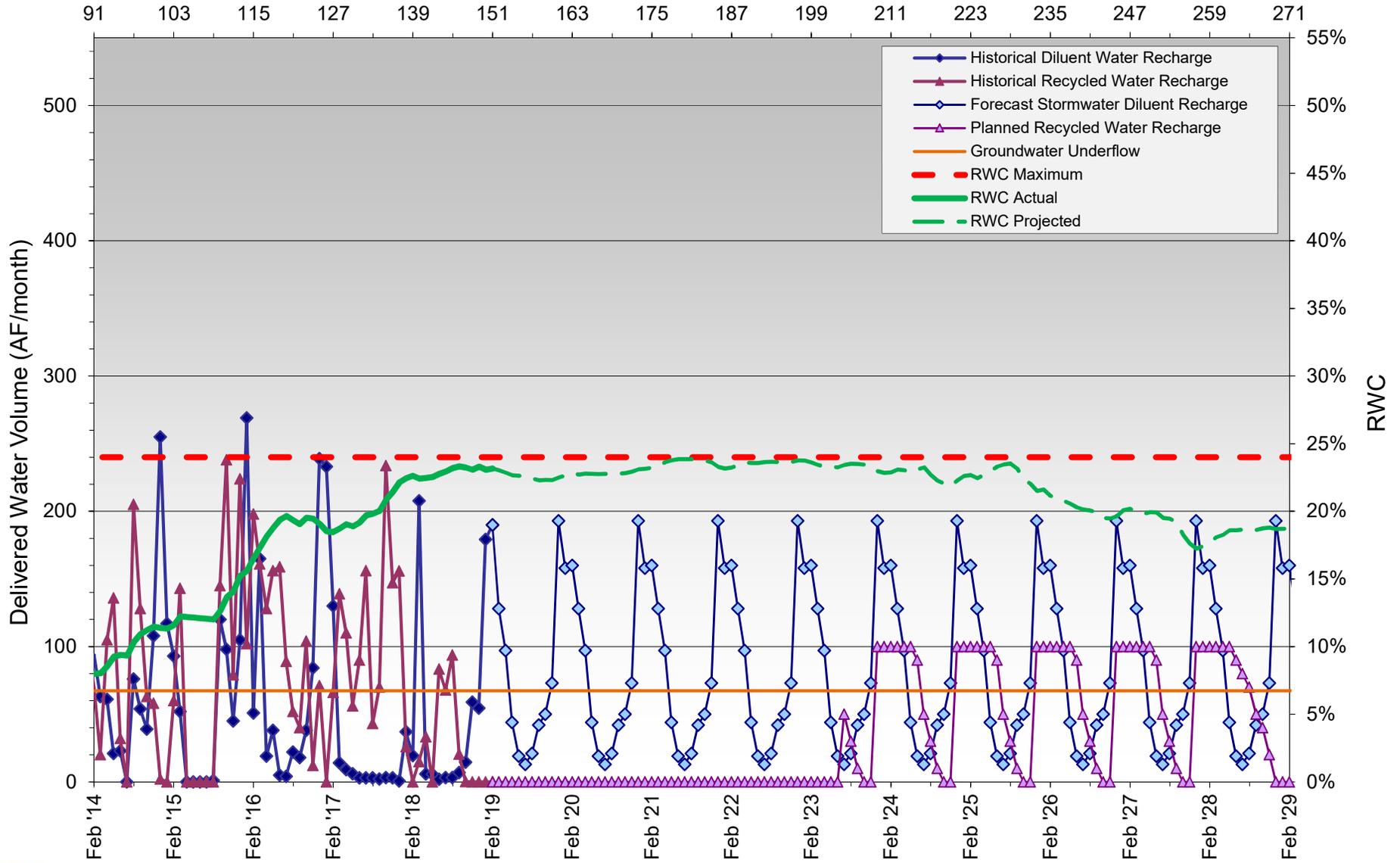
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2025/26	Jul '25	228	13	67	80	16,881	50	5,175	22,055	23%	P L A N E D
	Aug '25	229	21	67	88	16,901	30	5,205	22,105	24%	
	Sep '25	230	42	67	109	16,823	10	5,070	21,892	23%	
	Oct '25	231	50	67	117	16,775	0	4,832	21,606	22%	
	Nov '25	232	73	67	140	16,803	0	4,753	21,555	22%	
	Dec '25	233	193	67	260	16,891	100	4,629	21,519	22%	
	Jan '26	234	158	67	225	16,780	100	4,627	21,406	22%	
	Feb '26	235	160	67	227	16,889	100	4,529	21,417	21%	
	Mar '26	236	128	67	195	16,852	100	4,468	21,319	21%	
	Apr '26	237	97	67	164	16,930	100	4,440	21,369	21%	
	May '26	238	44	67	111	16,936	100	4,384	21,319	21%	
	Jun '26	239	19	67	86	16,950	90	4,315	21,264	20%	
2026/27	Jul '26	240	13	67	80	16,959	50	4,276	21,234	20%	
	Aug '26	241	21	67	88	16,958	30	4,254	21,211	20%	
	Sep '26	242	42	67	109	16,982	10	4,224	21,205	20%	
	Oct '26	243	50	67	117	16,994	0	4,120	21,113	20%	
	Nov '26	244	73	67	140	16,983	0	4,108	21,090	19%	
	Dec '26	245	193	67	260	16,937	100	4,137	21,073	20%	
	Jan '27	246	158	67	225	16,862	100	4,237	21,098	20%	
	Feb '27	247	160	67	227	16,892	100	4,271	21,162	20%	
	Mar '27	248	128	67	195	17,006	100	4,232	21,237	20%	
	Apr '27	249	97	67	164	17,094	100	4,222	21,315	20%	
	May '27	250	44	67	111	17,132	100	4,266	21,397	20%	
	Jun '27	251	19	67	86	17,148	90	4,266	21,413	20%	
2027/28	Jul '27	252	13	67	80	17,158	50	4,160	21,317	20%	
	Aug '27	253	21	67	88	17,176	30	4,147	21,322	19%	
	Sep '27	254	42	67	109	17,216	10	4,087	21,302	19%	
	Oct '27	255	50	67	117	17,262	0	3,853	21,115	18%	
	Nov '27	256	73	67	140	17,332	0	3,706	21,038	18%	
	Dec '27	257	193	67	260	17,525	100	3,650	21,175	17%	
	Jan '28	258	158	67	225	17,646	100	3,724	21,369	17%	
	Feb '28	259	160	67	227	17,786	100	3,824	21,610	18%	
	Mar '28	260	128	67	195	17,707	100	3,909	21,615	18%	
	Apr '28	261	97	67	164	17,798	100	3,975	21,773	18%	
	May '28	262	44	67	111	17,836	100	4,075	21,912	19%	
	Jun '28	263	19	67	86	17,853	90	4,082	21,935	19%	
2028/29	Jul '28	264	13	67	80	17,863	80	4,094	21,957	19%	
	Aug '28	265	21	67	88	17,881	70	4,071	21,952	19%	
	Sep '28	266	42	67	109	17,916	50	4,100	22,016	19%	
	Oct '28	267	50	67	117	17,952	40	4,140	22,092	19%	
	Nov '28	268	73	67	140	17,966	20	4,160	22,126	19%	
	Dec '28	269	193	67	260	18,104	0	4,160	22,264	19%	
	Jan '29	270	158	67	225	18,083	0	4,160	22,243	19%	
	Feb '29	271	160	67	227	18,053	0	4,160	22,213	19%	
	Mar '29	272	128	67	195	18,053	0	4,160	22,213	19%	
	Apr '29	273	97	67	164	18,053	0	4,160	22,213	19%	
	May '29	274	44	67	111	18,053	50	4,210	22,263	19%	
	Jun '29	275	19	67	86	18,053	70	4,280	22,333	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 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	0	2,123	10,208	21%	H I S T O R I C A L
	Aug '13	85	0	0	60	60	0	2,123	10,268	21%	
	Sep '13	86	24	0	60	84	107	2,230	10,459	21%	
	Oct '13	87	20	0	60	80	117	2,347	10,656	22%	
	Nov '13	88	17	0	60	77	89	2,436	10,821	23%	
	Dec '13	89	5	0	60	65	85	2,521	10,971	23%	
	Jan '14	90	16	0	60	76	139	2,660	11,186	24%	
	Feb '14	91	62	0	60	122	120	2,780	11,428	24%	
	Mar '14	92	50	0	60	110	47	2,827	11,584	24%	
	Apr '14	93	0	0	60	60	0	2,827	11,644	24%	
	May '14	94	23	0	60	83	168	2,995	11,895	25%	
	Jun '14	95	12	0	60	72	54	3,049	12,021	25%	
2014/15	Jul '14	96	11	0	60	71	0	3,049	12,091	25%	
	Aug '14	97	0	0	60	60	0	3,049	12,151	25%	
	Sep '14	98	0	0	60	60	0	3,049	12,211	25%	
	Oct '14	99	0	0	60	60	0	3,049	12,150	25%	
	Nov '14	100	0	0	60	60	0	3,049	12,081	25%	
	Dec '14	101	348	0	60	408	0	3,049	12,271	25%	
	Jan '15	102	4	0	60	64	0	3,049	12,078	25%	
	Feb '15	103	65	0	60	125	53	3,102	12,023	26%	
	Mar '15	104	71	0	60	131	155	3,257	12,135	27%	
	Apr '15	105	39	0	60	99	0	3,257	12,233	27%	
	May '15	106	0	0	60	60	0	3,257	12,293	26%	
	Jun '15	107	2	0	60	62	81	3,338	12,435	27%	
2015/16	Jul '15	108	87	0	60	147	85	3,423	12,667	27%	
	Aug '15	109	15	0	60	75	163	3,586	12,905	28%	
	Sep '15	110	74	0	60	134	51	3,637	13,090	28%	
	Oct '15	111	64	0	60	124	65	3,702	13,278	28%	
	Nov '15	112	44	0	60	104	3	3,705	13,385	28%	
	Dec '15	113	144	0	60	204	1	3,706	13,466	28%	
	Jan '16	114	82	0	60	142	0	3,706	13,533	27%	
	Feb '16	115	41	0	60	101	0	3,706	13,563	27%	
	Mar '16	116	47	0	60	107	0	3,706	13,498	27%	
	Apr '16	117	49	0	60	109	0	3,706	13,346	28%	
	May '16	118	33	0	60	93	0	3,706	13,367	28%	
	Jun '16	119	20	0	60	80	0	3,706	13,360	28%	
2016/17	Jul '16	120	15	0	60	75	0	3,568	13,266	27%	
	Aug '16	121	1	0	60	61	0	3,333	13,058	26%	
	Sep '16	122	0	0	60	60	0	3,293	13,056	25%	
	Oct '16	123	1	0	60	61	0	3,293	13,052	25%	
	Nov '16	124	0	0	60	60	0	3,293	13,096	25%	
	Dec '16	125	316	0	60	376	0	3,227	13,392	24%	
	Jan '17	126	298	0	60	358	0	3,196	13,709	23%	
	Feb '17	127	171	0	60	231	8	3,183	13,918	23%	
	Mar '17	128	34	0	60	94	165	3,332	14,156	24%	
	Apr '17	129	23	0	60	83	99	3,423	14,327	24%	
	May '17	130	16	0	60	76	125	3,491	14,463	24%	
	Jun '17	131	8	274	60	341	10	3,501	14,804	24%	
2017/18	Jul '17	132	10	220	60	290	0	3,501	15,093	23%	
	Aug '17	133	21	79	60	160	13	3,514	15,256	23%	
	Sep '17	134	16	0	60	76	51	3,565	15,371	23%	
	Oct '17	135	1	0	60	60	4	3,569	15,432	23%	
	Nov '17	136	4	0	60	64	0	3,569	15,430	23%	
	Dec '17	137	2	0	60	61	0	3,569	15,429	23%	
	Jan '18	138	116	0	60	175	0	3,569	15,462	23%	
	Feb '18	139	75	0	60	134	13	3,582	15,600	23%	
	Mar '18	140	107	0	60	167	38	3,621	15,806	23%	
	Apr '18	141	4	0	60	63	139	3,760	16,004	23%	
	May '18	142	35	0	60	95	164	3,924	16,225	24%	
	Jun '18	143	14	0	60	74	138	4,062	16,409	25%	
2018/19	Jul '18	144	13	0	60	73	25	4,087	16,503	25%	
	Aug '18	145	6	0	60	66	65	4,152	16,628	25%	
	Sep '18	146	9	0	60	69	88	4,240	16,771	25%	
	Oct '18	147	28	0	60	88	87	4,261	16,843	25%	
	Nov '18	148	31	0	60	91	59	4,312	16,949	25%	
	Dec '18	149	90	0	60	150	20	4,332	17,069	25%	
	Jan '19	150	154	0	60	214	0	4,332	17,273	25%	
	Feb '19	151	189	0	60	249	0	4,332	17,454	25%	
	Mar '19	152	69	0	60	129	50	4,382	17,622	25%	
	Apr '19	153	40	0	60	100	80	4,462	17,800	25%	
	May '19	154	21	0	60	81	100	4,562	17,980	25%	
	Jun '19	155	18	0	60	78	100	4,662	18,158	26%	



## 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	19	60	79	13,574	100	4,762	18,336	26%	P L A N N E D
	Aug '19	157	14	60	74	13,648	110	4,872	18,520	26%	
	Sep '19	158	19	60	79	13,727	100	4,972	18,699	27%	
	Oct '19	159	28	60	88	13,755	90	5,062	18,817	27%	
	Nov '19	160	32	60	92	13,784	90	5,152	18,936	27%	
	Dec '19	161	110	60	170	13,796	10	5,099	18,895	27%	
	Jan '20	162	94	60	154	13,705	30	5,002	18,707	27%	
	Feb '20	163	90	60	150	13,620	30	5,032	18,652	27%	
	Mar '20	164	69	60	129	13,575	50	5,038	18,613	27%	
	Apr '20	165	40	60	100	13,532	80	5,103	18,635	27%	
	May '20	166	21	60	81	13,526	100	5,133	18,659	28%	
	Jun '20	167	18	60	78	13,469	100	5,193	18,662	28%	
2020/21	Jul '20	168	19	60	79	13,393	100	5,287	18,680	28%	
	Aug '20	169	14	60	74	13,323	110	5,375	18,698	29%	
	Sep '20	170	19	60	79	13,288	100	5,458	18,746	29%	
	Oct '20	171	28	60	88	13,261	90	5,548	18,809	29%	
	Nov '20	172	32	60	92	13,254	90	5,638	18,892	30%	
	Dec '20	173	110	60	170	13,203	10	5,648	18,851	30%	
	Jan '21	174	94	60	154	13,296	30	5,678	18,974	30%	
	Feb '21	175	90	60	150	13,336	30	5,708	19,044	30%	
	Mar '21	176	69	60	129	13,356	50	5,758	19,114	30%	
	Apr '21	177	40	60	100	13,396	80	5,838	19,234	30%	
	May '21	178	21	60	81	13,417	100	5,938	19,355	31%	
	Jun '21	179	18	60	78	13,435	100	6,038	19,473	31%	
2021/22	Jul '21	180	19	60	79	13,454	100	6,138	19,592	31%	
	Aug '21	181	14	60	74	13,410	110	6,241	19,651	32%	
	Sep '21	182	19	60	79	13,244	100	6,155	19,399	32%	
	Oct '21	183	28	60	88	13,209	90	6,022	19,231	31%	
	Nov '21	184	32	60	92	13,175	90	6,016	19,191	31%	
	Dec '21	185	110	60	170	13,216	10	5,974	19,190	31%	
	Jan '22	186	94	60	154	13,224	30	5,932	19,156	31%	
	Feb '22	187	90	60	150	13,205	30	5,865	19,070	31%	
	Mar '22	188	69	60	129	13,148	50	5,880	19,028	31%	
	Apr '22	189	40	60	100	13,100	80	5,945	19,045	31%	
	May '22	190	21	60	81	13,081	100	5,989	19,070	31%	
	Jun '22	191	18	60	78	13,074	100	6,024	19,098	32%	
2022/23	Jul '22	192	19	60	79	13,068	100	6,073	19,141	32%	
	Aug '22	193	14	60	74	13,046	110	6,148	19,194	32%	
	Sep '22	194	19	60	79	13,034	100	6,224	19,258	32%	
	Oct '22	195	28	60	88	13,040	90	6,305	19,345	33%	
	Nov '22	196	32	60	92	13,042	90	6,390	19,432	33%	
	Dec '22	197	110	60	170	13,105	10	6,395	19,500	33%	
	Jan '23	198	94	60	154	13,184	30	6,425	19,609	33%	
	Feb '23	199	90	60	150	13,249	30	6,455	19,704	33%	
	Mar '23	200	69	60	129	13,304	50	6,505	19,809	33%	
	Apr '23	201	40	60	100	13,344	80	6,585	19,929	33%	
	May '23	202	21	60	81	13,365	100	6,685	20,050	33%	
	Jun '23	203	18	60	78	13,383	100	6,785	20,168	34%	
2023/24	Jul '23	204	19	60	79	13,402	100	6,885	20,287	34%	
	Aug '23	205	14	60	74	13,416	110	6,995	20,411	34%	
	Sep '23	206	19	60	79	13,411	100	6,988	20,399	34%	
	Oct '23	207	28	60	88	13,419	90	6,961	20,380	34%	
	Nov '23	208	32	60	92	13,434	90	6,962	20,396	34%	
	Dec '23	209	110	60	170	13,539	10	6,887	20,426	34%	
	Jan '24	210	94	60	154	13,617	30	6,778	20,395	33%	
	Feb '24	211	90	60	150	13,645	30	6,688	20,333	33%	
	Mar '24	212	69	60	129	13,664	50	6,691	20,355	33%	
	Apr '24	213	40	60	100	13,704	80	6,771	20,475	33%	
	May '24	214	21	60	81	13,702	100	6,703	20,405	33%	
	Jun '24	215	18	60	78	13,708	100	6,749	20,457	33%	
2024/25	Jul '24	216	19	60	79	13,716	100	6,849	20,565	33%	
	Aug '24	217	14	60	74	13,730	110	6,959	20,689	34%	
	Sep '24	218	19	60	79	13,749	100	7,059	20,808	34%	
	Oct '24	219	28	60	88	13,777	90	7,149	20,926	34%	
	Nov '24	220	32	60	92	13,809	90	7,239	21,048	34%	
	Dec '24	221	110	60	170	13,571	10	7,249	20,820	35%	
	Jan '25	222	94	60	154	13,661	30	7,279	20,940	35%	
	Feb '25	223	90	60	150	13,686	30	7,256	20,942	35%	
	Mar '25	224	69	60	129	13,684	50	7,151	20,835	34%	
	Apr '25	225	40	60	100	13,685	80	7,231	20,916	35%	
	May '25	226	21	60	81	13,706	100	7,331	21,037	35%	
	Jun '25	227	18	60	78	13,722	100	7,350	21,072	35%	



## 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	19	60	79	13,654	100	7,365	21,019	35%	P L A N N E D
	Aug '25	229	14	60	74	13,653	110	7,312	20,965	35%	
	Sep '25	230	19	60	79	13,598	100	7,361	20,959	35%	
	Oct '25	231	28	60	88	13,562	90	7,386	20,948	35%	
	Nov '25	232	32	60	92	13,550	90	7,473	21,023	36%	
	Dec '25	233	110	60	170	13,516	10	7,482	20,998	36%	
	Jan '26	234	94	60	154	13,528	30	7,512	21,040	36%	
	Feb '26	235	90	60	150	13,577	30	7,542	21,119	36%	
	Mar '26	236	69	60	129	13,599	50	7,592	21,191	36%	
	Apr '26	237	40	60	100	13,590	80	7,672	21,262	36%	
	May '26	238	21	60	81	13,578	100	7,772	21,350	36%	
	Jun '26	239	18	60	78	13,576	100	7,872	21,448	37%	
2026/27	Jul '26	240	19	60	79	13,580	100	7,972	21,552	37%	
	Aug '26	241	14	60	74	13,593	110	8,082	21,675	37%	
	Sep '26	242	19	60	79	13,612	100	8,182	21,794	38%	
	Oct '26	243	28	60	88	13,639	90	8,272	21,911	38%	
	Nov '26	244	32	60	92	13,671	90	8,362	22,033	38%	
	Dec '26	245	110	60	170	13,465	10	8,372	21,837	38%	
	Jan '27	246	94	60	154	13,261	30	8,402	21,663	39%	
	Feb '27	247	90	60	150	13,180	30	8,424	21,604	39%	
	Mar '27	248	69	60	129	13,215	50	8,309	21,524	39%	
	Apr '27	249	40	60	100	13,232	80	8,290	21,522	39%	
	May '27	250	21	60	81	13,237	100	8,265	21,502	38%	
	Jun '27	251	18	60	78	12,973	100	8,355	21,328	39%	
2027/28	Jul '27	252	19	60	79	12,762	100	8,455	21,217	40%	
	Aug '27	253	14	60	74	12,676	110	8,552	21,228	40%	
	Sep '27	254	19	60	79	12,679	100	8,601	21,280	40%	
	Oct '27	255	28	60	88	12,706	90	8,687	21,393	41%	
	Nov '27	256	32	60	92	12,734	90	8,777	21,511	41%	
	Dec '27	257	110	60	170	12,843	10	8,787	21,630	41%	
	Jan '28	258	94	60	154	12,821	30	8,817	21,638	41%	
	Feb '28	259	90	60	150	12,836	30	8,834	21,670	41%	
	Mar '28	260	69	60	129	12,798	50	8,846	21,644	41%	
	Apr '28	261	40	60	100	12,834	80	8,787	21,621	41%	
	May '28	262	21	60	81	12,820	100	8,722	21,542	40%	
	Jun '28	263	18	60	78	12,824	100	8,684	21,508	40%	
2028/29	Jul '28	264	19	60	79	12,830	100	8,759	21,590	41%	
	Aug '28	265	14	60	74	12,838	110	8,804	21,643	41%	
	Sep '28	266	19	60	79	12,848	100	8,816	21,664	41%	
	Oct '28	267	28	60	88	12,848	90	8,819	21,667	41%	
	Nov '28	268	32	60	92	12,849	90	8,850	21,699	41%	
	Dec '28	269	110	60	170	12,869	10	8,840	21,709	41%	
	Jan '29	270	94	60	154	12,809	30	8,870	21,679	41%	
	Feb '29	271	90	60	150	12,710	30	8,900	21,610	41%	
	Mar '29	272	69	60	129	12,710	50	8,900	21,610	41%	
	Apr '29	273	40	60	100	12,710	80	8,900	21,610	41%	
	May '29	274	21	60	81	12,710	100	8,900	21,610	41%	
	Jun '29	275	18	60	78	12,710	100	8,900	21,610	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.

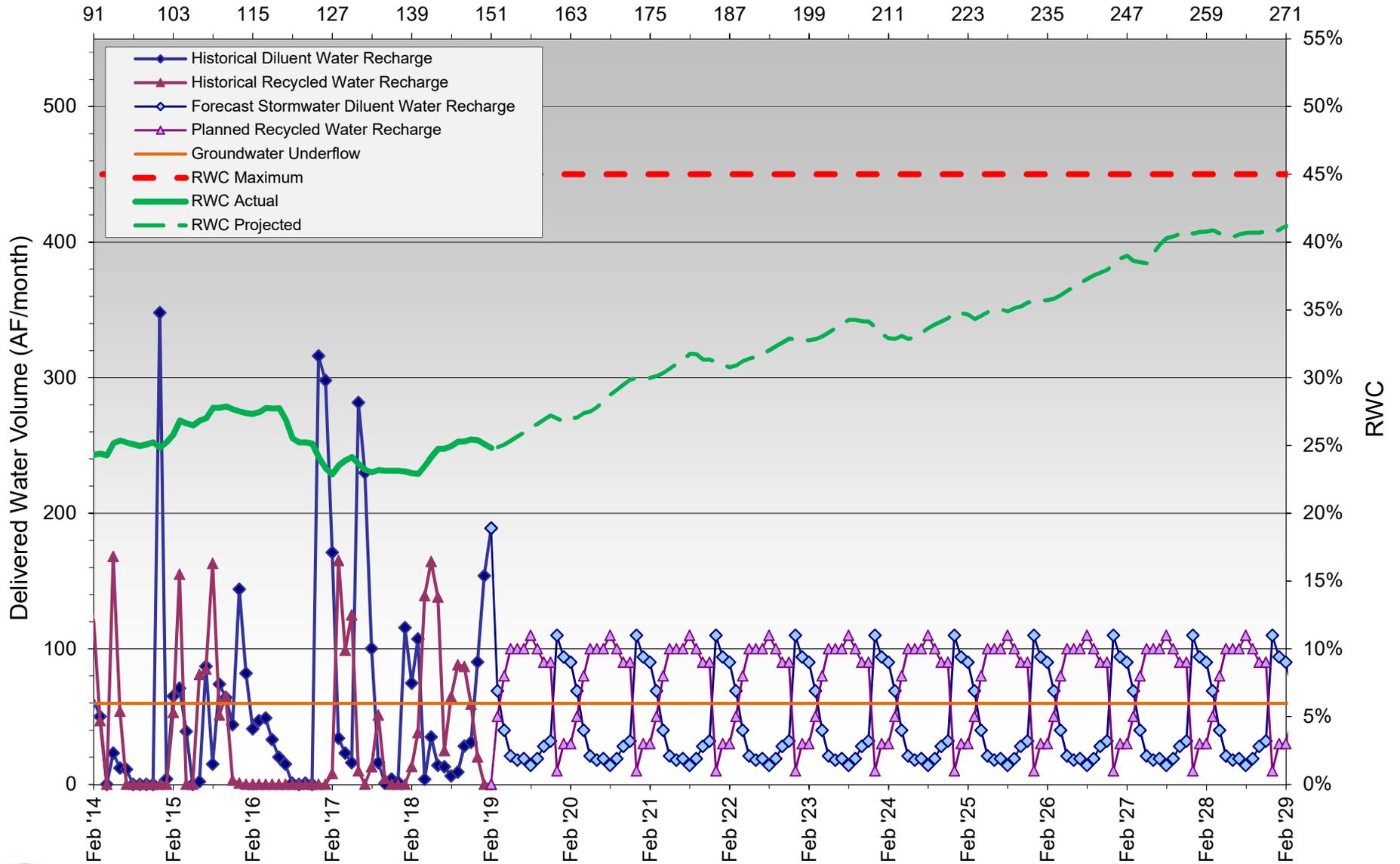
While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.

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



**HISTORICAL RECHARGE**

**PLANNED RECHARGE**



## RWC Management Plan for Victoria Basin

(120-month averaging period)

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

Date		No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2013/14	Jul '13	34	2	0	139	141	7,718	74	2,354	10,072	23%	H I S T O R I C A L
	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	33	0	278	311	22,643	220	8,754	31,397	28%	
	Apr '19	103	22	0	278	300	22,940	230	8,984	31,924	28%	
	May '19	104	11	0	278	289	23,226	240	9,224	32,450	28%	
	Jun '19	105	3	0	278	281	23,507	250	9,474	32,981	29%	



## 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	2		278	280	23,786	250	9,724	33,510	29%	P L A N E D
	Aug '19	107	2		278	280	24,066	250	9,974	34,040	29%	
	Sep '19	108	4		278	282	24,348	250	10,224	34,572	30%	
	Oct '19	109	18		278	296	24,605	240	10,464	35,069	30%	
	Nov '19	110	21		278	299	24,885	230	10,694	35,579	30%	
	Dec '19	111	77		278	355	25,151	180	10,874	36,025	30%	
	Jan '20	112	85		278	363	25,361	170	11,044	36,405	30%	
	Feb '20	113	76		278	354	25,541	180	11,224	36,765	31%	
	Mar '20	114	33		278	311	25,852	220	11,444	37,296	31%	
	Apr '20	115	22		278	300	26,132	230	11,674	37,806	31%	
	May '20	116	11		278	289	26,421	240	11,914	38,335	31%	
	Jun '20	117	3		278	281	26,701	250	12,164	38,865	31%	
2020/21	Jul '20	118	2		278	280	26,978	250	12,414	39,392	32%	
	Aug '20	119	2		278	280	27,256	250	12,664	39,920	32%	
	Sep '20	120	4		278	282	27,536	250	12,847	40,383	32%	
	Oct '20	121	18		278	296	27,678	240	12,934	40,612	32%	
	Nov '20	122	21		278	299	27,804	230	13,047	40,851	32%	
	Dec '20	123	77		278	355	27,778	180	13,185	40,963	32%	
	Jan '21	124	85		278	363	27,984	170	13,269	41,253	32%	
	Feb '21	125	76		278	354	28,127	180	13,382	41,509	32%	
	Mar '21	126	33		278	311	28,240	220	13,563	41,803	32%	
	Apr '21	127	22		278	300	28,396	230	13,793	42,189	33%	
	May '21	128	11		278	289	28,471	240	13,892	42,363	33%	
	Jun '21	129	3		278	281	28,610	250	14,081	42,691	33%	
2021/22	Jul '21	130	2		278	280	28,748	250	14,269	43,017	33%	
	Aug '21	131	2		278	280	28,765	250	14,467	43,232	33%	
	Sep '21	132	4		278	282	28,750	250	14,717	43,467	34%	
	Oct '21	133	18		278	296	28,877	240	14,957	43,834	34%	
	Nov '21	134	21		278	299	29,012	230	15,172	44,184	34%	
	Dec '21	135	77		278	355	29,219	180	15,327	44,546	34%	
	Jan '22	136	85		278	363	29,432	170	15,497	44,929	34%	
	Feb '22	137	76		278	354	29,643	180	15,677	45,320	35%	
	Mar '22	138	33		278	311	29,797	220	15,897	45,694	35%	
	Apr '22	139	22		278	300	29,862	230	16,109	45,971	35%	
	May '22	140	11		278	289	29,992	240	16,078	46,070	35%	
	Jun '22	141	3		278	281	30,131	250	16,106	46,237	35%	
2022/23	Jul '22	142	2		278	280	30,269	250	16,262	46,531	35%	
	Aug '22	143	2		278	280	30,405	250	16,394	46,799	35%	
	Sep '22	144	4		278	282	30,547	250	16,589	47,136	35%	
	Oct '22	145	18		278	296	30,703	240	16,698	47,401	35%	
	Nov '22	146	21		278	299	30,857	230	16,857	47,714	35%	
	Dec '22	147	77		278	355	31,054	180	17,016	48,070	35%	
	Jan '23	148	85		278	363	31,243	170	17,174	48,417	35%	
	Feb '23	149	76		278	354	31,448	180	17,344	48,792	36%	
	Mar '23	150	33		278	311	31,614	220	17,507	49,121	36%	
	Apr '23	151	22		278	300	31,774	230	17,639	49,413	36%	
	May '23	152	11		278	289	31,919	240	17,786	49,705	36%	
	Jun '23	153	3		278	281	32,060	250	17,954	50,014	36%	
2023/24	Jul '23	154	2		278	280	32,199	250	18,130	50,329	36%	
	Aug '23	155	2		278	280	32,338	250	18,338	50,676	36%	
	Sep '23	156	4		278	282	32,479	250	18,542	51,021	36%	
	Oct '23	157	18		278	296	32,629	240	18,782	51,411	37%	
	Nov '23	158	21		278	299	32,777	230	19,012	51,789	37%	
	Dec '23	159	77		278	355	32,983	180	19,074	52,057	37%	
	Jan '24	160	85		278	363	33,205	170	19,086	52,291	36%	
	Feb '24	161	76		278	354	33,383	180	19,075	52,458	36%	
	Mar '24	162	33		278	311	33,456	220	19,153	52,609	36%	
	Apr '24	163	22		278	300	33,602	230	19,133	52,735	36%	
	May '24	164	11		278	289	33,750	240	19,159	52,909	36%	
	Jun '24	165	3		278	281	33,890	250	19,265	53,155	36%	
2024/25	Jul '24	166	2		278	280	34,029	250	19,424	53,453	36%	
	Aug '24	167	2		278	280	34,165	250	19,567	53,732	36%	
	Sep '24	168	4		278	282	34,306	250	19,662	53,968	36%	
	Oct '24	169	18		278	296	34,460	240	19,827	54,287	37%	
	Nov '24	170	21		278	299	34,563	230	20,053	54,616	37%	
	Dec '24	171	77		278	355	34,627	180	20,233	54,860	37%	
	Jan '25	172	85		278	363	34,833	170	20,340	55,173	37%	
	Feb '25	173	76		278	354	35,008	180	20,463	55,471	37%	
	Mar '25	174	33		278	311	35,168	220	20,604	55,772	37%	
	Apr '25	175	22		278	300	35,329	230	20,707	56,036	37%	
	May '25	176	11		278	289	35,466	240	20,806	56,272	37%	
	Jun '25	177	3		278	281	35,607	250	21,024	56,631	37%	



## 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	35,744	250	21,135	56,879	37%
	Aug '25	179	2		278	280	35,884	250	21,220	57,104	37%
	Sep '25	180	4		278	282	35,990	250	21,334	57,324	37%
	Oct '25	181	18		278	296	36,112	240	21,473	57,585	37%
	Nov '25	182	21		278	299	36,272	230	21,669	57,941	37%
	Dec '25	183	77		278	355	36,402	180	21,789	58,191	37%
	Jan '26	184	85		278	363	36,539	170	21,959	58,498	38%
	Feb '26	185	76		278	354	36,744	180	22,139	58,883	38%
	Mar '26	186	33		278	311	36,837	220	22,359	59,196	38%
	Apr '26	187	22		278	300	36,997	230	22,589	59,586	38%
	May '26	188	11		278	289	37,145	240	22,829	59,974	38%
	Jun '26	189	3		278	281	37,284	250	23,079	60,363	38%
2026/27	Jul '26	190	2		278	280	37,425	250	23,329	60,754	38%
	Aug '26	191	2		278	280	37,567	250	23,579	61,146	39%
	Sep '26	192	4		278	282	37,710	250	23,776	61,486	39%
	Oct '26	193	18		278	296	37,857	240	23,874	61,731	39%
	Nov '26	194	21		278	299	37,986	230	23,886	61,872	39%
	Dec '26	195	77		278	355	38,017	180	23,960	61,977	39%
	Jan '27	196	85		278	363	37,775	170	24,130	61,905	39%
	Feb '27	197	76		278	354	37,786	180	24,257	62,043	39%
	Mar '27	198	33		278	311	37,801	220	24,258	62,059	39%
	Apr '27	199	22		278	300	37,823	230	24,171	61,994	39%
	May '27	200	11		278	289	37,821	240	24,099	61,920	39%
	Jun '27	201	3		278	281	37,703	250	24,148	61,851	39%
2027/28	Jul '27	202	2		278	280	37,469	250	24,258	61,727	39%
	Aug '27	203	2		278	280	37,447	250	24,269	61,716	39%
	Sep '27	204	4		278	282	37,321	250	24,352	61,673	39%
	Oct '27	205	18		278	296	37,189	240	24,549	61,738	40%
	Nov '27	206	21		278	299	37,210	230	24,738	61,949	40%
	Dec '27	207	77		278	355	37,284	180	24,820	62,103	40%
	Jan '28	208	85		278	363	37,276	170	24,983	62,259	40%
	Feb '28	209	76		278	354	37,344	180	25,130	62,473	40%
	Mar '28	210	33		278	311	37,368	220	25,325	62,693	40%
	Apr '28	211	22		278	300	37,350	230	25,555	62,905	41%
	May '28	212	11		278	289	37,358	240	25,795	63,153	41%
	Jun '28	213	3		278	281	37,361	250	26,045	63,406	41%
2028/29	Jul '28	214	2		278	280	37,363	250	26,136	63,499	41%
	Aug '28	215	2		278	280	37,365	250	26,195	63,560	41%
	Sep '28	216	4		278	282	37,369	250	26,285	63,654	41%
	Oct '28	217	18		278	296	37,343	240	26,421	63,764	41%
	Nov '28	218	21		278	299	37,332	230	26,568	63,900	42%
	Dec '28	219	77		278	355	37,363	180	26,650	64,012	42%
	Jan '29	220	85		278	363	37,196	170	26,729	63,925	42%
	Feb '29	221	76		278	354	36,900	180	26,900	63,800	42%
	Mar '29	222	33		278	311	36,900	220	26,900	63,800	42%
	Apr '29	223	22		278	300	36,900	230	26,900	63,800	42%
	May '29	224	11		278	289	36,900	240	26,900	63,800	42%
	Jun '29	225	3		278	281	36,900	250	26,900	63,800	42%

P L A N N E D

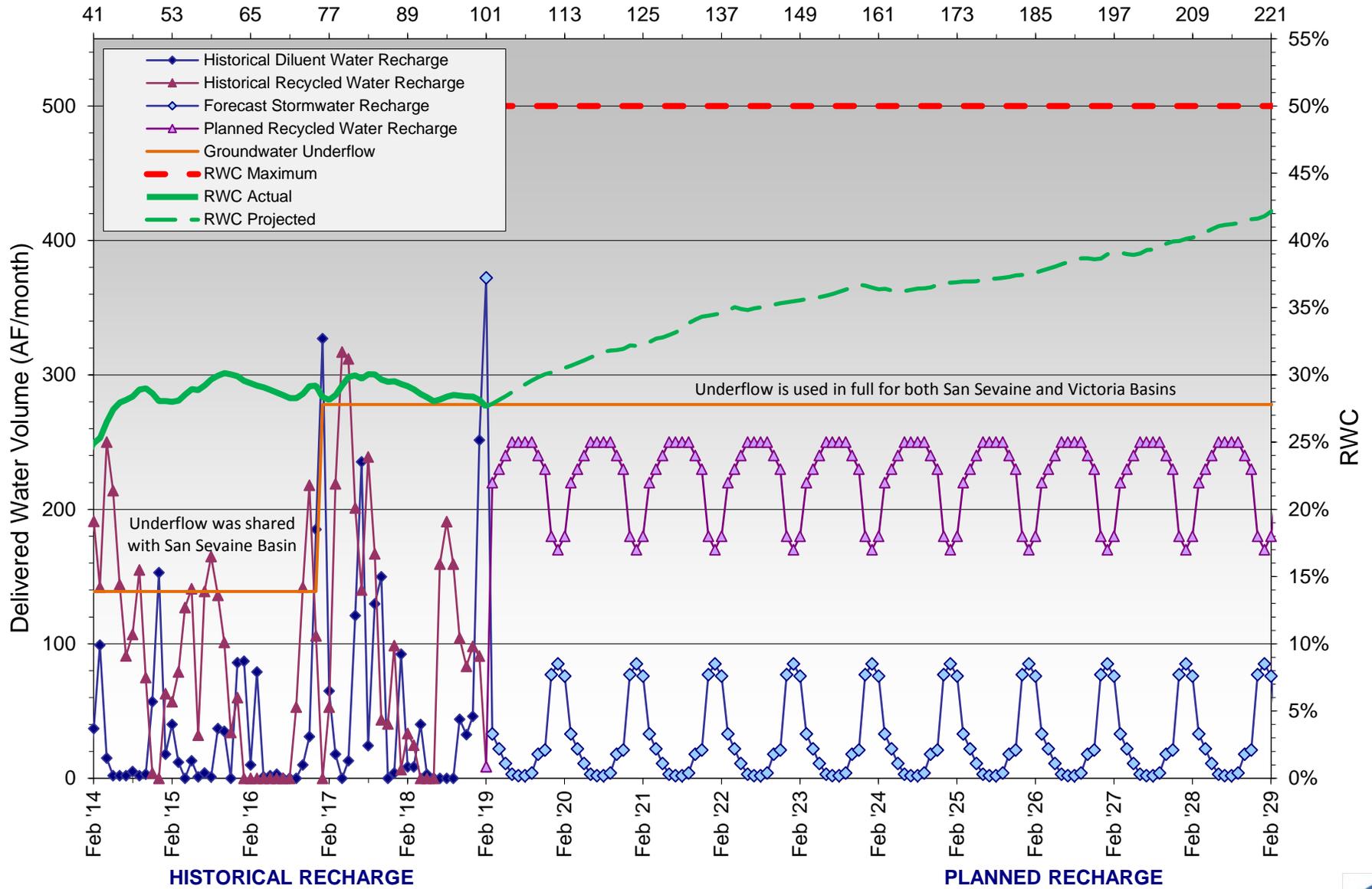
**Notes:**

DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.  
 RW = Recycled Water  
 RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.  
 While an RWC calculation is provided starting on the first month of RW recharge, 120 months of data may not be available until 10 years of recharge operations.  
 RWC maximum = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC) determined from a recharge site's start-up period



# RWC Management Plan - Victoria Basin

Months Since Initial Recycled Water Delivery

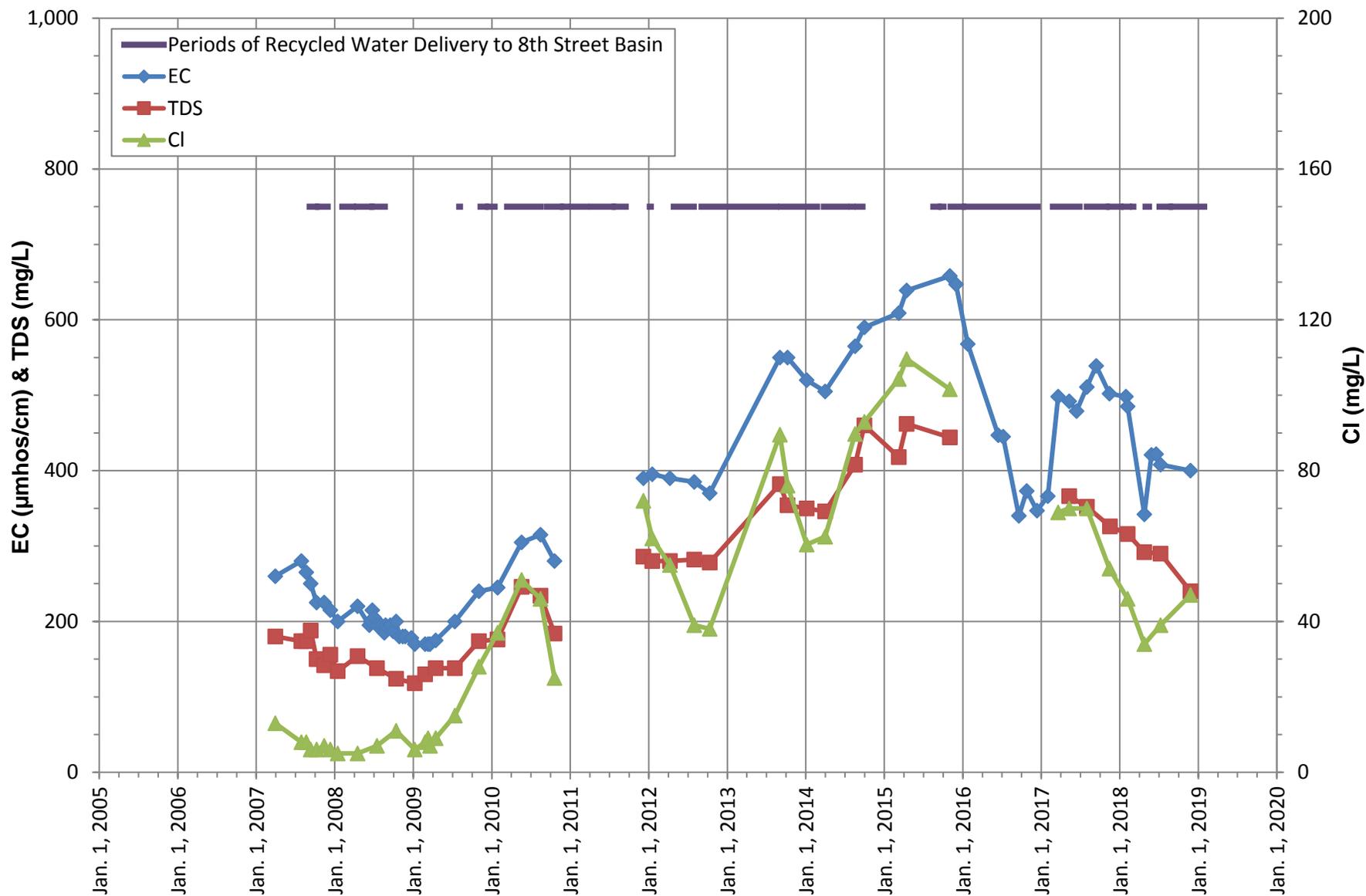


APPENDIX C

EVIDENCE FOR BLENDING:

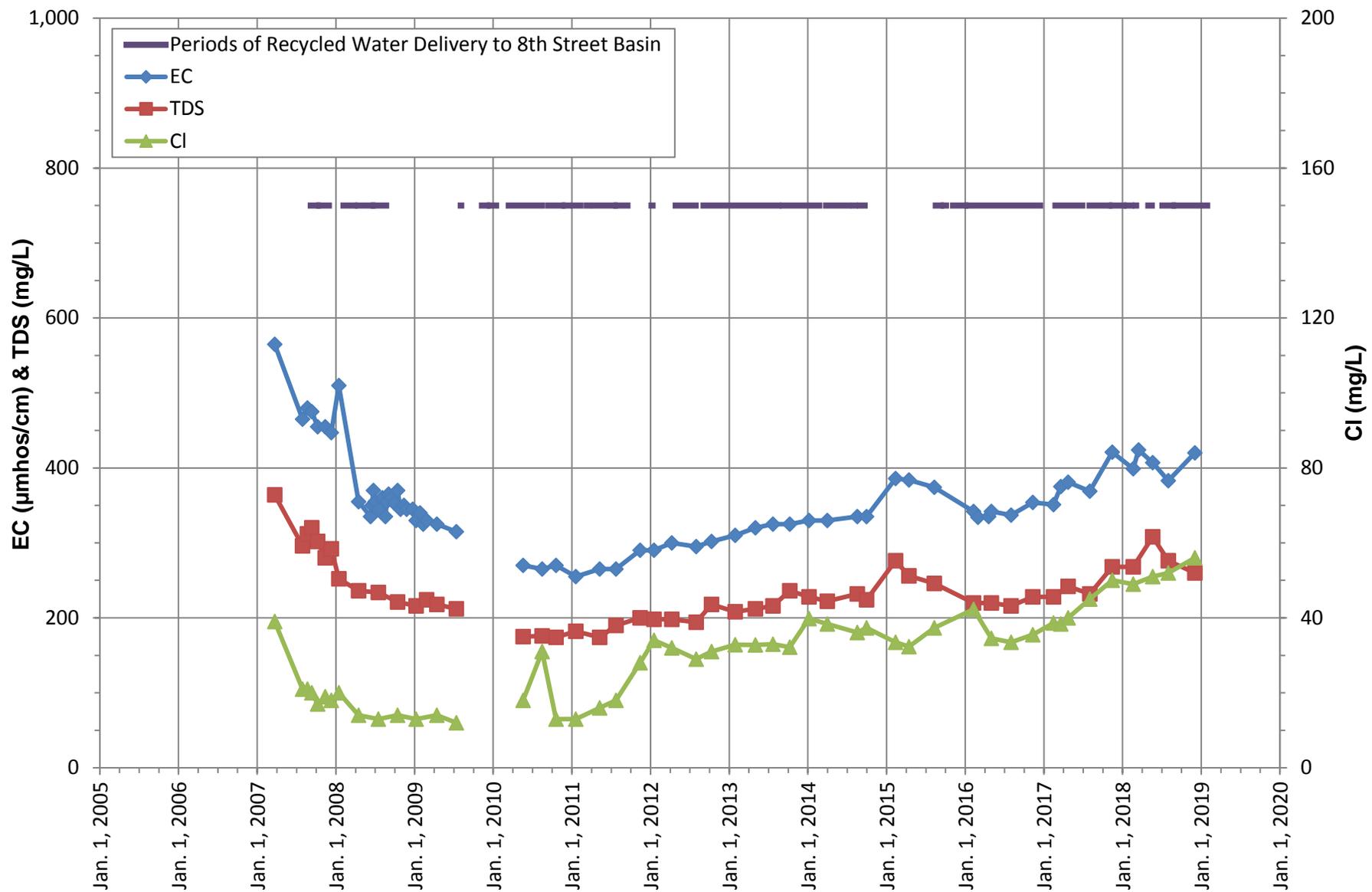
EC, TDS, CHLORIDE TIME-SERIES GRAPHS

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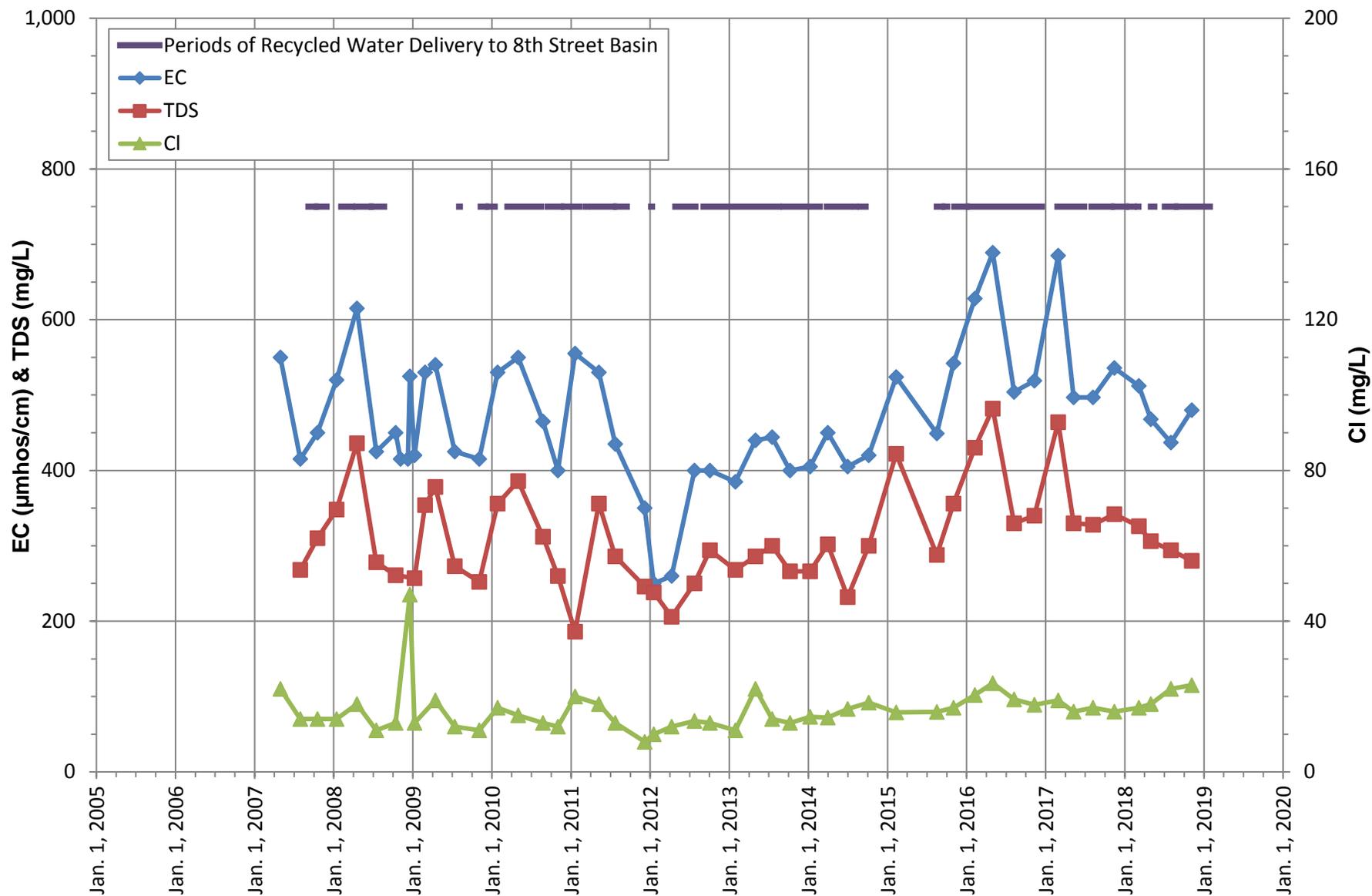
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-1/1**





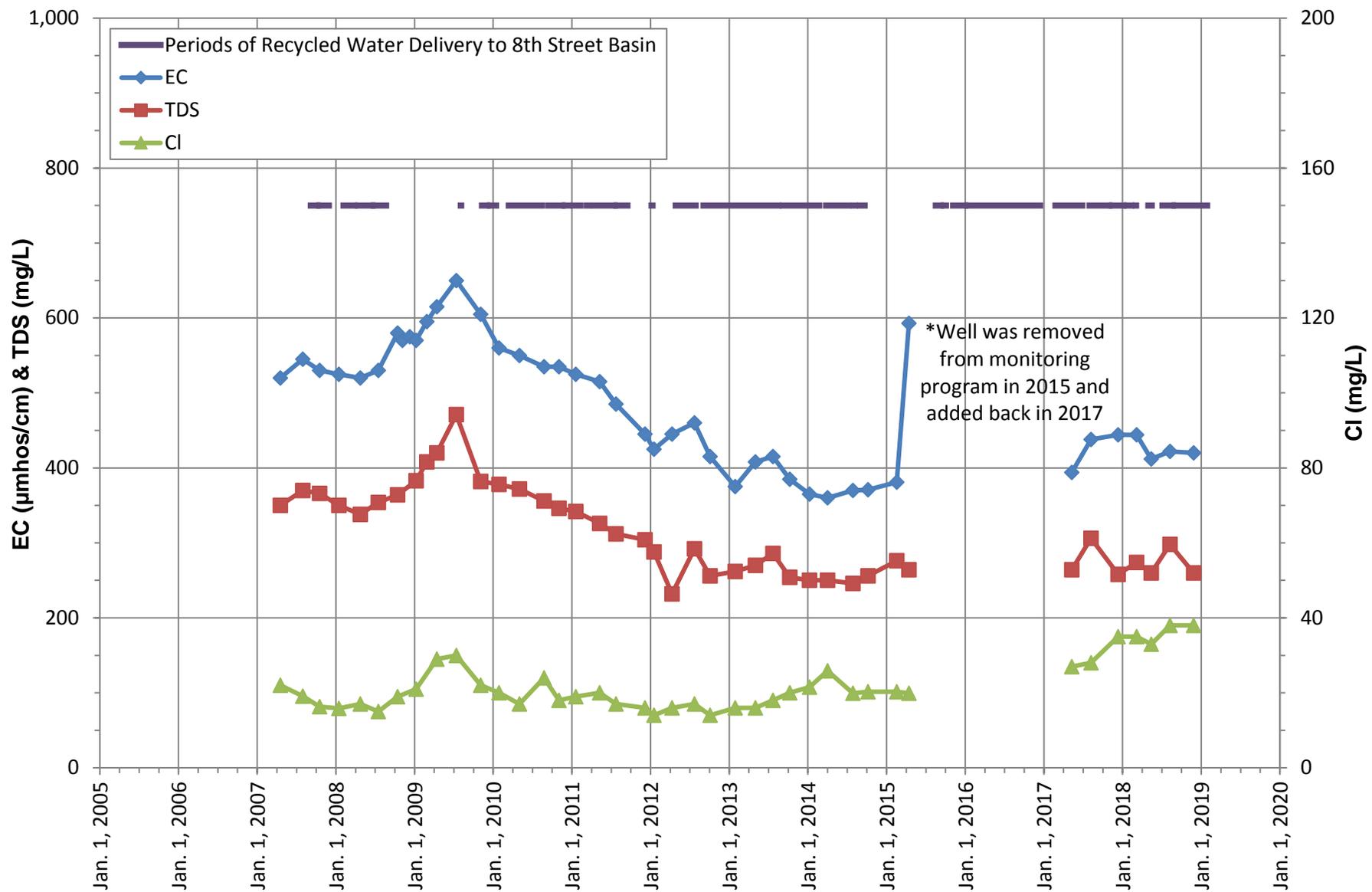
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-1/2**





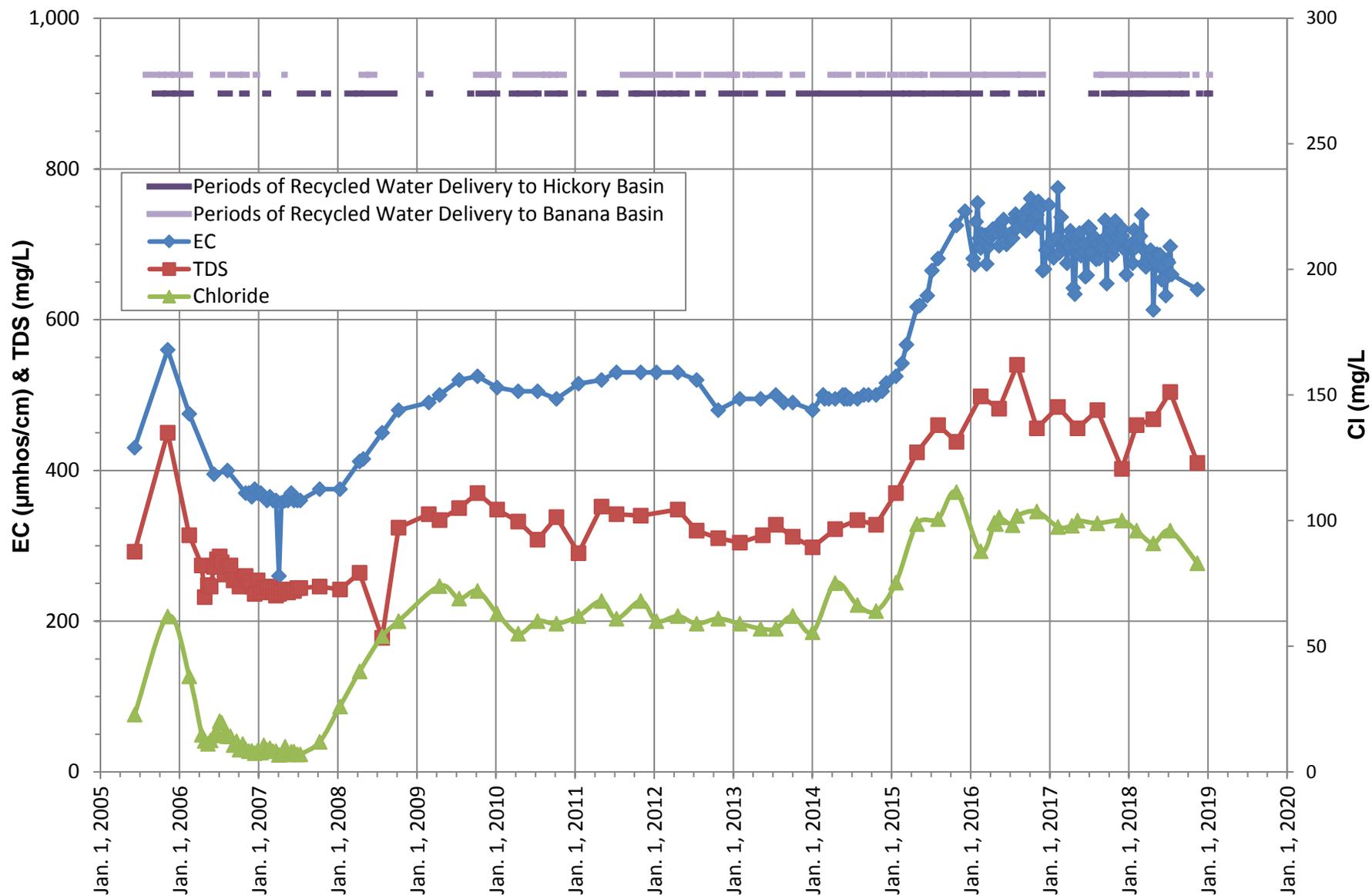
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-2/1**





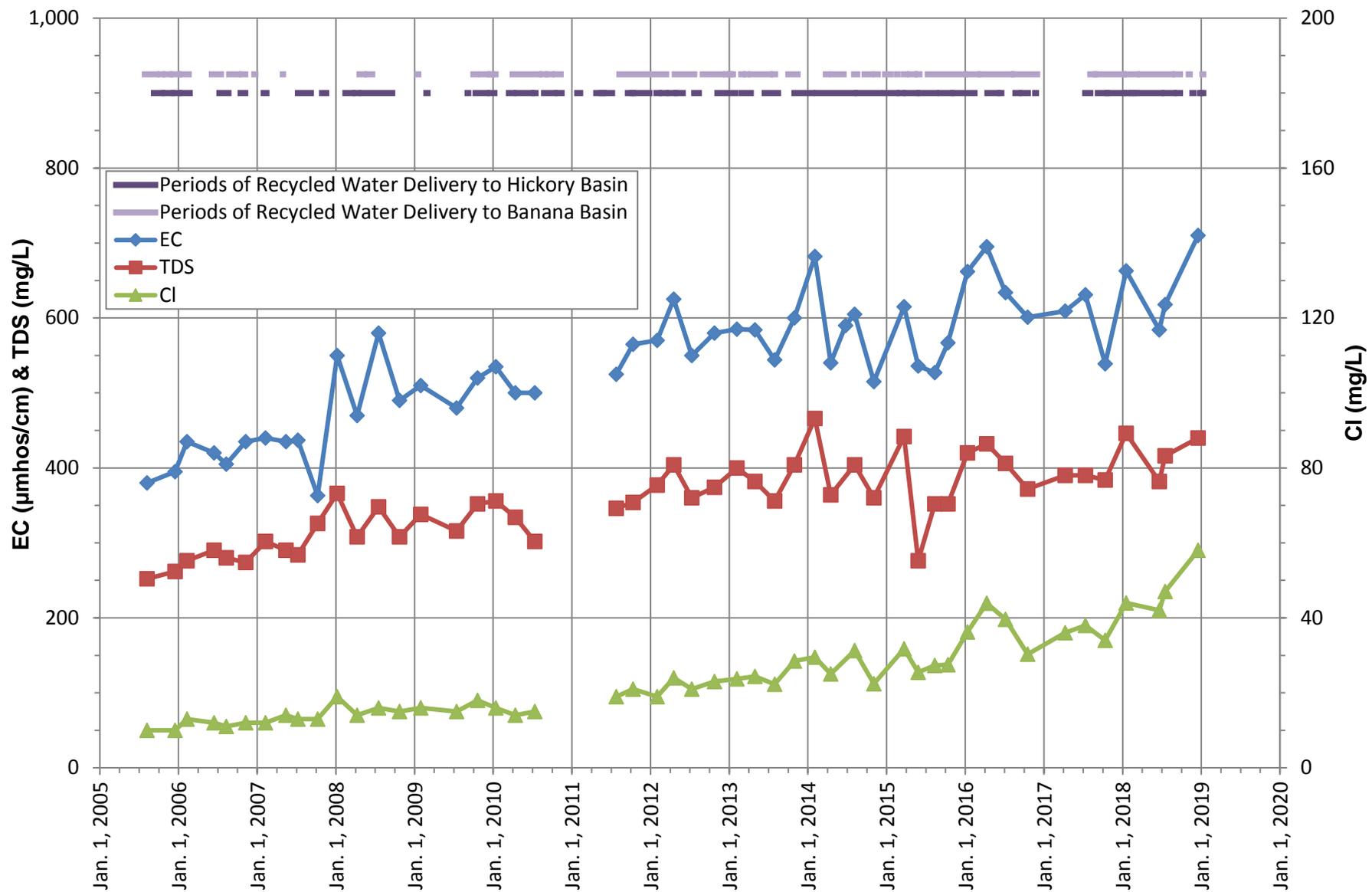
**EC, TDS, CHLORIDE TRENDS  
8TH STREET BASIN  
MW 8TH-2/2**





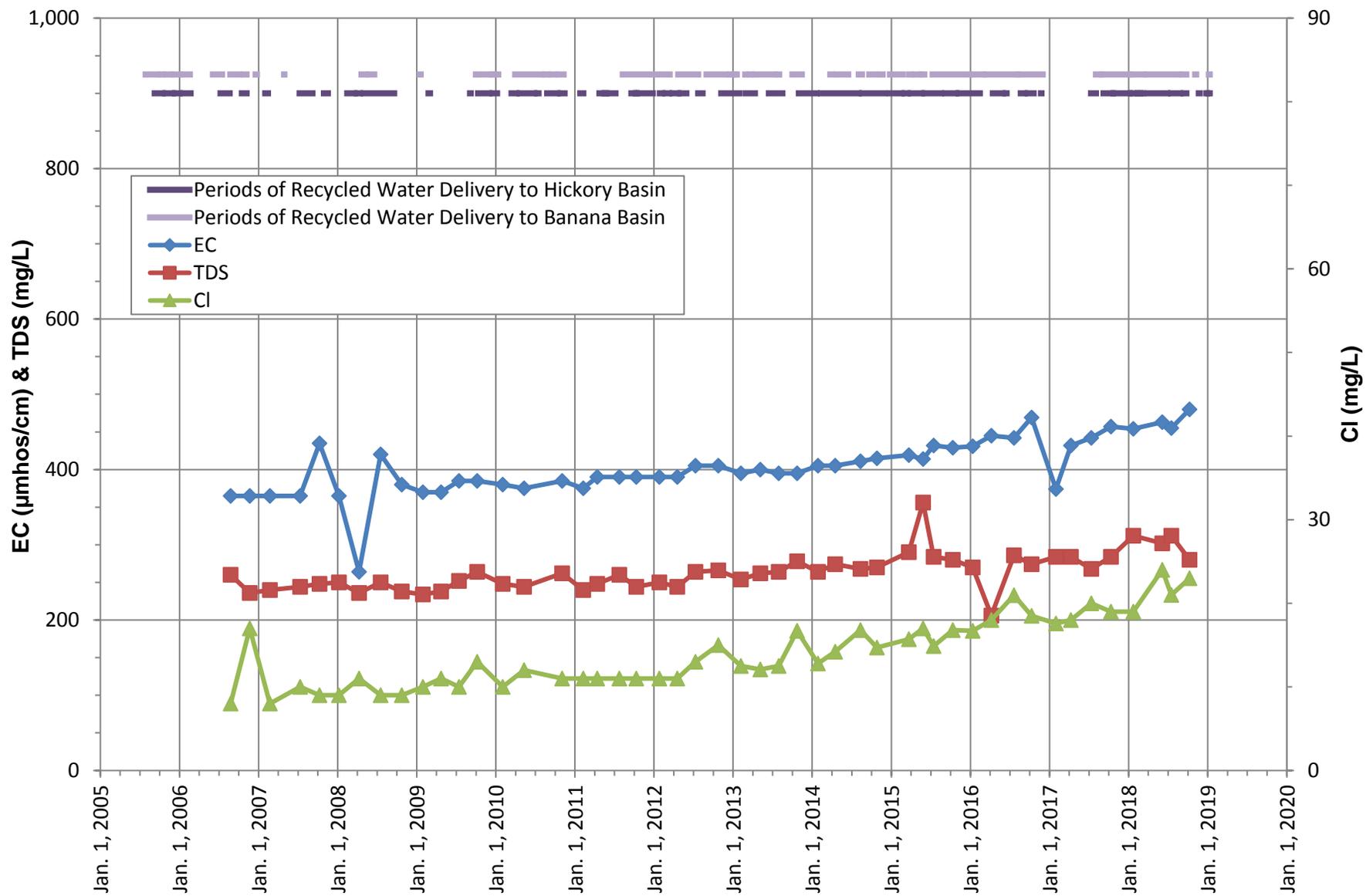
**EC, TDS, CHLORIDE TRENDS  
HICKORY BANANA BASINS  
MW BH-1/2**





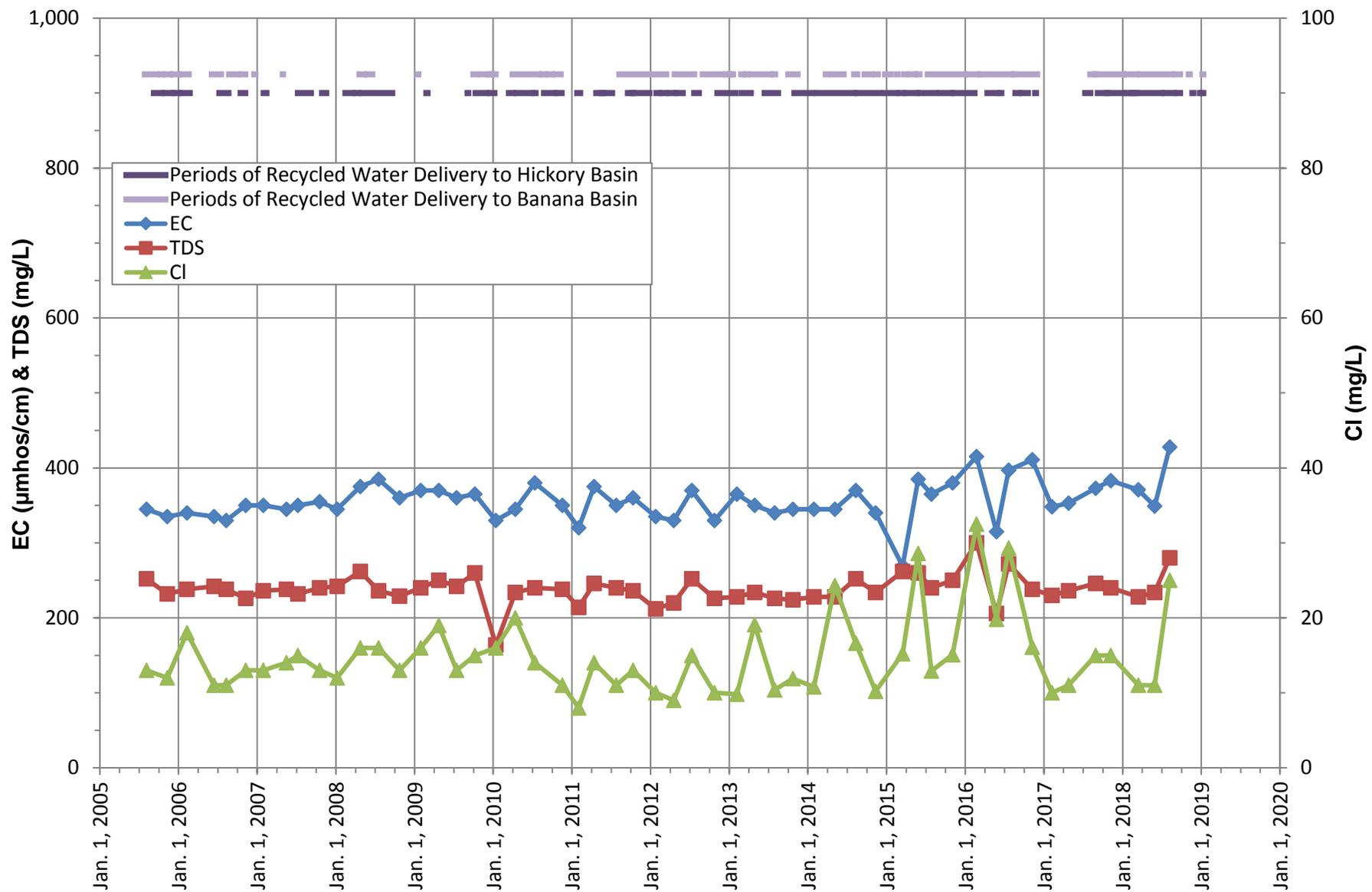
**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
CALIFORNIA SPEEDWAY INFIELD WELL**





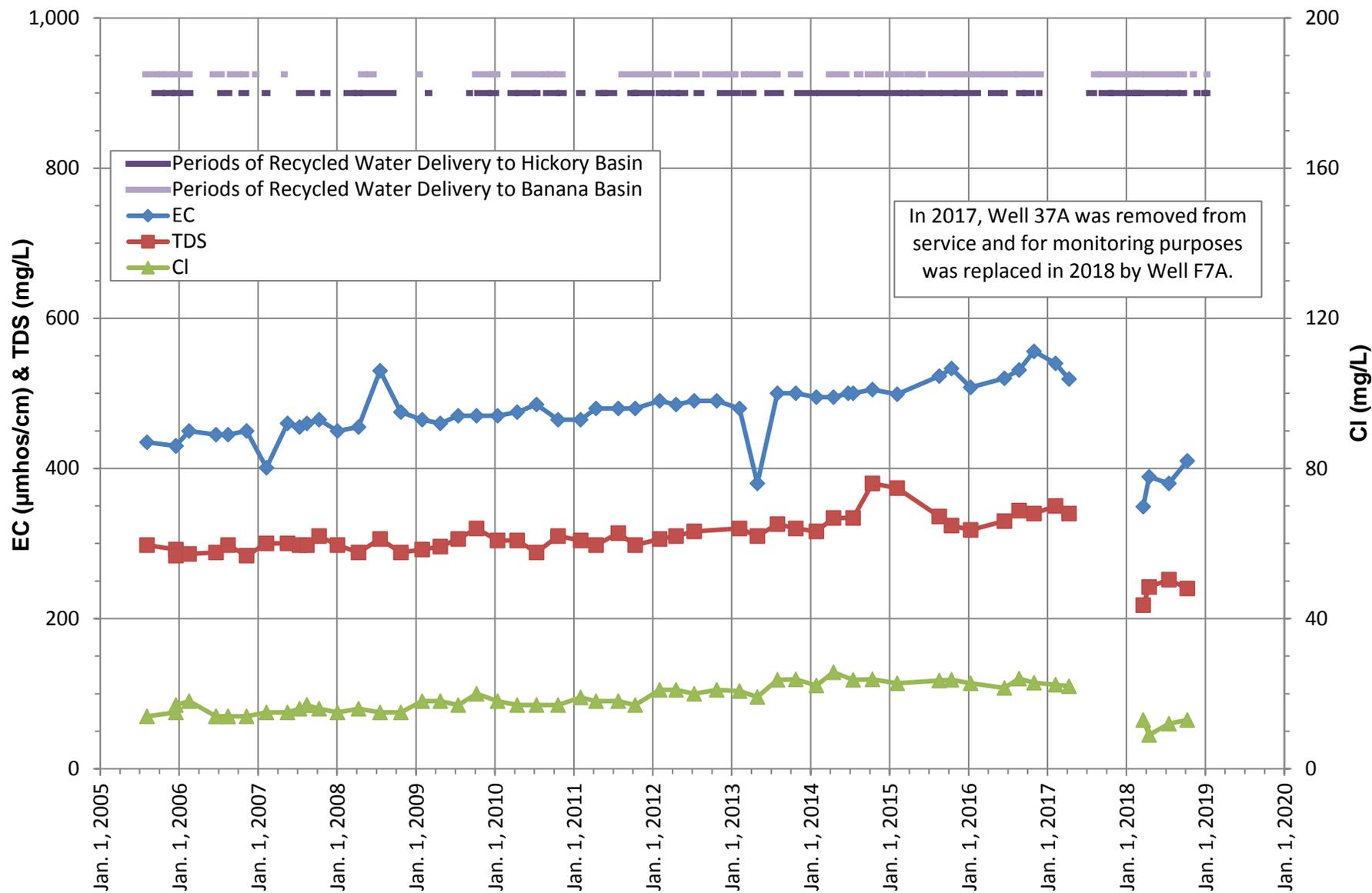
**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
CALIFORNIA SPEEDWAY NO. 2**





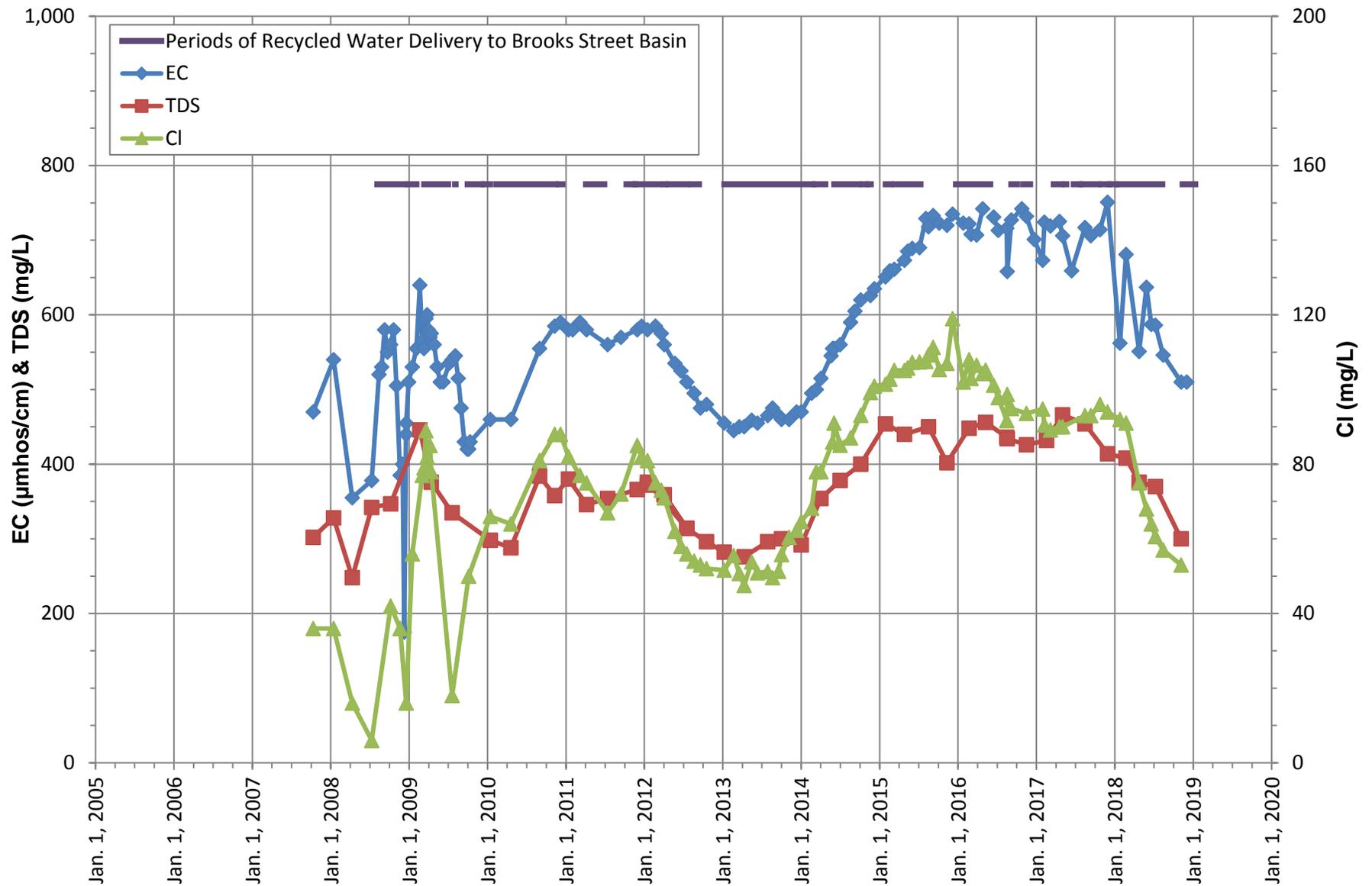
**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
RELIANT EAST WELL**





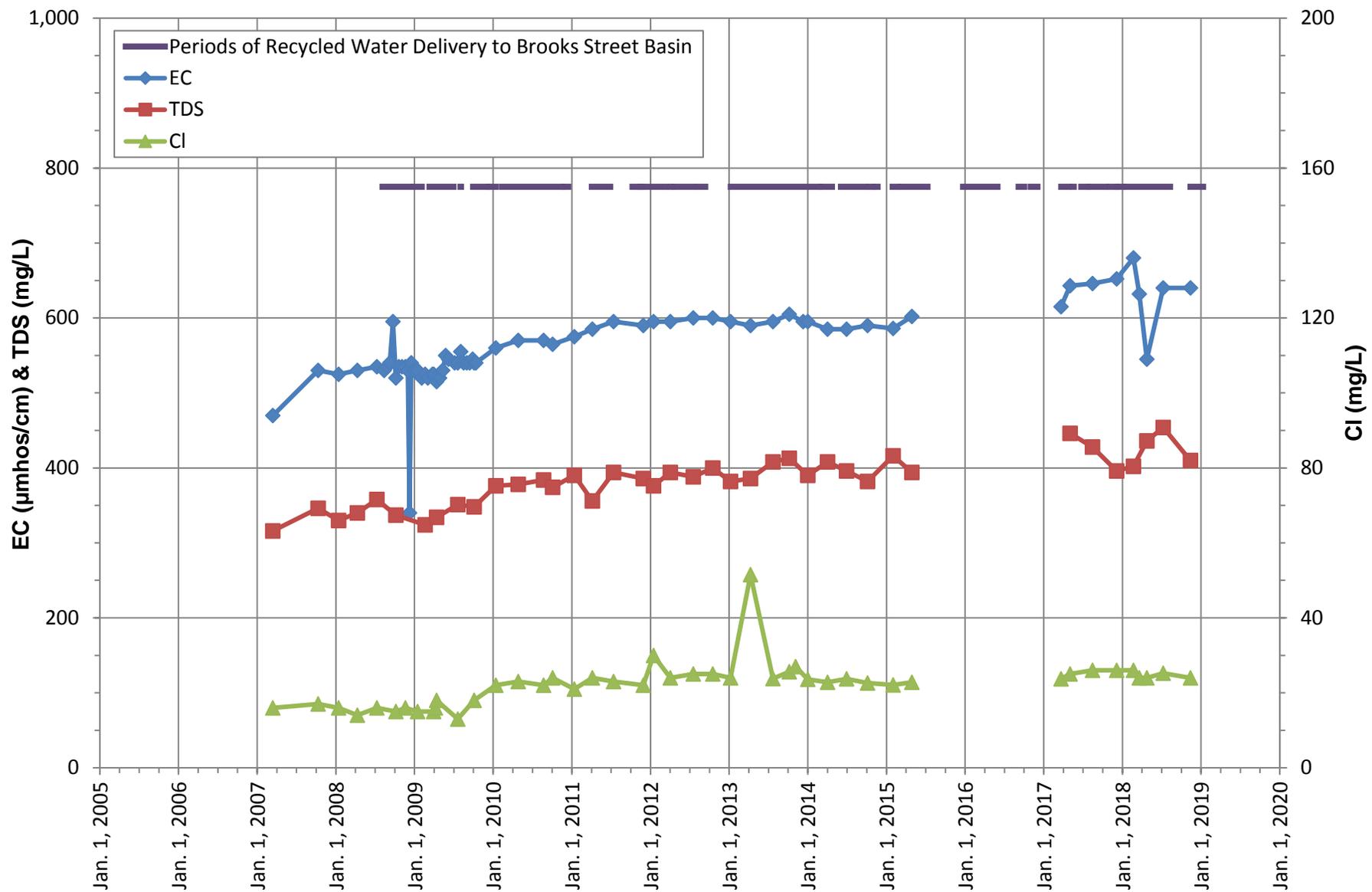
**EC, TDS, CHLORIDE TRENDS  
BANANA-HICKORY BASINS  
FONTANA WATER CO. WELLS 7A AND 37A**





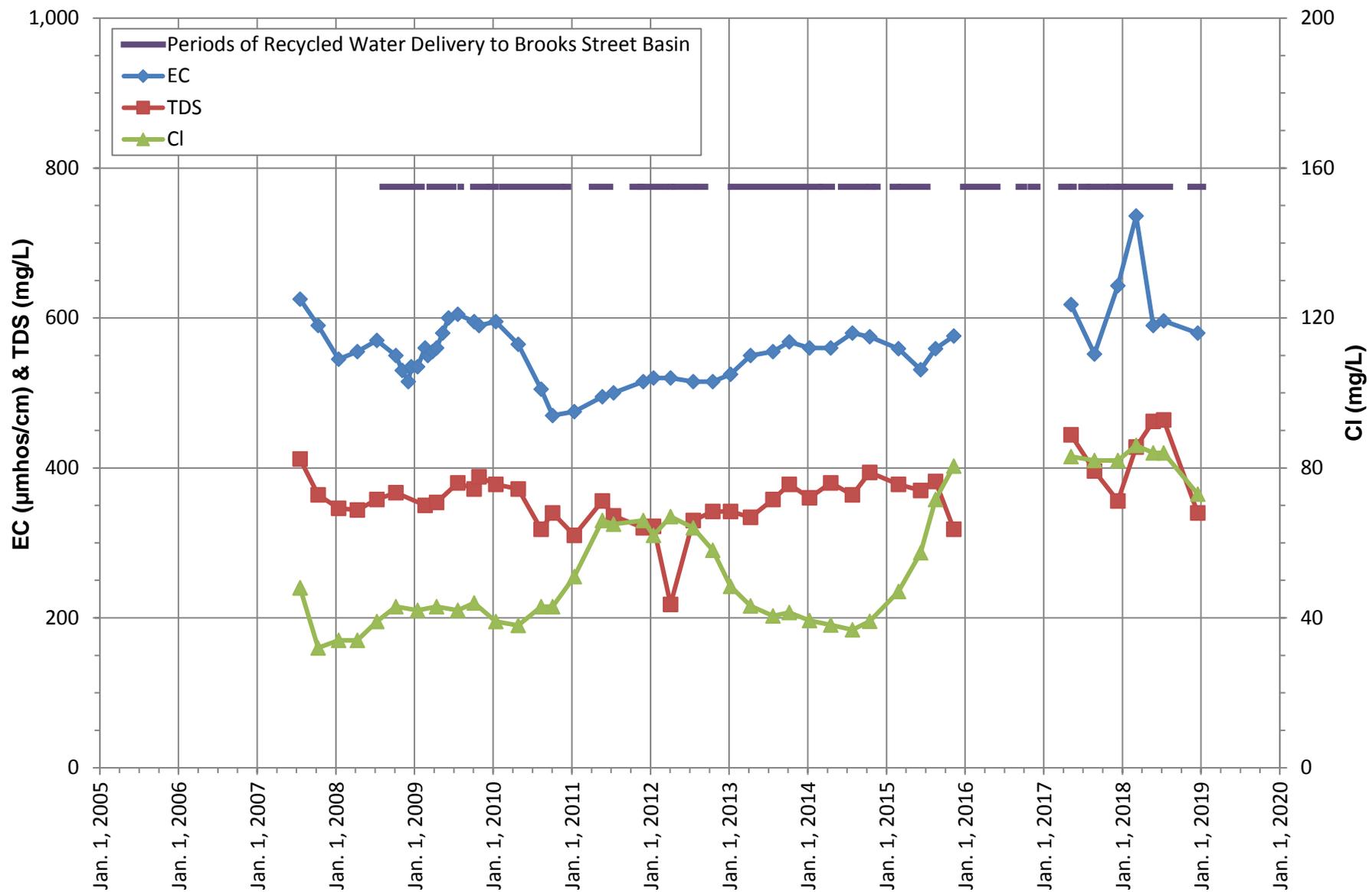
**EC, TDS, CHLORIDE TRENDS  
BROOKS STREET BASIN  
MW BRK-1/1**





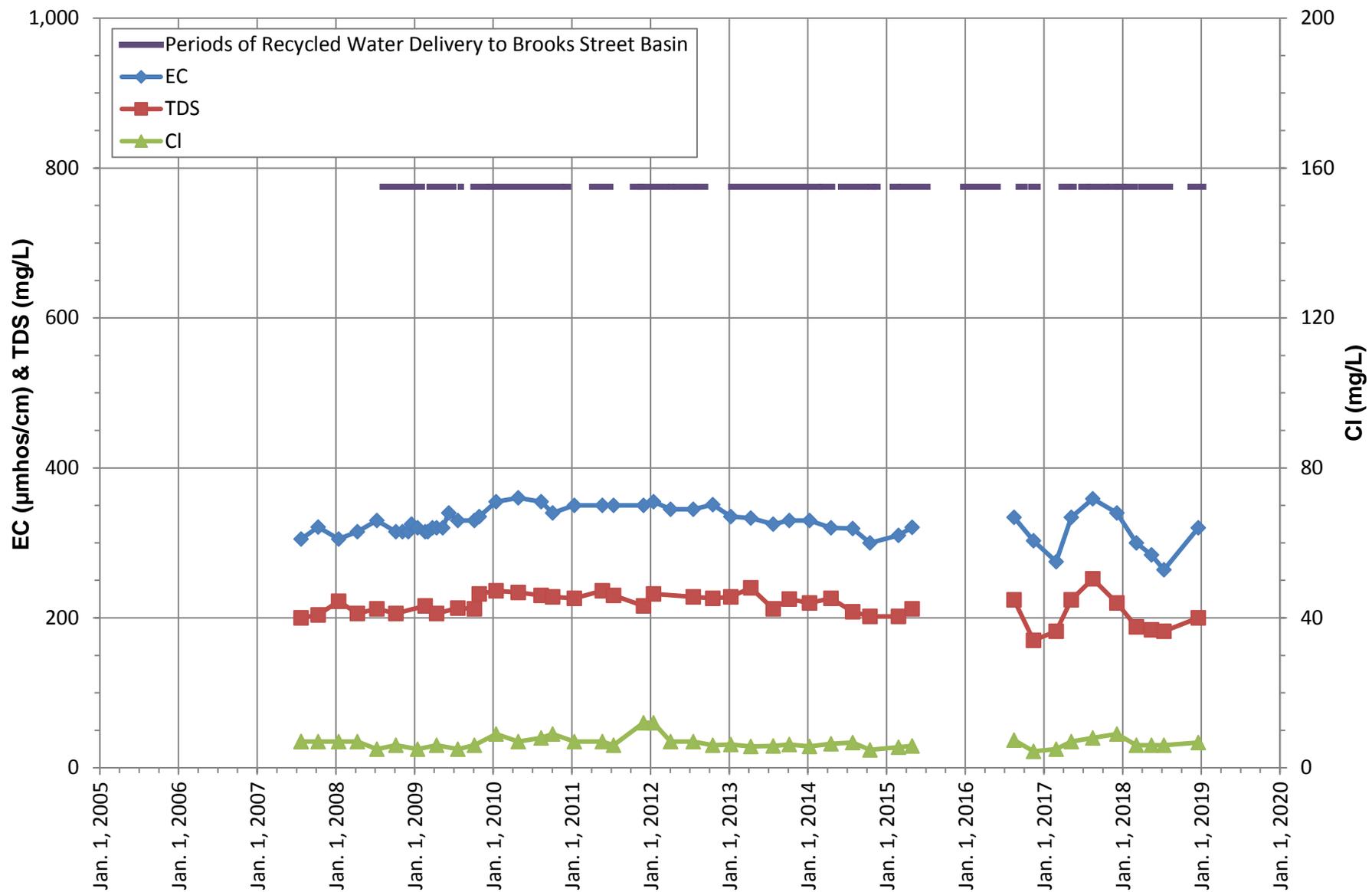
**EC, TDS, CHLORIDE TRENDS  
BROOKS STREET BASIN  
MW BRK-1/2**





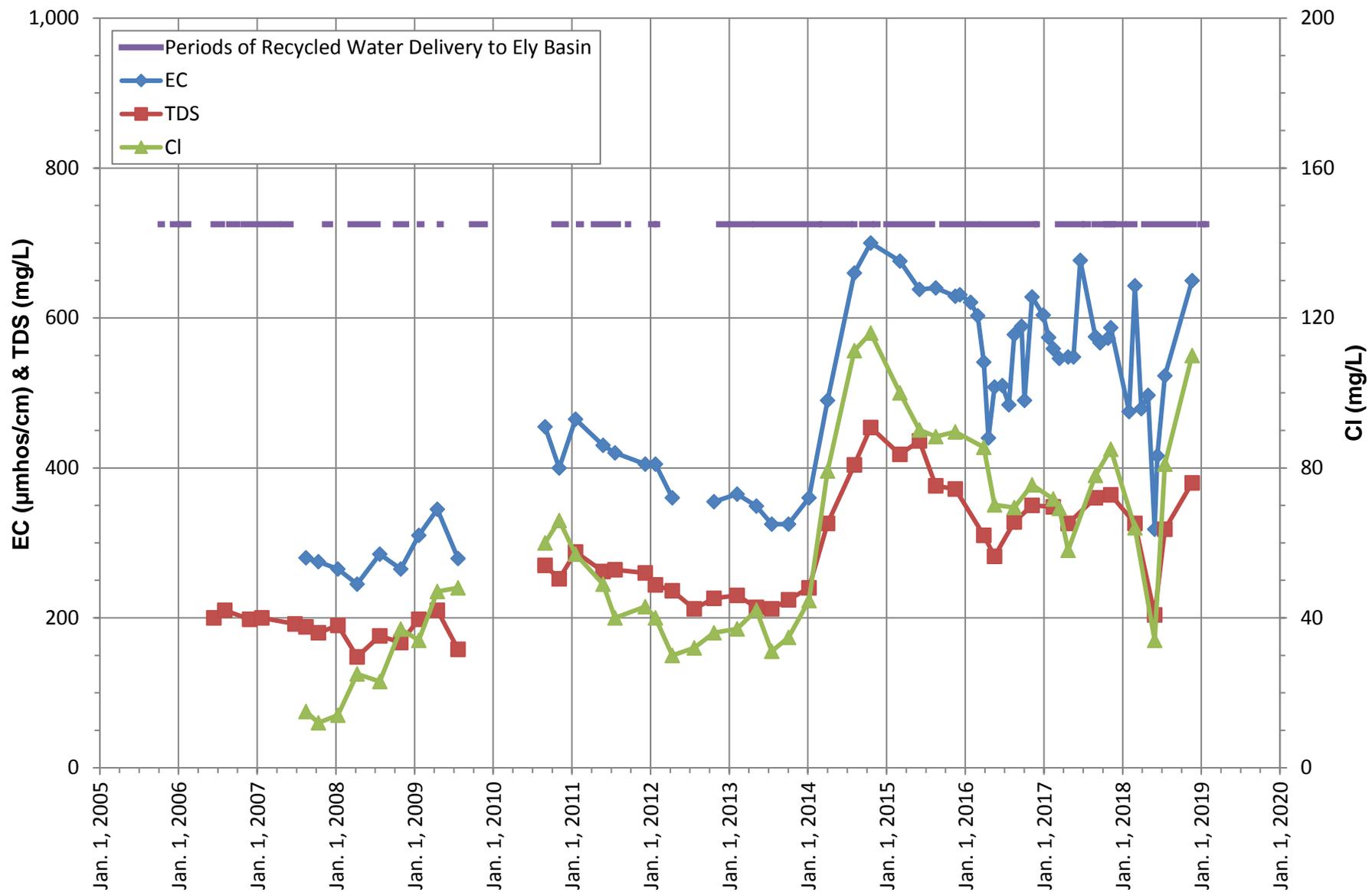
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MW BRK-2/1**





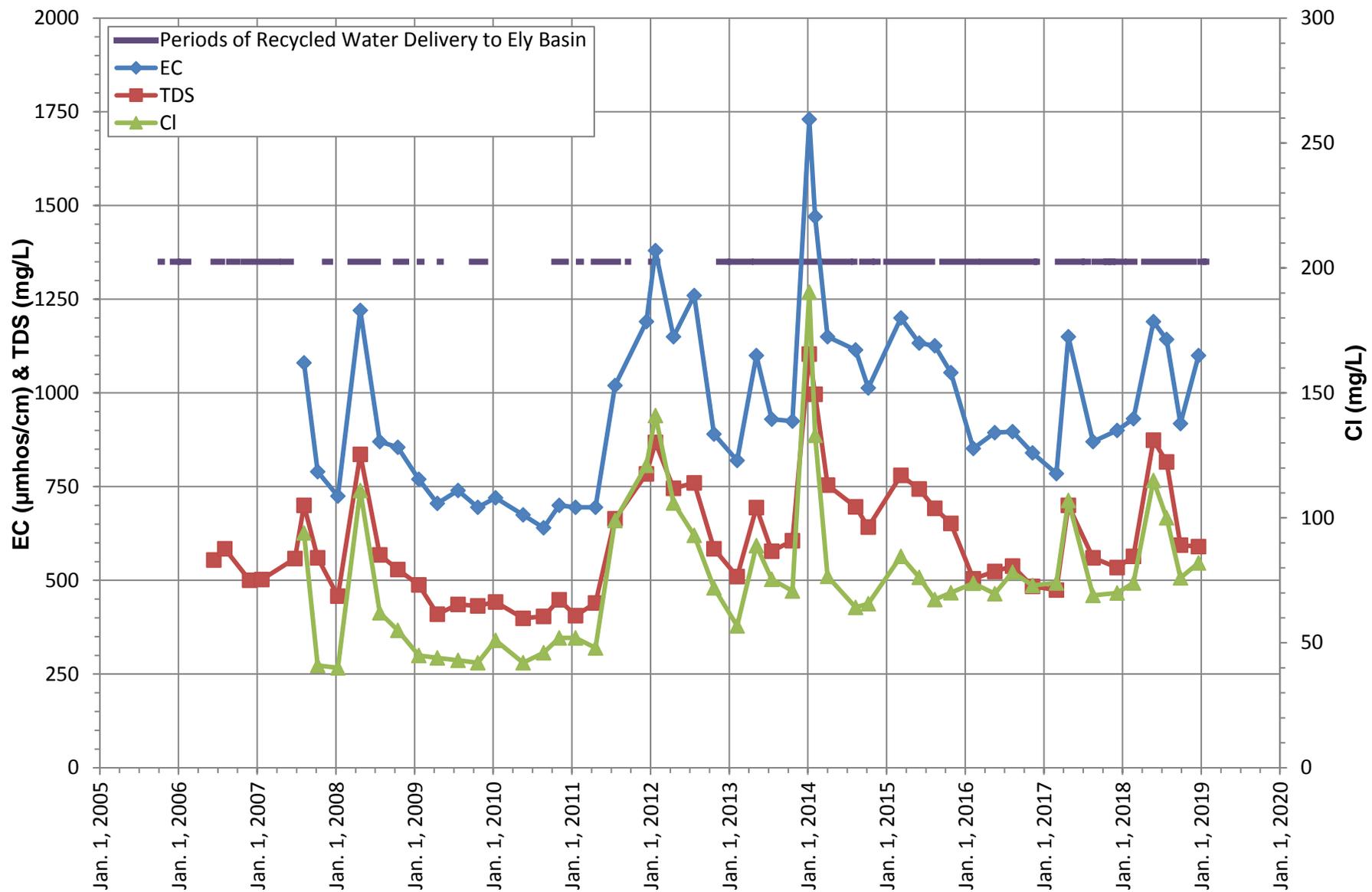
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MW BRK-2/2**





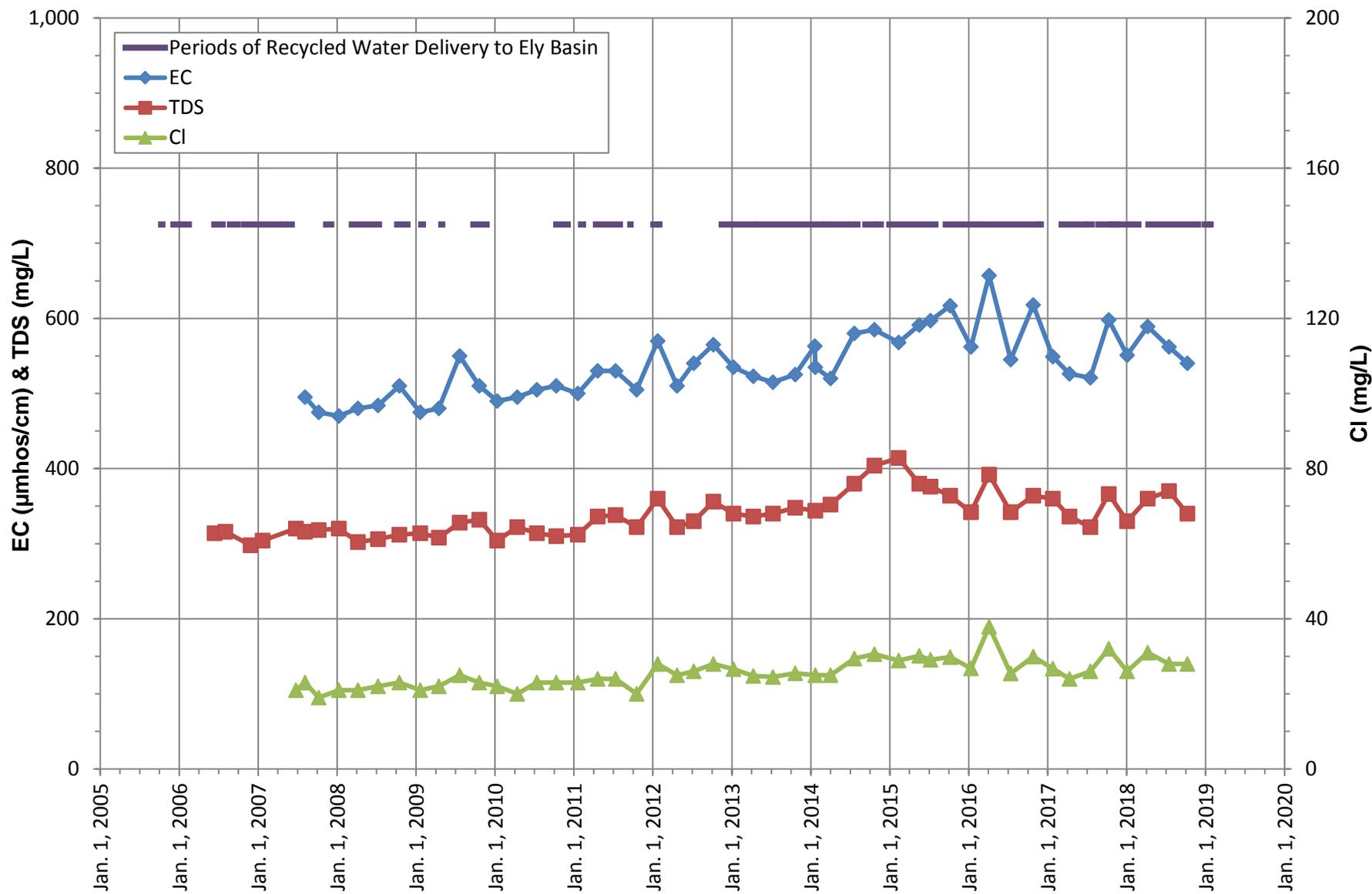
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ELY BASIN  
PHILADELPHIA WELL**





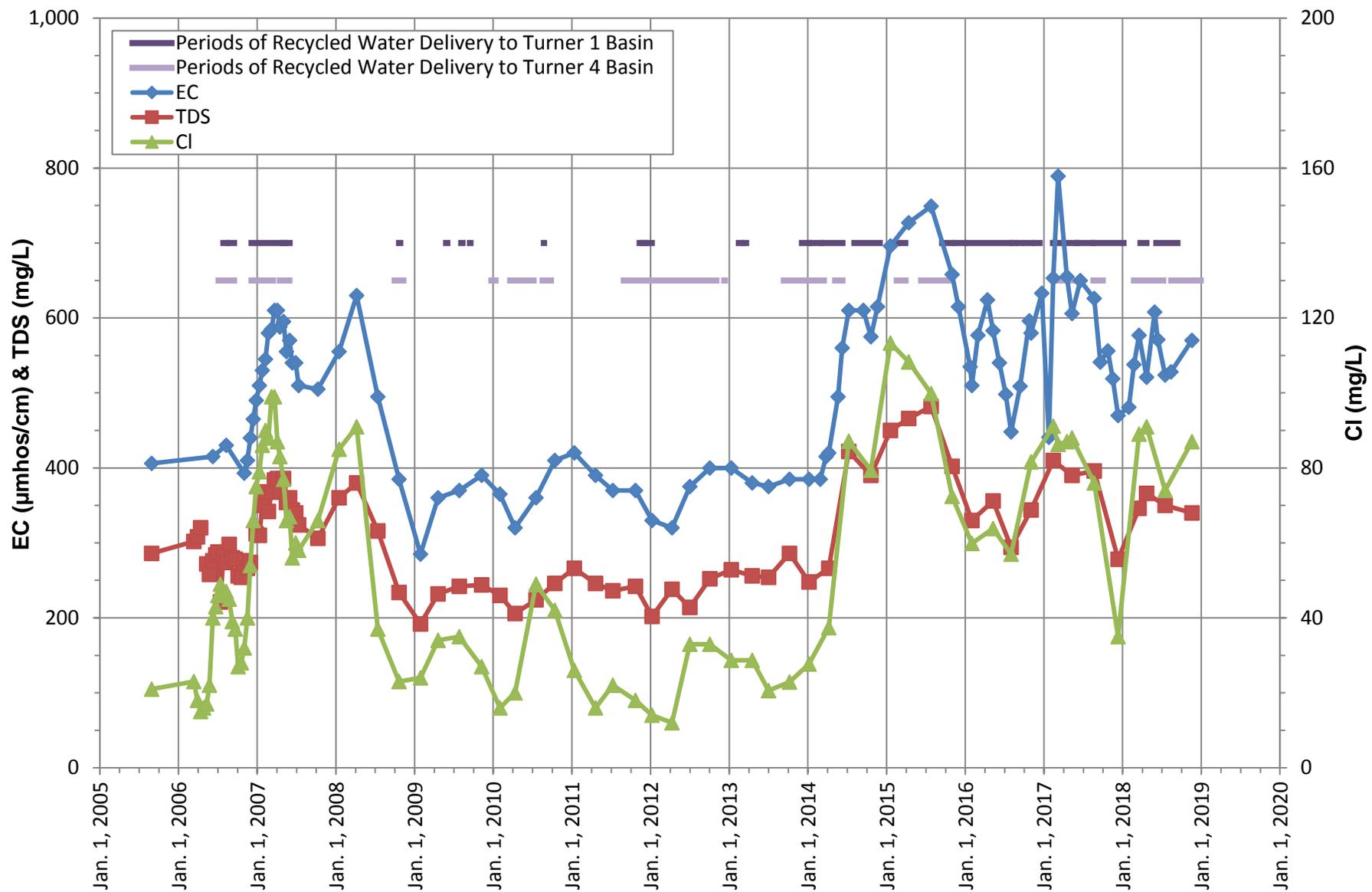
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ELY BASIN  
WALNUT WELL**





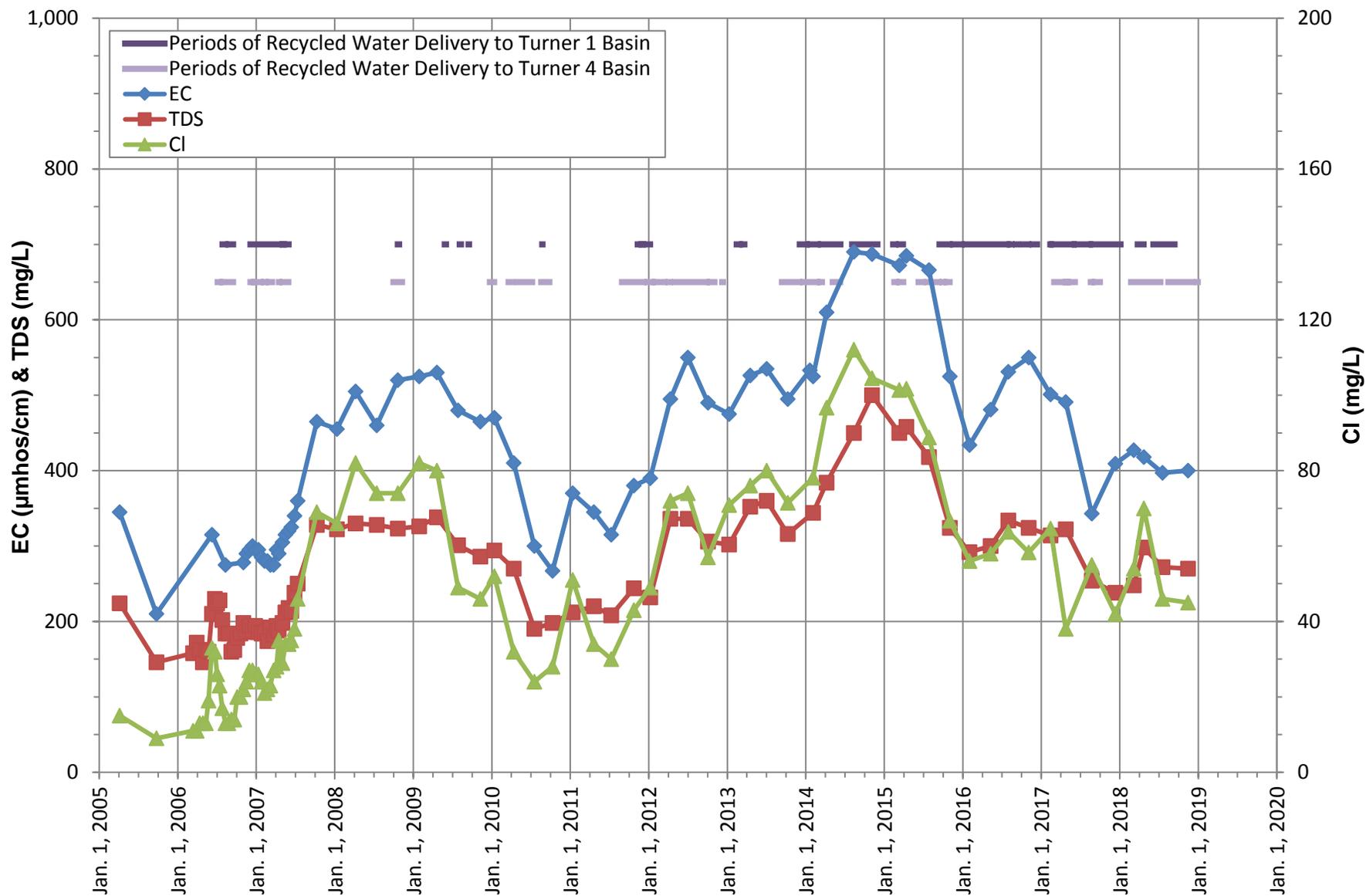
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ELY BASIN  
RIVERSIDE WELL**





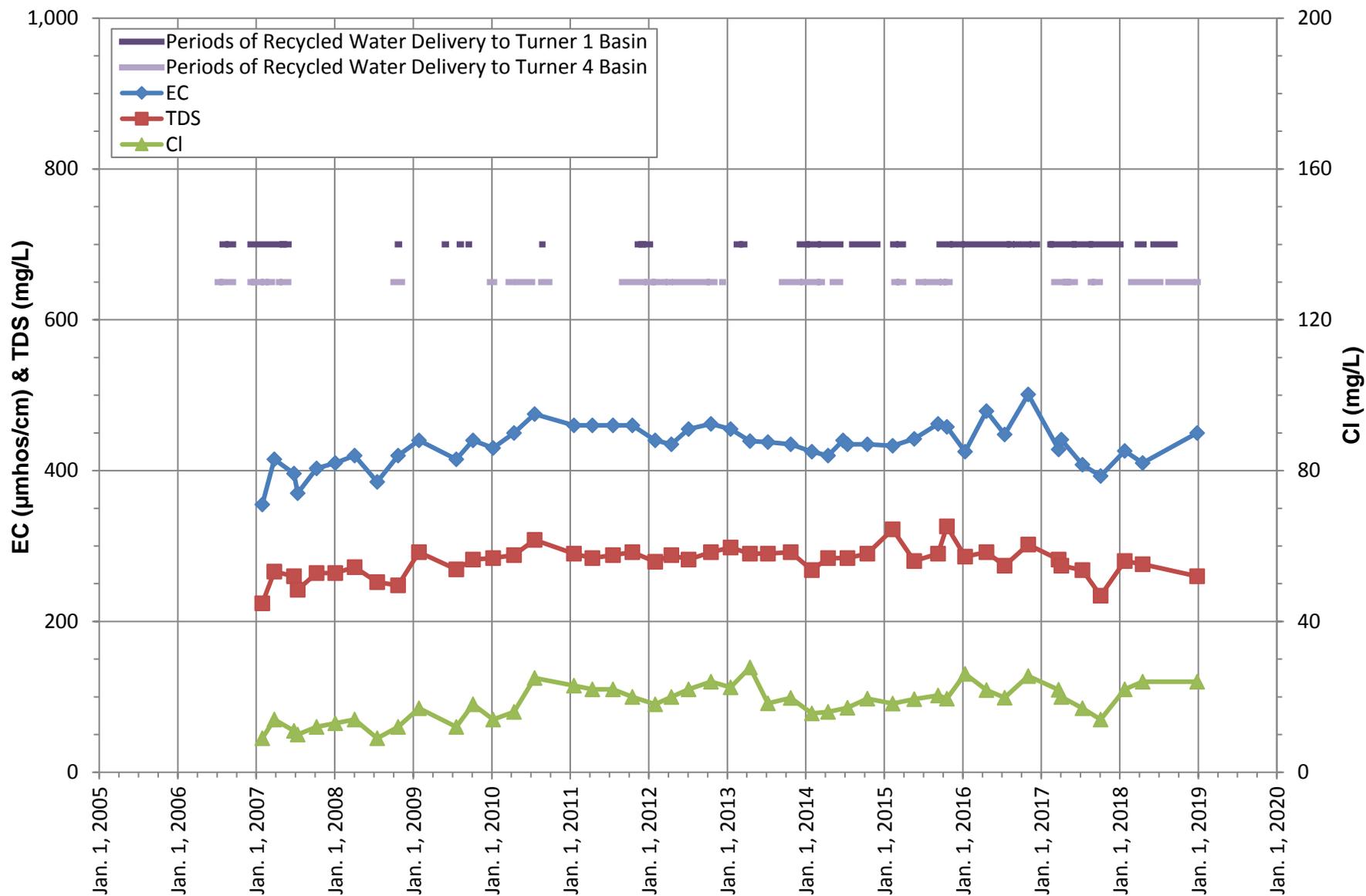
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TURNER BASINS  
MW TRN-1/2**





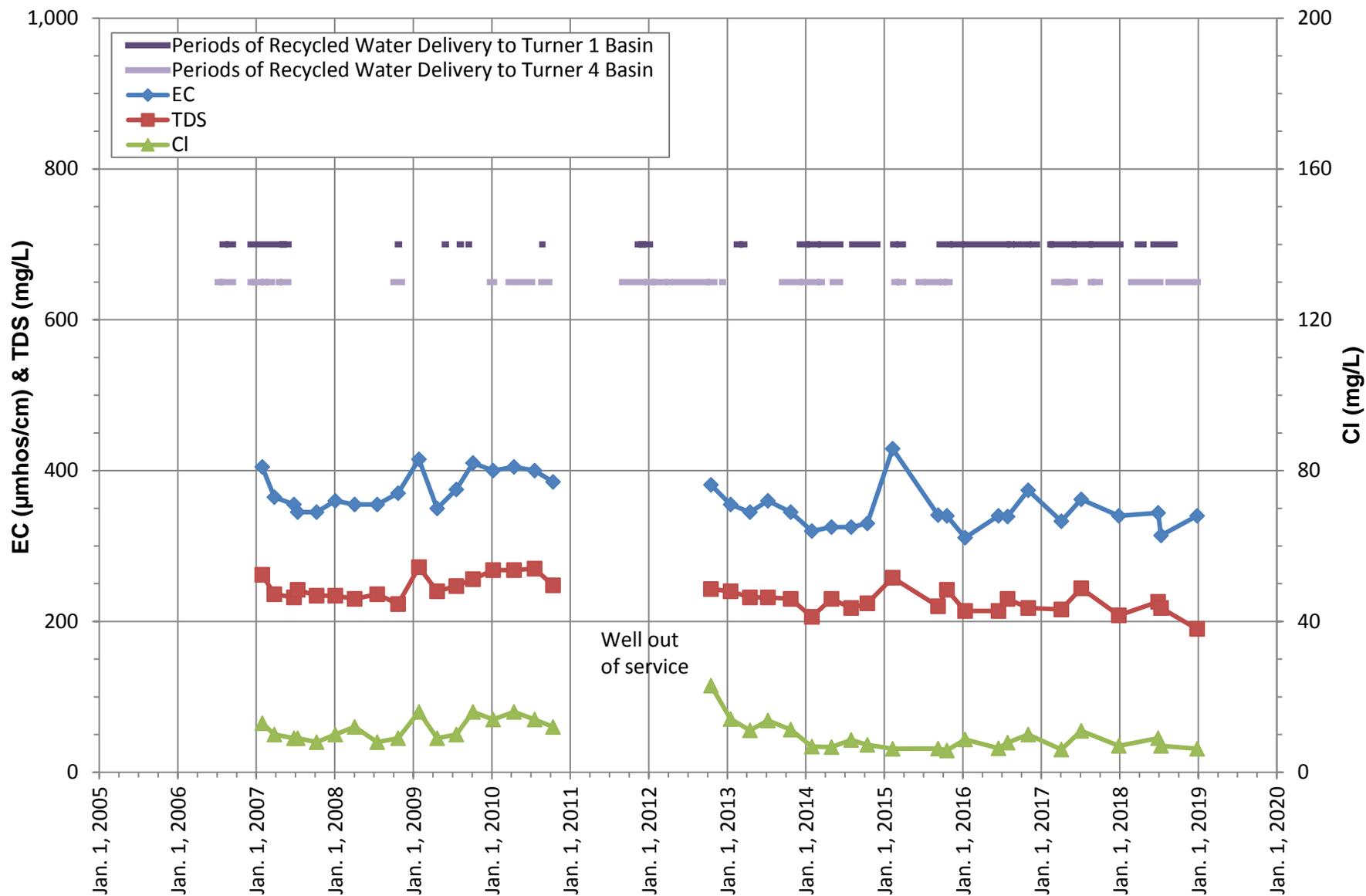
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TURNER BASINS  
MW TRN-2/2**





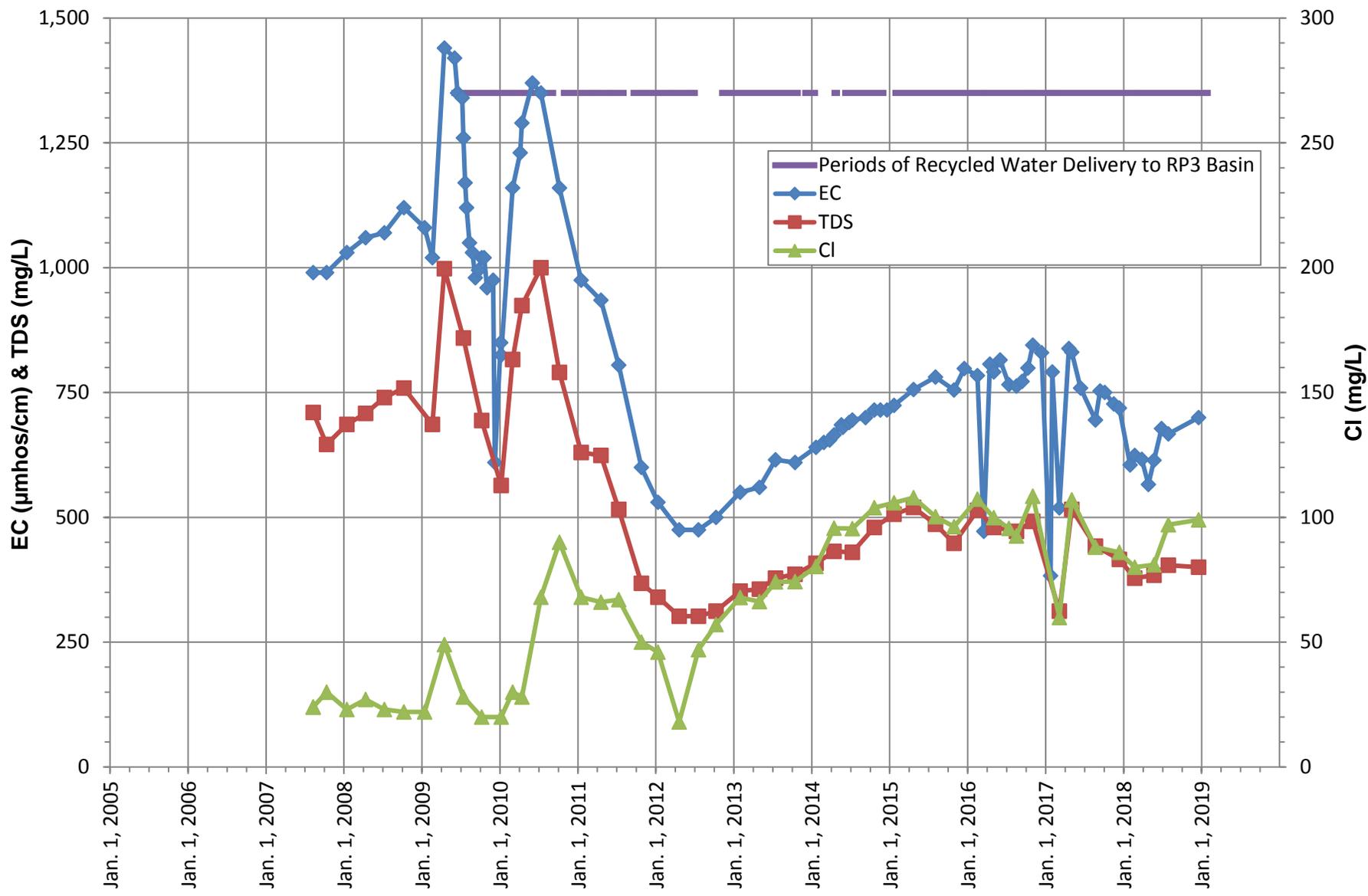
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TURNER BASINS  
ONTARIO NO. 25**





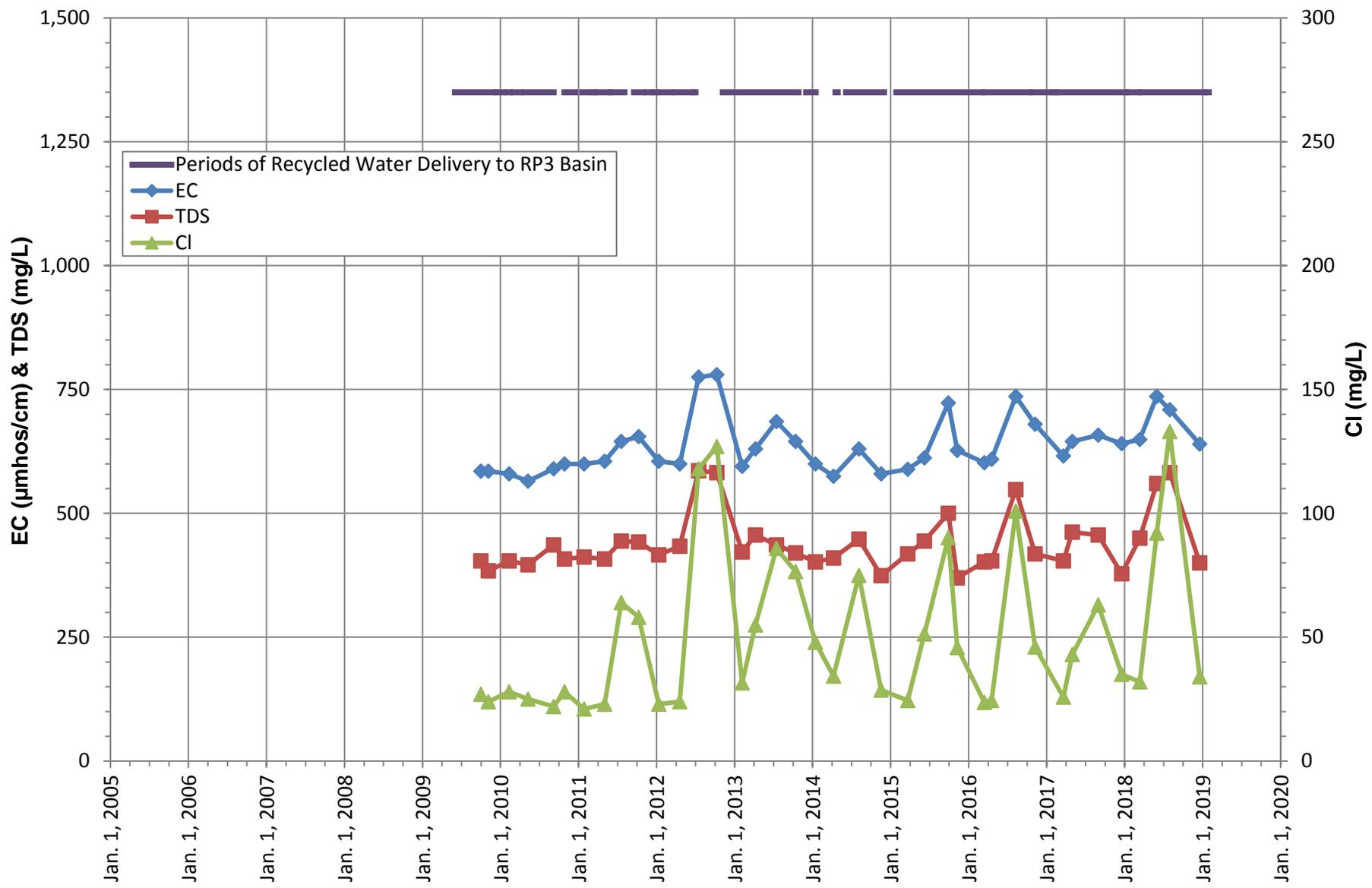
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TURNER BASINS  
ONTARIO NO. 29**





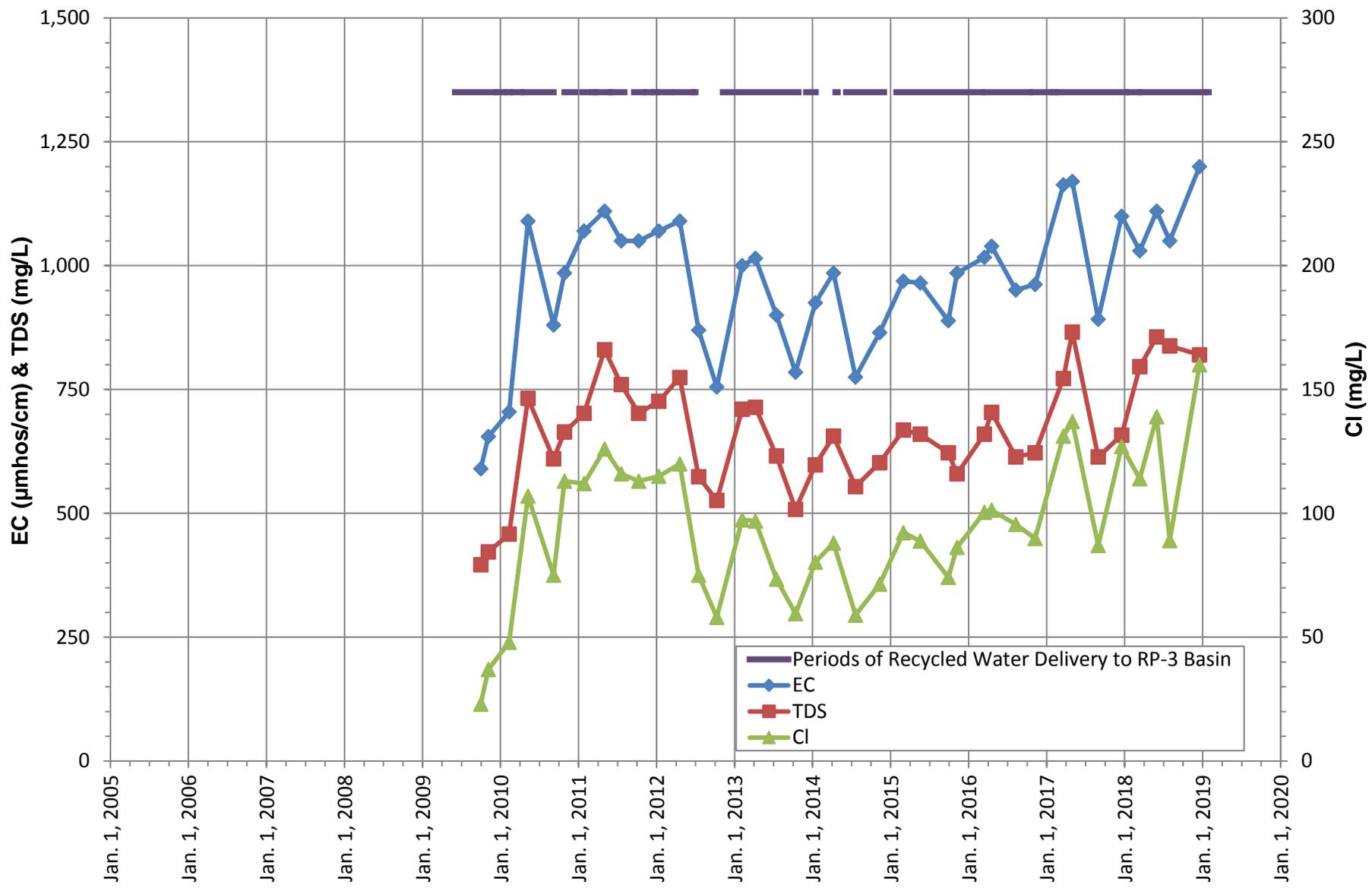
**EC, TDS, CHLORIDE TRENDS  
RP3 BASINS  
RP3-1/1**





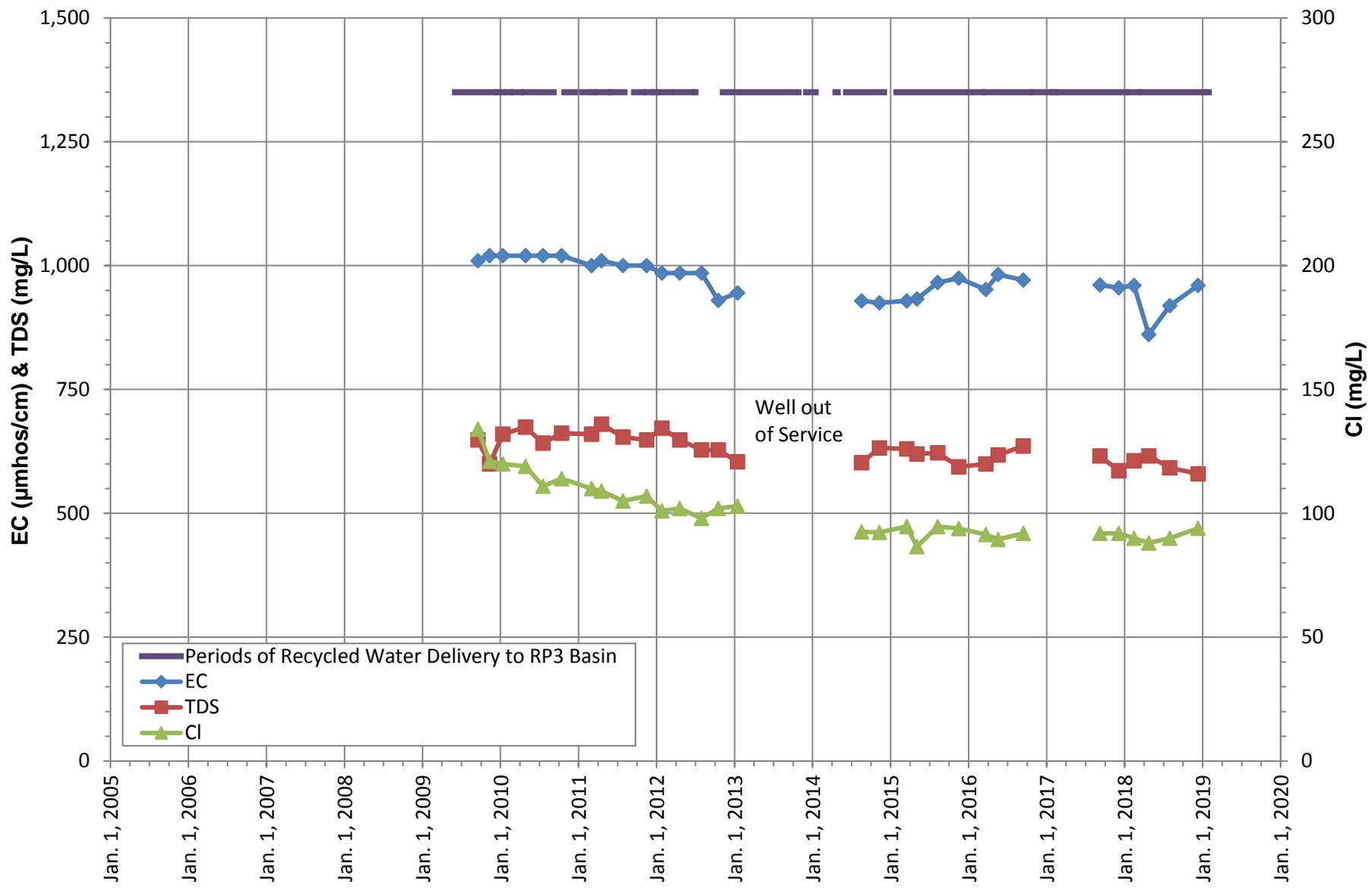
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RP3 BASINS  
ALCOA MW-1**





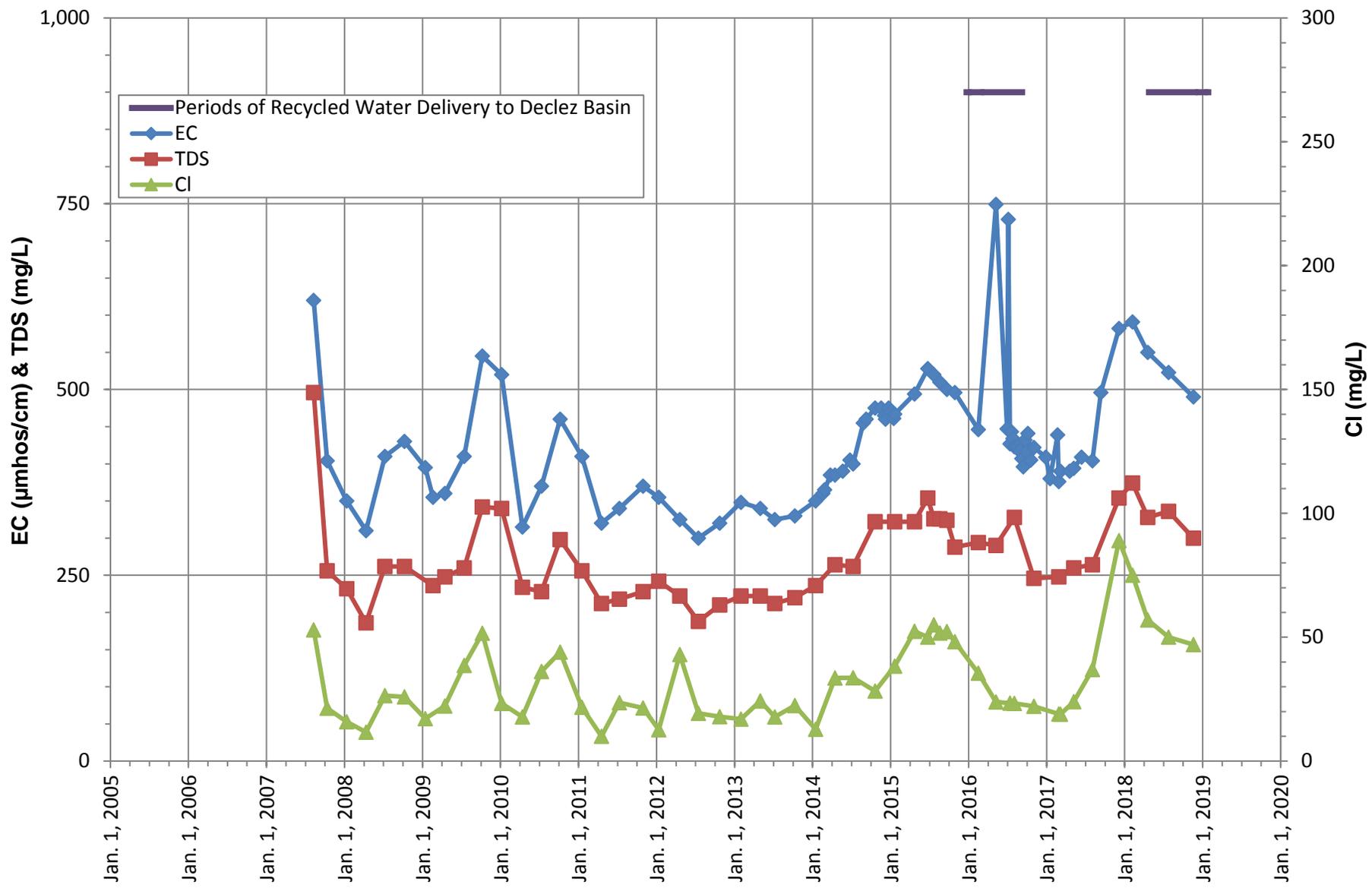
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RP3 BASINS  
ALCOA MW-3**





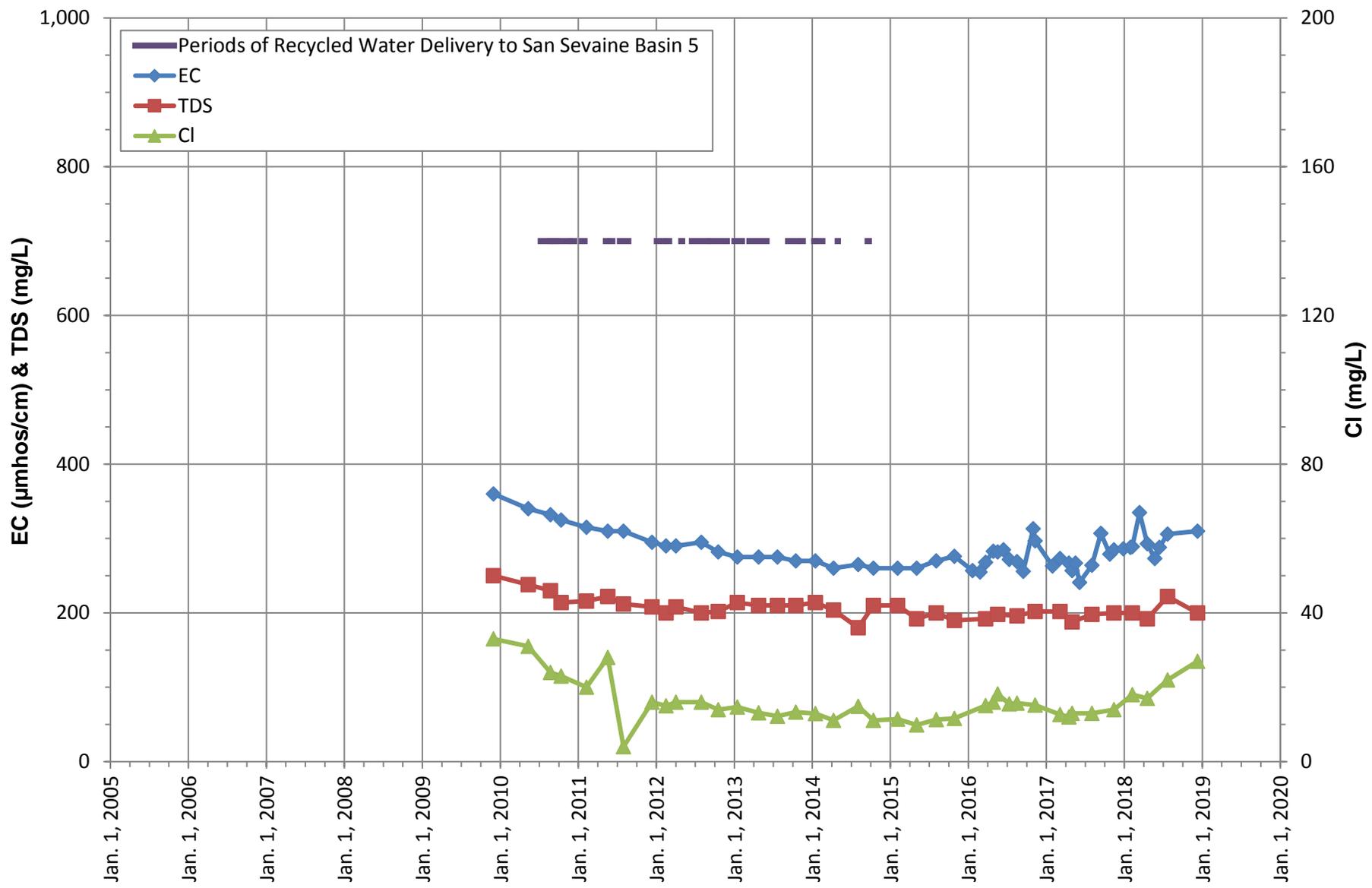
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RP3 BASINS  
Southridge JHS Well**





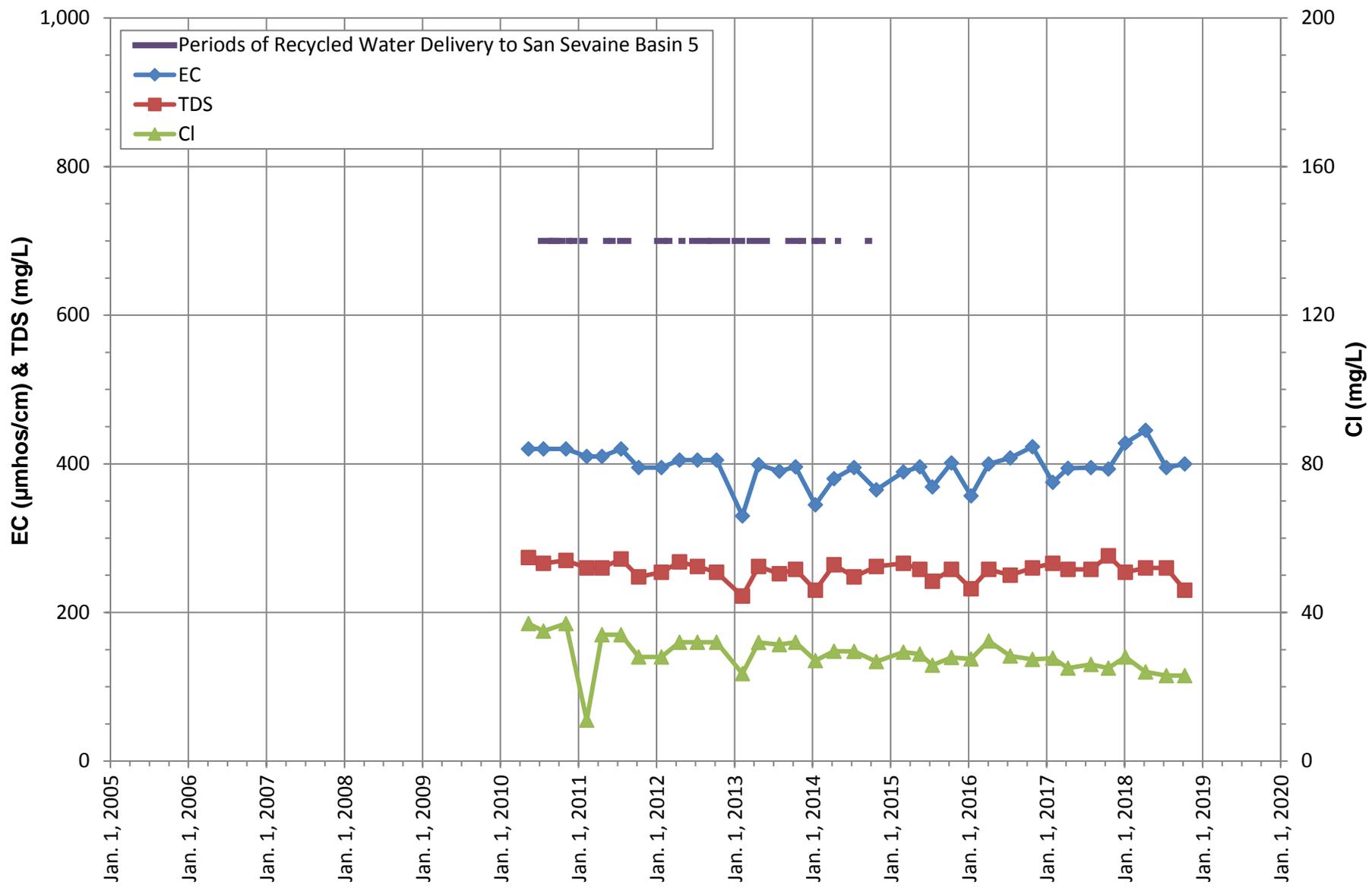
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DECLEZ BASIN  
DCZ-1/1**





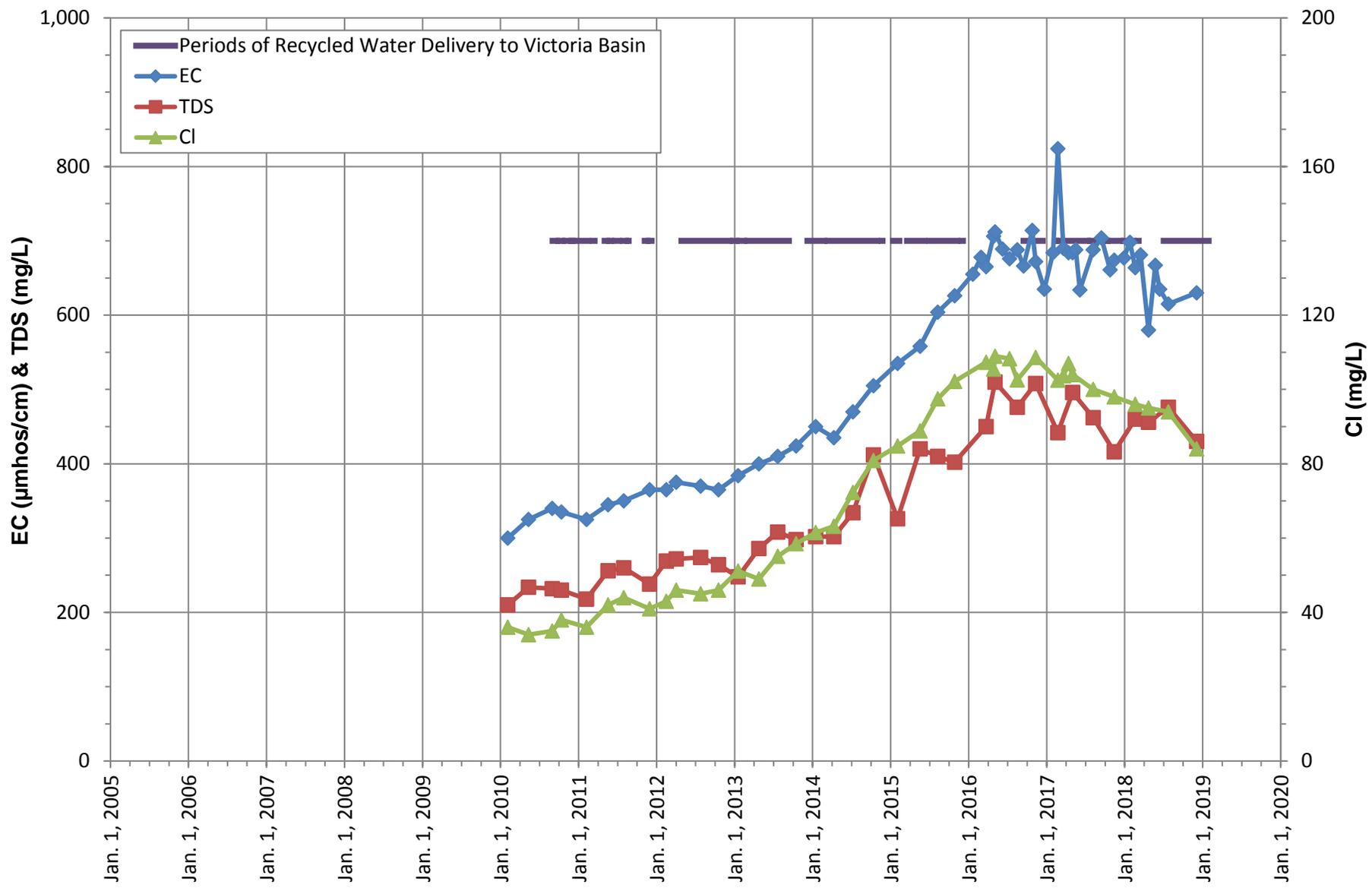
**EC, TDS, CHLORIDE TRENDS  
SAN SEVAIVE BASINS  
SS-1/1**





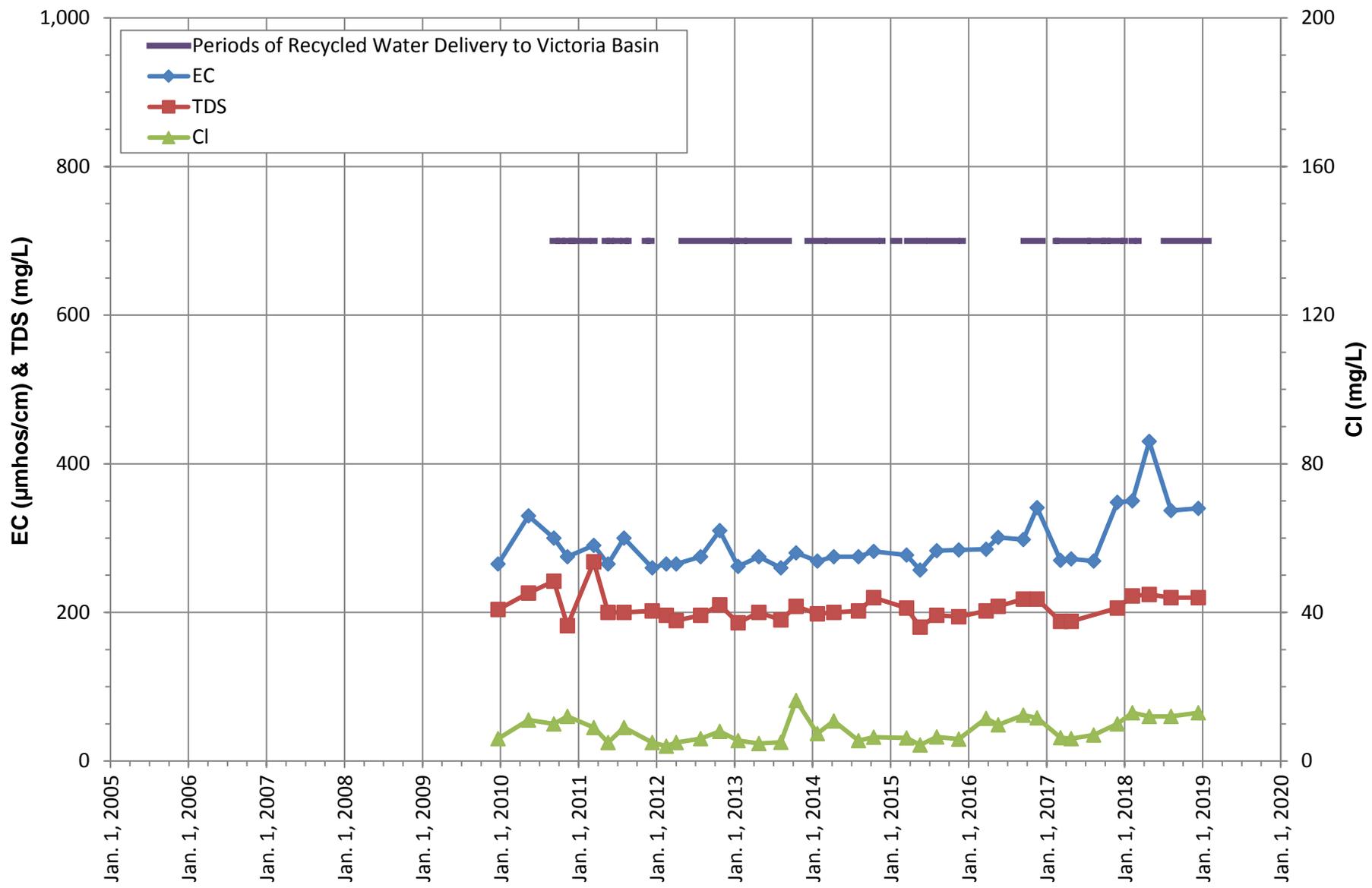
**EC, TDS, CHLORIDE TRENDS  
SAN SEVAIVE BASINS  
Unitex 91090**





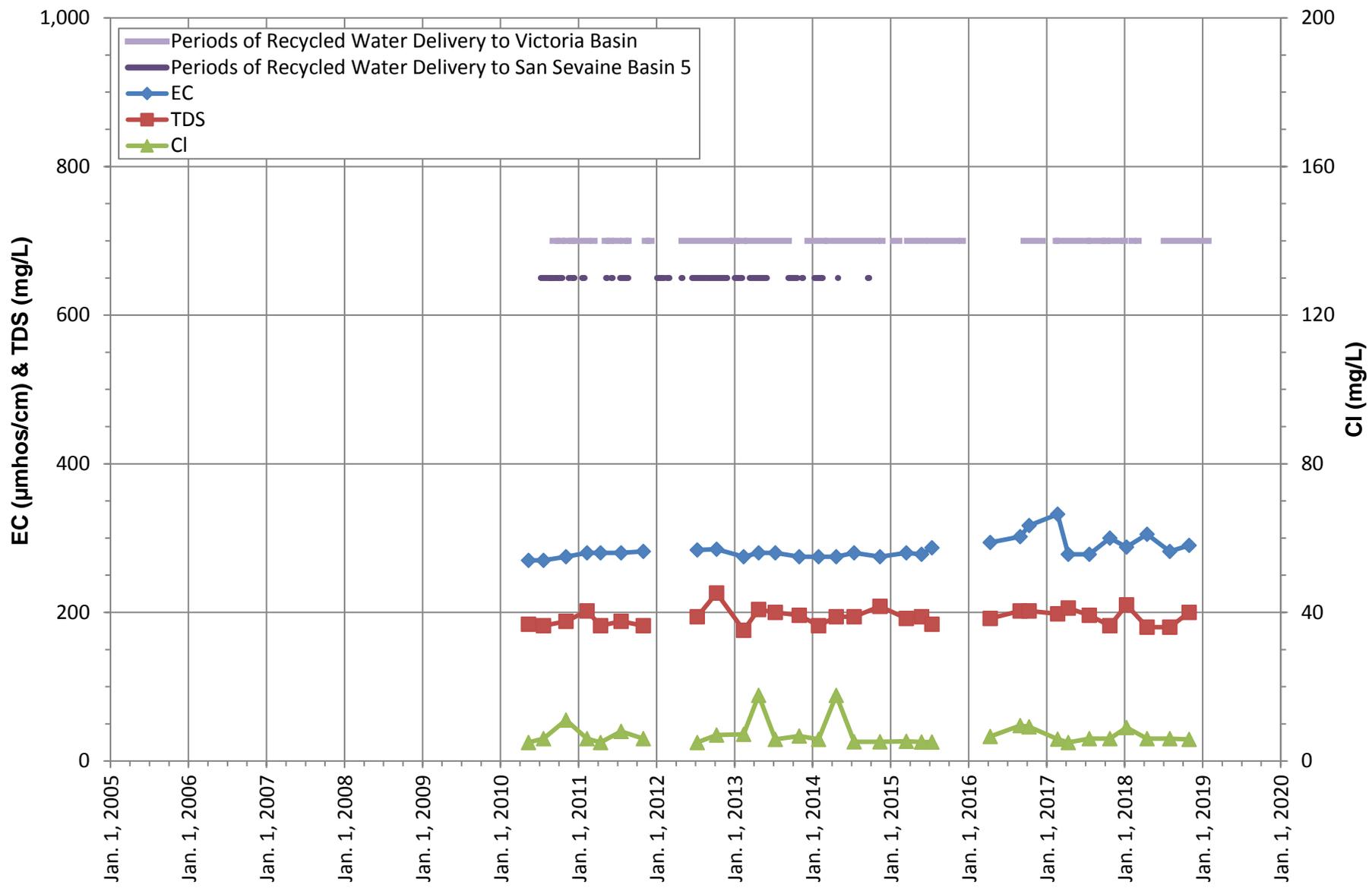
**EC, TDS, CHLORIDE TRENDS  
VICTORIA BASIN  
VCT-1/1**





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





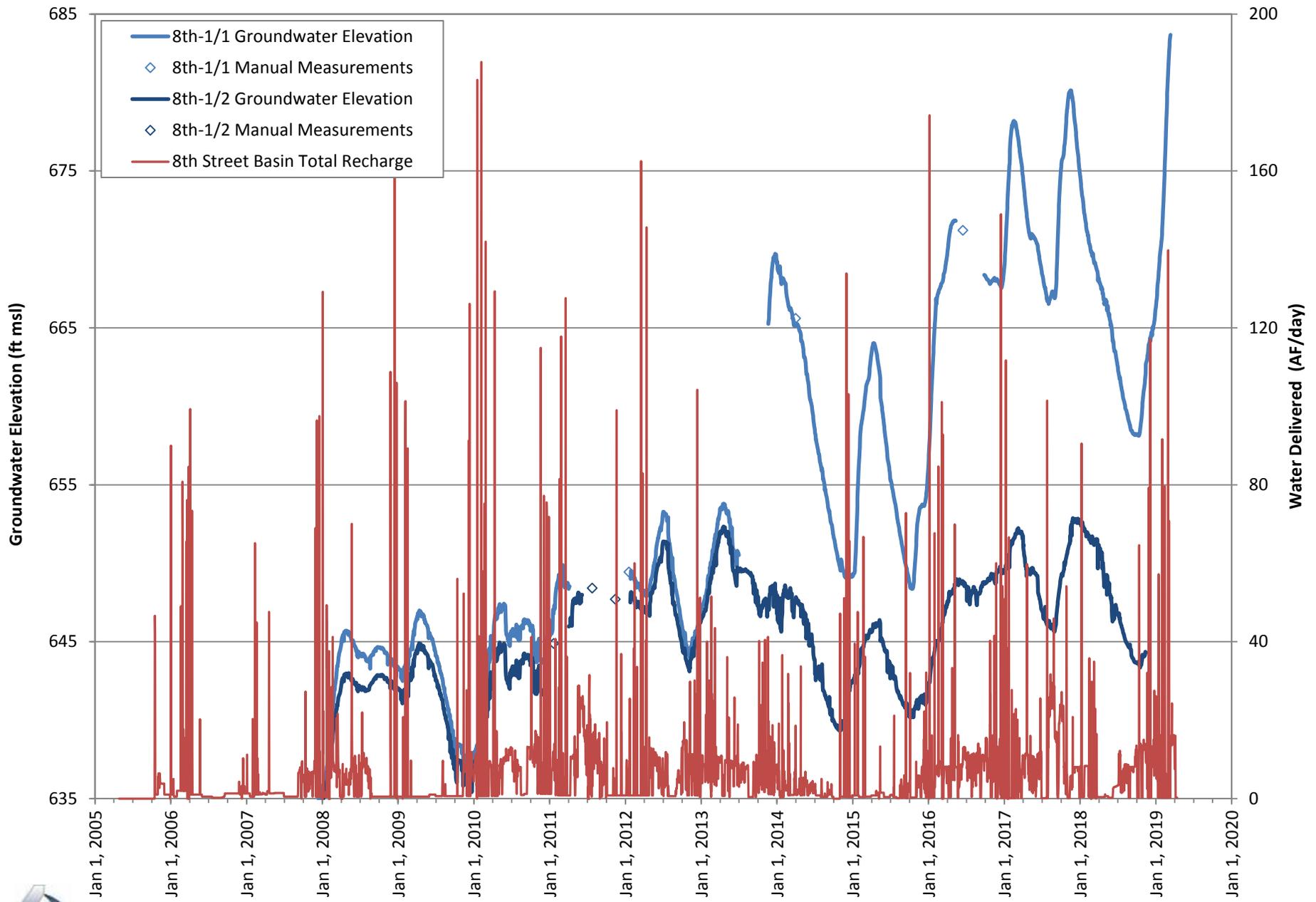
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SAN SEVAÏNE & VICTORIA BASINS  
CVWD Well No. 39**



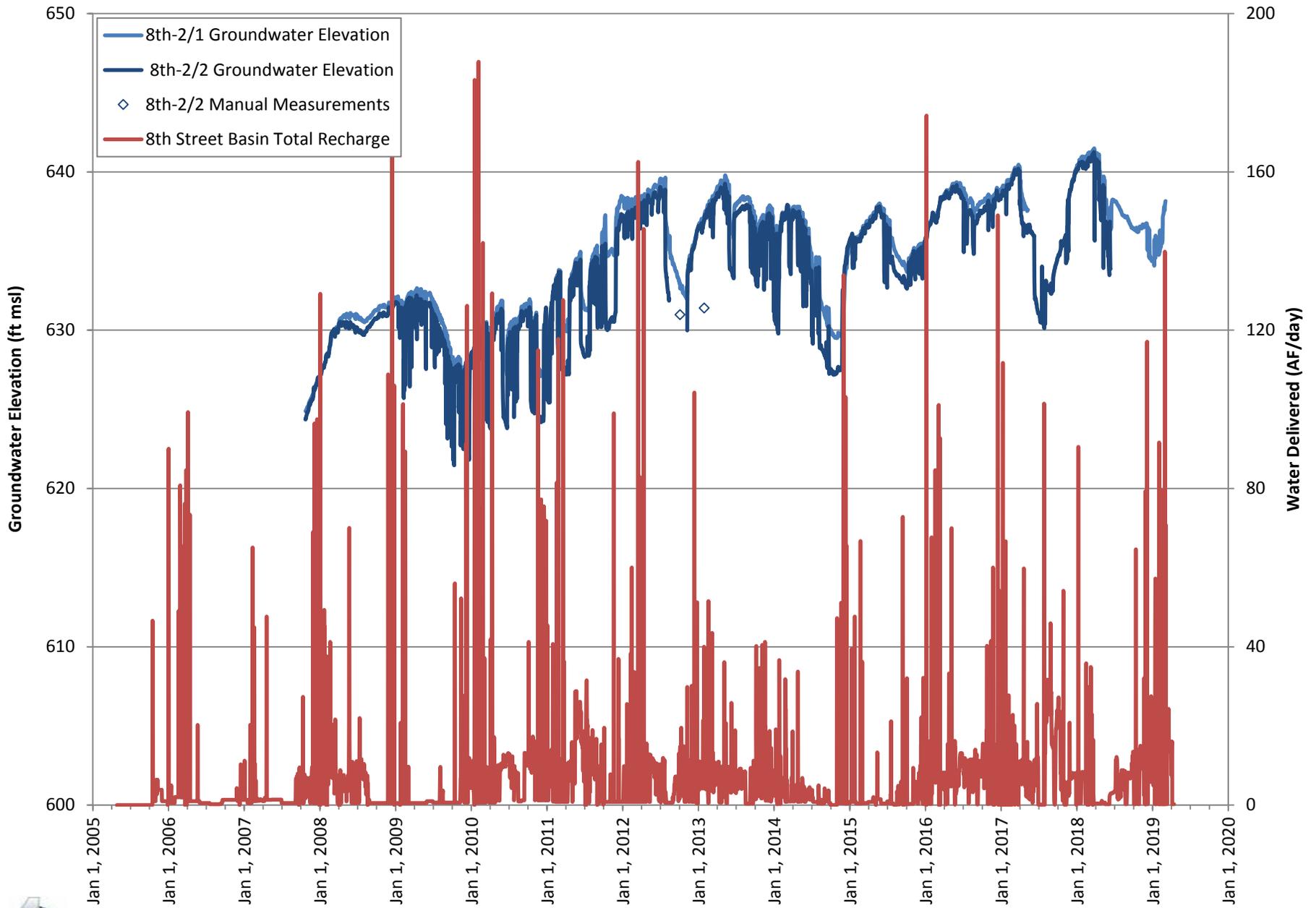
## APPENDIX D

### MONITORING WELL HYDROGRAPHS

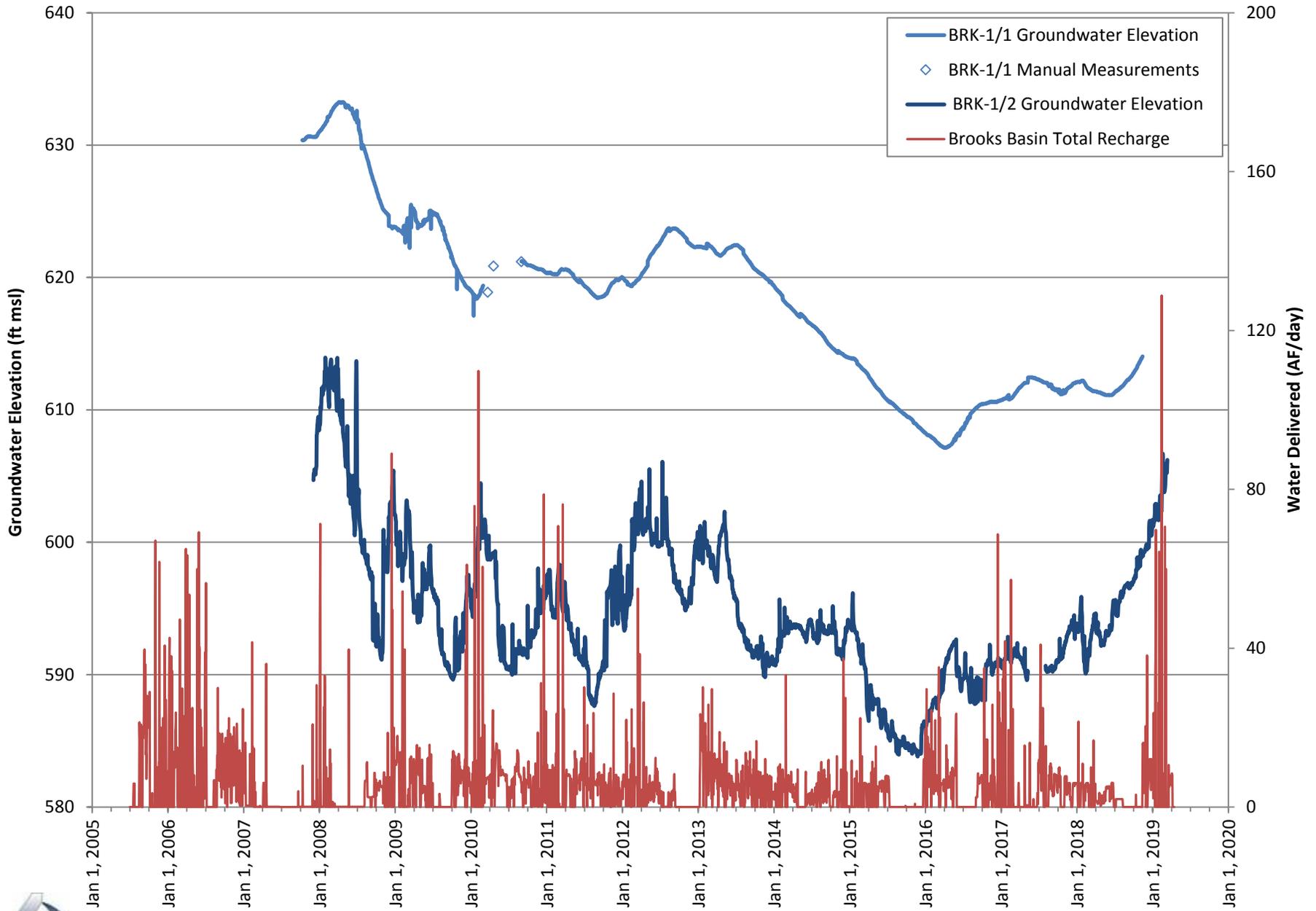
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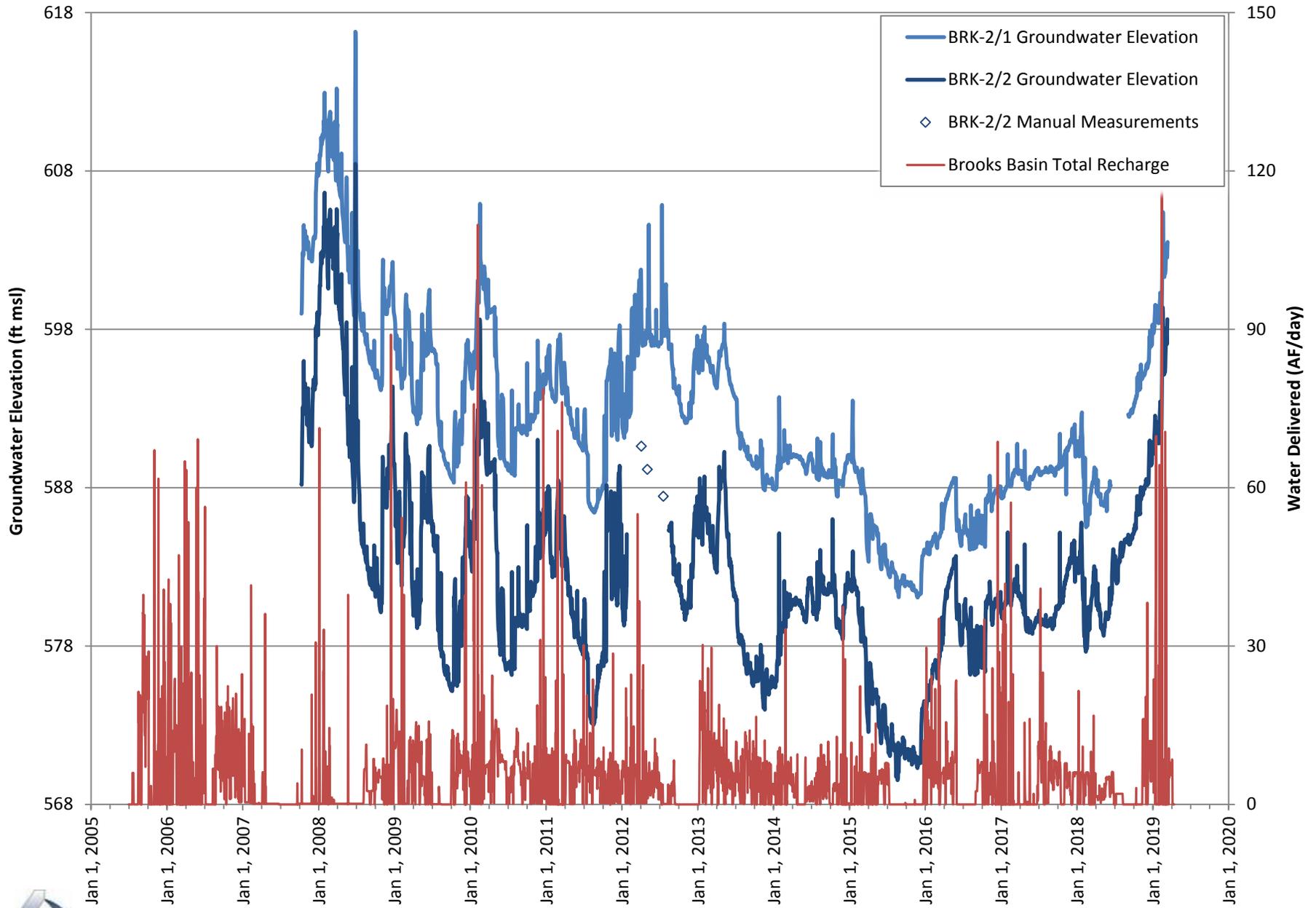
**HYDROGRAPH  
MW 8TH-1/1 & 8TH-1/2**



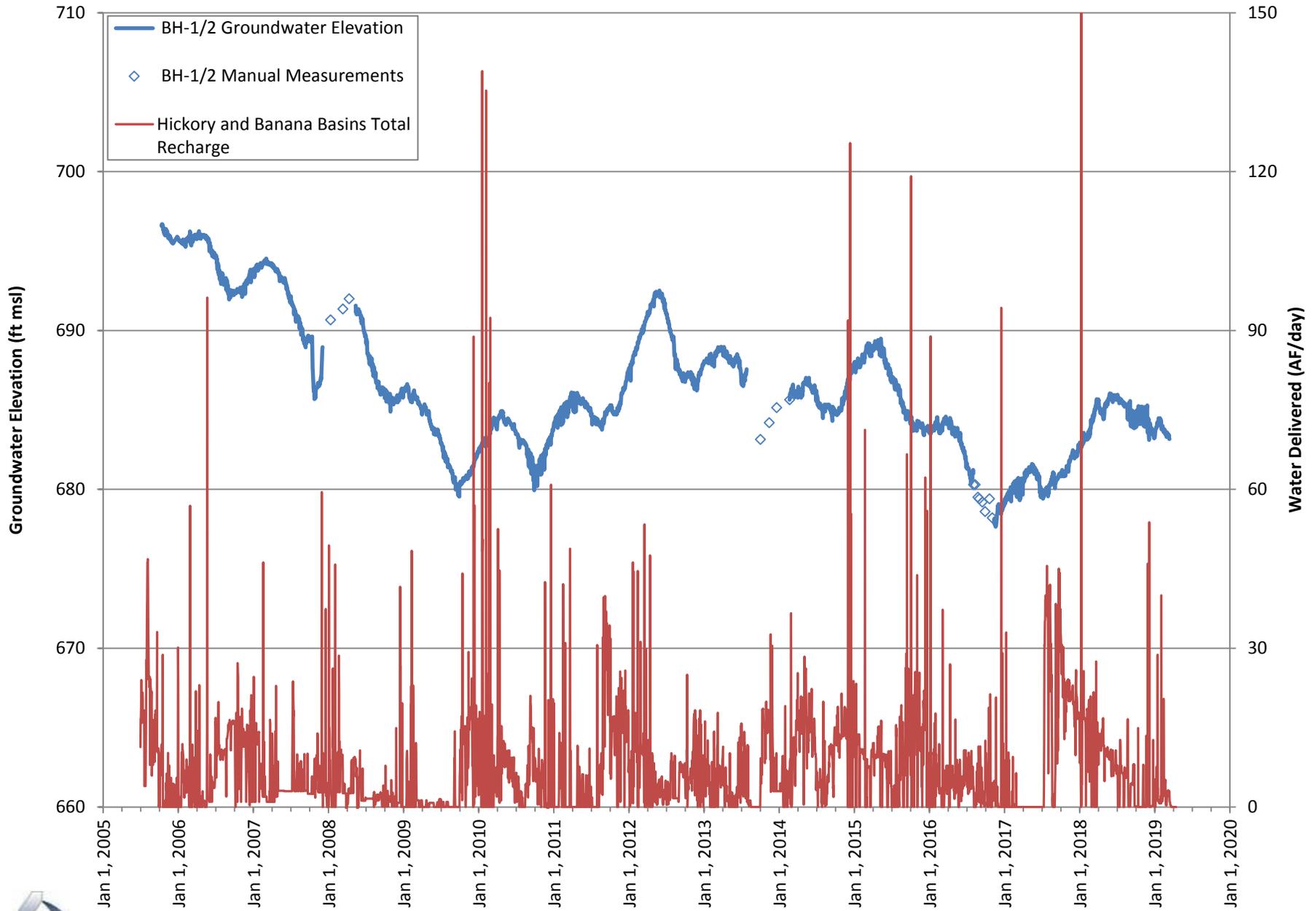
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**MW 8TH-2/1 & 8TH-2/2**



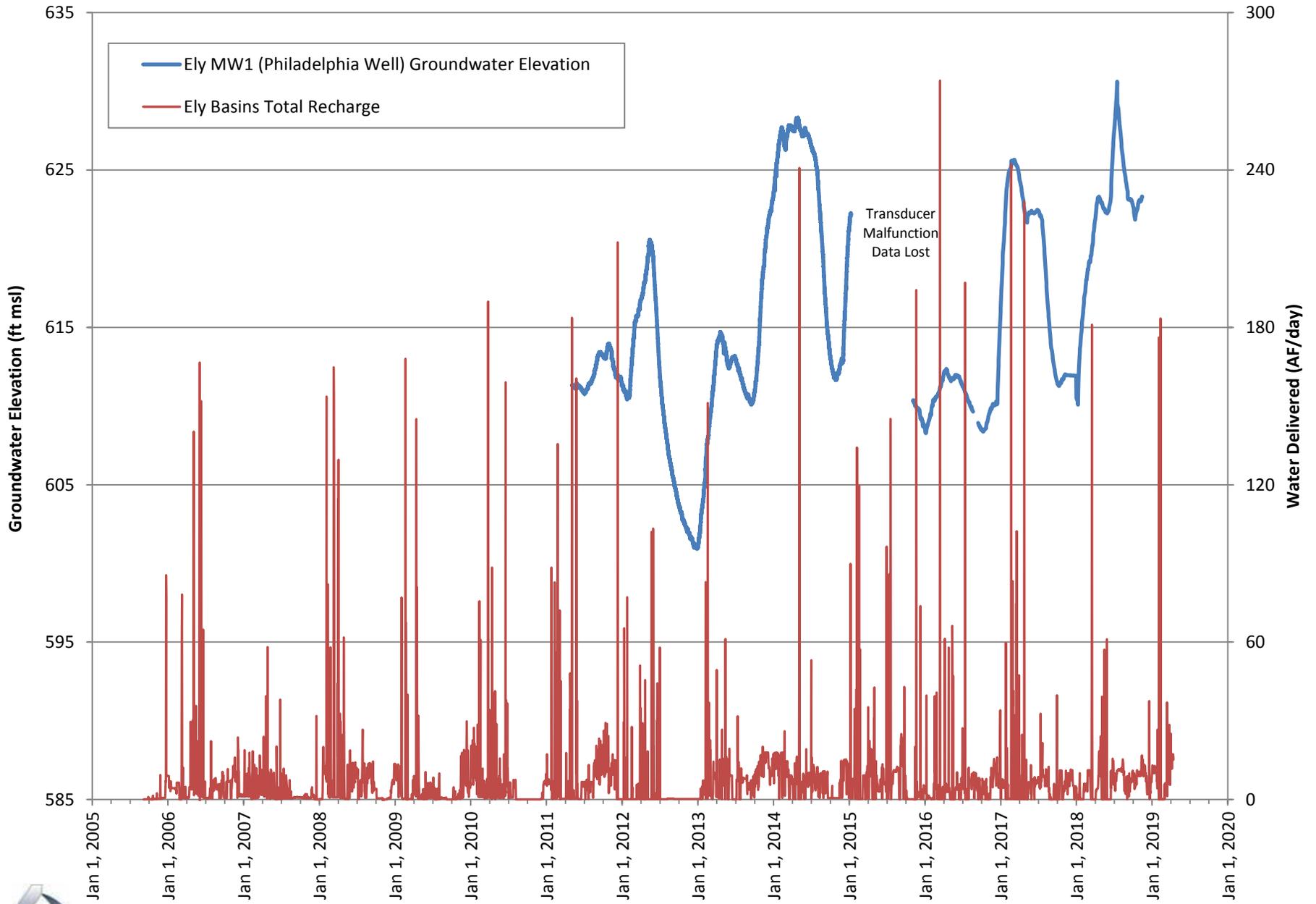
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MW BRK-1/1 & BRK-1/2**



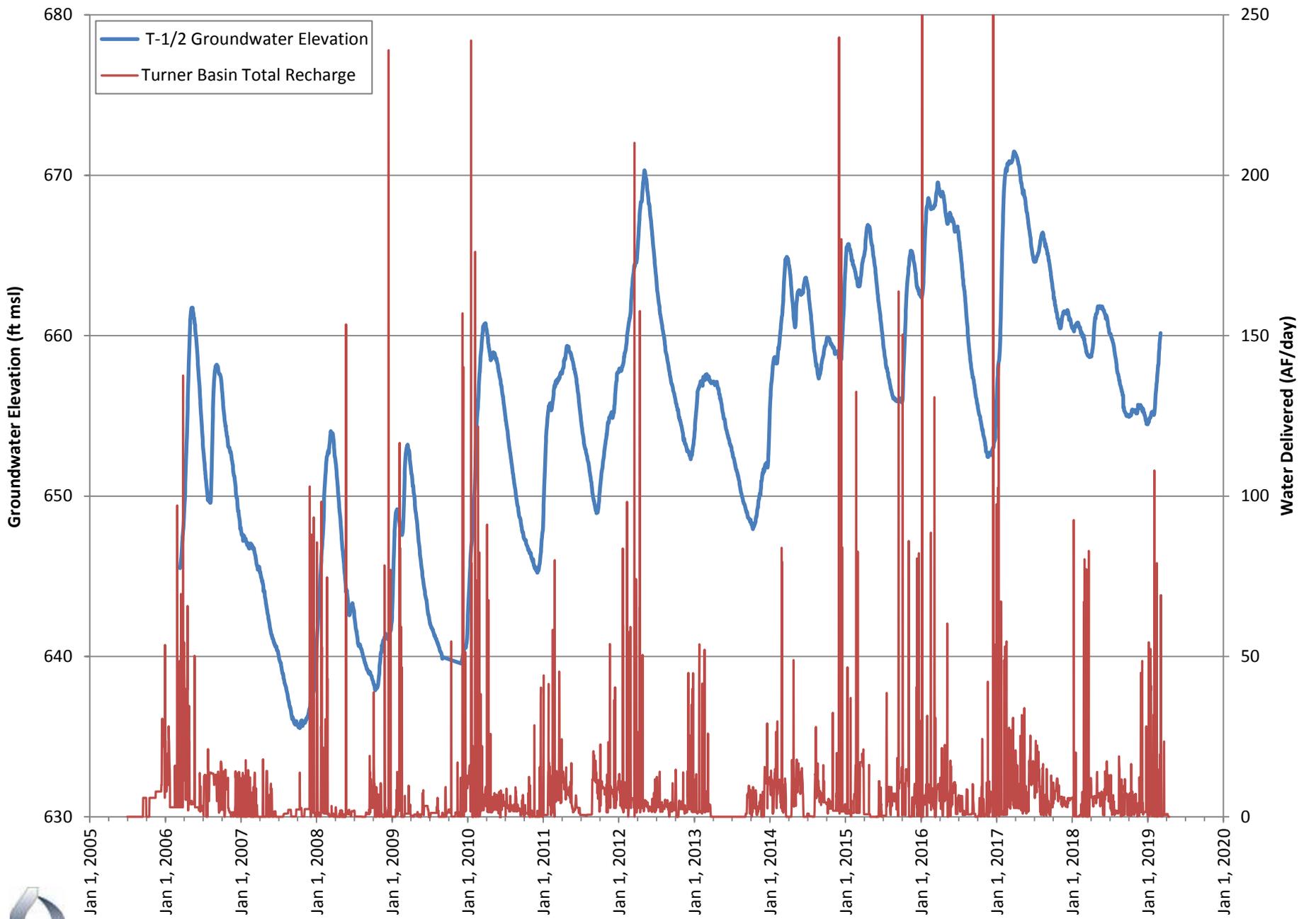
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MW BRK-2/1 & BRK-2/2**



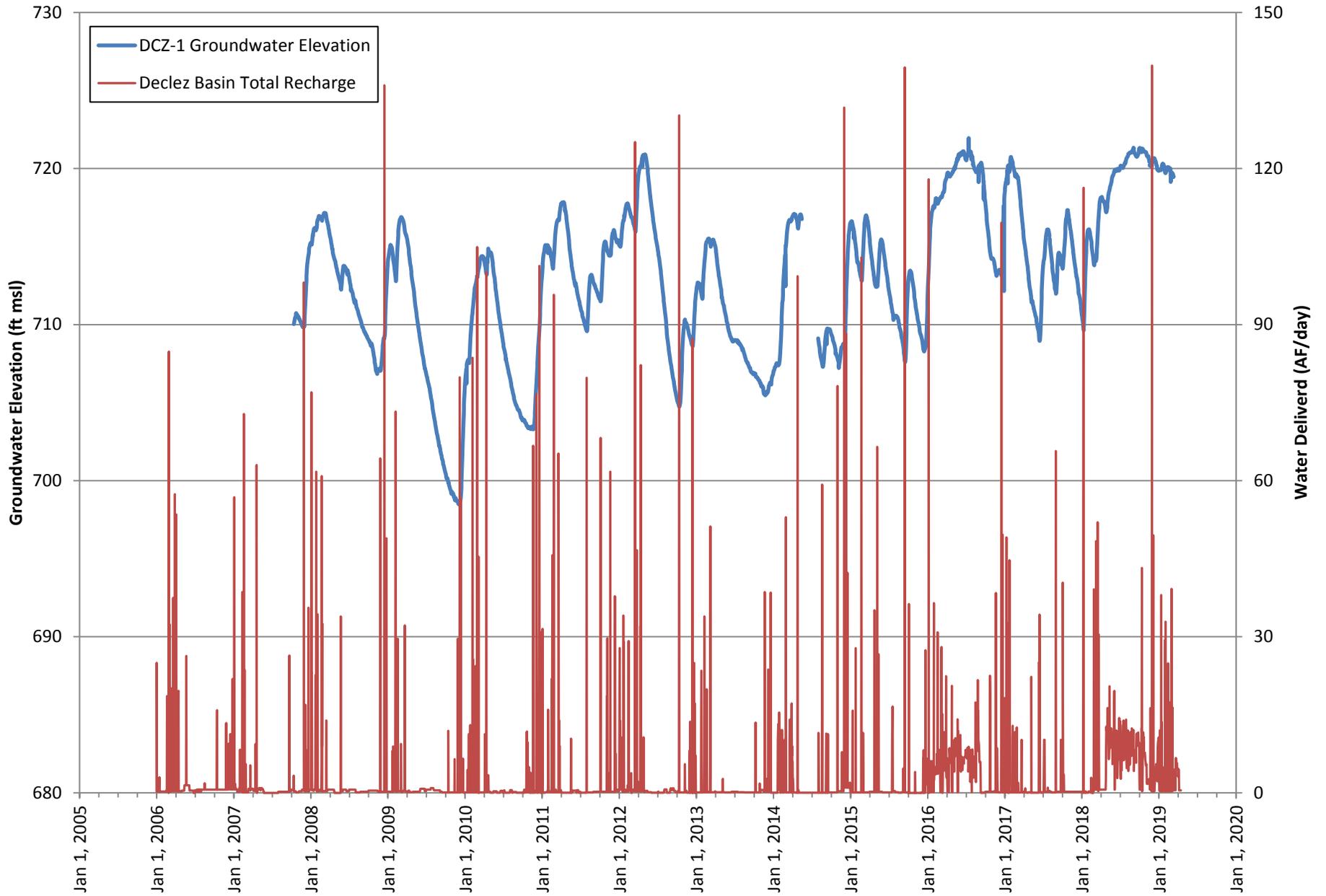
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MW BH-1/2**



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

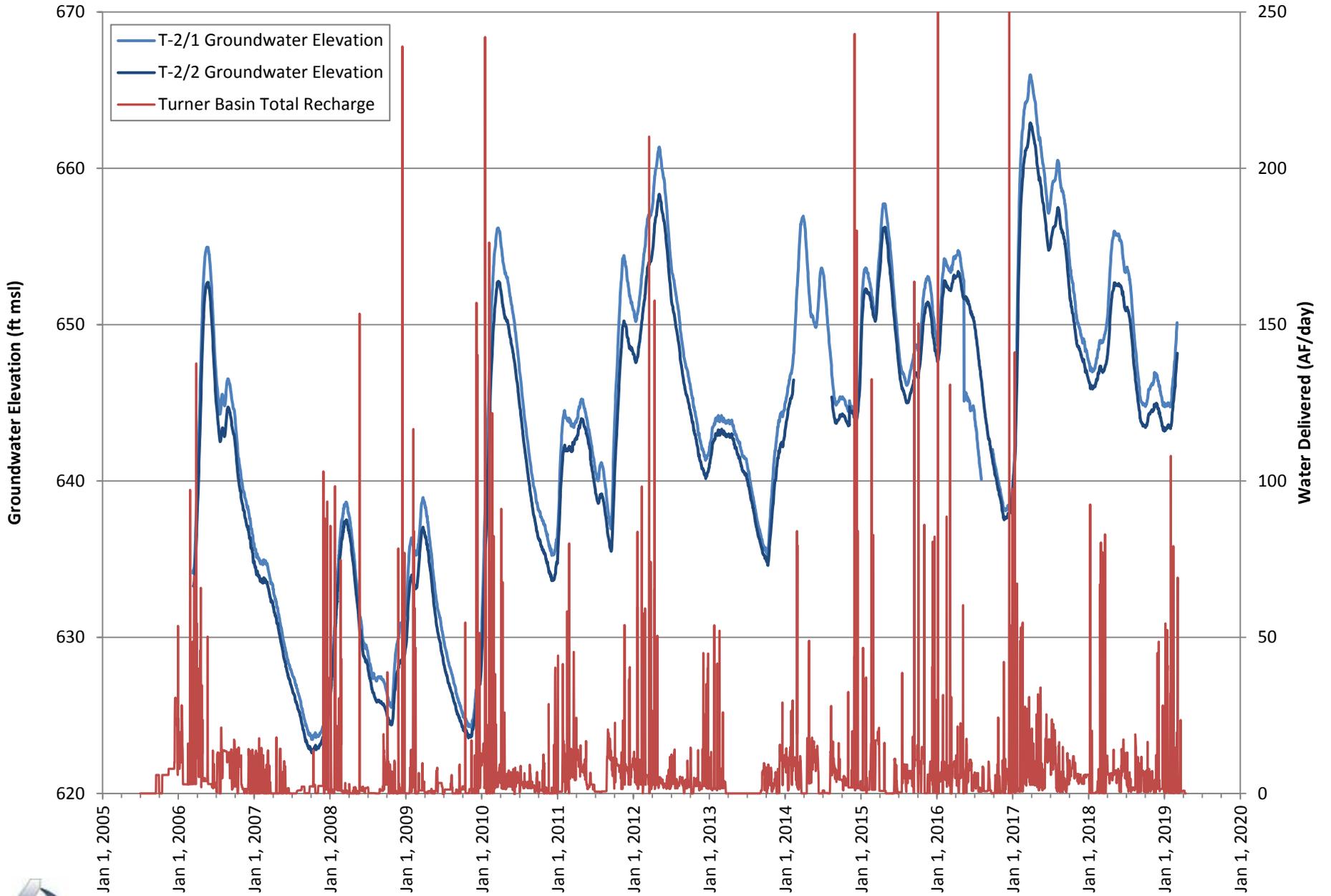


**HYDROGRAPH  
MW TRN-1/2**

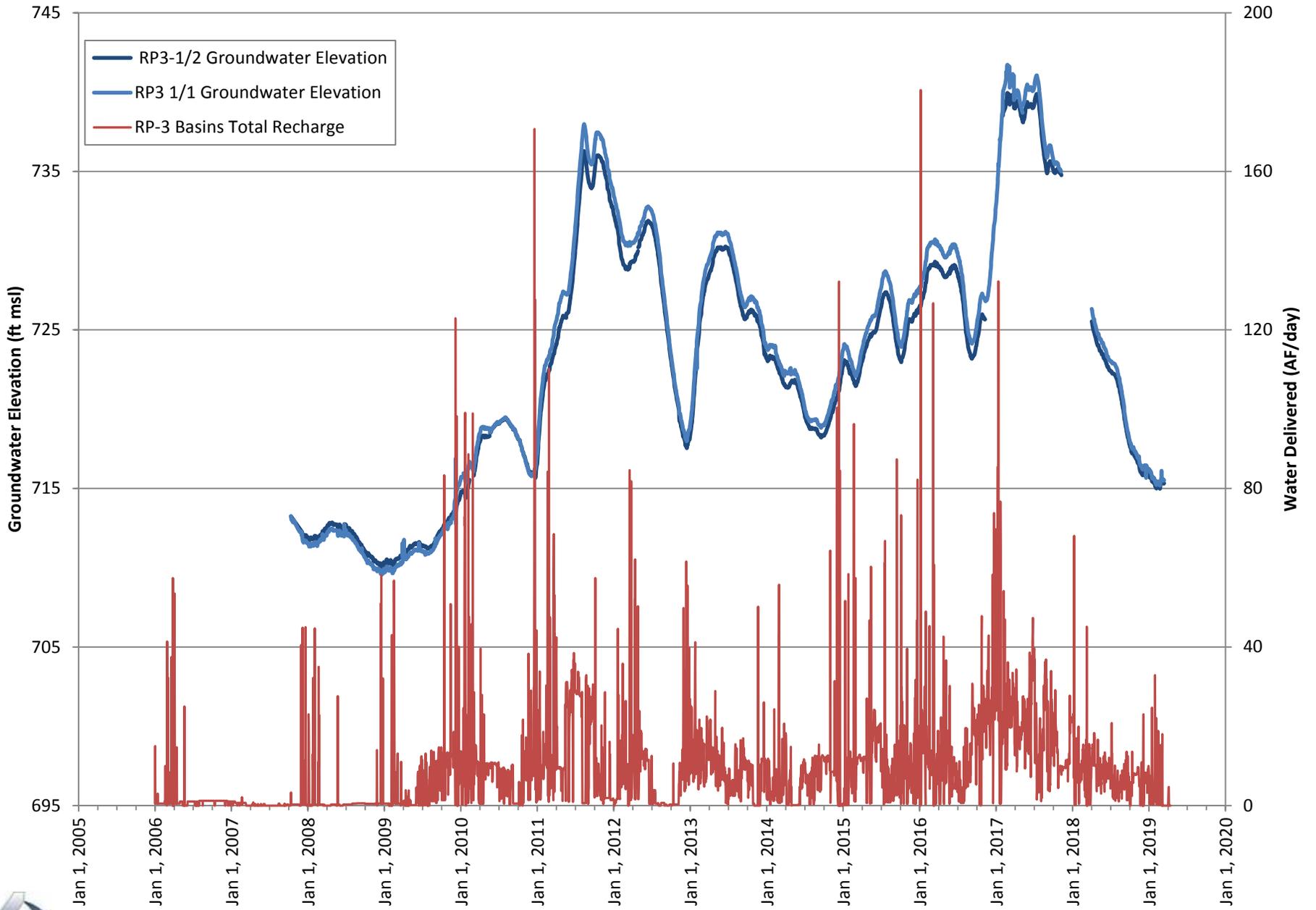


**HYDROGRAPH  
MW DCZ-1**

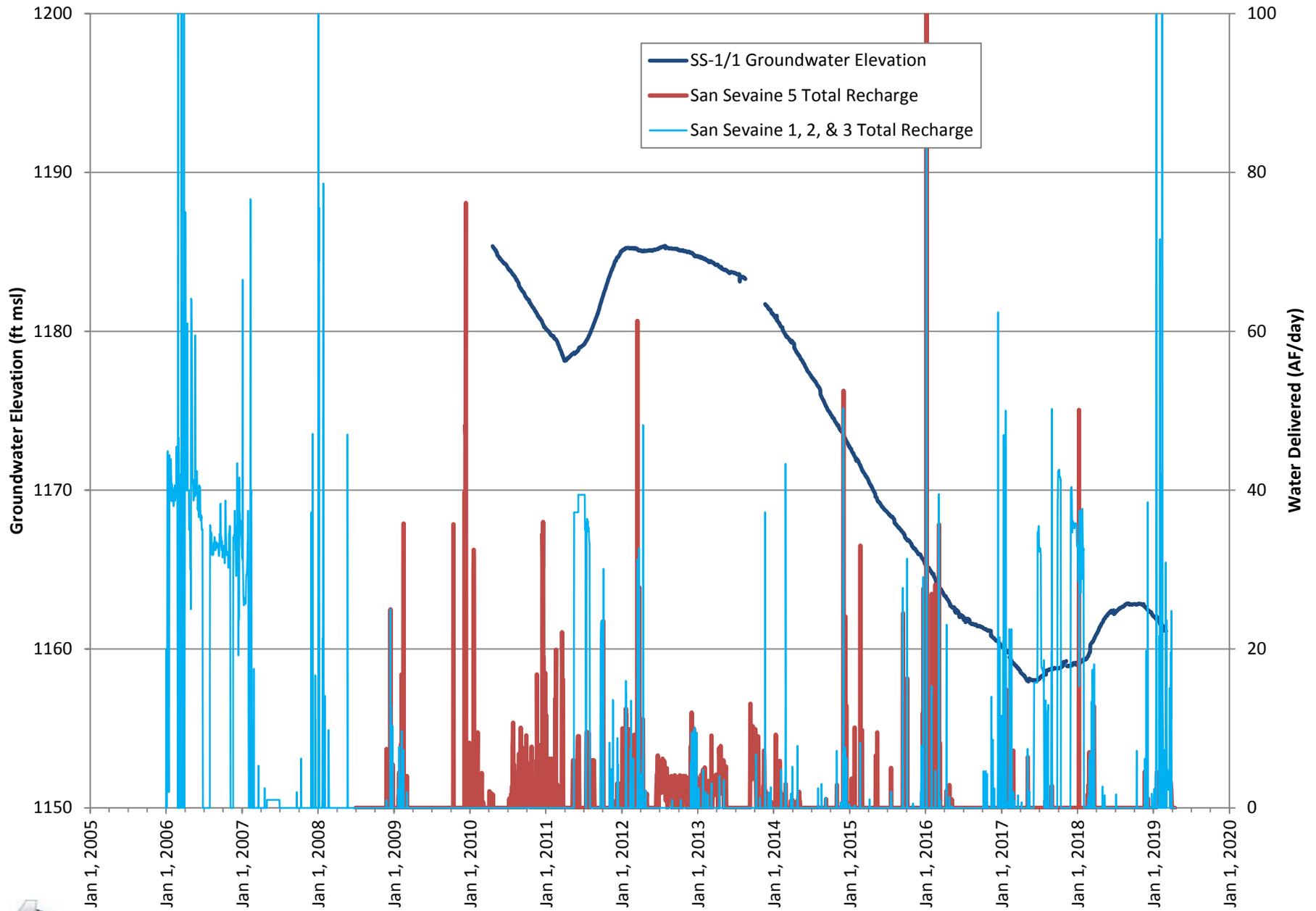




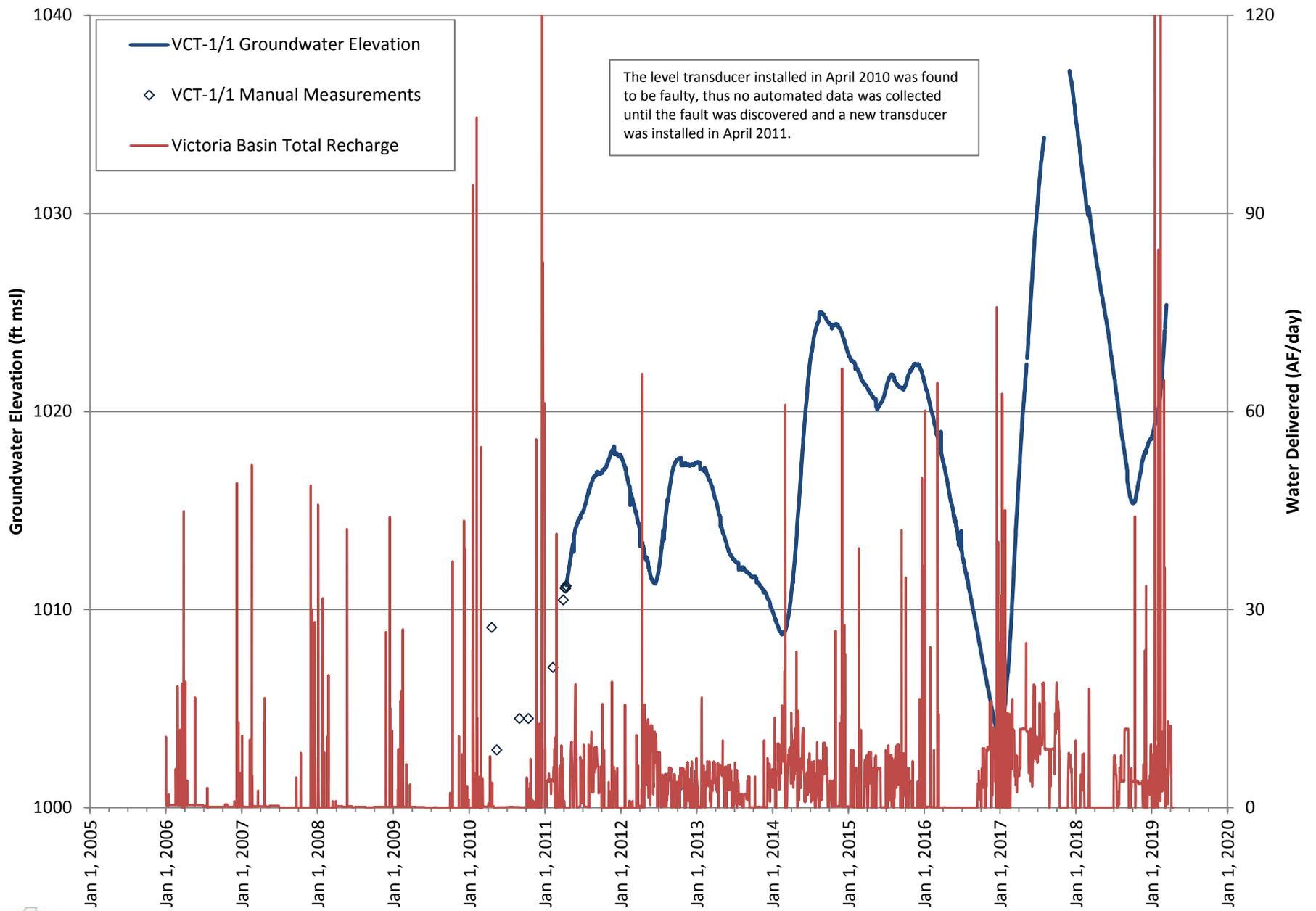
**HYDROGRAPH**  
**MW TRN-2/1 & TRN-2/2**



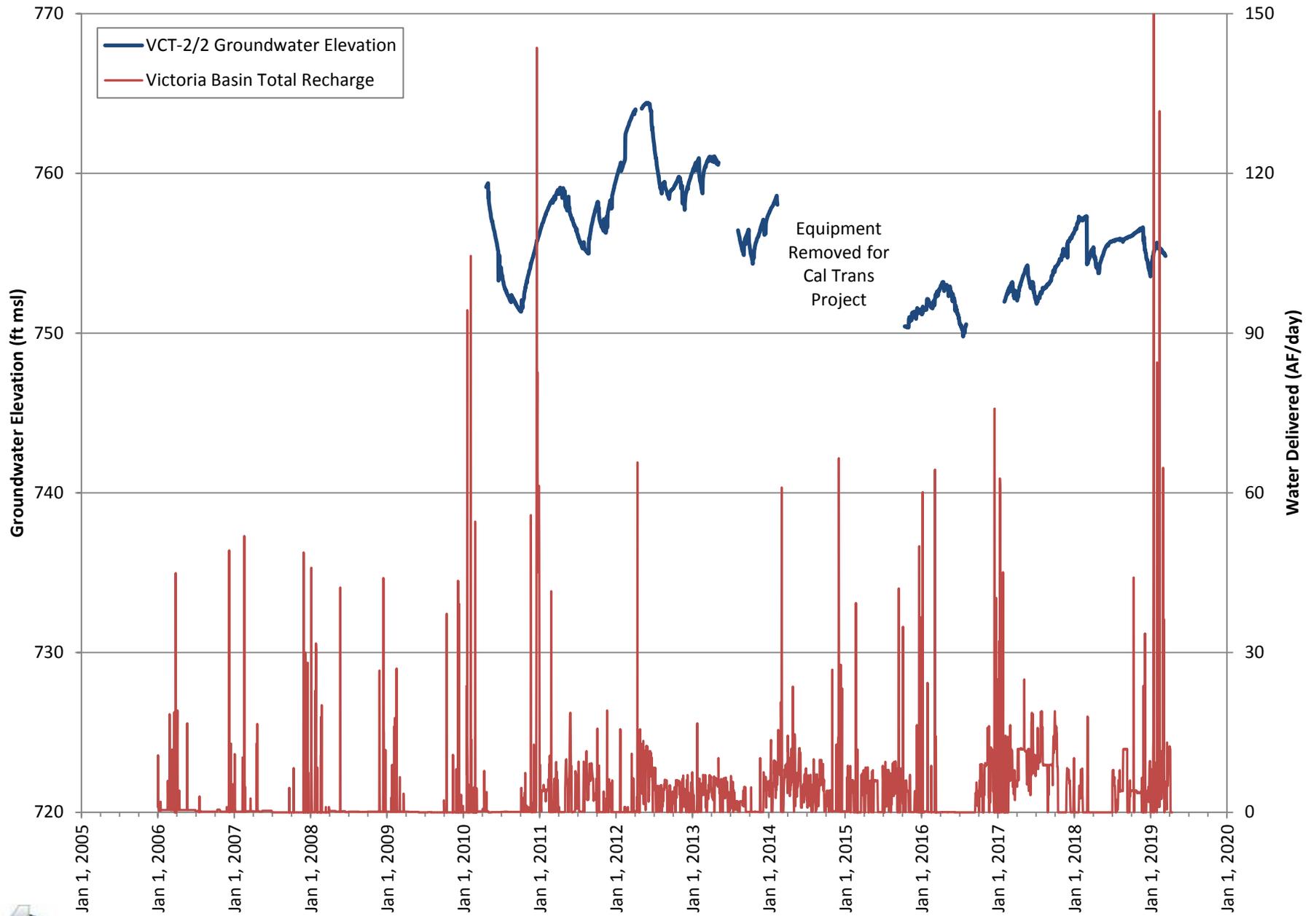
**HYDROGRAPH  
MW RP3-1/1 & RP3-1/2**



**HYDROGRAPH  
MW SS-1/1**



**HYDROGRAPH  
MW VCT-1/1**

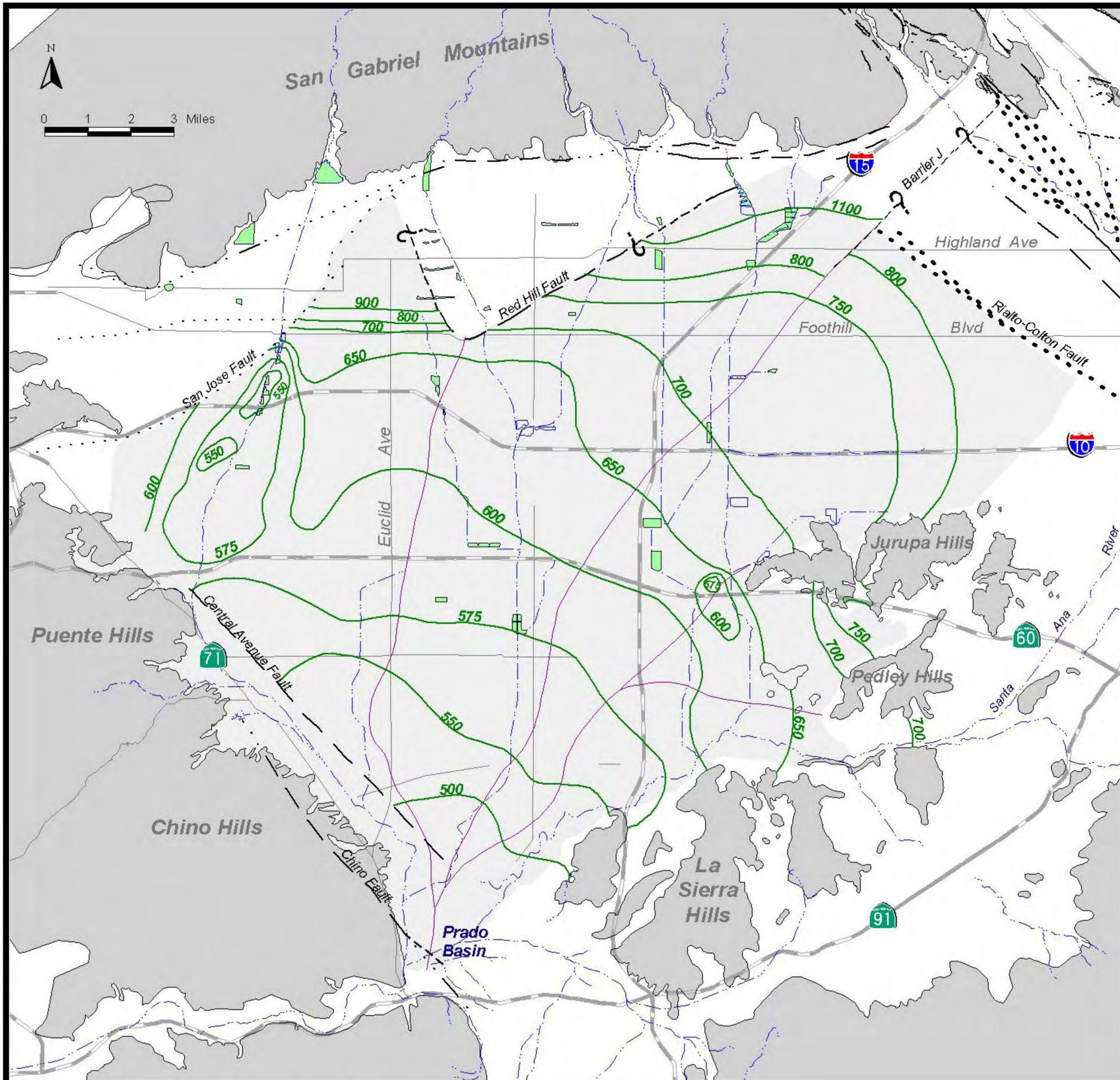


**HYDROGRAPH  
MW VCT-2/2**

## APPENDIX E

### GROUNDWATER ELEVATION CONTOUR MAPS

---



Optimum Basin Management Program  
Chino Basin Watermaster

Legend

- Fall 1997 Groundwater Elevation (ft-msl)
- Fault
  - Dashed Where Approximate
  - Dotted Where Concealed
  - Queried Where Uncertain
  - Large Dots Where Groundwater Barrier (Suspected Fault)
- Rivers & Streams
- Management Zone Boundary
- Hydrologic Chino Basin
- Recharge Basins
- Bedrock

Management Zone Index Map

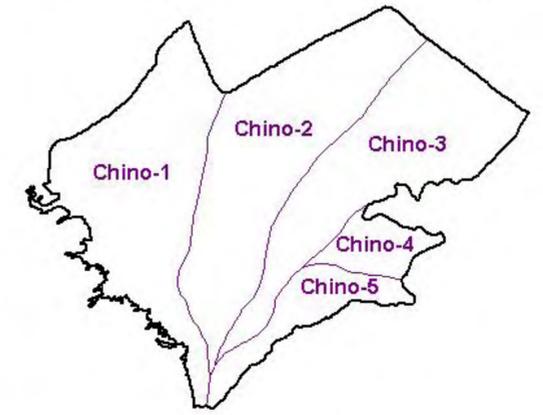
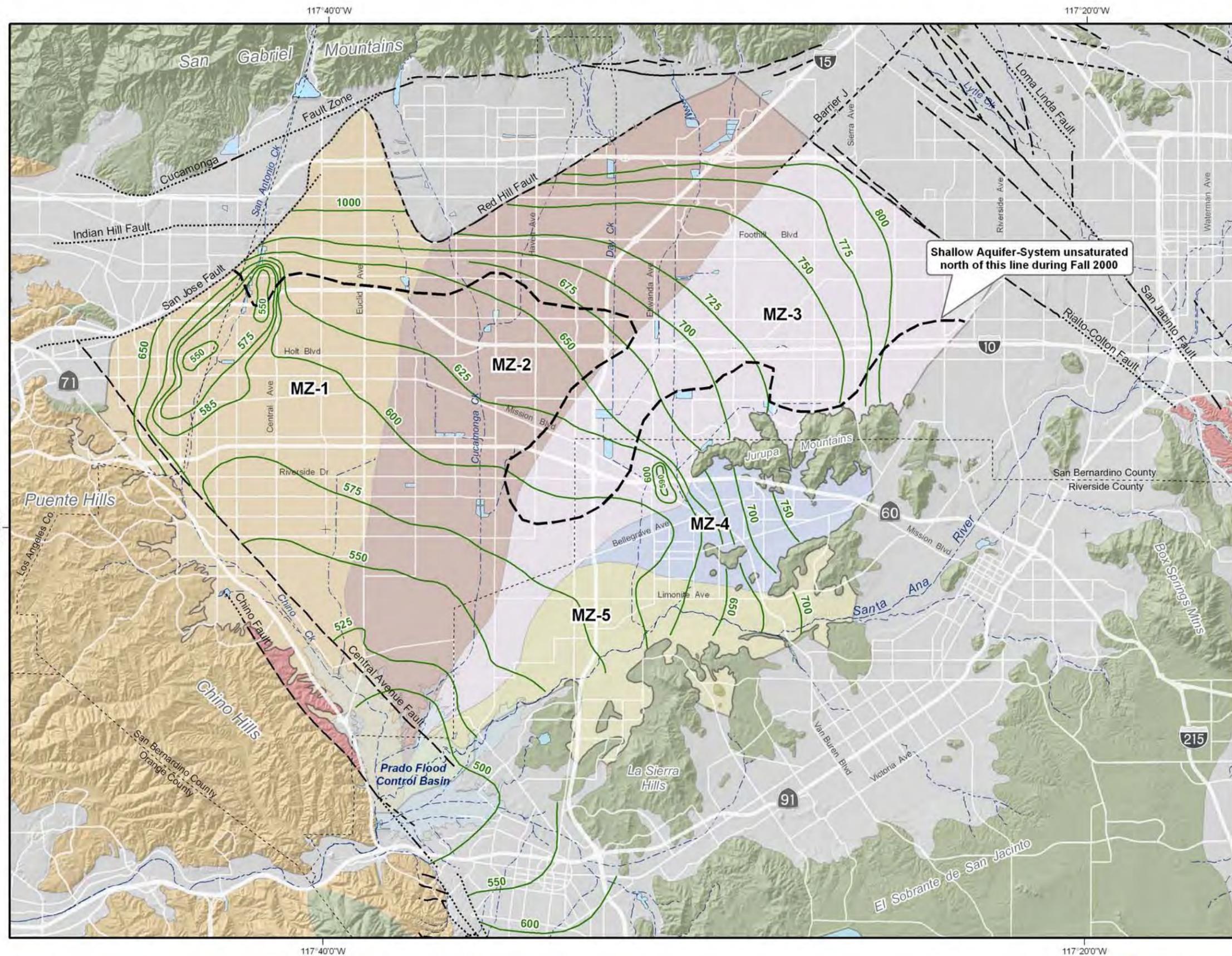


Figure 2-19  
Fall 1997  
Groundwater Elevation Map

**WE** WILDERMUTH ENVIRONMENTAL, INC.

Date: August 19, 1999



### Main Features

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

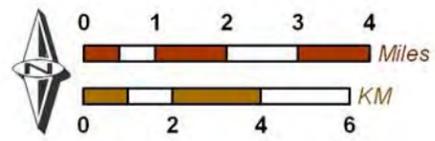
### Other Features

- Flood Control and Conservation Basins



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<http://www.wildermuthenvironmental.com>

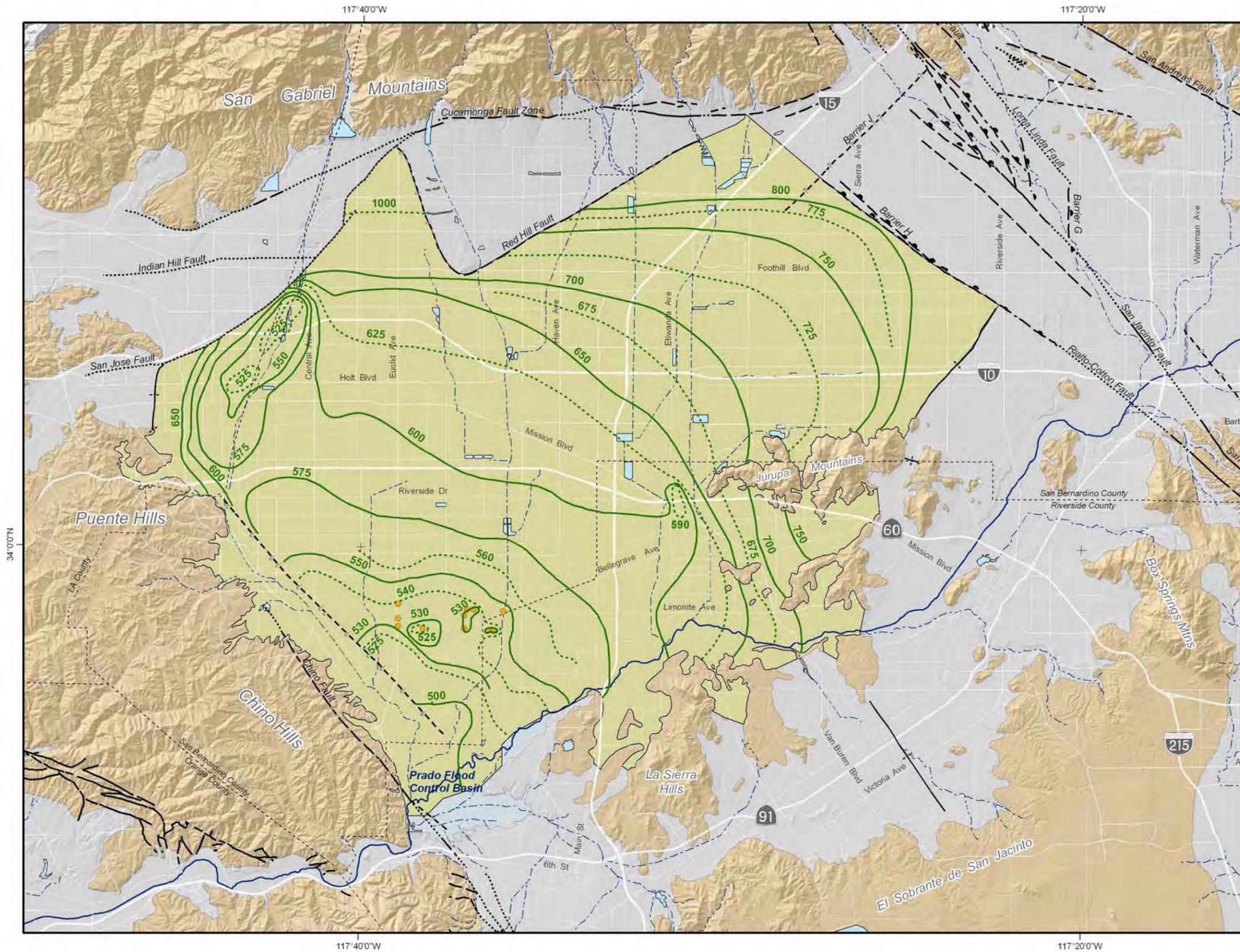
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 Update: WEL  
 Date: 20050714  
 File: Figure 8-03.mxd



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

**Groundwater Elevation Map  
 Fall 2000**

**Figure 8-3**



### Main Features

- 800 Groundwater Elevation Contours (feet above mean sea-level)
- 775
- Chino-I Desalter Well
- Chino Basin Hydrologic Boundary

### Geology

**Water-Bearing Sediments**

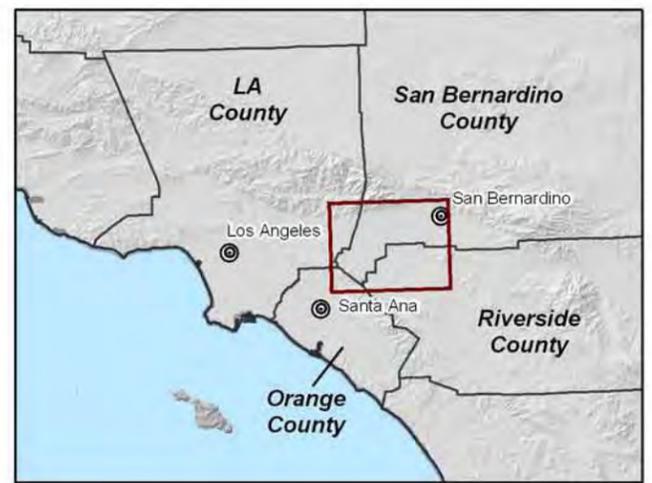
- Quaternary Alluvium

**Consolidated Bedrock**

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

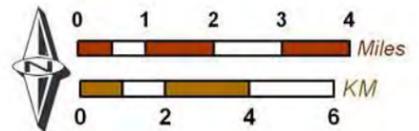
**Faults & Groundwater Divides**

- Location Certain
- Location Approximate
- Location Concealed
- Location Uncertain
- Groundwater Divide



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 Date: 20050627  
 File: Figure\_3-6.mxd

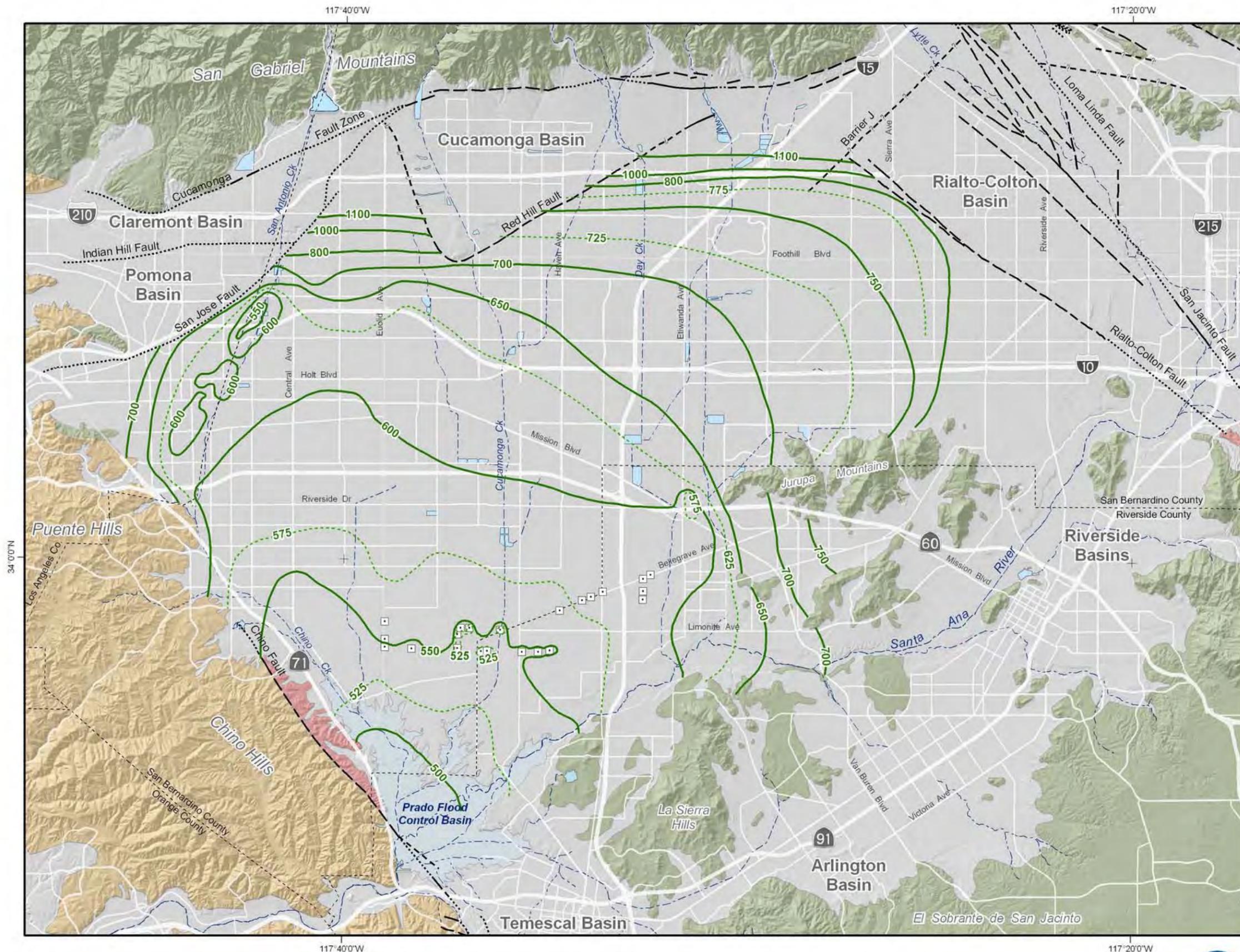


**State of the Basin Report -- 2004**  
 Groundwater Basin Operation and Response



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

**Figure 3-6**



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

Other Features

- Chino Desalter Well
- ☾ Flood Control and Conservation Basins

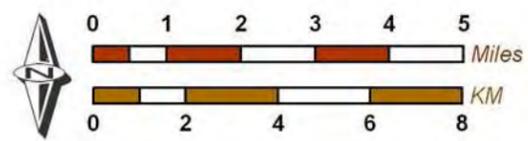
Geology

- 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



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

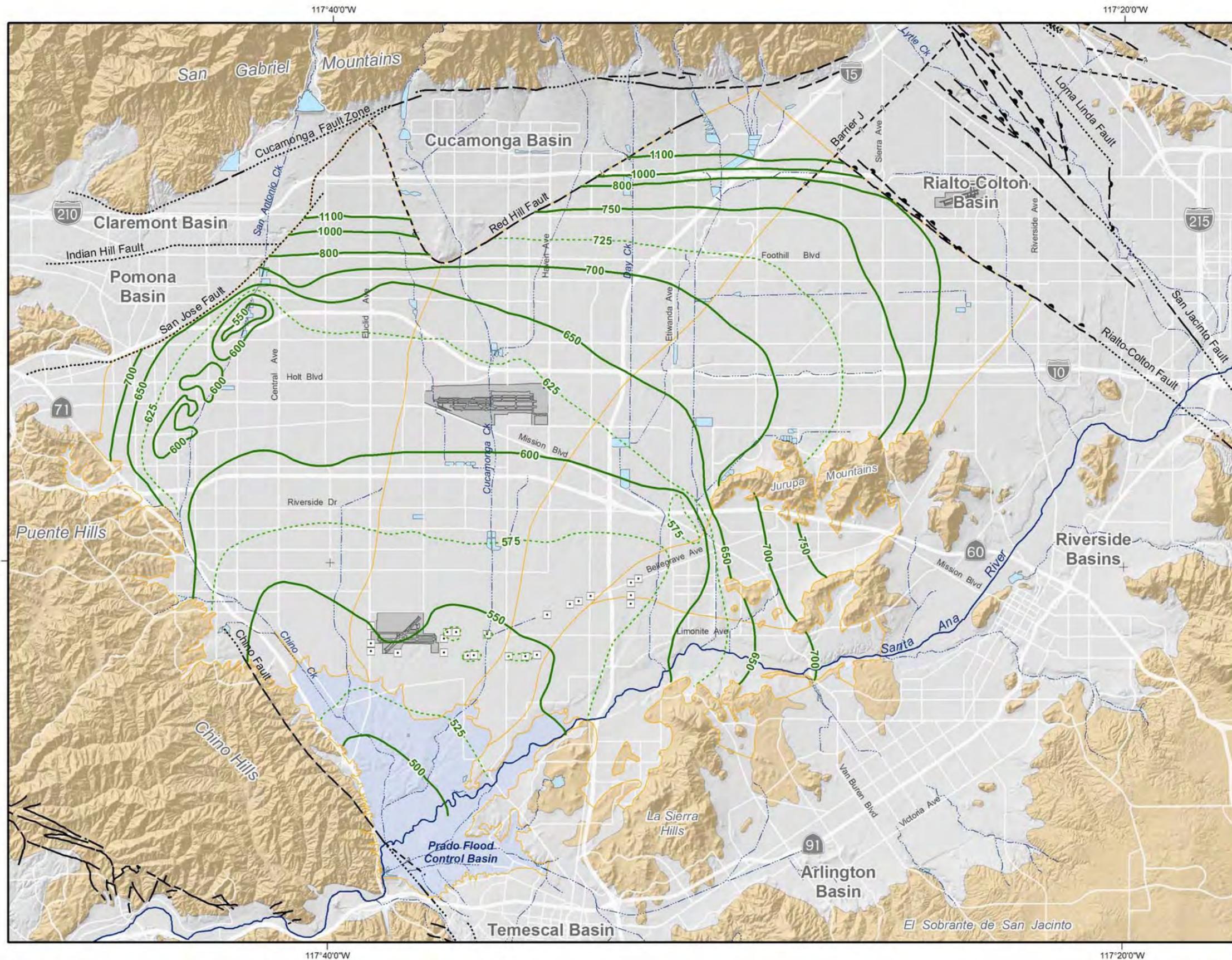


**CHINO BASIN WATERMASTER**  
 Success in Basin Management

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

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

**Figure 2-7a**



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

**Other Features**

Management Zone Boundary  
 Chino East  
 Chino South

Chino Desalter Well  
 Streams & Flood Control Channels  
 Flood Control & Conservation Basins

**Geology**

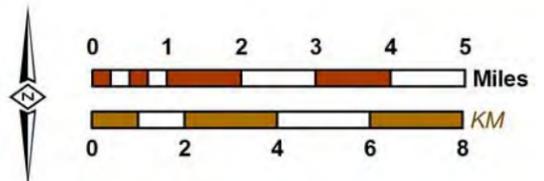
**Water-Bearing Sediments**  
 Quaternary Alluvium  
**Consolidated Bedrock**  
 Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

**Faults**  
 Location Certain      Location Concealed  
 Location Approximate      Location Uncertain



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Author: ETL/CML  
 Date: 20090401  
 File: Figure\_3-19.mxd

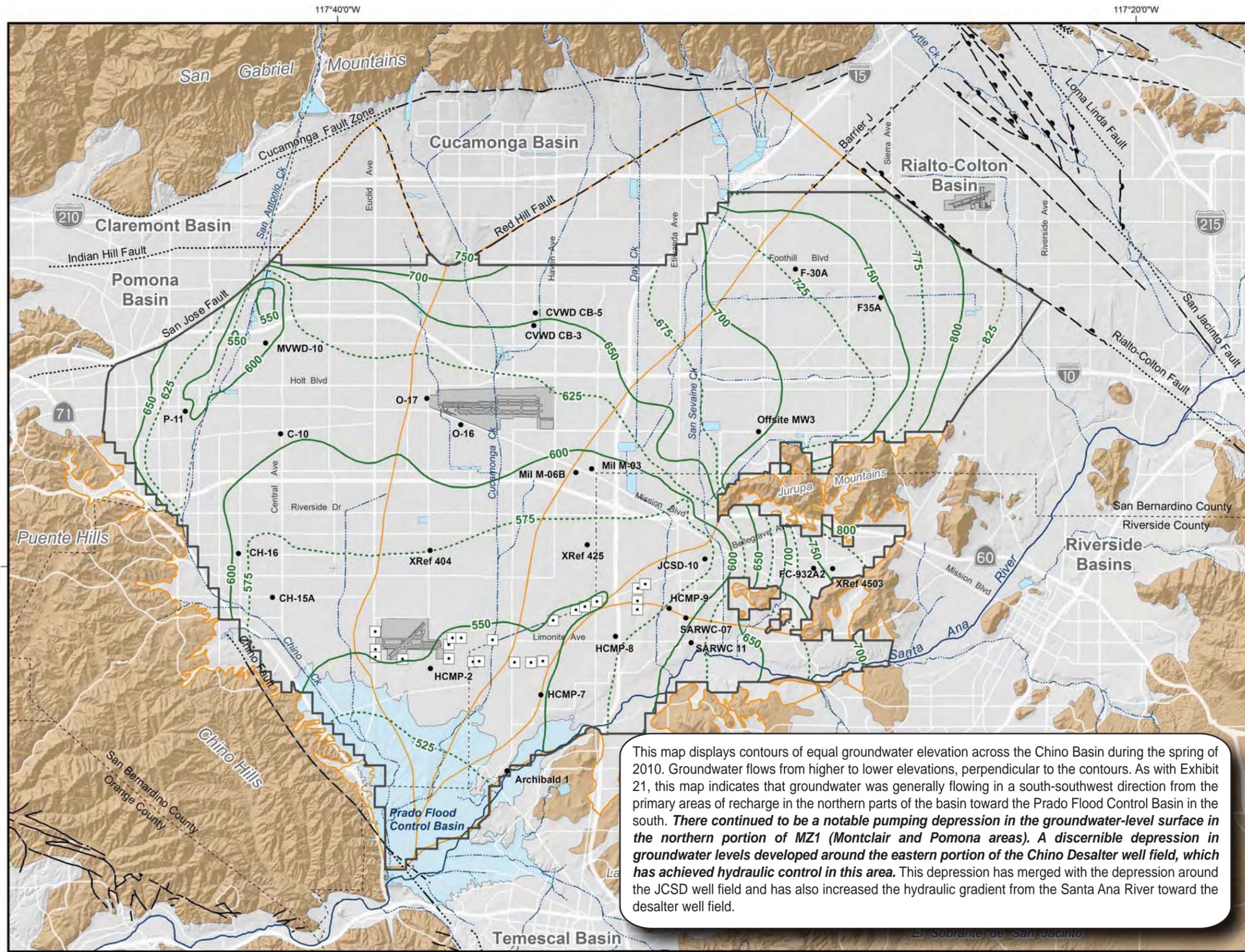


**2008 State of the Basin Report**  
 Groundwater Levels



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

**Figure 3-19**



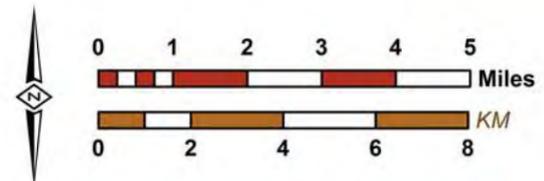
- Groundwater Elevation Contours (feet above mean sea-level)
  - Boundry of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
  - Well used for Time History Analysis (Exhibits 16 through 20)
  - OBMP Management Zones
  - Chino Desalter Wells
  - Streams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

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.

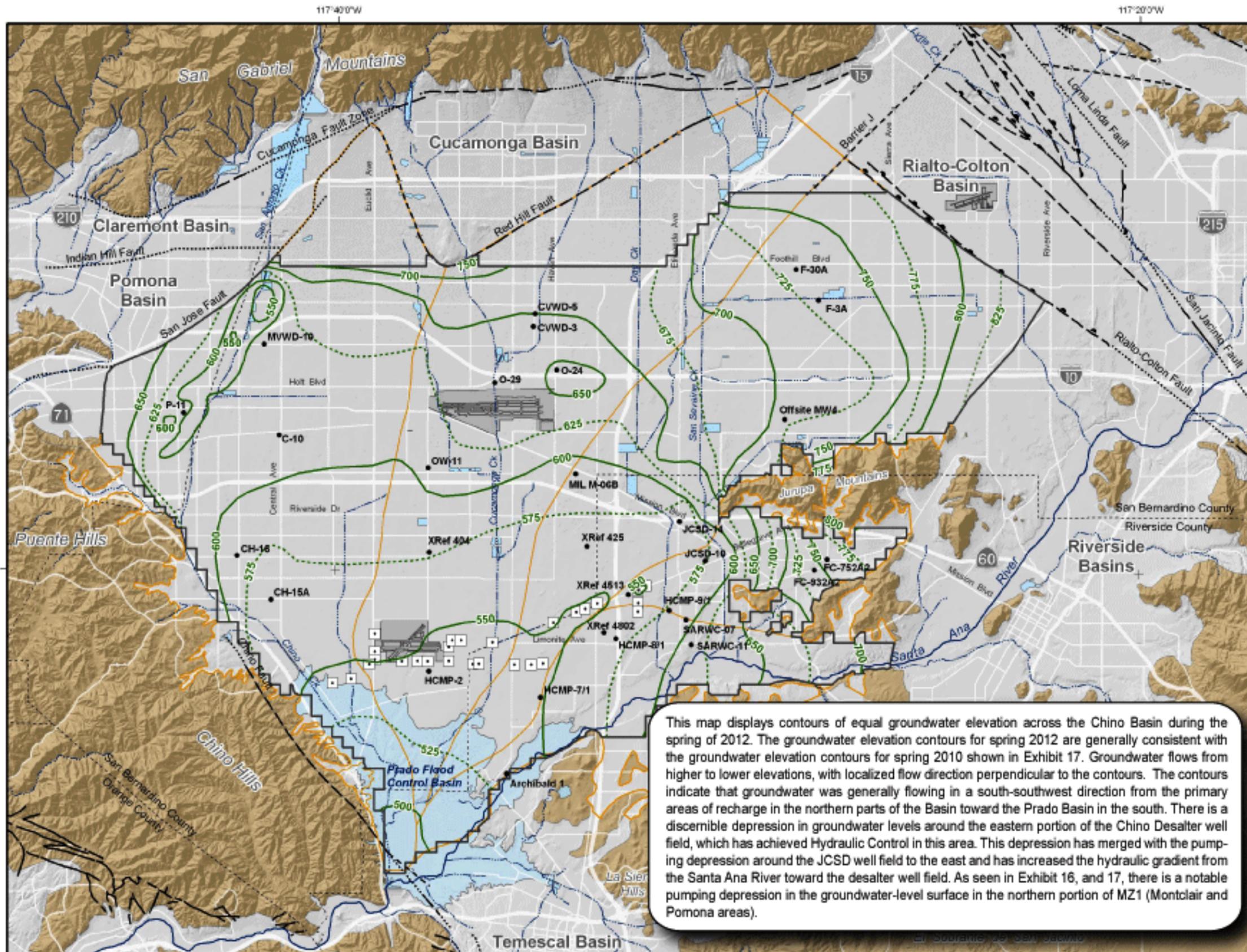


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Author: TCR  
 Date: 20111027  
 File: Exhibit\_22.mxd



2010 State of the Basin  
 Groundwater Levels

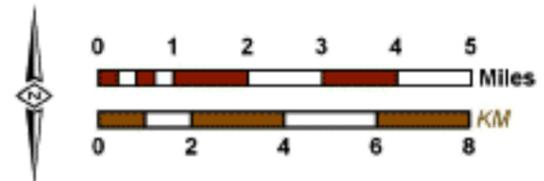


- Groundwater Elevation Contours (feet above mean sea-level)
- Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
- Well With a Water-Level Time History Plotted on Exhibits 24 through 28.
- OBMP Management Zones
- Chino Desalter Wells
- Streams & 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



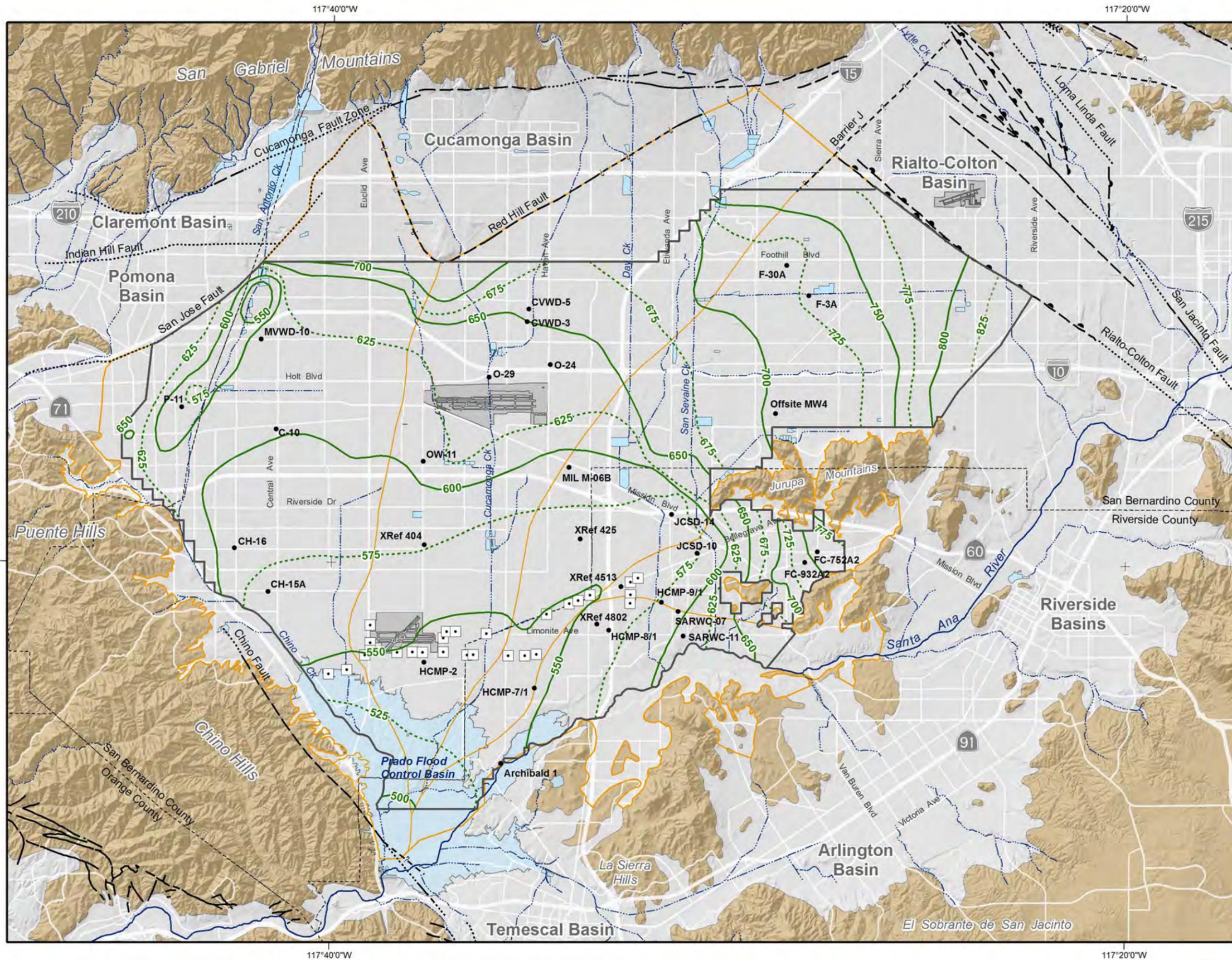
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Author: TCR  
 Date: 20121130  
 File: Exhibit\_18.mxd



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

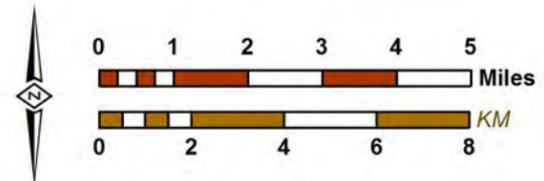
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins

- 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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 949.420.3030  
 www.weiwater.com

Author: amalone  
 Date: 4/3/2015  
 Document Name: 20150403\_Exhibit\_18\_sp2014\_copyfor IEUA\_Draft



**DRAFT**

2014 State of the Basin DRAFT  
 Groundwater Levels



**Groundwater Elevation Contours  
 in Spring 2014**

*Shallow Aquifer System*

