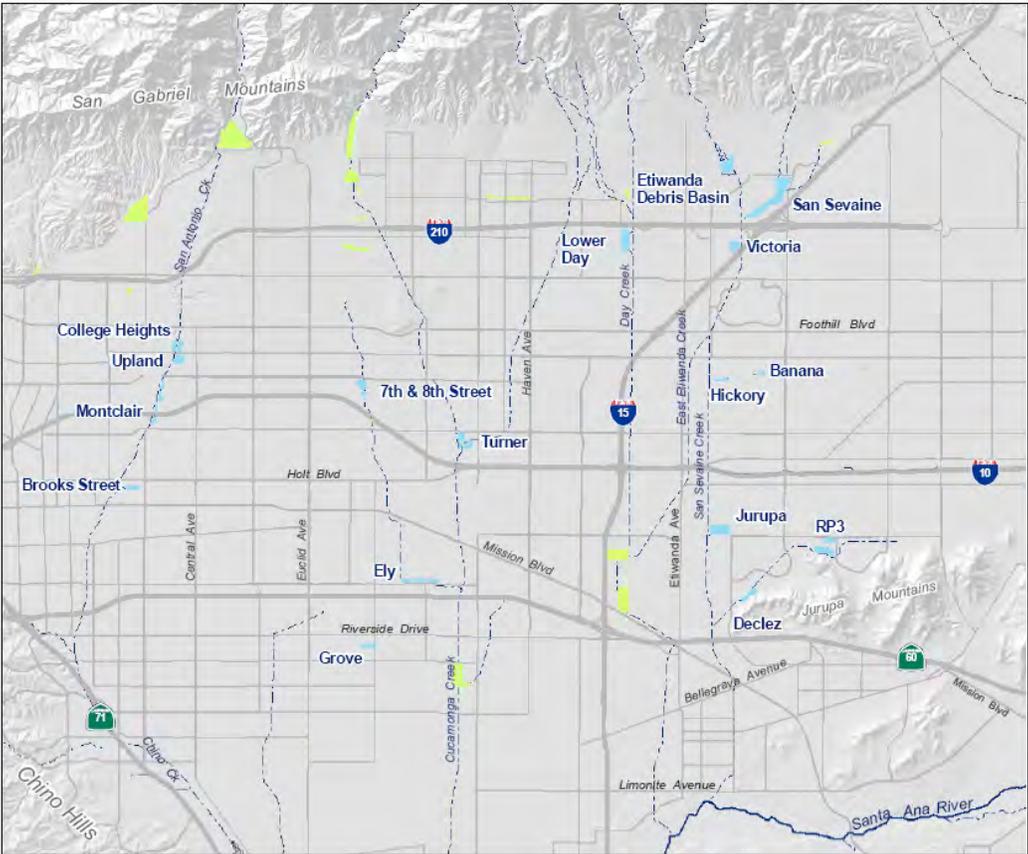


Chino Basin Recycled Water Groundwater Recharge Program

2015 Annual Report



May 1, 2016



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Manager of Planning & Environmental Resources

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May 1, 2016

Regional Water Quality Control Board, Santa Ana Region

Attention: Mr. Kurt V. Berchtold

3737 Main Street, Suite 500
Riverside, California 92501-3348

**Subject: Transmittal of the Annual Report for 2015
Chino Basin Recycled Water Groundwater Recharge Program**

Dear Mr. Berchtold:

The Inland Empire Utilities Agency (IEUA) and the Chino Basin Watermaster (CBWM) hereby submit the *2015 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 Inland Empire Utilities Agency and Chino Basin Watermaster. 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 Inland Empire Utilities Agency and Chino Basin Watermaster. 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 2015:

- The 2015 calendar year include annual program recharge of 18,820 acre-feet (AF), which includes 6,764 AF of storm water and dry weather flows; 12,056 AF of recycled water; and 0 AF of imported water.
- During 2015, recycled water quality monitoring was conducted in accordance with Monitoring and Reporting Program No. R8-2007-0039. No turbidity, coliform, total organic carbon (TOC), or dissolved oxygen (DO) compliance limits were exceeded during 2015. No primary or secondary regulated contaminants limits were exceeded during 2015, with the exception of secondary MCL for odor.
- During 2015, notifications were made to the State Water Resources Control Board – Division of Drinking Water (DDW) and Regional Board regarding the exceedance of the TN limit of 5 mg/L

for the average of two consecutive sample results at the Banana Basin lysimeter (BNA-LYS-25), Ely Basin alternative monitoring using a 52% TN reduction factor, and RP3 Basin alternative monitoring using a 31% TN reduction factor.

- No corrective actions were necessary for RP-1 and RP-4. No unit process changes occurred during 2015.
- In-aquifer blending of recycled water, diluent water, and native groundwater is evident at monitoring wells in the vicinity of 8th Street, Banana, Hickory, Brooks, Ely, Turner, Victoria, and RP3 Basins. For 8th Street, Banana, and Hickory Basins, blending was observed to be occurring both in the area of 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 2015, the volume-based 120-month running average recycled water contributions (RWCs), inclusive of groundwater underflow, by basin were: 8th Street - 21%; Banana - 36%; Brooks - 18%; Ely - 22%, Hickory - 26%, RP3 - 15%; San Sevaine 5 - 6%; Turner Basin Cells 1&2 - 16%; Turner Basin Cells 3&4 - 27%; and Victoria - 29%. These basins are all in compliance with their maximum RWC limits determined during their respective start-up periods.
- CBWM has verified in the Recycled Water Groundwater Recharge Quarterly Monitoring Reports that there was no reported pumping of groundwater in 2015 for domestic or municipal use from the zones that extend 500 feet and 6-months underground travel time from the 8th Street, Banana, Brooks, Ely, Hickory, Turner, RP3, San Sevaine, and Victoria recharge sites.
- Sufficient data exist to estimate approximate arrival times of recycled water at 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; BH-1/2 (2 months) for Hickory Basin; California Speedway Infield Well (29 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, respectively; VCT-1/1 for Victoria Basin (7.5 months) and RP3-1 (3.3 months) for RP3 Basin Cell 1. Other monitoring wells have not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water at these well sites.
- Comparison of the pre-recharge groundwater elevation contour map (Fall 2003) with the most recent groundwater elevation contour map (Spring 2014) indicates that in the 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 2014 groundwater elevations in the program monitoring wells have generally changed less than the contour interval (25 feet) used in the 2003, 2006, 2008, 2010, and 2012 groundwater elevation maps. A deeper and larger area pumping depression has developed in the vicinity the Chino Desalter well field (planned 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 2012 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 2014 map.

DECLARATION

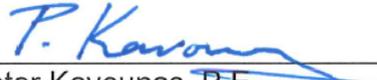
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments thereto; and that, based on my inquiry of the individuals immediately responsible for obtaining the information, I believe that the information is true, accurate,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

Executed on the 1st day of May 2016 in the Cities of Chino and Rancho Cucamonga.



Sylvie Lee, P.E.

*Manager of Planning &
Environmental Resources*



Peter Kavounas, P.E.

General Manager

Chino Basin Recycled Water Groundwater Recharge Program

2015 Annual Report

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May 1, 2016

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1 INTRODUCTION

This is the 2015 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 8th Street, Banana, Brooks, Ely, Hickory, RP3, Turner, San Sevaine, and Victoria Basins have previously been summarized in the four 2015 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 2015 calendar year, 18,820 acre-feet (AF) of water were recharged in the Chino Basin, which included 6,764 AF of storm water and dry weather flows; 12,056 AF of recycled water; and 0 AF of imported water.

1.1 Requirements of Order No. R8-2007-0039

This Recycled Water Groundwater Recharge Program is subject to the requirements found 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 Inland Empire Utilities Agency and Chino Basin Watermaster, 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 Inland Empire Utilities Agency and Chino Basin Watermaster, 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 Inland Empire Utilities Agency and Chino Basin Watermaster, 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 Inland Empire Utilities Agency and Chino Basin Watermaster. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County, October 27, 2010.

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

3. The annual report shall include the following:
 - a. A list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures. The report shall restate, for the record, the laboratories used by the users to monitor compliance with this Order and their status of certification. Upon request by Regional Board staff, the users shall also provide a summary of performance.
 - b. A mass balance to ensure that blending is occurring in the aquifer at each recharge basin. Recharge water groundwater flow paths shall be determined annually from groundwater elevation contours and compared to the flow and transport model's flow paths, travel of recharge waters, including leading edge of the recharged water plume, any anticipated changes. The flow and transport model shall be updated to match as closely as possible the actual flow patterns observed within the aquifer if the flow paths have significantly changed.
 - c. A summary of corrective actions taken as a result of violations, suspensions of recharge, detections of monitored constituents and any observed trends, information on the travel of the recycled water (estimated location of the leading edge), description of any changes in operation of any unit processes or facilities, and description of any anticipated changes, including any impacts on other unit processes.
 - d. A summary of calibration records for 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 2015 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 2015, 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 2015a, 2015b, 2015c, 2016).

2.1.1 *Detections and Compliance with Narrative Limits*

Recycled Water Specifications A.5 through A.9 are narrative limits in the permit. The 2015 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 coliform is daily; total inorganic nitrogen (TIN), total nitrogen (TN), and total organic carbon (TOC) is weekly; and total dissolved solids (TDS) is monthly. None of the narrative limits for turbidity, coliform, TDS, TIN, pH, or TOC were exceeded during 2015. Compliance with the TN limit of 5 mg/L can also be met at the lysimeters or at locations specified in alternative monitoring plans with the application of a TN reduction factor. This sampling is shown in Table 2-5a and 2-5b of the quarterly monitoring reports. During 2015, notifications were made to the State Water Resources Control Board – Division of Drinking Water (DDW) and Regional Board regarding the exceedance of the TN limit of 5 mg/L for the average of two consecutive sample results at the Banana Basin lysimeter (BNA-LYS-25), Ely Basin alternative monitoring using a 52% TN reduction factor, and RP3 Basin alternative monitoring using a 31% TN reduction factor. The TN exceedances will be summarized in Section 2.5 of this report.

Table 2-2 presents IEUA's Agency-wide 12-month running average for TDS and TIN as required by the NPDES permit. During 2015, 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 Specification A.1 through A.4 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 2015 recycled water quality monitoring data and associated limits for Recycled

Water Specifications A.1 through A.4 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 2015, the 4-quarter running average concentrations for constituents with primary MCLs, secondary MCLs, and action levels did not exceed compliance limits, with the exception of odor (secondary MCL).

Non-regulated contaminants include the remaining priority pollutants, endocrine disrupting chemicals & pharmaceuticals, and unregulated chemicals. These constituents do not have associated limits; however require annual monitoring in accordance with MRP No. R8-2007-0039 (Table II. Recycled Water Monitoring). The non-regulated contaminants monitoring data for recycled water can be found in Table 2-4 of the quarterly monitoring report. In 2015, the annual sampling for the non-regulated contaminants in the recycled water took place during the second quarter of 2015.

The compliance sampling point for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5) are not at the NRG Turnout. TTHMs and HAA5 compliance sampling is performed at the recharge basin lysimeters prior to the recycled water reaching the groundwater table. During 2015, compliance sampling for TTHMs and HAA5 was collected at lysimeters actively receiving recycled water from basins. Compliance for TTHMs and HAA5 were consistently met throughout 2015 at the selected lysimeters.

2.2 Groundwater Quality Monitoring

Groundwater quality data is collected at designated monitoring wells, and at the nearest down gradient potable water supply well near recharge basins utilizing recycled water. Location maps for wells monitored for the recharge program are presented on Figures 2-1 through 2-7 for Hickory & Banana, Turner, 7th & 8th Street, Ely, Brooks, Declez & RP3, and San Sevaïne & Victoria Basins, respectively. Groundwater quality samples are collected and tested quarterly for all constituents listed in Table 1 of Section V in the MRP R8-2007-0039, and annually for constituents specified in the Phase II Findings of Fact, Attachment A in the permit (Bullet 27 in the Conditions Section). All groundwater-quality data collected at the monitoring wells is reported in Table 2-8a and 2-8b of the quarterly monitoring reports. Table 2-1 in this annual report summarizes the quarterly groundwater quality results from the nearby potable supply wells in 2015.

Groundwater quality monitoring results can be used to assess background or baseline conditions, to estimate the time the arrival of recharge waters, to estimate the percentage of recycled water at a monitoring well, and to assess the impacts of recharged water on down-gradient groundwater supplies. Section 3.2 and Section 3.4 of this report describe how the groundwater quality monitoring results are used for these purposes in more detail.

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). Both of the 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 2016 and the EEA laboratory certification is valid through January 2017.

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 2015 Annual Laboratory QA/QC Data Summary Report was also submitted to the Regional Board as an attachment in IEUA's 2015 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.

In February 2015, the average of four consecutive TN results for the Ely Basins using the alternative monitoring TN reduction factor of 52% exceeded the 5 mg/L limit. The DDW and the Regional Board were both notified via e-mail regarding the exceedance. The 4-week average exceedance prompted an immediate suspension of recycled water recharge at Ely Basin on 02/17/15. As required by the permit, if four consecutive weeks of TN sampling exceed 5 mg/L, "Surface spreading shall not resume until appropriate corrections are made to reduce total nitrogen levels to below 5 mg/l of total nitrogen for at least one week." The elevated TN concentration of RP-1 Effluent was attributed to multiple preventative maintenance-related shutdowns that had taken place at RP-1 over a period of several weeks. IEUA resumed recycled water deliveries once we were confident that the recycled water being delivered was not impacted by shutdowns.

In March 2015, the average of two consecutive TN sample results for the Banana Basin compliance lysimeter exceeded the 5 mg/L limit. The DDW and the Regional Board were both notified via e-mail regarding the exceedance.

In May 2015, the average of two consecutive TN sample results for the RP3 Basin using the TN reduction factor of 31% exceeded 5 mg/L. The DDW and the Regional Board were both notified on June 1, 2015 via e-mail regarding the exceedance.

In November and December 2015, the average of two consecutive TN sample results for the Banana Basin compliance lysimeter exceeded the 5 mg/L limit. Two exceedances occurred on the second and third weeks of November 2015; and three exceedances occurred on the second, third, and fourth weeks of December 2015. The DDW and the Regional Board were both notified via e-mail regarding the first week of exceedances that occurred each month.

In December 2015, the average of two consecutive TN sample results for the RP3 Basin based on a 31% TN reduction factor exceeded the 5 mg/L limit. The DDW and the Regional Board were both notified via e-mail regarding the exceedance.

Odor has a secondary MCL of 3 Units in Recycled Water Specification A.3. During every quarter of 2015, the 4-quarter running average threshold odor value exceeded the secondary MCL. The odor has been identified by Eaton Analytical (contract laboratory) as chlorine. Recycled water used for groundwater recharge must meet disinfected tertiary recycled water standards in accordance to Title 22. Sodium hypochlorite is used as the disinfection agent at the RP-1 and RP-4 water recycling facilities; hence, the smell of chlorine is prominent in recycled water and is therefore unavoidable. Order No. R8-2007-0039 allows compliance for secondary MCLs to be determined at the mound monitoring well. Based on the mound monitoring well data (Table 2-8a), threshold odor does not exceed 3 Units at any of the monitoring wells.

During 2015, 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. 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 2015 groundwater sampling, and any DDW notification:

- Turbidity exceeding the secondary MCL of 5 NTU was observed in several monitoring wells, namely: Alcoa MW1, 8TH-1/1, 8TH-1/2, BRK-1/1, BRK-2/1, DCZ-1/1, Ely MW1, Ely MW2, RP3-1/1, SS-1/1, T-1/2, and VCT-1/1.
- Color exceeded the secondary MCL of 15 units in monitoring wells at 8TH-1/1, 8TH-1/2, BRK-2/1 and DCZ-1/1.
- TDS and electrical conductivity (EC) were higher than their secondary MCLs of 500 mg/L and 900 μ mhos/cm, respectively, in the RP3 basin area wells (Alcoa MW3 and Southridge JHS) and Ely MW2 (Walnut). Bishop of San Bernardino Corporation and RP3-1/1 slightly exceeded the TDS secondary MCL. The wells south of the Ely Basins and near the RP3 Basins are located in areas where the TDS and EC concentrations in groundwater are naturally elevated. The distribution of TDS concentrations observed at wells in the Chino Basin is summarized in Watermaster's State of the Basin Reports.
- Dissolved manganese analyses were above the secondary MCL of 50 μ g/L at RP3-1/2 and Ely MW1 (Philadelphia). Recycled water manganese concentrations are generally less than 20 μ g/L. Historical stormwater manganese analyses have been observed to fall within the range of 10 to 180 μ g/L.

- Some monitoring wells in the Banana & Hickory, RP3, Brooks, and Ely Basins monitoring networks have NO₃-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 NO₃-N concentrations ranges from 10-30 mg/L. The distribution of NO₃-N concentrations observed at wells in the Chino Basin is summarized in Watermaster's State of the Basin Reports. No notifications were made to the DDW as these high NO₃-N concentrations are comparable to the ambient NO₃-N concentration in groundwater for each monitoring well's respective groundwater management zone within the Chino Basin.
- Total coliform was detected at Alcoa MW1, BH-1/2, BRK-2/1, BRK-2/2, Ely Basin MW2, Fontana Water Company Wells F23a, Ontario Well 20, Ontario Well 38, RP3-1/1, Reliant Energy – East Well, Riverside Well (Ely), Southridge JHS, SS-1/1, T-1/2, Unitex 91090, and VCT-1/1. 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. IEUA notified the DDW of coliform presence at Ontario Well No. 20, Ontario Well No. 38, and Fontana Water Company Well F23a during the 2015 calendar year.
- During the annual sampling event, perchlorate concentrations above the primary MCL of 6 µg/L was detected at 8TH-2/1 and BRK-1/2. Perchlorate concentrations at 8TH-2/1 have occasionally been at levels slightly above the MCL in the past. 8TH-2/1 is located in an area where perchlorate has historically been found in nearby wells. Perchlorate concentrations at BRK-1/2 have always been at levels slightly above the MCL since sampling at this well began in early 2007, prior to recycled water recharge. The perchlorate concentrations in BRK-1/2 are consistent with historical background groundwater concentration founds at nearby wells in the Pomona area. The perchlorate concentrations in these areas are reported in the Watermaster's State of the Basin reports.

2.6 Unit Process Changes and Anticipated Impact on Water Quality

No unit process changes occurred during the 2015 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 2015 calendar year is presented in Table 2-2.

3 GROUNDWATER RECHARGE MONITORING

3.1 Summary of Recharge Operations

Groundwater recharge using recycled water has been initiated in 8th Street, Banana, Brooks, Declez, Ely, Hickory, RP3, Turner, San Sevaine, and Victoria Basins. During 2015, IEUA's recycled water recharge totaled 12,056 AF.

Basin	2015 Recycled Water Recharge (AF)	Percent of 2015 Recycled Water Recharge
8 th Street	350	2.9%
Banana	2028	16.8%
Brooks	712	5.9%
Declez	50	0.4%
Ely	1519	12.6%
Hickory	1466	12.2%
RP3	3251	27.0%
San Sevaine	0	0.0%
Turner	1546	12.8%
Victoria	1134	9.4%
Total	12,056	100%

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, 2015a, 2015b, 2015c, and 2016), but are repeated in this section's discussion of RWC (recycled water contribution) management plans.

3.2 In-Aquifer Blending of Recycled Water

Section IV.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 recharge using recycled water and diluent water can be shown in 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 2015 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). Underflow for each basin was calculated using the Darcy flow equation with input parameters originating from Chino Basin Watermaster's calibrated groundwater flow model. 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). Conservatively, the underflow calculation was made using only the upper-most sediments (upper model layer), and thus does not included potential mixing of recycled water recharge with groundwater in the deeper sediments (lower model layer).

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 with the exception of 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. The determination for San Sevaine Basin was based upon EC and chloride data at the mound monitoring well that was inconclusive to determine the

arrival of recycled water since recycled water recharge has been inconsistent due to maintenance issues as a result of poor infiltration rates in San Sevaine 5.

At the end of December 2015, 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 th Street	28%	50%	21%
Banana	36%	50%	36%
Brooks	42%	50%	18%
Ely	29%	50%	22%
Hickory	36%	50%	26%
RP3	50%	50%	15%
San Sevaine 5	27%	27%	6%
Turner 1&2	24%	24%	16%
Turner 3&4	45%	45%	27%
Victoria	50%	50%	29%

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 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. In general, background (or baseline) groundwater concentrations of EC, TDS, and chloride are much lower than recycled water used for recharge. Blending can be gauged based on how rapidly these concentrations change 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 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. 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 concentration is generally the concentration prior to recycled water recharge. The recycled water concentration is the observed historical concentrations of RP-1 and RP-4 recycled water.

8th Street Basin Area

For the 8th Street Basin area, the 2009-10 increase in chloride concentrations in the shallower monitoring well (8TH-1/1), was interpreted to indicate the arrival of recycled water recharged in

2007 and 2008. The break in recycled water delivery between September 2008 and August 2009 shows up at the end of 2010 as the downward trend of EC, TDS, and chloride at this well. This represents an approximate 21-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. This corresponds well with the previous estimate of 22 months. 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 8th Street Basin. As presented in Table 3-1, the highest percent blend of recycled water in the groundwater mound at 8TH-1/1 during 2015 was approximately 83% to 100% based on EC and chloride variations.

From mid-2011 to 2012, there were slight increases in the EC, TDS, and chloride concentrations in the deeper casing of 8TH-1/2. After trending downward since the well was constructed, these increases suggest recycled water recharge from 2007 and 2008 may have started to arrive in the deeper casing after a travel time of roughly 46 months. In 2013 and 2014, the 8TH-1/2 monitoring well groundwater EC and TDS concentrations increased slightly, while the chloride concentrations increase only slightly, suggesting that the movement of recycled water downward at this location may be blending with underflow at a steady rate. As the data are within historical, pre-recycled water recharge values, continued monitoring of these water quality parameters at the deeper casing is needed to identify with certainty the arrival and blending of recycled water at this depth. Recycled water arrival would be confirmed should these concentrations continue to rise significantly above the 2011 baseline concentrations 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 2015 may have reached approximately 25% to 26% based preliminarily on EC and chloride variations.

The shallower casing of monitoring well 8TH-2 (8TH-2/1), located approximately 2,500 feet farther from 8TH-1, between 2007 and 2015 shows cyclical seasonal variations and a medium-term trend of decreases in EC, TDS, and chloride that make the arrival of recycled water somewhat difficult to evaluate. 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, which have yet to be observed. At monitoring well 8TH-2/2, TDS and EC concentrations both show an increase from 2007 through mid-2009 followed by a consistent decrease through 2014 to below the 2007 concentrations. Between 2007 and 2014, chloride concentrations vary within background concentrations. These data most likely indicate varied concentrations of groundwater are moving past the well site. There is insufficient data from 8TH-2/2 to identify the source of the groundwater in relation to the recharge operations at 8th Street Basin. More evidence is needed to determine arrival time of recycled water at this location.

Banana & Hickory Basins Area

Beginning in early 2008 and peaking in mid-2009, the Banana and Hickory Basins area monitoring well BH-1 casing 2 (BH-1/2) located adjacent to Hickory Basin demonstrated a significant changes in EC, TDS, and chloride (100 to 150-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 are observed and suggest a stabilized and perhaps sustained peak RWC with historical operations at Hickory and Banana Basins. In mid-

2014 EC, TDS, and chloride data increase to historically high levels. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water the groundwater mound at BH-1/2 during 2015 reached approximately 98% to 100%.

The California Speedway Infield Well, south of Banana Basin, shows gradual increases for EC, TDS, and chloride concentrations (150-mg/L TDS and 19 mg/L chloride differences) through 2015 since the initiation of recycled water recharge in 2005. The gradual increase is to be expected with gradual blending as groundwater moves away from the basin (compare with the 150 to 200-mg/L TDS variation at the basin area mound). Travel time from Banana Basin to the California Speedway Infield Well based on these data is approximately 29 months. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater at the California Speedway Infield Well during 2015 reached approximately 21% to 59%.

The EC, TDS, and chloride data do not definitively suggest that recycled water recharge has reached downgradient wells California Speedway No. 2, Reliant East, and Ontario Well No. 20. While, slight increases in EC, TDS, and chloride are observed at California Speedway No. 2 and Ontario Well No. 20 since late 2008, Fontana Water Company 37A (located 2,240 feet upgradient of Banana basin) has also shown small but steady increases in EC (50 μ mhos/cm), TDS (28 mg/L), and chloride (6-mg/L) between 2006 and 2013. Continued observation of the Fontana Water Company well is needed to evaluate whether these wells are being impacted by recycled water recharge or if they are revealing a slow regional change in background water quality.

Brooks Basin Area

For the Brooks Basin area, monitoring wells are located at the basin (BRK-1) and downgradient of the basin (BRK-2). 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. Concentration increases of 100 mg/L for TDS and 50 mg/L for chloride have been observed and attributed to the presence of recycled water at BRK-1/1. Since 2014, EC, TDS and chloride concentrations has steadily increased in BRK-1/1. In the deeper casing (BRK-1/2), smaller increases in EC, TDS, and chloride began in January 2010 and continued through 2013. Concentration increases of 50 mg/L for TDS and 10 mg/L for chloride have been observed and are attributed to the presence of recycled water at BRK-1/2. 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 2015 reached approximately 96% to 100% at BRK-1/1 and approximately 7% to 31% at BRK-1/2. These data show that blending is occurring in the aquifer beneath Brooks Basin.

The chloride concentrations at BRK-2/1 show a 35-mg/L stepped increase in 2011 and coincides with a 100 μ mhos/cm decrease in EC. Then in 2012 and continuing through 2014, chloride and EC concentrations returned to background levels. Since mid-2014, chloride concentrations in BRK-2/1 have steadily increased (approximately 40 mg/L) to historical highs, with a trend similar to that observed from mid-2010 through mid-2011. While these trends may indicate a 2011 arrival of recycled water recharge in the shallower casing groundwater, continued observations at this well will be necessary to identify, with certainty, the presence of recycled water. 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).

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 background TDS and nitrate concentrations. Groundwater in this area has TDS concentrations between 500 and 1,000 mg/L, as is typical of lands in the Chino Basin with irrigation history (CBWM, 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 their proximity to the basin (0.0 miles, 0.5 mile and 1.0 mile for the Philadelphia, Walnut, and Riverside wells, respectively). At the two downgradient 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 2014 sample results at the Philadelphia well show EC and chloride at historically high levels nearly equal to that of recycled water. Due to drought conditions in 2014, recycled water was the predominant recharge source. Since late 2014 and through 2015, EC, TDS and chloride concentrations at Philadelphia well steadily decrease, but still remain above pre-2014 levels. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater at the Philadelphia well during 2015 reached approximately 85% to 87%.

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. The lower TDS concentrations may be linked with more intense periods of storm water and recycled water recharge that would dilute the higher background TDS groundwater. The volume-based percent recycled water recharged at Ely basin has been between 10% and 25% since 2009 (including groundwater underflow).

Further down gradient of the Walnut well, the EC, TDS, and chloride of groundwater at the Riverside well are relatively stable and do not indicate any direct impacts from recycled water or diluent water recharge from 2007 through 2015. There is however a slight increase in EC, TDS, and chloride that should be observed further in the coming years that could indicate the gradual arrival of recycled water at this well.

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. After the recycled water start-up period at Turner 1 (2006-2007), recycled water deliveries had been limited, and thus EC, TDS, and chloride concentrations decreased towards background levels. However, with the current drought conditions, a larger

volume of recycled water was delivered in 2014 than prior years, Turner 1 area groundwater thus saw noticeable increase in EC, TDS, and chloride indicating that recharge water moves quickly away from Turner 1. As presented in Table 3-1 based on EC and chloride variations, the highest percent blend of recycled water in the groundwater mound at Turner 1 during 2015 was 100% at TRN-1/2.

At monitoring well TRN-2/2 (adjacent to Turner 4), the EC, TDS, and chloride concentrations are delayed several months from past recharge activities. The slower, more steady, and smaller relative concentration changes at monitoring wells TRN-2/1 and TRN-2/2 (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 2014, Turner 4 also saw increased recycled water recharge volumes from prior 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 2015 was approximately 84% to 92%. The TRN-1/2 and TRN-2/2 data show recycled water blending is occurring with groundwater in the aquifer beneath the Turner Basins.

The downgradient Ontario Well No. 25 shows a slight increase in EC (75 umhos/cm), TDS (40 mg/L), and chloride (10 mg/L) above background levels that suggest recycled water arrival in July 2010. Little variation in these parameters was evident in 2012 and a slight decline was observed in 2013. Since 2014, the EC, TDS and chloride concentrations in Ontario Well No. 25 have remained relatively constant. 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 2015 was approximately 6% to 13%.

In January 2009, downgradient Ontario Well No. 29 showed a slight stepped increase in TDS and chloride concentration similar in magnitude to the gradual rise at Ontario Well No. 25. However, the increase at Ontario Well No. 29 is 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 2014 data are lower than the wells' peak values in 2010 and are within background concentrations. A marked increase in EC and TDS concentrations occurred in January 2015, but returned to normal concentrations subsequently. Additional data from future monitoring are required to assess the arrival and blending 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 in regards to 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 and have since steadily increased. Use of the low values in 2012 as baseline conditions and the three year steady rise in EC, TDS, and chloride, there is now 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 highest percent blend of recycled water in the groundwater at RP3-1/1 during 2015 was 100%, and the highest percentage for RP3-1/2 was 91% to 94%.

Downgradient well ALCOA MW-1 shows seasonal (summer through early fall) spikes in EC, TDS, and chloride from 2011 through 2015. 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 are required to correlate the arrival of recycled water at ALCOA MW-1.

Downgradient well ALCOA MW-3 has higher EC, TDS, and chloride concentrations than ALCOA MW-1. In 2015, ALCOA MW-3 groundwater continued to show decreasing and increasing EC, TDS, and chloride concentrations, which suggests salt contamination moving past the well site. The EC has ranged from 785 to 1,015 $\mu\text{mhos/cm}$ which is higher than the recycled water EC (about 750 $\mu\text{mhos/cm}$). More data are 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 2015. The background concentrations 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 well data do not suggest that recycled water recharge has reached the downgradient Southridge JHS well from the RP3 recharge site. In 2013, the well pump's electric motor failed and no samples were collected until its repair in 2014. In 2014, the well was rehabilitated and the pump was replaced. A well video was conducted and identified the well is screened at multiple depths. The screen intervals are from:

- 100 feet to 140 feet below ground surface,
- 160 feet to 200 feet below ground surface
- 220 feet to 258 feet below ground surface
- 278 feet to 320 feet below ground surface
- 340 feet to 360 feet below ground surface

San Sevaine & Victoria Basins Area

Monitoring of San Sevaine and Victoria Basins area wells began in late 2009 and continued through 2015. Initiation of recycled water recharge began in these two basins in mid-2010. For the San Sevaine area, the 2010 through 2015 trends in EC, TDS, and chloride have yet to indicate the arrival of recycled water at monitoring points SSV-1 and Unitex 91090.

Victoria Basin mound monitoring well VCT-1/1 shows a steady increase in EC, TDS, and chloride concentrations beginning in May 2011 that continue through 2015, and continue through 2014. 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 highest percent blend of recycled water in the groundwater mound at Victoria Basin during 2015 was 70% to 89% 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. In 2009, IEUA and CBWM received a permit amendment from the RWQCB Order No. R8-2009-0057 that allows for a 120-month RWC averaging period (previously a 60-month period) and for the inclusion of a fraction of groundwater underflow as a diluent water source in the RWC calculation. In 2010, the National Water Research Institute (NWRI) convened an independent expert panel to review the amendment and evaluate if the amendment provided an equal level of public protection. The panel supported the proposed Darcian method of quantifying site specific groundwater underflow; but recommended that, to be conservative (from a mixing standpoint), the fraction of the underflow used should only include the uppermost aquifer layers of higher hydraulic conductivity.

The RWC Management Plans presented in this report include the 120-month averaging period and the use of a fraction of the basin groundwater underflow. The RWC Management Plans are updated to reflect the actual operation of the basin through the previous calendar year and to forecast average operations for the next 120 months. Appendix B contains the RWC Management Plans for 8th Street, Banana, Brooks, Ely, Hickory, RP3, San Sevaïne 5, Turner Basin Cells 1&2, Turner Basin Cells 3&4, Victoria Basins, and Declez Basin.

Each RWC Management Plan was developed using historical diluent and recycled water recharge volumes, and projections of diluent water recharge volumes and planned recycled water recharge deliveries. Storm water projections are based on the historical averages of diluent recharge for the corresponding months. With each subsequent operational year, storm water projections will be updated to include the past year's historical data. For a conservative approach to the RWC calculation, imported water forecasts are not used as diluent water to calculate the projected RWC.

Following the 2009 recharge permit amendment to allow the utilization of groundwater underflow as a diluent water source, the 2009 Annual Report (IEUA and CBWM, 2010) contained RWC Management Plans showing underflow occurring since the historical initiation of recycled water recharge in a basin. However, upon further discussion with DDW (formerly CDPH), the RWC calculations were revised to initiate the use of a fraction of groundwater underflow beginning in October 2009 (the month the amendment was issued) for basins already receiving recycled water. For basins that start 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. This change in underflow application in RWC calculation was made for the 2010 and subsequent annual reports. For basins initiated with recycled water recharge after October 2009, by the 120th month of recycled water recharge operations, there will be a full 120 months of underflow in the RWC calculation for each basin.

Within the limits of historical recharge, storm water projections, and groundwater underflow, planned recycled water deliveries are forecasted to either maximize the available basin capacity or maintain the volume-based RWC within a basin's maximum RWC limit. The 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. While the plan contains calculations for up to 120 months of historical data, the graphed RWC Management Plans (Appendix B) show only the previous 60 months of recharge and projections for the next 120 months. Historical data not tabulated here are contained in earlier annual reports.

Table 3-2 lists the volume-based RWC actual at the end of 2015 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 2015 quarterly monitoring reports, CBWM has certified that there was no reported pumping of groundwater in 2015 for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the 8th 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 8th 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.

8th Street Basin Area

Travel time from 8th 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 2013. Recharge of recycled water began at 8th Street Basin on September 7, 2007, thus the travel estimate for 8TH-1/1 is approximately 660 days (22 months). The travel time to the further downgradient monitoring well 8TH-2/2 had appeared to be more rapid (perhaps a more direct flow path), and was preliminarily estimated to be approximately 402 days (13 months) based on chloride data (IEUA, 2009). While this difference between wells was conceivable and was supported by continued observations of EC, TDS, and chloride in 2010, the water quality data from 2011 through 2014 at this location no longer support this estimate. This is evidenced by the decline in EC, TDS, and chloride through

2014 below initial background concentrations with no observable influence from recycled water recharged.

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). Other Banana-Hickory monitoring wells have not yet shown definitive variations in EC, TDS, and chloride that would signal arrival of recycled water at these well sites. Data collected in 2015 are consistent with the prior data interpretations.

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 was initially interpreted from EC changes to be approximately 7 days (IEUA and CBWM, 2010a) due to the observation of a 200 $\mu\text{mhos/cm}$ EC increase following initiation of recycled water recharge in August 2008. However, data from 2009 and the completion of the Brooks Basin Start-Up Period report suggested the earlier data were anomalous and document the travel time estimate to be approximately 150 days (5 months) based on trends in EC, TDS, and chloride data. The chloride increase 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 2014 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 following recharge are similar to the background variations prior to recycled water recharge, which makes identification of travel time to this well difficult. The 2012 EC, TDS, and chloride data at BRK-2 (casings BRK-2/1 and BRK-2/2) continue to be within the range of the background concentration; however an increase in chloride concentration at BRK-2/1 throughout 2011 and 2012 may suggest the arrival of recycled water. In 2013 and 2014, the chloride concentration at BRK-2/1 returned to background levels. More data are required to determine the arrival time.

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.

Turner Basin Area

Travel time from Turner Basins through the vadose zone to the groundwater was documented at 97 days (3 months) and 285 days (9 months) to monitoring wells TRN-1/2 and TRN-2/2,

respectively (IEUA and CBWM, 2009). Further review of historical data suggests travel times approaching 10 to 12 months for both 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 increased significantly from background concentrations in the summer of 2007 and are indicative of the (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, if needed. Original modeling (CH2MHill, 2003) for the Turner recharge site predicted a 109-day travel time to each of these wells. Recycled water continued to be detected at TRN-2/2 (as elevated EC) through 2014. Decrease in EC, TDS, and chloride concentrations at TRN-1/2 indicate that recycled water recharged during the start-up period has migrated away from this location since July 2008, after the high volume recharge start-up period ended in 2007. The water quality beneath Turner 1 still indicates the presence of recycled water from subsequent recycled water recharge activities. 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 2015 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 findings indicate the earlier data did not represent the arrival of recycled water, but was instead evidence of vadose zone flushing (IEUA and CBWM, 2010b). 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 background noise of water purged from 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.

San Sevaine & Victoria Basins Area

San Sevaine Basins lie directly upgradient of Victoria Basin and thus these two sites are considered together. There is currently insufficient data from the San Sevaine area monitoring wells to establish travel times of recharge to mound monitoring well SSV-1/1 and to cross gradient well Unitex 91090. 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 through 2015 (starting with the May 19, 2011 sample).

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 8th Street, Banana, Brooks, Ely, Hickory, Turner Basins, Victoria, and RP3 Basins. Only two 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 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 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 2015, 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 Elevation vs. Modeled Elevation*

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, and 2014. These groundwater elevation maps from the Chino Basin Watermaster's *Biennial State of the Basin Reports* are presented in Appendix E.

A comparison of the pre-recharge elevation contour map (Fall 2003) with the most recent post-program start-up groundwater contour map (Spring 2014) indicates several things. First, local changes in groundwater elevation near the recharge basins due to recharge activities are present, but are not generally evident by the contour interval of 25 feet shown in the maps, indicating that the recharge program has not significantly impacted regional groundwater flow directions. Local recharge mounds at basins are evident in well hydrographs at the monitoring wells shown in Appendix D, but are generally smaller than the contour interval (25 feet) on the maps. Small differences in groundwater flow direction are noticeable for mounds building at 8th Street (+15 feet) and at Ely Basins (+20 feet) between the 2003 and 2012 maps, but neither difference suggests that downgradient monitoring well locations are inappropriately located to become characteristic of recharge water quality. Also of note, a deeper and larger area pumping depression has developed in the vicinity the Chino Desalter (hydraulic control) well field and a smaller (narrower) regional pumping depression has developed in the Pomona area west of Brooks Basin. There are some changes in the contouring style/methodology between the 2003 and 2014 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, 2012, and 2014 maps.

3.5.2 Water Level Trends in Monitoring Wells

Appendix D contains groundwater elevation hydrographs for wells constructed for the monitoring program from the approximate time of a basin's start-up period through the end of 2015. 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.

8th Street Basin Area

The hydrographs of the 8th Street Basin mound monitoring well (8TH-1) show relatively stable long-term groundwater elevations from 2008 through 2015, which typically range between 640 to 660 feet above mean sea level. There is 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 in 2011 due to the loss and replacement of the pressure transducers and pumps at the well. Hand-measured water levels supplemented the hydrographs during that time. 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 above MSL between 2014 through 2015. 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 were relatively stable annually between mid-2009 and mid-2013. From mid-2013 through 2015, water levels have steadily decreased approximately 14 feet, from 622 to 608 feet above MSL. This decrease is perhaps due to drought and a decrease

in stormwater recharge or other nearby groundwater stresses. At BRK-1/2, groundwater elevations typically range between 590 and 610 feet above 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. Prior to the generally stable period of mid-2009 to the end of 2013, water levels at BRK-1/1 and BRK-1/2 had generally declined approximately 10 feet during 2008 and early 2009. The shallower casing (BRK-1/1) was redeveloped during 2010. Due to the removal of monitoring equipment at that time, it does not have a continuous water level record in 2010. Similar to BRK-1/1, BRK-1-2 shows a decrease in water levels to historic lows between 2013 and 2015. Periods of rising water levels on the Brooks Basin monitoring well hydrographs correlate well with about a 3-months lag from recharge activity at Brooks Basin. The hydrograph of the downgradient (intermediate) monitoring well BRK-2 shows a similarly stable trend as BRK-1/2 from 2009 to 2014 with the exception of slightly larger seasonal fluctuations and pumping influences.

Banana & Hickory Basins Area

The hydrograph for the Banana and Hickory Basins mound monitoring well (BH-1) shows seasonal and longer-term water level fluctuations of about 15 feet. Between 2006 and 2009, a 15-foot steady decline in water level occurred. For 2009 through 2015, the BH-1/2 hydrograph shows relatively stable water levels with 5-foot season fluctuations. For 2012, the hydrograph rose about 10 feet above the 2009 through 2011 levels, but came back down in 2013. 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.

Turner Basin Area

The hydrographs for the two Turner Basin monitoring wells, TRN-1/2 and TRN-2/2, show annual variations (related to stormwater recharge and longer-term water level fluctuations in about a 30-foot range). Annually the hydrographs have shown 10- to 25-foot variations in groundwater elevation with delays of 1 to 2 months associated with peaks in recharge. The annual low water elevations of September 2007 to September 2009 are generally the same elevation. The annual lows of September 2009 through 2014 show an approximate 25-foot rise in groundwater levels suggesting recharge at Turner Basins has a positive local impact on regional water levels.

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. The 2014 annual report is the first presentation of that site's hydrograph. From 2011 to 2014, the Ely Basin long-term water levels were generally stable, but show 20-foot variations within days of changes in recharge. In January 2015, the water level transducer malfunctioned and several months of water level data were lost. The transducer was repaired and water level data collection resumed in November 2015.

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 2007 and 2008, the water elevation did not vary by more

than 2 to 3 feet with recharge activity. However, after initiation of Jurupa Basin in June 2009 for diverting recycled water and winter stormwater (for subsequently pumping to the RP3 site), annual recharge volumes and water levels increased. For 2009 through 2011, dramatic increases in groundwater elevations occurred, followed by a decrease in groundwater elevation 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 6 feet through most of 2014 due in part to the low rainfall and stormwater recharge in that year. Since mid-2014, water levels in both the shallow and deep RP3-1 casings have increased approximately 8 feet.

Declez Basin Area

Declez Basin monitoring well DCZ-1 contains data since 2008. The data generally shows 10 to 15 feet seasonal variations, with the water level responding within days of stormwater recharge. The long-term water level trend at this site is stable between 2008 and 2015.

San Sevaine & Victoria Basins Area

Between 2010 and 2013, the hydrograph for the San Sevaine 5 basin mound monitoring well (SS-1) shows seasonal and longer-term water level fluctuations within a 5-foot range. SS-1 was installed in spring 2010 and does not have sufficient water level history to correlate with recharge at the San Sevaine Basins. Since 2013, water levels at SS-1 show a steady decline of about 20 feet, due in part to the low rainfall and stormwater recharge. In addition, recycled water recharge at San Sevaine 5 has been limited due to low basin infiltration rates and operating constraints.

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 water level transducer installed at VCT-1/1 in April 2010 was found to be faulty and only manual measurements were measured until April 2011. 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 10 feet due to relatively higher volume recharge of recycled water in early 2014, and have remained relatively stable since.

The hydrograph for the Victoria Basin downgradient (intermediate) monitoring well (VCT-2/2) shows long-term water level fluctuations within a 12-foot range. Seasonally, the hydrograph shows 5- to 8-foot water level fluctuations in 2010 through 2013. This well was installed in spring 2010 and the existing water level data set does not yet correlate well with recharge activities at the San Sevaine and Victoria Basins. While both the water levels and the recharge volumes rise and fall annually, the data set requires comparison of a longer duration data set to determine their correlation with certainty. Data for 2014 and parts of 2015 were not available for download due to Caltrans construction activities at the well's site. Data collection was resumed in November 2015, and indicate that water levels remain relatively unchanged since late 2013.

4 REFERENCES

- California Regional Water Quality Control Board, Santa Ana Region, 2007a, Order No. R8-2007-0039 Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster, Chino Basin Recycled Water Groundwater Recharge Program, Phase I and Phase II Projects, San Bernardino County.
- California Regional Water Quality Control Board, Santa Ana Region, 2007b, Monitoring and Reporting Program No. R8-2007-0039 for Inland Empire Utilities Agency and Chino Basin Watermaster Chino Basin Recycled Water Groundwater Recharge Program Phase I and Phase II Projects, San Bernardino County.
- California Regional Water Quality Control Board, Santa Ana Region, 2009, Order No. R8-2009-0057 Amending Order No. R8-2007-0039 for Inland Empire Utilities Agency and Chino Basin Watermaster. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County.
- California Regional Water Quality Control Board, Santa Ana Region, 2010, Revised Monitoring and Reporting Program No. R8-2007-0039 for Inland Empire Utilities Agency and Chino Basin Watermaster. Chino Basin Recycled Water Groundwater Recharge Program: Phase I and Phase II Projects, San Bernardino County.
- CH2MHill, 2003, Title 22 Engineering Report, Phase 1 Chino Basin Recycled Water Groundwater Recharge Program.
- Chino Basin Watermaster and Inland Empire Utilities Agency, 2003, Optimum Basin Management Program, Chino Basin Dry-Year Yield Program, Modeling Report, Volume III.
- Inland Empire Utilities Agency and Chino Basin Watermaster, 2006 October, Phase II Chino Basin Recycled Water Groundwater Recharge Project Title 22 Engineering Report March 2006, Addendum 1 – Inclusion of Ely Basin in Phase II Recycled Water Groundwater Recharge Project.
- Inland Empire Utilities Agency, 2015a, Chino Basin Recycled Water Groundwater Recharge Program Quarterly Monitoring Report January through March 2015.
- Inland Empire Utilities Agency, 2015b. Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report April through June 2015.
- Inland Empire Utilities Agency, 2015c, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report July through September 2015.
- Inland Empire Utilities Agency, 2016, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report October through December 2015.
- Inland Empire Utilities Agency and Chino Basin Watermaster, 2009, Chino Basin Recycled Water Groundwater Recharge Program, 2008 Annual Report, May 1, 2009.
- Inland Empire Utilities Agency and Chino Basin Watermaster, 2010a, Chino Basin Recycled Water Groundwater Recharge Program, 2009 Annual Report, May 1, 2010.
- Inland Empire Utilities Agency and Chino Basin Watermaster, 2010b, Start-Up Period Report for RP3 Basin, December 13, 2010.
- Inland Empire Utilities Agency and Chino Basin Watermaster, 2011, Chino Basin Recycled Water Groundwater Recharge Program, 2010 Annual Report, May 1, 2011.

TABLES

**Table 2-1
Quarterly Groundwater Quality at Nearest Potable Well**

Sample Location		Date	TOC (mg/L)	Total Coliform (MPN/100mL)	pH	EC (µmho/cm)	Al (µg/L)	Color (units)	Cu (µg/L)	Corrosivity Index (SI)	Foaming Agents (mg/L)	Fe (µg/L)	Mn (µg/L)	MTBE (µg/L)	Odor Threshold (TON)	Ag (µg/L)	Thiobencarb (µg/L)	Turbidity (NTU)	Zn (µg/L)	TDS (mg/L)	Cl (mg/L)	Hardness (mg CaCO3/L)	Na (mg/L)	SO4 (mg/L)	Nitrogen, Total (mg/L)	NO2-N (mg/L)	NO3-N (mg/L)	Dissolved Oxygen (mg/L)
8th St	No active municipal drinking water wells within 10,000 feet of the 8th Street Basin during the 2015 calendar year																											
Banana & Hickory	City of Ontario Well No. 20	1Q15	0.12	<1.1	7.5	365	<25	<3	0.8	0.5	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.10	<1	268	9	179	14	6	3.1	0.20	2.4	5.2
		2Q15	0.20	23	7.7	364	<25	<3	1.2	0.6	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.10	1	244	9	163	13	6	2.6	0.17	2.4	7.3
		3Q15	0.20	<1.1	7.7	379	<25	<3	0.9	0.4	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.15	<1	246	9	175	14	6	2.5	0.12	2.4	4.3
		4Q15	0.11	<1.1	7.6	378	<25	<3	0.5	0.3	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.30	<1	254	9	168	13	6	2.5	0.12	2.4	8.1
Brooks	Pomona Well No. 10	1Q15	0.37	<1.1	7.9	505	<25	<3	0.6	0.4	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.10	2	400	39	234	12	39	7.2	0.17	7.0	6.5
		2Q15	0.22	<1.1	7.8	504	<25	<3	0.8	0.4	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.05	2	338	38	228	10	39	6.7	0.13	6.6	6.7
		3Q15	0.24	<1.1	7.8	526	<25	<3	0.9	0.4	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.15	1	338	39	231	11	39	6.9	0.13	6.8	10.5
		4Q15	0.20	<1.1	7.8	529	<25	<3	0.8	0.4	0.07	<15	<1	<0.5	1	<0.25	<0.2	0.10	4	344	40	231	11	39	6.9	0.07	6.8	5.9
Ely	Bishop Of San Bernardino Corp.	1Q15	0.35	<1.1	7.6	749	<25	<3	1.8	0.7	<0.05	95	4	<0.5	1	<0.25	<0.2	0.20	2	488	37	349	23	57	20.1	0.20	19.9	5.2
		2Q15	0.39	<1.1	7.8	747	<25	<3	1.0	0.7	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.10	156	490	35	344	21	60	18.9	0.18	18.7	4.4
		3Q15	0.32	<1.1	7.8	793	<25	5	1.7	0.7	0.09	28	1	<0.5	<1	0.58	<0.2	0.18	280	520	37	349	22	64	20.5	0.17	20.3	8.7
		4Q15	0.21	<1.1	7.5	790	<25	5	23.8	0.7	0.07	19	2	<0.5	1	<0.25	<0.2	0.15	314	490	36	347	23	64	20.1	0.09	20.0	4.3
RP3	JCSD Well No. 17	1Q15	0.37	<1.1	7.8	578	<25	<3	1.5	0.3		47	<1	<0.5		<0.25	<0.2	0.10	10	412	54	216	27	44	13.3	0.14	13.2	4.2
		2Q15	0.27	<1.1	7.7	602	<25	<3	2.0	0.3	<0.05	<15	<1	<0.5	2	<0.25	<0.2	0.05	<1	426	65	224	26	39	10.3	0.10	10.2	8.2
		3Q15	0.42	<1.1	7.7	632	<25	5	2.1	0.4	<0.05	<15	<1	<0.5	2	<0.25	<0.2	0.06	<1	418	69	236	27	38	9.8	0.09	9.7	7.6
		4Q15	0.27	<1.1	7.7	627	<25	5	1.3	0.4	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.25	<1	410	68	234	28	38	9.4	0.07	9.3	3.9
San Sevaline	Unitex 91090	1Q15	0.23	1.1	7.8	389	<25	<3	0.6	0.1	<0.05	89	2	<0.5	1	<0.25	<0.2	0.55	2	266	29	172	14	28	2.5	0.16	1.7	5.6
		2Q15	0.21	<1.1	7.8	396	<25	<3	0.8	-0.1	<0.05	20	<1	<0.5	<1	<0.25	<0.2	0.15	3	258	29	178	11	30	1.8	0.13	1.7	4.2
		3Q15	0.27	3.6	7.8	369	<25	5	0.6	0.1	<0.05	47	1		2	<0.25	<0.2	0.39	2	242	26	153	15	27	1.7	0.10	1.6	9.1
		4Q15	0.24	<1.1	7.6	401	<25	5	0.6	0.1	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.15	2	258	28	170	12	30	2.6	0.09	1.8	6.2
Turner	City of Ontario Well No. 25	1Q15	0.20	<1.1	7.4	433	<25	<3	0.5	0.3	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.05	<1	322	18	185	22	16	5.7	0.19	4.7	4.8
		2Q15	0.16	<1.1	7.6	442	<25	<3	0.9	0.4	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.05	<1	280	19	180	22	16	4.9	0.17	4.7	8.4
		3Q15	0.29	<1.1	7.7	462	<25	<3	0.8	0.3	<0.05	<15	<1	<0.5	2	<0.25	<0.2	0.10	<1	290	20	188	23	16	4.9	0.11	4.8	4.3
		4Q15	0.19	<1.1	7.6	458	<25	<3	0.9	0.3	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.10	<1	326	20	181	22	16	4.8	0.11	4.7	8.4
Victoria & San Sevaline	CVWD No. 39	1Q15	<0.1	<1.1	7.7	280	<25	<3	1.2	0.1	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.20	<1	192	5	100	22	10	3.1	0.17	2.4	4.8
		2Q15	0.10	<1.1	7.7	278	<25	<3	7.5	-0.1	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.10	4	194	5	98	21	10	2.3	0.14	2.2	7.4
		3Q15	0.28	<1.1	7.7	287	<25	<3	2.5	-0.1	<0.05	<15	<1	<0.5	2	<0.25	<0.2	0.14	4	184	5	99	20	10	2.4	0.13	2.3	9.0
	CVWD No. 43	4Q15	0.17	<1.1	7.5	313	<25	<3	<0.5	-0.4	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.25	<1	223	8	139	20	14	2.9	<0.02	2.9	2.2
	<i>Primary Maximum Contaminant Level</i>																											
	<i>Secondary Maximum Contaminant Level</i>			6.5-8.5	900	1000	200	15	1000		1	300	50	5	3	100	1	5	5000	500	250			250		1	10	

Blank cells indicate that analysis was not run for a constituent during the quarter

Table 2-2
Regional Plants No. 1 & No. 4 Chemical Usage Summary

	RP-1 (Flow)				RP-1 (Tertiary)			RP-4		
	Ferric Chloride	Polymer	Sodium Hypochlorite	Sodium Hydroxide	Aluminum Sulfate	Sodium Hypochlorite	Sodium Bisulfite	Ferric Chloride	Aluminum Sulfate	Sodium Hypochlorite
Month	Gal.	Gal.	Gal.	Gal.	lbs.	Gal.	Gal.	Gal.	Gal.	Gal.
<i>Jan-15</i>	26,375	273	784	366	8,084	116,500	27,900	1,564	684	19,246
<i>Feb-15</i>	23,400	257	919	304	7,224	108,200	17,000	583	827	29,107
<i>Mar-15</i>	28,000	292	1,176	196	7,697	115,600	20,000	311	1,188	26,888
<i>Apr-15</i>	21,700	286	0	0	6,837	108,200	17,400	9,924	958	23,499
<i>May-15</i>	18,600	162	0	0	7,052	106,300	21,900	7,361	876	26,094
<i>Jun-15</i>	20,200	1	0	1	7,697	105,000	6,650	7,213	891	27,053
<i>Jul-15</i>	30,900	0	0	0	8,084	98,900	8,100	8,759	882	26,437
<i>Aug-15</i>	25,400	0	0	0	7,998	101,850	4,400	8,966	818	25,104
<i>Sep-15</i>	24,900	16	0	0	7,740	102,200	13,100	9,208	772	24,635
<i>Oct-15</i>	26,700	17	0	0	7,998	107,500	17,900	9,268	899	22,110
<i>Nov-15</i>	24,500	2	1,253	2	7,740	93,400	24,900	8,604	1,016	24,099
<i>Dec-15</i>	26,600	0	9,041	0	7,998	120,700	23,400	8,877	1,019	20,060
Total	297,275	1,306	13,173	869	92,149	1,284,350	202,650	80,638	10,830	294,332

**Table 3-1
Evidence of Recycled Water Blending Based on Water Quality at
Monitoring Wells in 2015 Based on EC and Chloride**

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	Downgradient	750	200	658	83%	110	9	110	100%	
	8TH-1/2	Downgradient	750	255	386	26%	110	13	37	25%	
	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	750	360	744	98%	110	10	111	100%	
	California Speedway Infield	Downgradient	750	420	615	59%	110	11	32	21%	
	California Speedway No. 2	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	Reliant East Well	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	Fontana Water Co. 37A	Upgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	Ontario No. 20	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
Brooks	BRK-1/1	Mound	750	367	733	96%	110	11	119	100%	
	BRK-1/2	Mound	750	535	602	31%	110	16	23	7%	
	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	750	245	676	85%	110	34	100	87%	
	Walnut Well	Downgradient	Well impacted by regionally high TDS concentration				Well impacted by regionally high TDS concentration				
	Riverside Well	Downgradient	No EC fluctuation correlatable with recharge				No EC fluctuation correlatable with recharge				
Turner	TRN-1/2	Mound	750	390	749	100%	110	21	113	100%	
	TRN-2/2	Mound	750	350	685	84%	110	9	102	92%	
	Ontario No. 25	Downgradient	750	420	462	13%	110	14	20	6%	
	Ontario No. 29	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
RP-3	RP3-1/1	Mound	750	475	798	100%	110	20	108	98%	
	RP3-1/2	Mound	750	465	723	91%	110	41	106	94%	
	Alcoa MW3	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	Alcoa MW1	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	IEUA Southridge JHS	Downgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
San Seavine & Victoria	SS1-1/1	Mound	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	Unitex 91090	Crossgradient	Inconclusive evidence of recycled water				Inconclusive evidence of recycled water				
	VCT-1/1	Mound	750	330	626	70%	110	38	102	89%	
	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				

Table 3-2
Volume-Based RWC Actuals by Basin

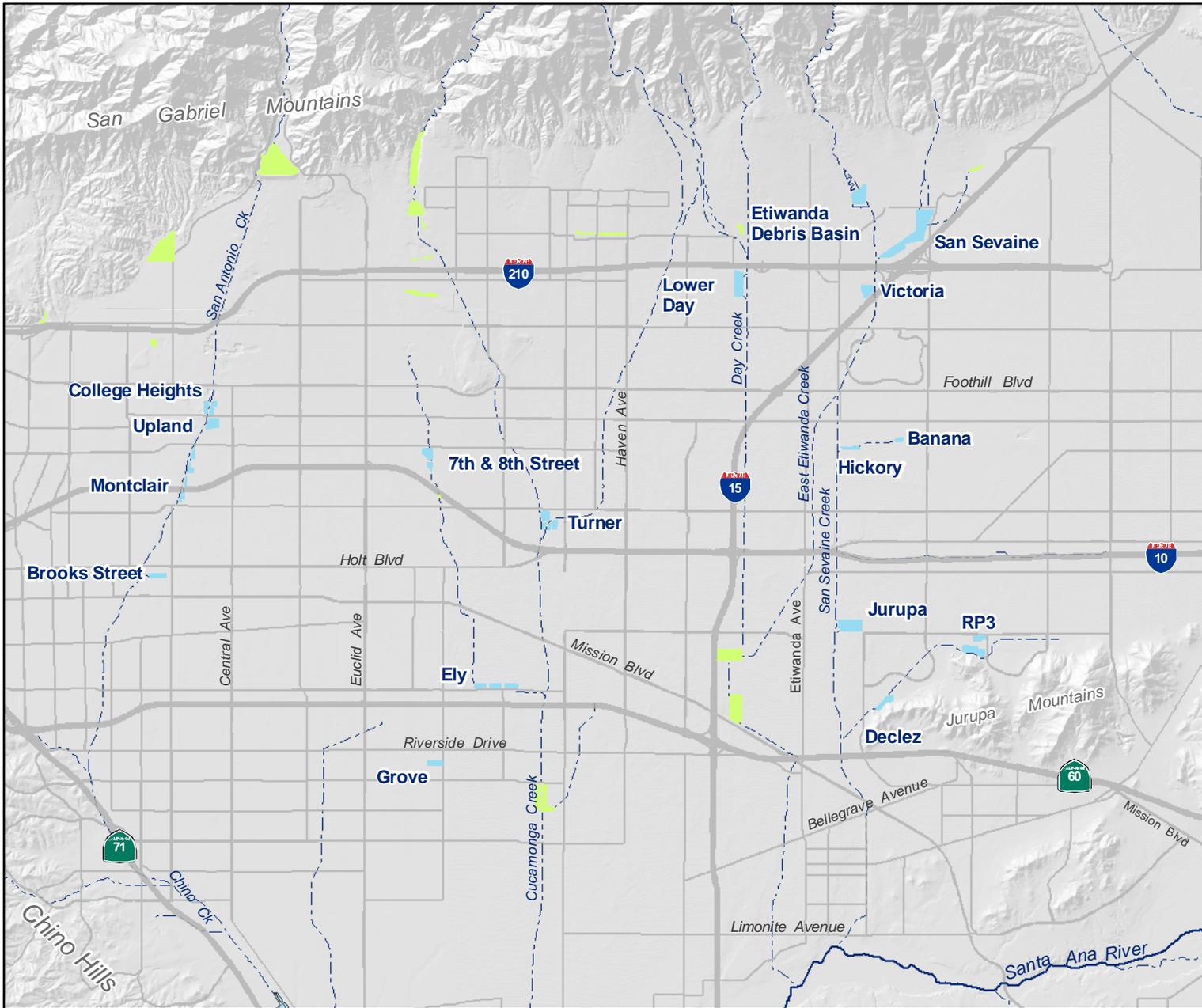
Basin	Owner	RW Start Up	Limit	2008*	2009**	2010	2011	2012	2013	2014	2015
8th Street	SBCFCD	2007-10	28%	28%	23%	23%	21%	21%	24%	22%	21%
Banana	SBCFCD	2005	36%	29%	30%	29%	32%	34%	34%	34%	37%
Brooks	CBWCD	2008-09	42%	8%	30%	22%	18%	16%	18%	18%	17%
Declez	SBCFCD	TBD	TBD	0%	0%	0%	0%	1%	1%	1%	2%
Ely	CBWCD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

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

** 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.

TBD To Be Determined. Declez basin has not been initiated with recycled water recharge, but received recycled water drained from RP3 basins prior to basin restoration activities.

FIGURES



- ### 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

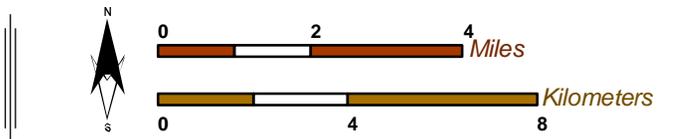
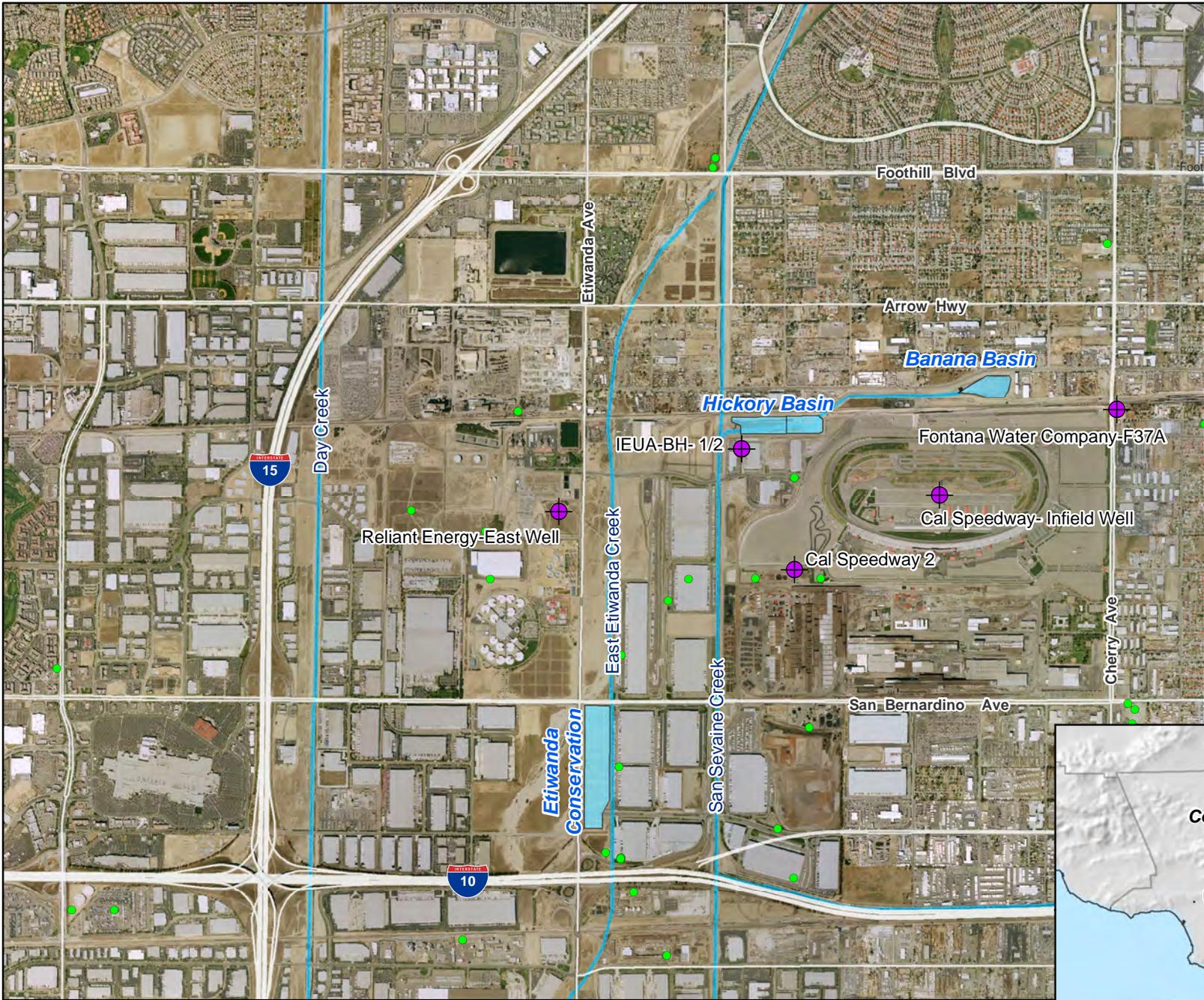


Figure 1-1



Main Map Features

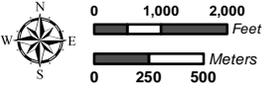
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

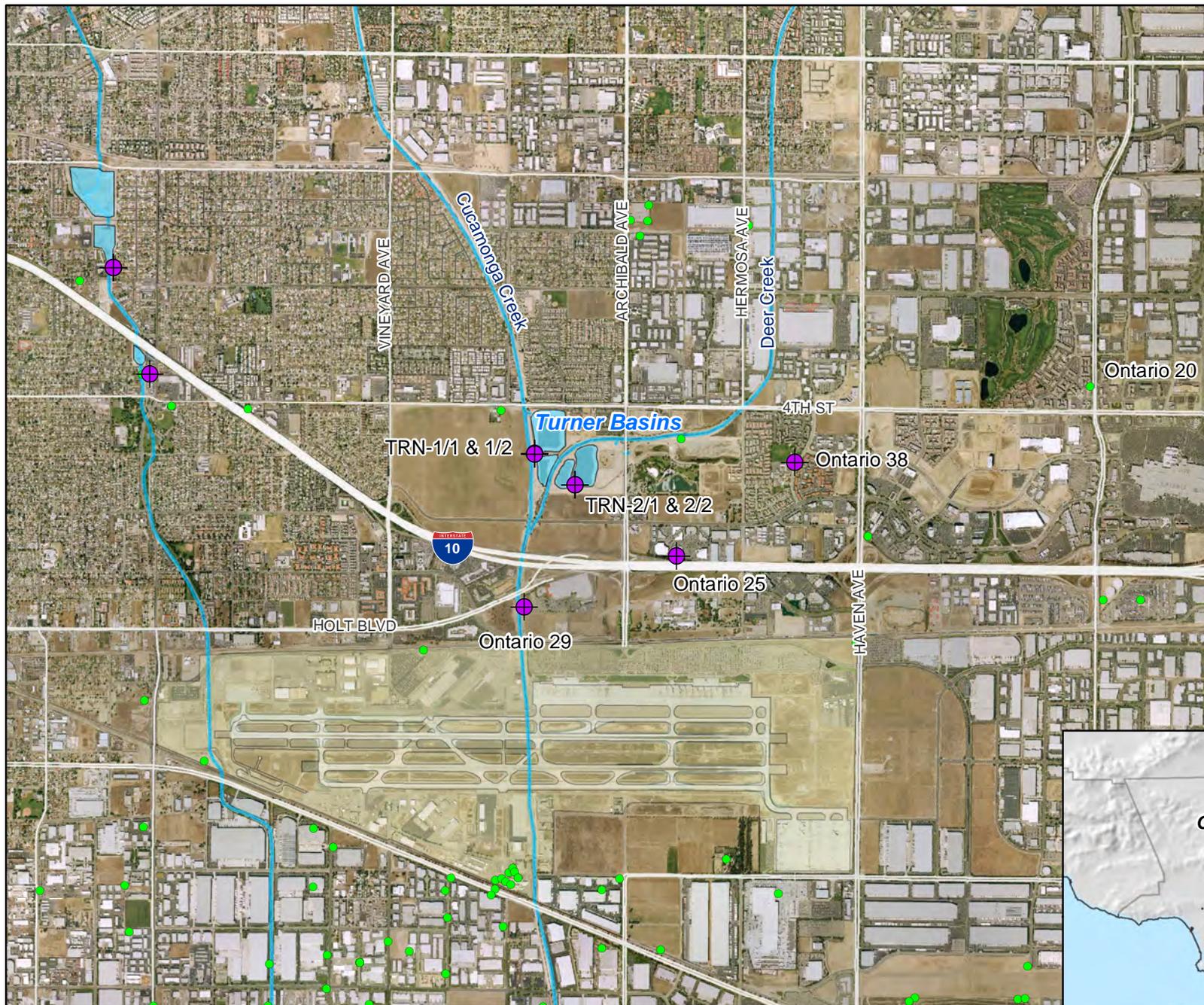


Monitoring Well Network
Hickory and Banana Basins

Figure 2-1

Recycled Water Recharge Program





Main Map Features

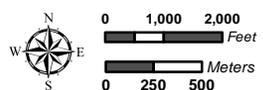
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

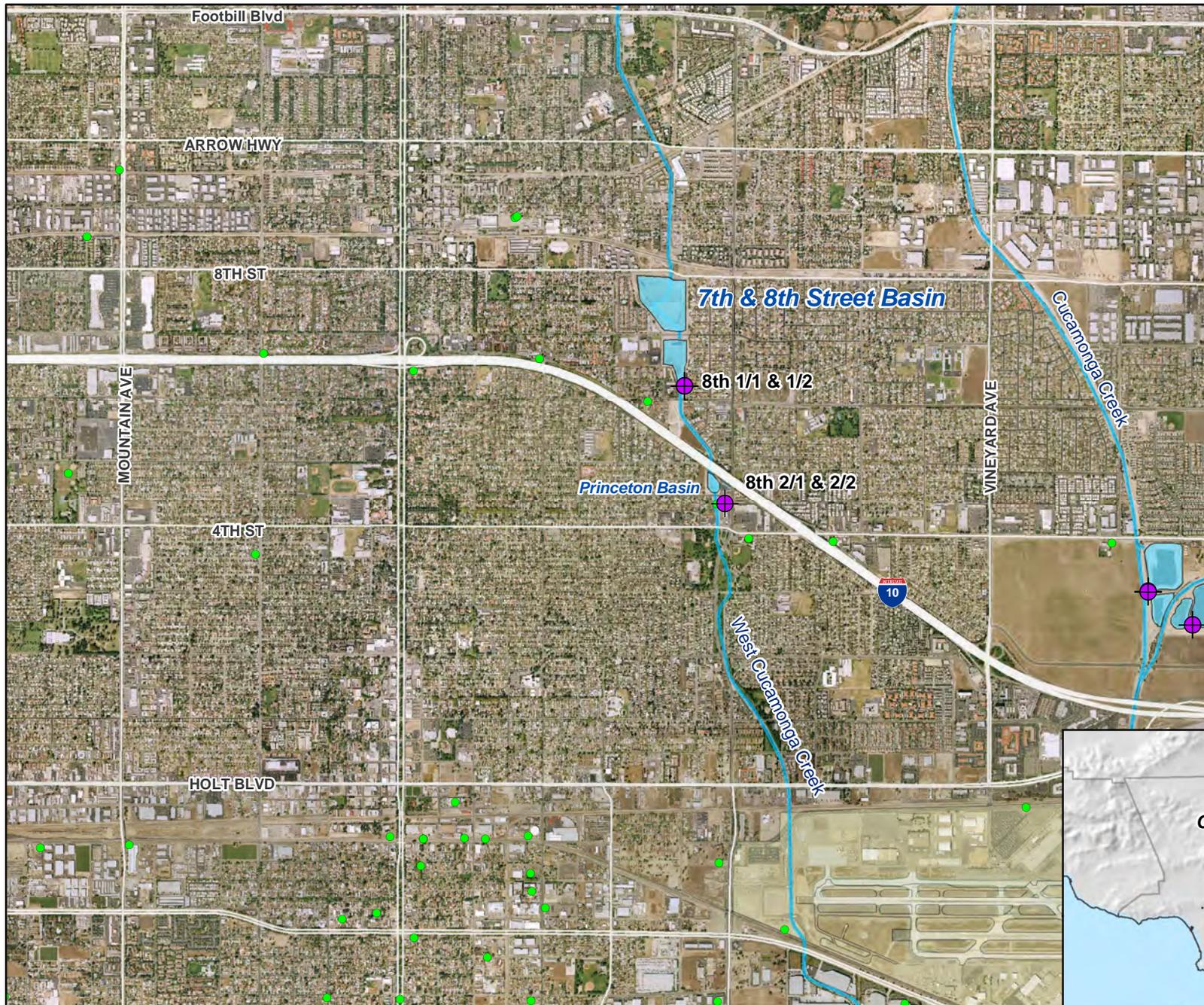


Monitoring Well Network
Turner Basins

Figure 2-2

Recycled Water Recharge Program





Main Map Features

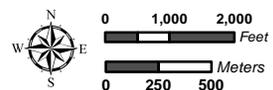
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

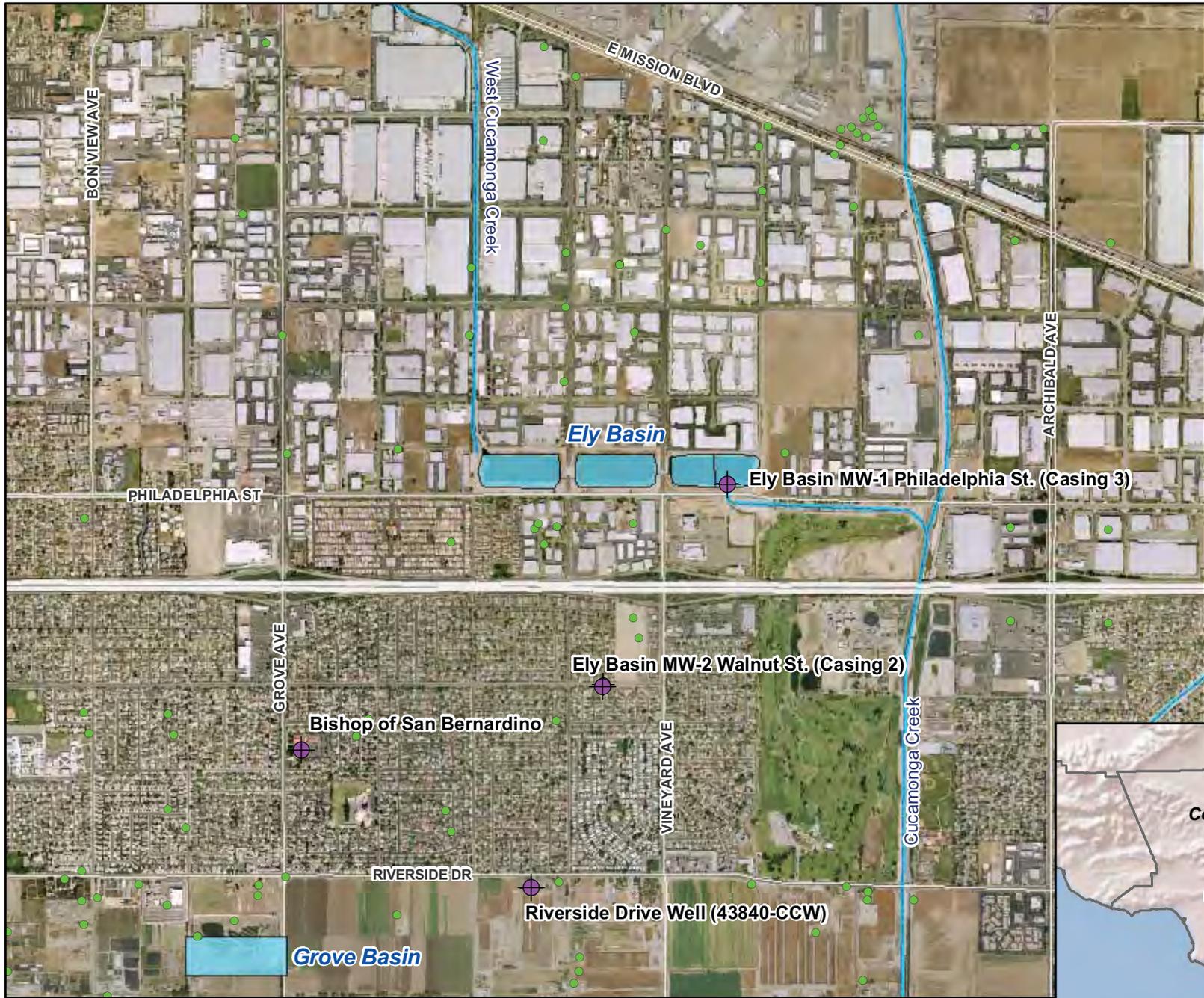


Monitoring Well Network
7th and 8th Street Basin

Figure 2-3

Recycled Water Recharge Program





Main Map Features

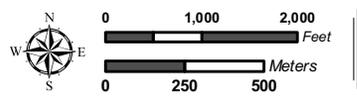
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

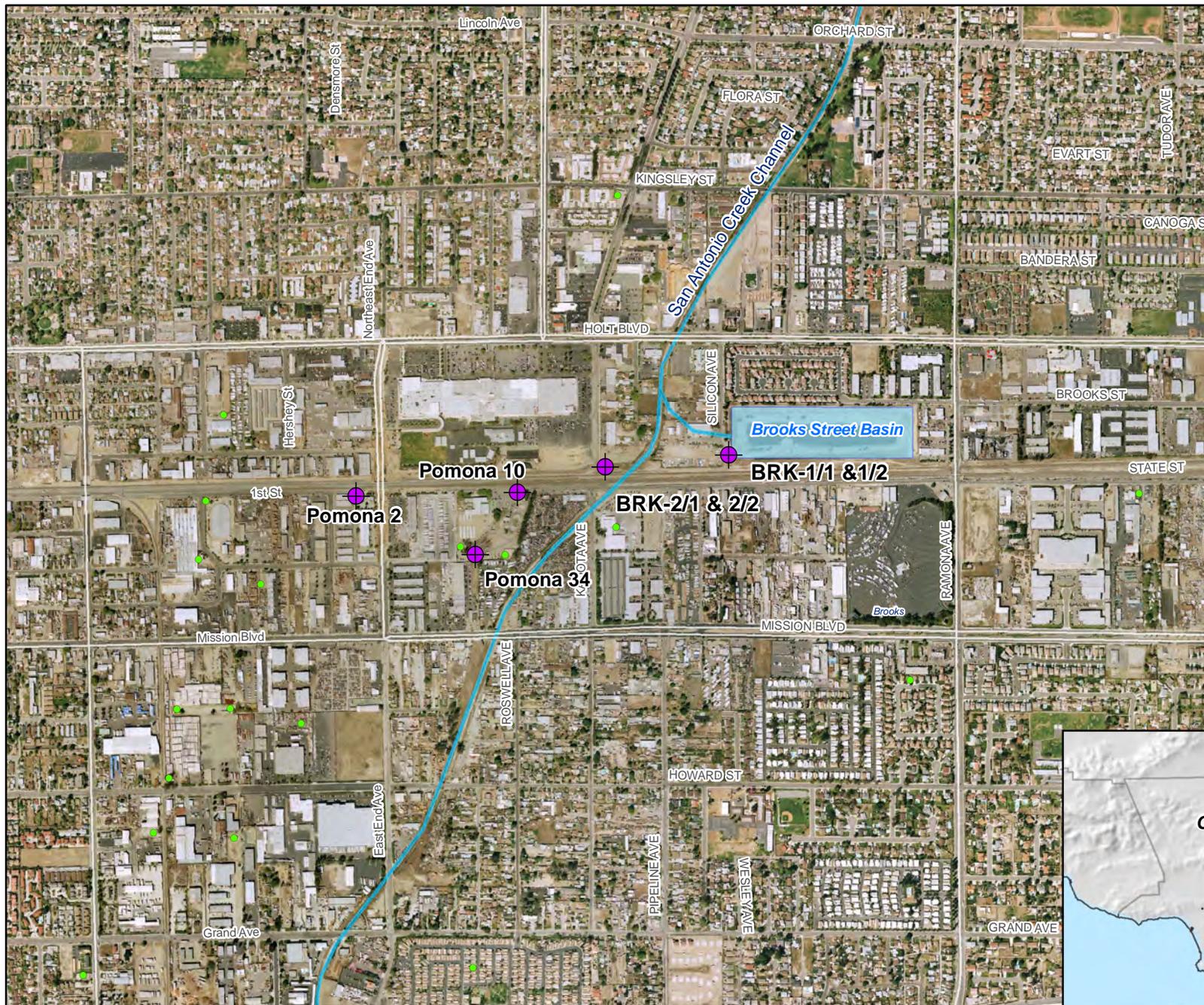


Monitoring Well Network
Ely Basins

Figure 2-4

Recycled Water Recharge Program





Main Map Features

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



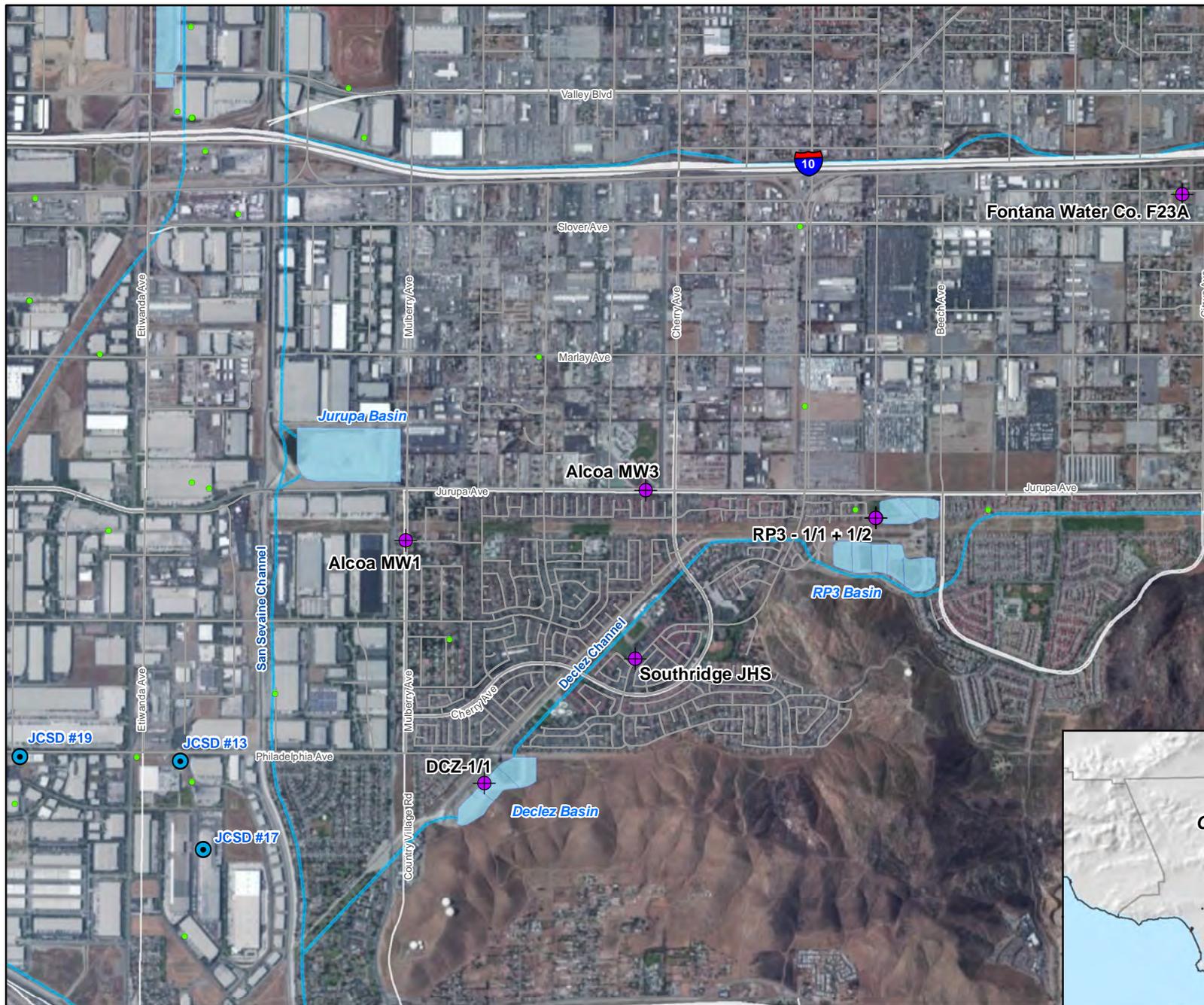
Monitoring Well Network

Brooks Street Basin

Figure 2-5

Recycled Water Recharge Program





Main Map Features

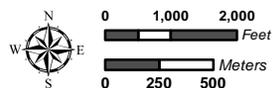
- JCS# Wells
- "Other Wells"
- ⊕ Existing Monitoring Well
- Rivers/Streams/Creeks
- Recharge Basins

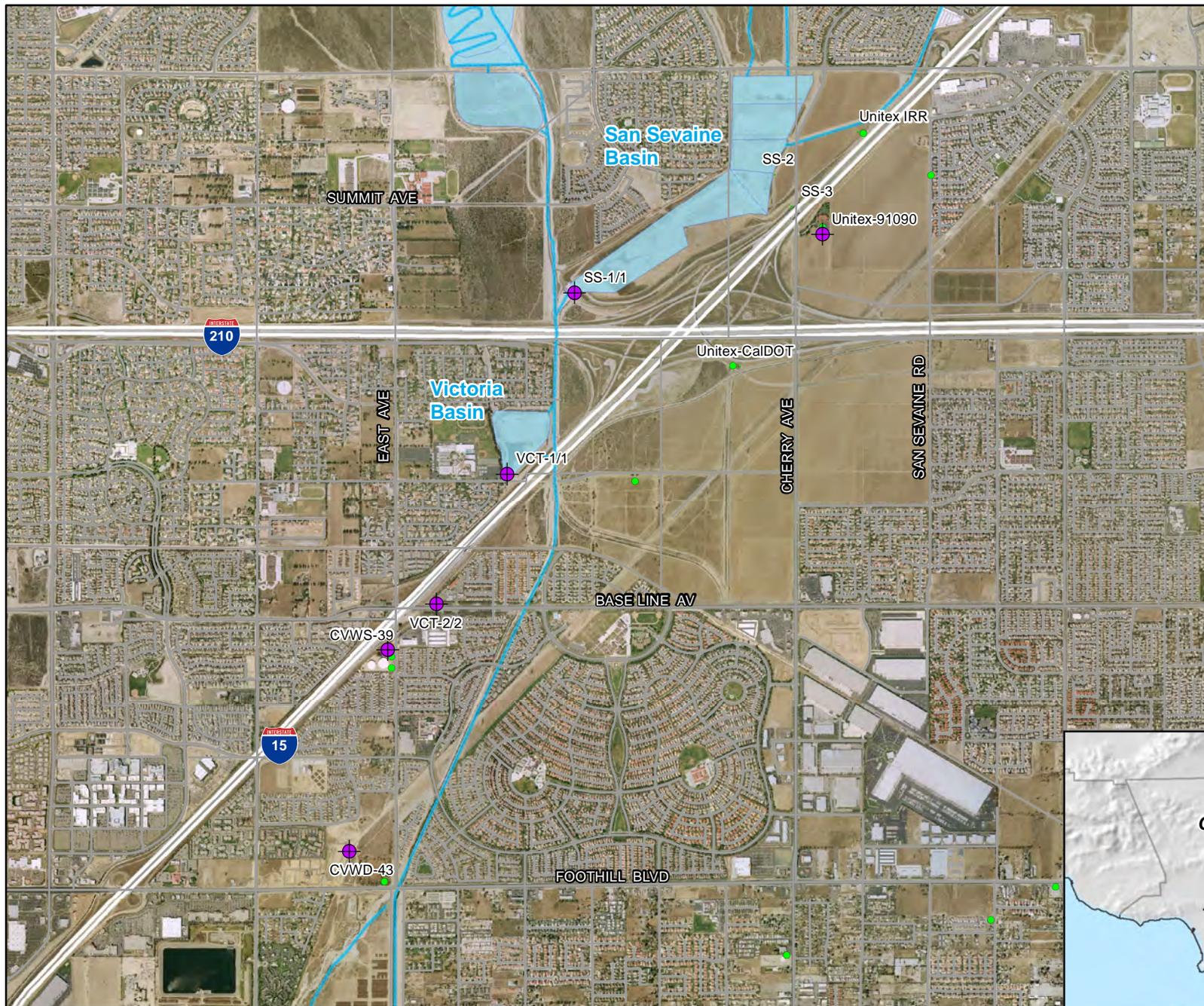


Monitoring Well Network
Declez and RP3 Basins

Figure 2-6

Recycled Water Recharge Program





Main Map Features

Legend

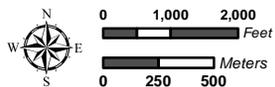
-  Existing Monitoring Well
-  Rivers/Streams/Creeks
-  Recharge Basins



Monitoring Well Network
San Sevaine and Victoria Basin

Figure 2-7

Recycled Water Recharge Program



APPENDIX A

MONTHLY GROUNDWATER RECHARGE SUMMARIES

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

January 2015

Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 234 AF**	
Upland	28	-	N		
Montclair 1, 2, 3 & 4	72	-	N		
Brooks	19	-	10		
West Cucamonga Channel Drainage System					
8th Street	110	-	-	MZ-2 689 AF**	
7th Street	-	-	-		
Ely 1, 2, & 3	44	-	183		
Minor Drainage					
Grove	33	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	117	-	-		
Turner 3 & 4	4	-	-		
Day Creek Channel Drainage System					
Lower Day	40	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	18	-	63		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	-	-	-		
San Sevaine 5	(6)	-	-		
West Fontana Channel System					
Hickory	8	0.0	194		
Banana	24	0.0	144		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	109	0.0	29	MZ-3 376 AF**	
RP3 Cell 2	23	-	-		
Declez	47	0.0	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(5)				
Turner (CVWD) MZ-2	(9)				
Month Total = 1,299 AF					
	676	0.0	623	January 2015	
Fiscal Year to Date Total					
Since July 1, 2014 = 5,404 AF		0.0	5,404	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 1,299 AF	676	0.0	623	Calendar Year to Date	

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

- : No stormwater/local runoff, or basin not in use due to maintenance or testing.

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

N : No turnout planned for installation.

* : Data are preliminary based on the data available at the time of this report preparation.

** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
February 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 202 AF**	
Upland	29	-	N		
Montclair 1, 2, 3 & 4	30	-	N		
Brooks	27	-	92		
West Cucamonga Channel Drainage System					
8th Street	37	-	-	MZ-2 974 AF**	
7th Street	5	-	-		
Ely 1, 2, & 3	72	-	222		
Minor Drainage					
Grove	29	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	93	-	60		
Turner 3 & 4	65	-	53		
Day Creek Channel Drainage System					
Lower Day	17	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	40	-	57		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	8	-	-		
San Sevaine 5	31	-	-		
West Fontana Channel System					
Hickory	47	-	180		
Banana	16	-	47		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	74	-	243		
RP3 Cell 2	21	-	-		
Declez	106	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	(7)				
Montclair (MVWD) MZ-1	(11)				
Turner (CVWD) MZ-2	-				
Month Total = 1,683 AF					
	729	0	954	February 2015	
Fiscal Year to Date Total					
Since July 1, 2014 = 12,998 AF	6,640	0	6,358	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 2,982 AF	1,405	0	1,577	Calendar Year to Date	
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water					
- : No stormwater/local runoff, or basin not in use due to maintenance or testing.					
X : Turnouts not available - to be installed during future projects.					
N : No turnout planned for installation.					
* : Data are preliminary based on the data available at the time of this report preparation.					
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
March 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 146 AF**	
Upland	14	-	N		
Montclair 1, 2, 3 & 4	11	-	N		
Brooks	13	-	69		
West Cucamonga Channel Drainage System					
8th Street	24	-	-	MZ-2 825 AF**	
7th Street	18	-	-		
Ely 1, 2, & 3	15	-	157		
Minor Drainage					
Grove	29	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	52	-	143		
Turner 3 & 4	71	-	155		
Day Creek Channel Drainage System					
Lower Day	-	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	12	-	79		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	1	-	-		
San Sevaine 5	1	-	-		
West Fontana Channel System					
Hickory	-	-	115		
Banana	2	-	80		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	62	-	325		
RP3 Cell 2	7	-	-		
Declez	15	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(3)				
Turner (CVWD) MZ-2	(5)				
Month Total = 1,462 AF	339	0.0	1,123	March 2015	
Fiscal Year to Date Total				Fiscal Year	
Since July 1, 2014 = 14,460 AF	6,979	0.0	7,481	to Date	
Calendar Year to Date Total				Calendar Year	
Since Jan. 1, 2015 = 4,444 AF	1,744	0.0	2,700	to Date	
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water					
- : No stormwater/local runoff, or basin not in use due to maintenance or testing.					
X : Turnouts not available - to be installed during future projects.					
N : No turnout planned for installation.					
* : Data are preliminary based on the data available at the time of this report preparation.					
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
April 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 133 AF**	
Upland	-	-	N		
Montclair 1, 2, 3 & 4	2	-	N		
Brooks	10	-	101		
West Cucamonga Channel Drainage System					
8th Street	25	-	-	MZ-2 731 AF**	
7th Street	-	-	-		
Ely 1, 2, & 3	100	-	165		
Minor Drainage					
Grove	68	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	-	-	-		
Turner 3 & 4	39	-	-		
Day Creek Channel Drainage System					
Lower Day	3	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	-	-	127		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	-	-	-		
San Sevaine 5	-	-	-		
West Fontana Channel System					
Hickory	-	-	229		
Banana	3	-	90		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	41	-	282		
RP3 Cell 2	-	-	-		
Declez	41	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	(4)				
Montclair (MVWD) MZ-1	(1)				
Turner (SAWCO) MZ-2	-				
Month Total = 1,321 AF	327	0.0	994	April 2015	
Fiscal Year to Date Total				Fiscal Year to Date	
Since July 1, 2014 = 15,781 AF	7,306	0.0	8,475		
Calendar Year to Date Total				Calendar Year to Date	
Since Jan. 1, 2015 = 5,765 AF	2,071	0.0	3,694		
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water					
- : No stormwater/local runoff, or basin not in use due to maintenance or testing.					
X : Turnouts not available - to be installed during future projects.					
N : No turnout planned for installation.					
* : Data are preliminary based on the data available at the time of this report preparation.					
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
May 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 239 AF**	
Upland	20	-	N		
Montclair 1, 2, 3 & 4	35	-	N		
Brooks	21	-	120		
West Cucamonga Channel Drainage System					
8th Street	57	-	-	MZ-2 761 AF**	
7th Street	-	-	-		
Ely 1, 2, & 3	231	-	160		
Minor Drainage					
Grove	47	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	-	-	-		
Turner 3 & 4	-	-	-		
Day Creek Channel Drainage System					
Lower Day	10	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	13	-	141		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	1	-	-		
San Sevaine 5	16	-	-		
West Fontana Channel System					
Hickory	3	-	139		
Banana	-	-	161		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	112	-	348	MZ-3 729 AF**	
RP3 Cell 2	9	-	-		
Declez	99	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(14)				
Turner (SAWCO) MZ-2	-				
Month Total = 1,729 AF					
	660	0.0	1,069	May 2015	
Fiscal Year to Date Total					
Since July 1, 2014 = 17,509 AF	7,965	0.0	9,544	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 7,493 AF	2,730	0.0	4,763	Calendar Year to Date	
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water					
- : No stormwater/local runoff, or basin not in use due to maintenance or testing.					
X : Turnouts not available - to be installed during future projects.					
N : No turnout planned for installation.					
* : Data are preliminary based on the data available at the time of this report preparation.					
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
June 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 168 AF**	
Upland	-	-	N		
Montclair 1, 2, 3 & 4	-	-	N		
Brooks	-	-	156		
West Cucamonga Channel Drainage System					
8th Street	12	-	-	MZ-2 586 AF**	
7th Street	-	-	-		
Ely 1, 2, & 3	-	-	273		
Minor Drainage					
Grove	-	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	-	-	-		
Turner 3 & 4	2	-	81		
Day Creek Channel Drainage System					
Lower Day	-	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	1	-	32		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	-	-	-		
San Sevaine 5	-	-	-		
West Fontana Channel System					
Hickory	-	-	197		
Banana	-	-	26		
Declez Channel Drainage System					
RP3 Cells 1, 3, & 4	9	-	531		
RP3 Cell 2	3	-	-		
Declez	3	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	-				
Turner (SAWCO) MZ-2	-				
Month Total = 1,326 AF	30	0.0	1,296	June 2015	
Fiscal Year to Date Total				Fiscal Year to Date	
Since July 1, 2014 = 18,835 AF	7,995	0.0	10,840		
Calendar Year to Date Total				Calendar Year to Date	
Since Jan. 1, 2015 = 8,819 AF	2,760	0.0	6,059		
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water - : No stormwater/local runoff, or basin not in use due to maintenance or testing. X : Turnouts not available - to be installed during future projects. N : No turnout planned for installation. * : Data are preliminary based on the data available at the time of this report preparation. ** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

July 2015

Drainage System Basin	Recharge Volume (AF)*			Management Zone Subtotals	
	SW/LR	MW	RW		
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 141 AF**	
Upland	17	-	N		
Montclair 1, 2, 3 & 4	17	-	N		
Brooks	-	-	63		
West Cucamonga Channel Drainage System					
8th Street	44	-	-	MZ-2 806 AF**	
7th Street	-	-	-		
Ely 1, 2, & 3	285	-	102		
Minor Drainage					
Grove	37	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	-	-	-		
Turner 3 & 4	87	-	85		
Day Creek Channel Drainage System					
Lower Day	17	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	2	-	X		
Victoria	4	-	139		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	4	-	-		
San Sevaine 5	5	-	-		
West Fontana Channel System					
Hickory	-	-	39		
Banana	-	-	54		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	105	-	268	MZ-3 505 AF**	
RP3 Cell 2	29	-	-		
Declez	49	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	-				
Turner (CVWD) MZ-2	-				
Month Total = 1,452 AF	702	0.0	750	July 2015	
Fiscal Year to Date Total				Fiscal Year	
Since July 1, 2015 = 1,452 AF	702	0.0	750	to Date	
Calendar Year to Date Total				Calendar Year	
Since Jan. 1, 2015 = 10,272 AF	3,463	0.0	6,809	to Date	

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

- : No stormwater/local runoff, or basin not in use due to maintenance or testing.

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

N : No turnout planned for installation.

* : Data are preliminary based on the data available at the time of this report preparation.

** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS					
August 2015					
Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 27 AF**	
Upland	-	-	N		
Montclair 1, 2, 3 & 4	-	-	N		
Brooks	-	-	-		
West Cucamonga Channel Drainage System					
8th Street	4	-	-	MZ-2 426 AF**	
7th Street	-	-	23		
Ely 1, 2, & 3	3	-	1		
Minor Drainage					
Grove	-	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	1	-	-		
Turner 3 & 4	15	-	163		
Day Creek Channel Drainage System					
Lower Day	21	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	1	-	165		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	-	-	-		
San Sevaine 5	-	-	-		
West Fontana Channel System					
Hickory	-	-	56		
Banana	-	-	156		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	9	-	141	MZ-3 331 AF**	
RP3 Cell 2	22	-	-		
Declez	3	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	-				
Turner (CVWD) MZ-2	-				
Month Total = 784 AF	79	-	705	August 2015	
Fiscal Year to Date Total				Fiscal Year	
Since July 1, 2015 = 2,236 AF	781	-	1,455	to Date	
Calendar Year to Date Total				Calendar Year	
Since Jan. 1, 2015 = 11,056 AF	3,542	0.0	7,514	to Date	
SW : Storm Water, LR : Local Runoff (and GE, MVWD), MW : MWD Imported Water, RW : Recycled Water					
- : No stormwater/local runoff, or basin not in use due to maintenance or testing.					
X : Turnouts not available - to be installed during future projects.					
N : No turnout planned for installation.					
* : Data are preliminary based on the data available at the time of this report preparation.					
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.					

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

September 2015

Drainage System	Recharge Volume (AF)*			Management Zone Subtotals	
	Basin	SW/LR	MW		RW
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 206 AF**	
Upland	29	-	N		
Montclair 1, 2, 3 & 4	42	-	N		
Brooks	-	-	-		
West Cucamonga Channel Drainage System					
8th Street	19	-	-	MZ-2 1,092 AF**	
7th Street	57	-	60		
Ely 1, 2, & 3	215	-	31		
Minor Drainage					
Grove	82	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	120	-	145		
Turner 3 & 4	74	-	51		
Day Creek Channel Drainage System					
Lower Day	19	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	13	-	X		
Victoria	37	-	136		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	28	-	-		
San Sevaine 5	25	-	-		
West Fontana Channel System					
Hickory	9	-	107		
Banana	40	-	376		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	75	-	219	MZ-3 905 AF**	
RP3 Cell 2	48	-	-		
Declez	147	-	-		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(1)				
Turner (CVWD) MZ-2	-				
Month Total = 2,203 AF					
	1,078	-	1,125	September 2015	
Fiscal Year to Date Total					
Since July 1, 2015 = 4,439 AF	1,859	-	2,580	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 13,259 AF	4,620	0.0	8,639	Calendar Year to Date	

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- : No stormwater/local runoff, or basin not in use due to maintenance or testing.

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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

October 2015

Drainage System	Recharge Volume (AF)*			Management Zone Subtotals	
Basin	SW/LR	MW	RW		
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 93 AF**	
Upland	19	-	N		
Montclair 1, 2, 3 & 4	23	-	N		
Brooks	-	-	-		
West Cucamonga Channel Drainage System					
8th Street	14	-	-	MZ-2 978 AF**	
7th Street	25	-	13		
Ely 1, 2, & 3	75	-	76		
Minor Drainage					
Grove	60	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	98	-	238		
Turner 3 & 4	64	-	65		
Day Creek Channel Drainage System					
Lower Day	24	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	8	-	X		
Victoria	35	-	101		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	31	-	-		
San Sevaine 5	16	-	-		
West Fontana Channel System					
Hickory	14	-	73		
Banana	105	-	349		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	67	-	363	MZ-3 939 AF**	
RP3 Cell 2	19	-	-		
Declez	36	-	-		
Non-Replenishment Recharge Deduct **					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(1)				
Turner (CVWD) MZ-2	-				
Month Total = 2,010 AF	732	0	1,278	October 2015	
Fiscal Year to Date Total					
Since July 1, 2015 = 6,449 AF	2,591	0	3,858	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 15,269 AF	5,352	0	9,917	Calendar Year to Date	

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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

November 2015

Drainage System	Recharge Volume (AF)*			Management	
Basin	SW/LR	MW	RW	Zone Subtotals	
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 142 AF**	
Upland	12	-	N		
Montclair 1, 2, 3 & 4	22	-	N		
Brooks	1	-	-		
West Cucamonga Channel Drainage System					
8th Street	10	-	-	MZ-2 386 AF**	
7th Street	9	-	95		
Ely 1, 2, & 3	41	-	21		
Minor Drainage					
Grove	20	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	45	-	79		
Turner 3 & 4	44	-	3		
Day Creek Channel Drainage System					
Lower Day	-	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	-	-	X		
Victoria	-	-	34		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	1	-	-		
San Sevaine 5	-	-	-		
West Fontana Channel System					
Hickory	14	-	84		
Banana	30	-	262		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	40	-	228	MZ-3 578 AF**	
RP3 Cell 2	14	-	-		
Declez	4	-	-		
Non-Replenishment Recharge**					
Upland (SAWCo) MZ-1	-				
Montclair (MVWD) MZ-1	(7)				
Turner (SAWCO) MZ-2	-				
Month Total = 1,106 AF					
	300	0.0	806	November 2015	
Fiscal Year to Date Total					
Since July 1, 2015 = 7,555 AF	2,891	0.0	4,664	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 16,375 AF	5,652	0.0	10,723	Calendar Year to Date	

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SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

December 2015

Drainage System	Recharge Volume (AF)*			Management Zone Subtotals	
Basin	SW/LR	MW	RW		
San Antonio Channel Drainage System					
College Heights	-	-	N	MZ-1 416 AF**	
Upland	28	-	N		
Montclair 1, 2, 3 & 4	45	-	N		
Brooks	-	-	101		
West Cucamonga Channel Drainage System					
8th Street	10	-	-	MZ-2 1,126 AF**	
7th Street	76	-	159		
Ely 1, 2, & 3	92	-	128		
Minor Drainage					
Grove	42	N	N		
Cucamonga and Deer Creek Channel Drainage Systems					
Turner 1 & 2	105	-	224		
Turner 3 & 4	144	-	1		
Day Creek Channel Drainage System					
Lower Day	27	-	X		
Etiwanda Channel Drainage System					
Etiwanda Debris	20	-	X		
Victoria	86	-	60		
San Sevaine Channel Drainage System					
San Sevaine 1, 2, 3, & 4	40	-	-		
San Sevaine 5	40	-	-		
West Fontana Channel System					
Hickory	64	-	53	MZ-3 903 AF**	
Banana	59	-	283		
Declez Channel Drainage System					
RP3 Cells 1,3, & 4	148	-	274		
RP3 Cell 2	40	-	-		
Declez	49	-	50		
Non-Replenishment Recharge**					
Brooks (MVWD) MZ-1	-				
Montclair (MVWD) MZ-1	(3)				
Turner (CVWD) MZ-2	-				
Month Total = 2,445 AF					
	1,112	0.0	1,333	December 2015	
Fiscal Year to Date Total					
Since July 1, 2015 = 10,000 AF	4,003	0.0	5,997	Fiscal Year to Date	
Calendar Year to Date Total					
Since Jan. 1, 2015 = 18,820 AF	6,764	0.0	12,056	Calendar Year to Date	

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APPENDIX B
RWC MANAGEMENT PLANS

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
2010/11	Feb '11	41	276.	0.	310.2	586.2	12,285	83.	3,695	15980	23%
	Mar '11	42	250.	0.	310.2	560.2	12,845	23.	3,718	16563	22%
	Apr '11	43	24.	0.	310.2	334.2	13,179	181.	3,899	17078	23%
	May '11	44	33.	218.	310.2	561.2	13,740	243.	4,142	17883	23%
	Jun '11	45	21.	325.3	310.2	656.5	14,397	202.	4,344	18741	23%
2011/12	Jul '11	46	10.	190.6	310.2	510.8	14,908	88.	4,432	19340	23%
	Aug '11	47	11.	221.6	310.2	542.8	15,451	46.	4,478	19929	22%
	Sep '11	48	8.	160.	310.2	478.2	15,929	2.	4,480	20409	22%
	Oct '11	49	43.	0.	310.2	353.2	16,282	0.	4,480	20762	22%
	Nov '11	50	138.	0.	310.2	448.2	16,730	0.	4,480	21210	21%
	Dec '11	51	76.	0.	310.2	386.2	17,116	0.	4,480	21597	21%
	Jan '12	52	57.	0.	310.2	367.2	17,484	27.	4,507	21991	20%
	Feb '12	53	154.	0.	310.2	464.2	17,948	0.	4,507	22455	20%
	Mar '12	54	281.	0.	310.2	591.2	18,539	0.	4,507	23046	20%
	Apr '12	55	223.	0.	310.2	533.2	19,072	34.	4,541	23613	19%
	May '12	56	25.	0.	310.2	335.2	19,407	256.	4,797	24205	20%
	Jun '12	57	21.	0.	310.2	331.2	19,739	188.	4,985	24724	20%
2012/13	Jul '12	58	20.	0.	310.2	330.2	20,069	137.	5,122	25191	20%
	Aug '12	59	21.	0.	310.2	331.2	20,400	0.	5,122	25522	20%
	Sep '12	60	33.	0.	310.2	343.2	20,743	124.	5,246	25989	20%
	Oct '12	61	29.	0.	310.2	339.2	21,083	309.	5,555	26638	21%
	Nov '12	62	66.	0.	310.2	376.2	21,459	248.	5,803	27262	21%
	Dec '12	63	278.	0.	310.2	588.2	22,047	103.	5,906	27953	21%
	Jan '13	64	70.	0.	310.2	380.2	22,427	230.	6,136	28563	21%
	Feb '13	65	90.	0.	310.2	400.2	22,827	226.	6,362	29189	22%
	Mar '13	66	65.	0.	310.2	375.2	23,203	240.	6,602	29805	22%
	Apr '13	67	24.	0.	310.2	334.2	23,537	152.	6,754	30291	22%
	May '13	68	43.	0.	310.2	353.2	23,890	221.	6,975	30865	23%
	Jun '13	69	12.	0.	310.2	322.2	24,212	271.	7,246	31458	23%
2013/14	Jul '13	70	13.	0.	310.2	323.2	24,535	186.	7,432	31968	23%
	Aug '13	71	13.	0.	310.2	323.2	24,859	118.	7,550	32409	23%
	Sep '13	72	11.	0.	310.2	321.2	25,180	150.	7,700	32880	23%
	Oct '13	73	48.	0.	310.2	358.2	25,538	239.	7,939	33477	24%
	Nov '13	74	49.	0.	310.2	359.2	25,897	249.	8,188	34085	24%
	Dec '13	75	46.	0.	310.2	356.2	26,253	121.	8,309	34563	24%
	Jan '14	76	27.	0.	310.2	337.2	26,591	108.	8,417	35008	24%
	Feb '14	77	59.	0.	310.2	369.2	26,960	88.	8,505	35465	24%
	Mar '14	78	46.	5.4	310.2	361.6	27,321	26.	8,531	35853	24%
	Apr '14	79	79.	0.	310.2	389.2	27,711	21.	8,552	36263	24%
	May '14	80	26.	0.	310.2	336.2	28,047	65.	8,617	36664	24%
	Jun '14	81	24	0	310.2	334.2	28,381	52.	8,669	37050	23%
2014/15	Jul '14	82	25.	0.	310.2	335.2	28,716	8.	8,677	37393	23%
	Aug '14	83	15.	0.	310.2	325.2	29,041	8.	8,685	37727	23%
	Sep '14	84	14.	0.	310.2	324.2	29,366	32.	8,717	38083	23%
	Oct '14	85	0.	0.	310.2	310.2	29,676	0.	8,717	38393	23%
	Nov '14	86	146.	0.	310.2	456.2	30,132	0.	8,717	38849	22%
	Dec '14	87	353.	0.	310.2	663.2	30,795	0.	8,717	39512	22%
	Jan '15	88	110.	0.	310.2	420.2	31,216	0.	8,717	39933	22%
	Feb '15	89	42.	0.	310.2	352.2	31,568	0.	8,717	40285	22%
	Mar '15	90	42.	0.	310.2	352.2	31,920	0.	8,717	40637	21%
	Apr '15	91	25.	0.	310.2	335.2	32,255	0.	8,717	40972	21%
	May '15	92	57.	0.	310.2	367.2	32,622	0.	8,717	41340	21%
	Jun '15	93	12.	0.	310.2	322.2	32,945	0.	8,717	41662	21%
2015/16	Jul '15	94	44.	0.	310.2	354.2	33,299	0.	8,717	42016	21%
	Aug '15	95	4.	0.	310.2	314.2	33,613	23.	8,740	42353	21%
	Sep '15	96	76.	0.	310.2	386.2	33,939	60.	8,800	42739	21%
	Oct '15	97	39.	0.	310.2	349.2	34,156	13.	8,813	42969	21%
	Nov '15	98	19.	0.	310.2	329.2	34,425	95.	8,908	43333	21%
	Dec '15	99	86.	0.	310.2	396.2	34,761	159.	9,067	43828	21%
	Jan '16	100	249.	0.	310.2	559.2	35,204	59.	9,126	44331	21%
	Feb '16	101	93.	0.	310.2	403.2	35,365	206.	9,332	44697	21%
	Mar '16	102	116.	0.	310.2	426.2	35,466	125.	9,457	44923	21%
	Apr '16	103	93.	0.	310.2	403.2	35,639	175.	9,632	45271	21%
	May '16	104	42.	0.	310.2	352.2	35,941	100.	9,732	45673	21%
	Jun '16	105	20.	0.	310.2	330.2	36,256	0.	9,732	45989	21%
2016/17	Jul '16	106	17.	0.	310.2	327.2	36,572	0.	9,732	46304	21%
	Aug '16	107	16.	0.	310.2	326.2	36,892	230.	9,962	46854	21%
	Sep '16	108	23.	0.	310.2	333.2	37,203	230.	10,192	47395	22%
	Oct '16	109	51.	0.	310.2	361.2	37,524	230.	10,422	47946	22%
	Nov '16	110	100.	0.	310.2	410.2	37,892	150.	10,572	48464	22%
	Dec '16	111	227.	0.	310.2	537.2	38,350	0.	10,572	48922	22%
	Jan '17	112	131.	0.	310.2	441.2	38,732	50.	10,622	49354	22%
	Feb '17	113	206.	0.	310.2	516.2	39,081	50.	10,672	49753	21%
	Mar '17	114	116.	0.	310.2	426.2	39,469	125.	10,797	50266	21%
	Apr '17	115	93.	0.	310.2	403.2	39,783	175.	10,972	50755	22%
	May '17	116	42.	0.	310.2	352.2	40,093	230.	11,202	51295	22%
	Jun '17	117	20.	0.	310.2	330.2	40,381	0.	11,202	51583	22%

H I S T O R I C A L

P L A N



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
2017/18	Jul '17	118	17.		310.2	327.2	40,692	0.	11,202	51895	22%
	Aug '17	119	16.		310.2	326.2	41,003	230.	11,432	52435	22%
	Sep '17	120	23.		310.2	333.2	41,319	230.	11,534	52853	22%
	Oct '17	121	51.		310.2	361.2	41,638	230.	11,655	53293	22%
	Nov '17	122	100.		310.2	410.2	41,967	150.	11,644	53611	22%
	Dec '17	123	227.		310.2	537.2	42,281	0.	11,644	53925	22%
	Jan '18	124	131.		310.2	441.2	42,387	50.	11,693	54080	22%
	Feb '18	125	206.		310.2	516.2	42,805	50.	11,586	54391	21%
	Mar '18	126	116.		310.2	426.2	43,210	125.	11,547	54757	21%
	Apr '18	127	93.		310.2	403.2	43,602	175.	11,632	55234	21%
	May '18	128	42.		310.2	352.2	43,865	230.	11,704	55569	21%
	Jun '18	129	20.		310.2	330.2	44,180	0.	11,618	55798	21%
2018/19	Jul '18	130	17.		310.2	327.2	44,478	0.	11,394	55872	20%
	Aug '18	131	16.		310.2	326.2	44,789	230.	11,496	56285	20%
	Sep '18	132	23.		310.2	333.2	45,107	230.	11,726	56833	21%
	Oct '18	133	51.		310.2	361.2	45,453	230.	11,956	57409	21%
	Nov '18	134	100.		310.2	410.2	45,726	150.	12,106	57832	21%
	Dec '18	135	227.		310.2	537.2	45,911	0.	12,106	58017	21%
	Jan '19	136	131.		310.2	441.2	46,317	50.	12,156	58473	21%
	Feb '19	137	206.		310.2	516.2	46,375	50.	12,206	58581	21%
	Mar '19	138	116.		310.2	426.2	46,781	125.	12,331	59112	21%
	Apr '19	139	93.		310.2	403.2	47,169	175.	12,506	59675	21%
	May '19	140	42.		310.2	352.2	47,505	230.	12,736	60241	21%
	Jun '19	141	20.		310.2	330.2	47,835	0.	12,736	60571	21%
2019/20	Jul '19	142	17.		310.2	327.2	48,143	0.	12,736	60879	21%
	Aug '19	143	16.		310.2	326.2	48,437	230.	12,942	61379	21%
	Sep '19	144	23.		310.2	333.2	48,752	230.	13,172	61924	21%
	Oct '19	145	51.		310.2	361.2	48,729	230.	13,402	62131	22%
	Nov '19	146	100.		310.2	410.2	48,736	150.	13,419	62155	22%
	Dec '19	147	227.		310.2	537.2	48,660	0.	13,326	61986	21%
	Jan '20	148	131.		310.2	441.2	48,404	50.	13,274	61678	22%
	Feb '20	149	206.		310.2	516.2	48,133	50.	13,324	61457	22%
	Mar '20	150	116.		310.2	426.2	48,176	125.	13,335	61511	22%
	Apr '20	151	93.		310.2	403.2	48,063	175.	13,410	61473	22%
	May '20	152	42.		310.2	352.2	48,071	230.	13,441	61512	22%
	Jun '20	153	20.		310.2	330.2	48,058	0.	13,139	61197	21%
2020/21	Jul '20	154	17.		310.2	327.2	48,045	0.	12,921	60966	21%
	Aug '20	155	16.		310.2	326.2	48,033	230.	13,045	61078	21%
	Sep '20	156	23.		310.2	333.2	48,020	230.	13,098	61118	21%
	Oct '20	157	51.		310.2	361.2	47,982	230.	13,040	61022	21%
	Nov '20	158	100.		310.2	410.2	47,895	150.	13,027	60922	21%
	Dec '20	159	227.		310.2	537.2	47,623	0.	13,007	60630	21%
	Jan '21	160	131.		310.2	441.2	47,644	50.	12,890	60534	21%
	Feb '21	161	206.		310.2	516.2	47,574	50.	12,857	60431	21%
	Mar '21	162	116.		310.2	426.2	47,440	125.	12,959	60399	21%
	Apr '21	163	93.		310.2	403.2	47,509	175.	12,953	60462	21%
	May '21	164	42.		310.2	352.2	47,300	230.	12,940	60240	21%
	Jun '21	165	20.		310.2	330.2	46,974	0.	12,738	59712	21%
2021/22	Jul '21	166	17.		310.2	327.2	46,790	0.	12,650	59440	21%
	Aug '21	167	16.		310.2	326.2	46,573	230.	12,834	59407	22%
	Sep '21	168	23.		310.2	333.2	46,428	230.	13,062	59490	22%
	Oct '21	169	51.		310.2	361.2	46,436	230.	13,292	59728	22%
	Nov '21	170	100.		310.2	410.2	46,398	150.	13,442	59840	22%
	Dec '21	171	227.		310.2	537.2	46,549	0.	13,442	59991	22%
	Jan '22	172	131.		310.2	441.2	46,623	50.	13,465	60088	22%
	Feb '22	173	206.		310.2	516.2	46,675	50.	13,515	60190	22%
	Mar '22	174	116.		310.2	426.2	46,510	125.	13,640	60150	23%
	Apr '22	175	93.		310.2	403.2	46,380	175.	13,781	60161	23%
	May '22	176	42.		310.2	352.2	46,397	230.	13,755	60152	23%
	Jun '22	177	20.		310.2	330.2	46,396	0.	13,567	59963	23%
2022/23	Jul '22	178	17.		310.2	327.2	46,393	0.	13,430	59823	22%
	Aug '22	179	16.		310.2	326.2	46,388	230.	13,660	60048	23%
	Sep '22	180	23.		310.2	333.2	46,378	230.	13,766	60144	23%
	Oct '22	181	51.		310.2	361.2	46,400	230.	13,687	60087	23%
	Nov '22	182	100.		310.2	410.2	46,434	150.	13,589	60023	23%
	Dec '22	183	227.		310.2	537.2	46,383	0.	13,486	59869	23%
	Jan '23	184	131.		310.2	441.2	46,444	50.	13,306	59750	22%
	Feb '23	185	206.		310.2	516.2	46,560	50.	13,130	59690	22%
	Mar '23	186	116.		310.2	426.2	46,611	125.	13,015	59626	22%
	Apr '23	187	93.		310.2	403.2	46,680	175.	13,038	59718	22%
	May '23	188	42.		310.2	352.2	46,679	230.	13,047	59726	22%
	Jun '23	189	20.		310.2	330.2	46,687	0.	12,776	59463	21%

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
2023/24	Jul '23	190	17.		310.2	327.2	46,691	0.	12,590	59281	21%
	Aug '23	191	16.		310.2	326.2	46,694	230.	12,702	59396	21%
	Sep '23	192	23.		310.2	333.2	46,706	230.	12,782	59488	21%
	Oct '23	193	51.		310.2	361.2	46,709	230.	12,773	59482	21%
	Nov '23	194	100.		310.2	410.2	46,760	150.	12,674	59434	21%
	Dec '23	195	227.		310.2	537.2	46,941	0.	12,553	59494	21%
	Jan '24	196	131.		310.2	441.2	47,045	50.	12,495	59540	21%
	Feb '24	197	206.		310.2	516.2	47,192	50.	12,457	59649	21%
	Mar '24	198	116.		310.2	426.2	47,257	125.	12,556	59813	21%
	Apr '24	199	93.		310.2	403.2	47,271	175.	12,710	59981	21%
	May '24	200	42.		310.2	352.2	47,287	230.	12,875	60162	21%
	Jun '24	201	20.		310.2	330.2	47,283	0.	12,823	60106	21%
2024/25	Jul '24	202	17.		310.2	327.2	47,275	0.	12,815	60090	21%
	Aug '24	203	16.		310.2	326.2	47,276	230.	13,037	60313	22%
	Sep '24	204	23.		310.2	333.2	47,285	230.	13,235	60520	22%
	Oct '24	205	51.		310.2	361.2	47,336	230.	13,465	60801	22%
	Nov '24	206	100.		310.2	410.2	47,290	150.	13,615	60905	22%
	Dec '24	207	227.		310.2	537.2	47,164	0.	13,615	60779	22%
	Jan '25	208	131.		310.2	441.2	47,185	50.	13,665	60850	22%
	Feb '25	209	206.		310.2	516.2	47,349	50.	13,715	61064	22%
	Mar '25	210	116.		310.2	426.2	47,423	125.	13,840	61263	23%
	Apr '25	211	93.		310.2	403.2	47,491	175.	14,015	61506	23%
	May '25	212	42.		310.2	352.2	47,476	230.	14,245	61721	23%
	Jun '25	213	20.		310.2	330.2	47,484	0.	14,245	61729	23%
2025/26	Jul '25	214	17.		310.2	327.2	47,457	0.	14,245	61702	23%
	Aug '25	215	16.		310.2	326.2	47,469	230.	14,452	61921	23%
	Sep '25	216	23.		310.2	333.2	47,416	230.	14,622	62038	24%
	Oct '25	217	51.		310.2	361.2	47,428	230.	14,839	62267	24%
	Nov '25	218	100.		310.2	410.2	47,509	150.	14,894	62403	24%
	Dec '25	219	227.		310.2	537.2	47,650	0.	14,735	62385	24%
	Jan '26	220	131.		310.2	441.2	47,532	50.	14,726	62258	24%
	Feb '26	221	206.		310.2	516.2	47,645	50.	14,570	62215	23%

P L A N E D

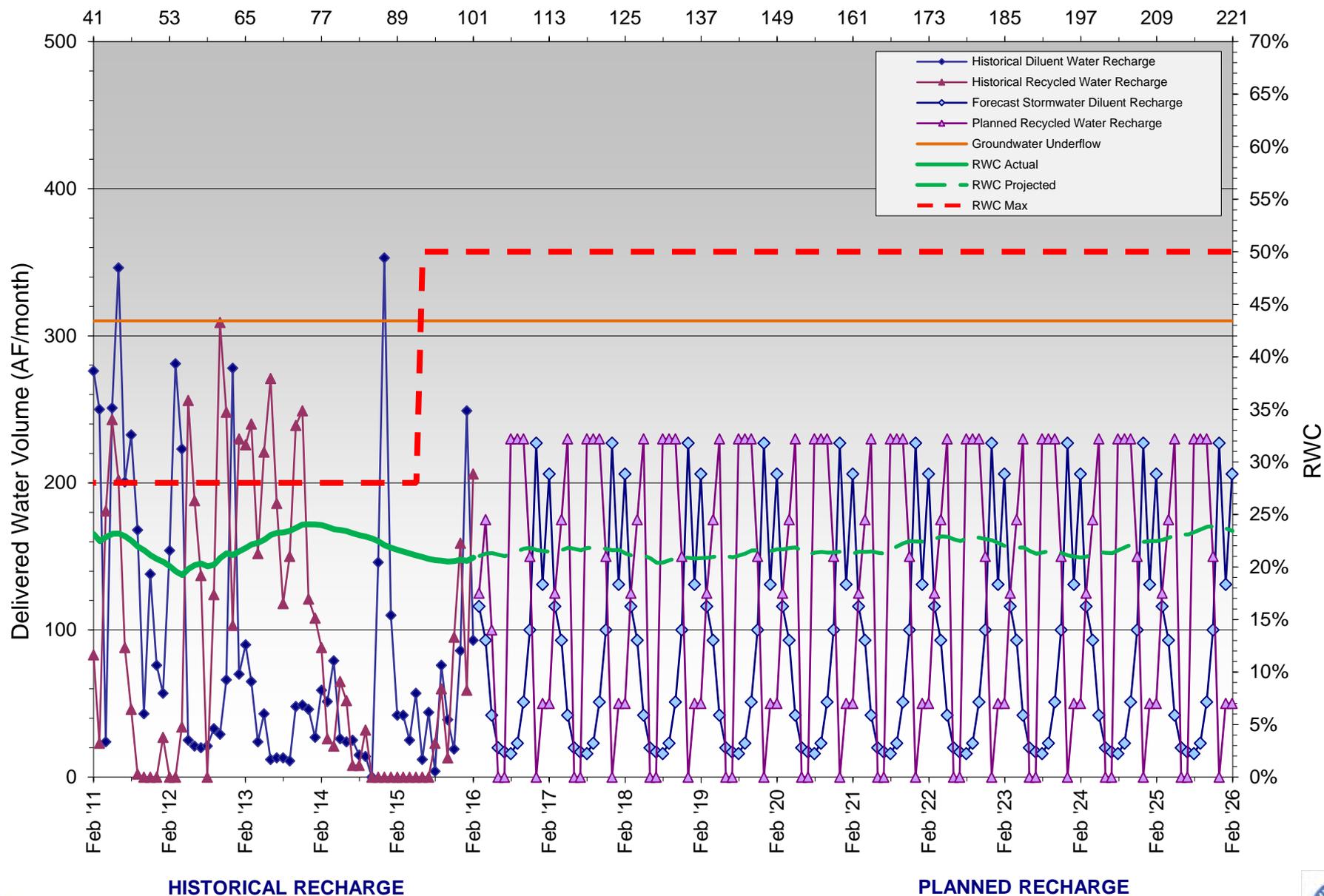
Notes:

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
2017/2018	Jul '17	144	6.		151	157.3	16,724	150	9,431	26,155	36%
	Aug '17	145	3.		151	154.3	16,878	0	9,431	26,309	36%
	Sep '17	146	3.		151	154.3	17,030	0	9,431	26,461	36%
	Oct '17	147	14.		151	165.3	17,193	100	9,531	26,724	36%
	Nov '17	148	19.		151	170.3	17,328	100	9,631	26,959	36%
	Dec '17	149	42.		151	193.3	17,500	100	9,731	27,231	36%
	Jan '18	150	36.		151	187.3	17,557	100	9,831	27,388	36%
	Feb '18	151	72.		151	223.3	17,705	100	9,931	27,636	36%
	Mar '18	152	25.		151	176.3	17,882	100	10,031	27,913	36%
	Apr '18	153	23.		151	174.3	18,056	0	9,984	28,040	36%
	May '18	154	16.		151	167.3	18,220	150	10,096	28,316	36%
	Jun '18	155	3.		151	154.3	18,366	150	10,174	28,540	36%
2018/2019	Jul '18	156	6.		151	157.3	18,493	150	10,324	28,817	36%
	Aug '18	157	3.		151	154.3	18,602	0	10,324	28,926	36%
	Sep '18	158	3.		151	154.3	18,722	0	10,324	29,046	36%
	Oct '18	159	14.		151	165.3	18,852	100	10,424	29,276	36%
	Nov '18	160	19.		151	170.3	18,972	100	10,524	29,496	36%
	Dec '18	161	42.		151	193.3	19,078	100	10,624	29,702	36%
	Jan '19	162	36.		151	187.3	19,261	100	10,684	29,945	36%
	Feb '19	163	72.		151	223.3	19,389	100	10,784	30,173	36%
	Mar '19	164	25.		151	176.3	19,565	100	10,884	30,449	36%
	Apr '19	165	23.		151	174.3	19,740	0	10,884	30,624	36%
	May '19	166	16.		151	167.3	19,907	150	11,034	30,941	36%
	Jun '19	167	3.		151	154.3	20,061	150	11,184	31,245	36%
2019/2020	Jul '19	168	6.		151	157.3	20,218	150	11,334	31,552	36%
	Aug '19	169	3.		151	154.3	20,373	0	11,334	31,707	36%
	Sep '19	170	3.		151	154.3	20,527	0	11,334	31,861	36%
	Oct '19	171	14.		151	165.3	20,526	100	11,305	31,831	36%
	Nov '19	172	19.		151	170.3	20,545	100	11,224	31,769	35%
	Dec '19	173	42.		151	193.3	20,512	100	11,257	31,769	35%
	Jan '20	174	36.		151	187.3	20,448	100	11,282	31,730	36%
	Feb '20	175	72.		151	223.3	20,377	100	11,382	31,759	36%
	Mar '20	176	25.		151	176.3	20,385	100	11,482	31,867	36%
	Apr '20	177	23.		151	174.3	20,342	0	11,342	31,684	36%
	May '20	178	16.		151	167.3	20,358	150	11,315	31,673	36%
	Jun '20	179	3.		151	154.3	20,361	150	11,336	31,697	36%
2020/2021	Jul '20	180	6.		151	157.3	20,367	150	11,409	31,776	36%
	Aug '20	181	3.		151	154.3	20,370	0	11,355	31,725	36%
	Sep '20	182	3.		151	154.3	20,373	0	11,296	31,669	36%
	Oct '20	183	14.		151	165.3	20,382	100	11,348	31,730	36%
	Nov '20	184	19.		151	170.3	20,385	100	11,419	31,804	36%
	Dec '20	185	42.		151	193.3	20,376	100	11,519	31,895	36%
	Jan '21	186	36.		151	187.3	20,402	100	11,619	32,021	36%
	Feb '21	187	72.		151	223.3	20,448	100	11,719	32,167	36%
	Mar '21	188	25.		151	176.3	20,473	100	11,819	32,292	37%
	Apr '21	189	23.		151	174.3	20,496	0	11,819	32,315	37%
	May '21	190	16.		151	167.3	20,512	150	11,969	32,481	37%
	Jun '21	191	3.		151	154.3	20,515	150	12,119	32,634	37%
2021/2022	Jul '21	192	6.		151	157.3	20,490	150	12,269	32,759	37%
	Aug '21	193	3.		151	154.3	20,493	0	12,134	32,627	37%
	Sep '21	194	3.		151	154.3	20,496	0	11,739	32,235	36%
	Oct '21	195	14.		151	165.3	20,490	100	11,435	31,925	36%
	Nov '21	196	19.		151	170.3	20,479	100	11,374	31,853	36%
	Dec '21	197	42.		151	193.3	20,503	100	11,229	31,732	35%
	Jan '22	198	36.		151	187.3	20,491	100	11,168	31,659	35%
	Feb '22	199	72.		151	223.3	20,542	100	11,101	31,643	35%
	Mar '22	200	25.		151	176.3	20,523	100	11,129	31,652	35%
	Apr '22	201	23.		151	174.3	20,511	0	11,078	31,589	35%
	May '22	202	16.		151	167.3	20,527	150	11,183	31,710	35%
	Jun '22	203	3.		151	154.3	20,530	150	11,254	31,784	35%
2022/2023	Jul '22	204	6.		151	157.3	20,536	150	11,363	31,899	36%
	Aug '22	205	3.		151	154.3	20,539	0	11,361	31,900	36%
	Sep '22	206	3.		151	154.3	20,542	0	11,173	31,715	35%
	Oct '22	207	14.		151	165.3	20,545	100	11,170	31,715	35%
	Nov '22	208	19.		151	170.3	20,559	100	11,150	31,709	35%
	Dec '22	209	42.		151	193.3	20,552	100	11,235	31,787	35%
	Jan '23	210	36.		151	187.3	20,570	100	11,307	31,877	35%
	Feb '23	211	72.		151	223.3	20,622	100	11,405	32,027	36%
	Mar '23	212	25.		151	176.3	20,639	100	11,463	32,102	36%
	Apr '23	213	23.		151	174.3	20,662	0	11,408	32,070	36%
	May '23	214	16.		151	167.3	20,675	150	11,519	32,194	36%
	Jun '23	215	3.		151	154.3	20,678	150	11,634	32,312	36%

P L A N N E D



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
2023/2024	Jul '23	216	6.		151	157.3	20,684	150	11,769	32,453	36%
	Aug '23	217	3.		151	154.3	20,687	0	11,757	32,444	36%
	Sep '23	218	3.		151	154.3	20,690	0	11,757	32,447	36%
	Oct '23	219	14.		151	165.3	20,704	100	11,472	32,176	36%
	Nov '23	220	19.		151	170.3	20,701	100	11,470	32,171	36%
	Dec '23	221	42.		151	193.3	20,737	100	11,570	32,307	36%
	Jan '24	222	36.		151	187.3	20,756	100	11,670	32,426	36%
	Feb '24	223	72.		151	223.3	20,773	100	11,770	32,543	36%
	Mar '24	224	25.		151	176.3	20,789	100	11,785	32,574	36%
	Apr '24	225	23.		151	174.3	20,810	0	11,697	32,507	36%
May '24	226	16.		151	167.3	20,826	150	11,653	32,479	36%	
Jun '24	227	3.		151	154.3	20,829	150	11,613	32,442	36%	
2024/2025	Jul '24	228	6.		151	157.3	20,835	150	11,763	32,598	36%
	Aug '24	229	3.		151	154.3	20,838	0	11,681	32,519	36%
	Sep '24	230	3.		151	154.3	20,841	0	11,609	32,450	36%
	Oct '24	231	14.		151	165.3	20,855	100	11,503	32,358	36%
	Nov '24	232	19.		151	170.3	20,867	100	11,430	32,297	35%
	Dec '24	233	42.		151	193.3	20,764	100	11,463	32,227	36%
	Jan '25	234	36.		151	187.3	20,776	100	11,419	32,195	35%
	Feb '25	235	72.		151	223.3	20,832	100	11,472	32,304	36%
	Mar '25	236	25.		151	176.3	20,855	100	11,492	32,347	36%
	Apr '25	237	23.		151	174.3	20,875	0	11,402	32,277	35%
May '25	238	16.		151	167.3	20,891	150	11,391	32,282	35%	
Jun '25	239	3.		151	154.3	20,894	150	11,515	32,409	36%	
2025/2026	Jul '25	240	6.		151	157.3	20,900	150	11,611	32,511	36%
	Aug '25	241	3.		151	154.3	20,903	0	11,455	32,358	35%
	Sep '25	242	3.		151	154.3	20,866	0	11,079	31,945	35%
	Oct '25	243	14.		151	165.3	20,775	100	10,830	31,605	34%
	Nov '25	244	19.		151	170.3	20,764	100	10,668	31,432	34%
	Dec '25	245	42.		151	193.3	20,747	100	10,485	31,232	34%
	Jan '26	246	36.		151	187.3	20,712	100	10,510	31,222	34%
	Feb '26	247	72.		151	223.3	20,777	100	10,500	31,277	34%
	Mar '26	248	25.		151	176.3	20,777	100	10,500	31,277	34%
	Apr '26	249	23.		151	174.3	20,777	0	10,500	31,277	34%
May '26	250	16.		151	167.3	20,777	150	10,500	31,277	34%	
Jun '26	251	3.		151	154.3	20,777	150	10,500	31,277	34%	

P L A N N E D

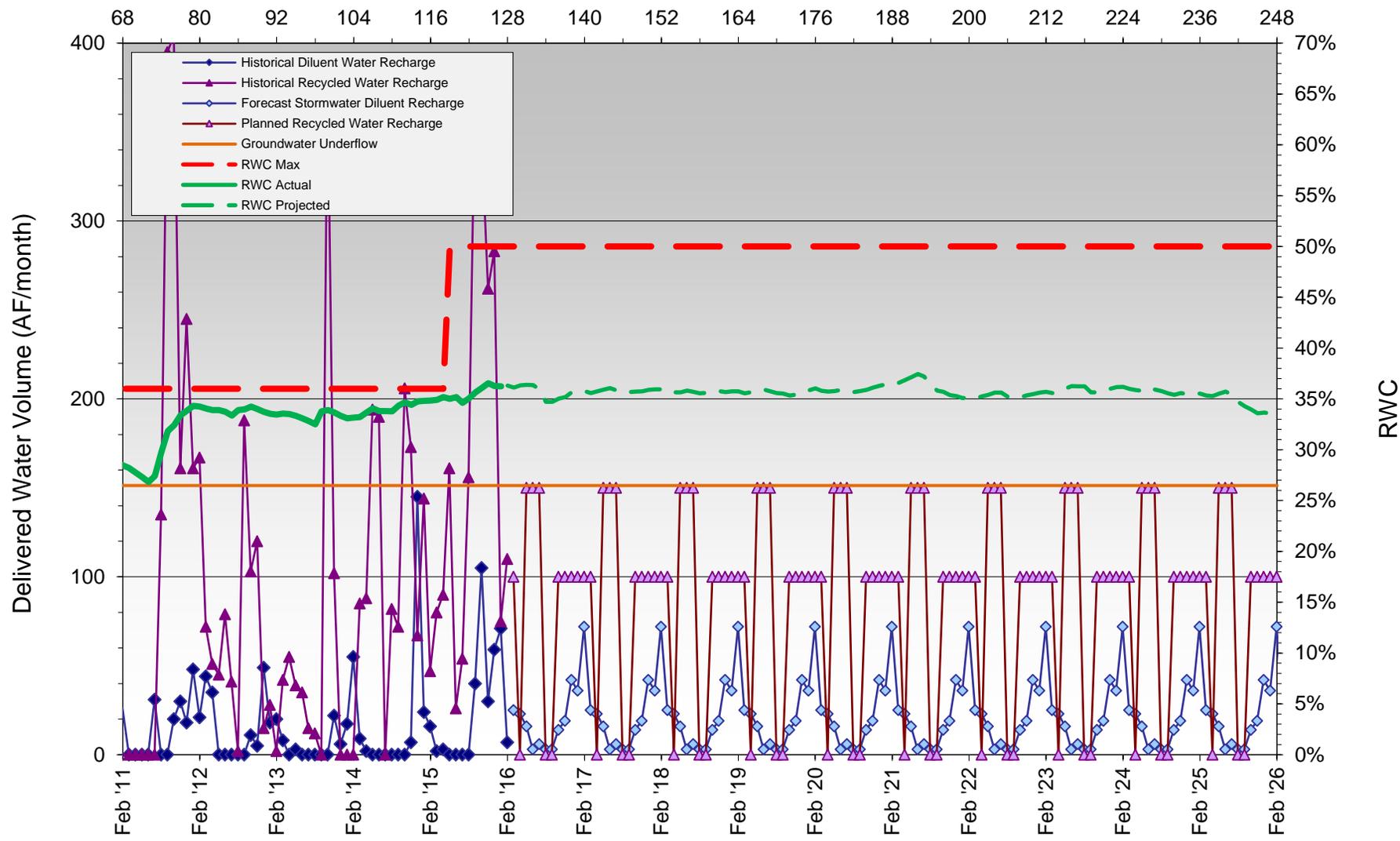
Notes:

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 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 Diluted 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
2010/11	Feb '11	30	164.	0.	509.2	673.2	16450	0.	4114	20564	20%
	Mar '11	31	142.	0.	509.2	651.2	17101	0.	4114	21215	19%
	Apr '11	32	1.	0.	509.2	510.2	17611	174.	4288	21899	20%
	May '11	33	10.	0.	509.2	519.2	18131	162.	4450	22581	20%
	Jun '11	34	1.	0.	509.2	510.2	18641	223.	4673	23314	20%
2011/12	Jul '11	35	2.	235.6	509.2	746.8	19388	0.	4673	24061	19%
	Aug '11	36	2.	183.4	509.2	694.6	20082	0.	4673	24755	19%
	Sep '11	37	12.	141.5	509.2	662.7	20745	0.	4673	25418	18%
	Oct '11	38	18.	0.	509.2	527.2	21272	80.	4753	26025	18%
	Nov '11	39	50.	0.	509.2	559.2	21832	36.	4789	26621	18%
	Dec '11	40	16.	0.	509.2	525.2	22357	98.	4887	27244	18%
	Jan '12	41	45.	0.	509.2	554.2	22911	142.	5029	27940	18%
	Feb '12	42	50.	0.	509.2	559.2	23470	77.	5106	28576	18%
	Mar '12	43	103.	0.	509.2	612.2	24082	85.	5191	29273	18%
	Apr '12	44	64.	0.	509.2	573.2	24656	32.	5223	29879	17%
	May '12	45	1.	0.	509.2	510.2	25166	125.	5348	30514	18%
	Jun '12	46	0.	0.	509.2	509.2	25675	161.	5509	31184	18%
2012/13	Jul '12	47	1.	0.	509.2	510.2	26185	33.	5542	31727	17%
	Aug '12	48	2.	0.	509.2	511.2	26697	39.	5581	32278	17%
	Sep '12	49	2.	0.	509.2	511.2	27208	51.	5632	32840	17%
	Oct '12	50	0.	0.	509.2	509.2	27717	0.	5632	33349	17%
	Nov '12	51	0.	0.	509.2	509.2	28226	0.	5632	33858	17%
	Dec '12	52	0.	0.	509.2	509.2	28735	0.	5632	34367	16%
	Jan '13	53	35.	0.	509.2	544.2	29280	342.	5974	35254	17%
	Feb '13	54	26.	0.	509.2	535.2	29815	299.	6273	36088	17%
	Mar '13	55	32.	0.	509.2	541.2	30356	238.	6511	36867	18%
	Apr '13	56	0.	0.	509.2	509.2	30865	231.	6742	37607	18%
	May '13	57	17.	0.	509.2	526.2	31392	152.	6894	38286	18%
	Jun '13	58	1.	0.	509.2	510.2	31902	120.	7014	38916	18%
2013/14	Jul '13	59	1.	0.	509.2	510.2	32412	169.	7183	39595	18%
	Aug '13	60	1.	0.	509.2	510.2	32922	197.	7380	40302	18%
	Sep '13	61	28.	0.	509.2	537.2	33459	182.	7562	41021	18%
	Oct '13	62	23.	0.	509.2	532.2	33992	108.	7670	41662	18%
	Nov '13	63	4.	0.	509.2	513.2	34505	94.	7764	42269	18%
	Dec '13	64	8.	0.	509.2	517.2	35022	104.	7868	42890	18%
	Jan '14	65	3.	0.	509.2	512.2	35534	109.	7977	43511	18%
	Feb '14	66	47.	0.	509.2	556.2	36091	102.	8079	44170	18%
	Mar '14	67	12.	0.	509.2	521.2	36612	130.	8209	44821	18%
	Apr '14	68	14.	0.	509.2	523.2	37135	65.	8274	45409	18%
	May '14	69	0.	0.	509.2	509.2	37644	0.	8274	45918	18%
	Jun '14	70	19.	0.	509.2	528.2	38172	48.	8322	46494	18%
2014/15	Jul '14	71	7.	0.	509.2	516.2	38689	72.	8394	47083	18%
	Aug '14	72	1.	0.	509.2	510.2	39199	141.	8535	47734	18%
	Sep '14	73	1.	0.	509.2	510.2	39709	157.	8692	48401	18%
	Oct '14	74	6.	0.	509.2	515.2	40224	56.	8748	48972	18%
	Nov '14	75	28.	0.	509.2	537.2	40762	37.	8785	49547	18%
	Dec '14	76	95.	0.	509.2	604.2	41366	0.	8785	50151	18%
	Jan '15	77	19.	0.	509.2	528.2	41894	10.	8795	50689	17%
	Feb '15	78	27.	0.	509.2	536.2	42430	92.	8887	51317	17%
	Mar '15	79	13.	0.	509.2	522.2	42953	69.	8956	51909	17%
	Apr '15	80	10.	0.	509.2	519.2	43472	101.	9057	52529	17%
	May '15	81	21.	0.	509.2	530.2	44002	120.	9177	53179	17%
	Jun '15	82	0.	0.	509.2	509.2	44511	156.	9333	53844	17%
2015/16	Jul '15	83	0.	0.	509.2	509.2	44988	63.	9396	54384	17%
	Aug '15	84	0.	0.	509.2	509.2	45322	0.	9396	54718	17%
	Sep '15	85	0.	0.	509.2	509.2	45147	0.	9396	54543	17%
	Oct '15	86	0.	0.	509.2	509.2	45529	0.	9396	54925	17%
	Nov '15	87	1.	0.	509.2	510.2	45649	0.	9396	55045	17%
	Dec '15	88	0.	0.	509.2	509.2	45795	101.	9497	55292	17%
	Jan '16	89	54.	0.	509.2	563.2	46102	254.	9751	55853	17%
	Feb '16	90	22.	0.	509.2	531.2	46240	211.	9962	56202	18%
	Mar '16	91	58.	0.	509.2	567.2	46593	100.	10062	56655	18%
	Apr '16	92	38.	0.	509.2	547.2	46878	175.	10237	57115	18%
	May '16	93	13.	0.	509.2	522.2	47100	250.	10487	57587	18%
	Jun '16	94	3.	0.	509.2	512.2	47241	275.	10762	58003	19%
2016/17	Jul '16	95	4.	0.	509.2	513.2	47548	275.	11037	58585	19%
	Aug '16	96	5.	0.	509.2	514.2	47911	275.	11312	59223	19%
	Sep '16	97	8.	0.	509.2	517.2	48086	275.	11587	59673	19%
	Oct '16	98	13.	0.	509.2	522.2	48301	200.	11787	60088	20%
	Nov '16	99	24.	0.	509.2	533.2	48547	125.	11912	60459	20%
	Dec '16	100	72.	0.	509.2	581.2	48866	50.	11962	60828	20%
	Jan '17	101	78.	0.	509.2	587.2	49341	0.	11962	61303	20%
	Feb '17	102	94.	0.	509.2	603.2	49815	0.	11962	61777	19%
	Mar '17	103	58.	0.	509.2	567.2	50379	100.	12062	62441	19%
	Apr '17	104	38.	0.	509.2	547.2	50824	175.	12237	63061	19%
	May '17	105	13.	0.	509.2	522.2	51342	250.	12487	63829	20%
	Jun '17	106	3.	0.	509.2	512.2	51852	275.	12762	64614	20%

H I S T O R I C A L

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 Diluted 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
2017/18	Jul '17	107	4.		509.2	513.2	52366	275.	13037	65403	20%
	Aug '17	108	5.		509.2	514.2	52880	275.	13312	66192	20%
	Sep '17	109	8.		509.2	517.2	53372	275.	13587	66959	20%
	Oct '17	110	13.		509.2	522.2	53859	200.	13787	67646	20%
	Nov '17	111	24.		509.2	533.2	54369	125.	13912	68281	20%
	Dec '17	112	72.		509.2	581.2	54908	50.	13962	68870	20%
	Jan '18	113	78.		509.2	587.2	55213	0.	13962	69175	20%
	Feb '18	114	94.		509.2	603.2	55766	0.	13962	69728	20%
	Mar '18	115	58.		509.2	567.2	56324	100.	14062	70386	20%
	Apr '18	116	38.		509.2	547.2	56868	175.	14237	71105	20%
	May '18	117	13.		509.2	522.2	57347	250.	14487	71834	20%
	Jun '18	118	3.		509.2	512.2	57856	275.	14762	72618	20%
2018/19	Jul '18	119	4.		509.2	513.2	58366	275.	15037	73403	20%
	Aug '18	120	5.		509.2	514.2	58865	275.	15195	74060	21%
	Sep '18	121	8.		509.2	517.2	59382	275.	15384	74766	21%
	Oct '18	122	13.		509.2	522.2	59904	200.	15418	75322	20%
	Nov '18	123	24.		509.2	533.2	60414	125.	15440	75854	20%
	Dec '18	124	72.		509.2	581.2	60833	50.	15402	76235	20%
	Jan '19	125	78.		509.2	587.2	61396	0.	15125	76521	20%
	Feb '19	126	94.		509.2	603.2	61791	0.	15105	76896	20%
	Mar '19	127	58.		509.2	567.2	62328	100.	15046	77374	19%
	Apr '19	128	38.		509.2	547.2	62874	175.	14925	77799	19%
	May '19	129	13.		509.2	522.2	63380	250.	15060	78440	19%
	Jun '19	130	3.		509.2	512.2	63892	275.	15157	79049	19%
2019/20	Jul '19	131	4.		509.2	513.2	64404	275.	15426	79830	19%
	Aug '19	132	5.		509.2	514.2	64918	275.	15693	80611	19%
	Sep '19	133	8.		509.2	517.2	65435	275.	15968	81403	20%
	Oct '19	134	13.		509.2	522.2	65945	200.	15984	81419	20%
	Nov '19	135	24.		509.2	533.2	66455	125.	15863	81318	20%
	Dec '19	136	72.		509.2	581.2	66988	50.	15769	81167	19%
	Jan '20	137	78.		509.2	587.2	67525	0.	15695	80920	19%
	Feb '20	138	94.		509.2	603.2	68064	0.	15641	80745	19%
	Mar '20	139	58.		509.2	567.2	68602	100.	15561	80696	19%
	Apr '20	140	38.		509.2	547.2	69141	175.	15501	80651	19%
	May '20	141	13.		509.2	522.2	69680	250.	15395	80556	19%
	Jun '20	142	3.		509.2	512.2	70218	275.	15462	80625	19%
2020/21	Jul '20	143	4.		509.2	513.2	70756	275.	15590	80756	19%
	Aug '20	144	5.		509.2	514.2	71295	275.	15590	80743	19%
	Sep '20	145	8.		509.2	517.2	71834	275.	15724	80884	19%
	Oct '20	146	13.		509.2	522.2	72372	200.	15794	80943	20%
	Nov '20	147	24.		509.2	533.2	72910	125.	15832	80961	20%
	Dec '20	148	72.		509.2	581.2	73448	50.	15848	80767	20%
	Jan '21	149	78.		509.2	587.2	73985	0.	15848	80733	20%
	Feb '21	150	94.		509.2	603.2	74522	0.	15848	80663	20%
	Mar '21	151	58.		509.2	567.2	75059	100.	15948	80679	20%
	Apr '21	152	38.		509.2	547.2	75596	175.	15949	80717	20%
	May '21	153	13.		509.2	522.2	76133	250.	16037	80808	20%
	Jun '21	154	3.		509.2	512.2	76670	275.	16089	80862	20%
2021/22	Jul '21	155	4.		509.2	513.2	77208	275.	16364	80904	20%
	Aug '21	156	5.		509.2	514.2	77745	275.	16639	80998	21%
	Sep '21	157	8.		509.2	517.2	78282	275.	16914	81128	21%
	Oct '21	158	13.		509.2	522.2	78819	200.	17034	81243	21%
	Nov '21	159	24.		509.2	533.2	79356	125.	17123	81306	21%
	Dec '21	160	72.		509.2	581.2	79893	50.	17075	81314	21%
	Jan '22	161	78.		509.2	587.2	80430	0.	16933	81205	21%
	Feb '22	162	94.		509.2	603.2	80967	0.	16856	81172	21%
	Mar '22	163	58.		509.2	567.2	81504	100.	16871	81142	21%
	Apr '22	164	38.		509.2	547.2	82041	175.	17014	81259	21%
	May '22	165	13.		509.2	522.2	82578	250.	17139	81396	21%
	Jun '22	166	3.		509.2	512.2	83115	275.	17253	81513	21%
2022/23	Jul '22	167	4.		509.2	513.2	83652	275.	17495	81758	21%
	Aug '22	168	5.		509.2	514.2	84189	275.	17731	81997	22%
	Sep '22	169	8.		509.2	517.2	84726	275.	17955	82227	22%
	Oct '22	170	13.		509.2	522.2	85263	200.	18155	82440	22%
	Nov '22	171	24.		509.2	533.2	85800	125.	18280	82589	22%
	Dec '22	172	72.		509.2	581.2	86337	50.	18330	82711	22%
	Jan '23	173	78.		509.2	587.2	86874	0.	17988	82412	22%
	Feb '23	174	94.		509.2	603.2	87411	0.	17689	82181	22%
	Mar '23	175	58.		509.2	567.2	87948	100.	17551	82069	21%
	Apr '23	176	38.		509.2	547.2	88485	175.	17495	82051	21%
	May '23	177	13.		509.2	522.2	89022	250.	17593	82145	21%
	Jun '23	178	3.		509.2	512.2	89559	275.	17748	82302	22%

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
2023/24	Jul '23	179	4.		509.2	513.2	64557	275.	17854	82411	22%
	Aug '23	180	5.		509.2	514.2	64561	275.	17932	82493	22%
	Sep '23	181	8.		509.2	517.2	64541	275.	18025	82566	22%
	Oct '23	182	13.		509.2	522.2	64531	200.	18117	82648	22%
	Nov '23	183	24.		509.2	533.2	64551	125.	18148	82699	22%
	Dec '23	184	72.		509.2	581.2	64615	50.	18094	82709	22%
	Jan '24	185	78.		509.2	587.2	64690	0.	17985	82675	22%
	Feb '24	186	94.		509.2	603.2	64737	0.	17883	82620	22%
	Mar '24	187	58.		509.2	567.2	64783	100.	17853	82636	22%
	Apr '24	188	38.		509.2	547.2	64807	175.	17963	82770	22%
	May '24	189	13.		509.2	522.2	64820	250.	18213	83033	22%
	Jun '24	190	3.		509.2	512.2	64804	275.	18440	83244	22%
2024/25	Jul '24	191	4.		509.2	513.2	64801	275.	18643	83444	22%
	Aug '24	192	5.		509.2	514.2	64805	275.	18777	83582	22%
	Sep '24	193	8.		509.2	517.2	64812	275.	18895	83707	23%
	Oct '24	194	13.		509.2	522.2	64819	200.	19039	83858	23%
	Nov '24	195	24.		509.2	533.2	64815	125.	19127	83942	23%
	Dec '24	196	72.		509.2	581.2	64792	50.	19177	83969	23%
	Jan '25	197	78.		509.2	587.2	64851	0.	19167	84018	23%
	Feb '25	198	94.		509.2	603.2	64918	0.	19075	83993	23%
	Mar '25	199	58.		509.2	567.2	64963	100.	19106	84069	23%
	Apr '25	200	38.		509.2	547.2	64991	175.	19180	84171	23%
	May '25	201	13.		509.2	522.2	64983	250.	19310	84293	23%
	Jun '25	202	3.		509.2	512.2	64986	275.	19429	84415	23%
2025/26	Jul '25	203	4.		509.2	513.2	64990	275.	19641	84631	23%
	Aug '25	204	5.		509.2	514.2	64995	275.	19916	84911	23%
	Sep '25	205	8.		509.2	517.2	65003	275.	20191	85194	24%
	Oct '25	206	13.		509.2	522.2	65016	200.	20391	85407	24%
	Nov '25	207	24.		509.2	533.2	65039	125.	20516	85555	24%
	Dec '25	208	72.		509.2	581.2	65111	50.	20465	85576	24%
	Jan '26	209	78.		509.2	587.2	65135	0.	20211	85346	24%
	Feb '26	210	94.		509.2	603.2	65207	0.	20000	85207	23%
	Mar '26	211	58.		509.2	567.2	65207	100.	20000	85207	23%
	Apr '26	212	38.		509.2	547.2	65207	175.	20000	85207	23%
	May '26	213	13.		509.2	522.2	65207	250.	20000	85207	23%
	Jun '26	214	3.		509.2	512.2	65207	275.	20000	85207	23%

P L A N N E D

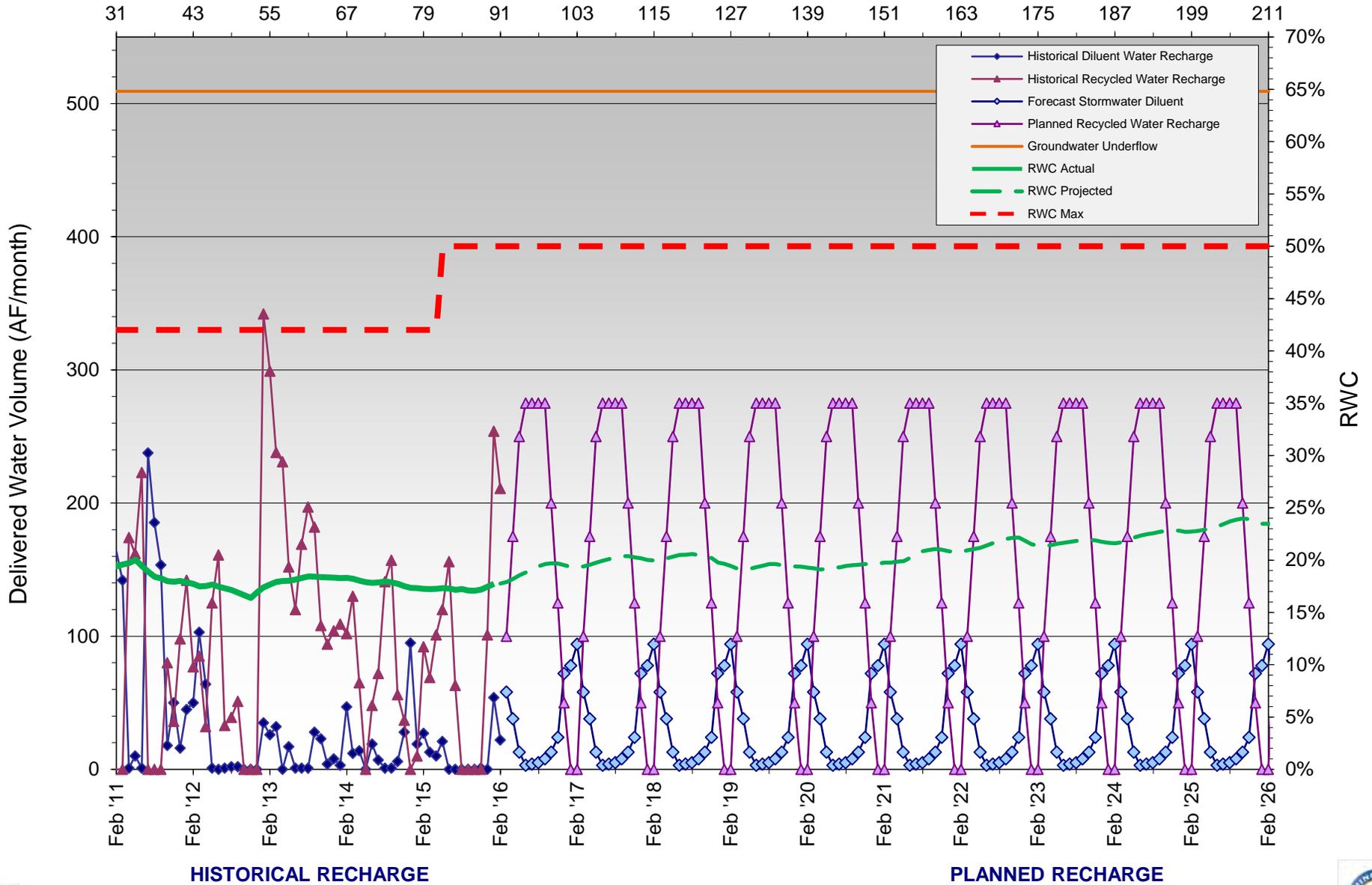
Notes:

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



HISTORICAL RECHARGE

PLANNED RECHARGE



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
2010/11	Feb '11	137	323	0	286	609	21,285	43	2,937	24,223	12%
	Mar '11	138	236	0	286	522	21,698	0	2,937	24,635	12%
	Apr '11	139	3	0	286	289	21,712	107	3,044	24,757	12%
	May '11	140	13	0	286	299	21,908	155	3,199	25,107	13%
	Jun '11	141	8	83	286	377	22,272	206	3,376	25,648	13%
2011/2012	Jul '11	142	18	285	286	589	22,847	176	3,552	26,399	13%
	Aug '11	143	16	275	286	577	23,414	141	3,662	27,076	14%
	Sep '11	144	19	325	286	630	24,018	6	3,490	27,508	13%
	Oct '11	145	215	0	286	501	24,443	0	3,304	27,746	12%
	Nov '11	146	211	0	286	497	24,611	0	3,194	27,806	11%
	Dec '11	147	36	0	286	322	24,820	0	3,194	28,015	11%
	Jan '12	148	89	0	286	375	25,018	64	3,258	28,276	12%
	Feb '12	149	95	0	286	381	25,293	6	3,264	28,557	11%
	Mar '12	150	247	0	286	533	25,607	0	3,264	28,872	11%
	Apr '12	151	135	0	286	421	25,908	0	3,264	29,172	11%
	May '12	152	3	0	286	289	26,111	0	3,264	29,375	11%
	Jun '12	153	12	0	286	298	26,393	0	3,264	29,658	11%
2012/2013	Jul '12	154	7	0	286	293	26,571	0	3,264	29,835	11%
	Aug '12	155	7	0	286	293	26,728	0	3,264	29,992	11%
	Sep '12	156	5	0	286	291	26,922	0	3,264	30,187	11%
	Oct '12	157	5	0	286	291	27,034	0	3,264	30,298	11%
	Nov '12	158	9	0	286	295	26,999	80	3,344	30,343	11%
	Dec '12	159	335	0	286	621	27,290	67	3,411	30,702	11%
	Jan '13	160	72	0	286	358	27,472	145	3,556	31,028	11%
	Feb '13	161	37	0	286	323	27,465	225	3,781	31,246	12%
	Mar '13	162	63	0	286	349	27,484	314	4,095	31,580	13%
	Apr '13	163	1	0	286	287	27,441	79	4,174	31,616	13%
	May '13	164	23	0	286	309	27,420	259	4,403	31,824	14%
	Jun '13	165	4	0	286	290	27,599	209	4,458	32,057	14%
	Jul '13	166	6	0	286	292	27,786	157	4,615	32,401	14%
	Aug '13	167	4	0	286	290	28,044	334	4,949	32,993	15%
2013/2014	Sep '13	168	6	0	286	292	28,325	457	5,406	33,731	16%
	Oct '13	169	0	0	286	286	28,600	358	5,764	34,364	17%
	Nov '13	170	21	0	286	307	28,803	421	6,185	34,988	18%
	Dec '13	171	24	0	286	310	28,920	413	6,598	35,518	19%
	Jan '14	172	8	0	286	294	29,181	211	6,809	35,990	19%
	Feb '14	173	294	0	286	580	29,431	194	7,003	36,434	19%
	Mar '14	174	63	0	286	349	29,606	108	7,111	36,717	19%
	Apr '14	175	83	0	286	369	29,907	218	7,329	37,236	20%
	May '14	176	9	0	286	295	30,185	241	7,565	37,750	20%
	Jun '14	177	15	0	286	301	30,473	186	7,707	38,181	20%
	Jul '14	178	16	0	286	302	30,761	101	7,762	38,524	20%
	Aug '14	179	16	0	286	302	30,969	8	7,722	38,692	20%
	Sep '14	180	15	0	286	301	31,092	121	7,802	38,894	20%
	Oct '14	181	16	0	286	302	31,064	286	8,065	39,129	21%
Nov '14	182	170	0	286	456	31,190	70	8,135	39,326	21%	
Dec '14	183	392	0	286	678	31,539	5	8,140	39,679	21%	
2014/2015	Jan '15	184	44	0	286	330	31,539	183	8,323	39,862	21%
	Feb '15	185	72	0	286	358	31,567	222	8,545	40,112	21%
	Mar '15	186	15	0	286	301	31,630	157	8,702	40,332	22%
	Apr '15	187	100	0	286	386	31,841	165	8,867	40,708	22%
	May '15	188	231	0	286	517	32,218	160	9,027	41,246	22%
	Jun '15	189	0	0	286	286	32,502	273	9,300	41,802	22%
	Jul '15	190	285	0	286	571	33,073	102	9,402	42,475	22%
	Aug '15	191	3	0	286	289	33,362	1	9,403	42,765	22%
	Sep '15	192	215	0	286	501	33,863	31	9,434	43,298	22%
	Oct '15	193	75	0	286	361	34,026	76	9,478	43,504	22%
	Nov '15	194	41	0	286	327	34,338	21	9,499	43,838	22%
	Dec '15	195	92	0	286	378	34,609	128	9,592	44,201	22%
	Jan '16	196	337	0	286	623	35,042	61	9,633	44,675	22%
	Feb '16	197	59	0	286	345	35,120	89	9,647	44,767	22%
2015/2016	Mar '16	198	169	0	286	455	35,237	50	9,697	44,934	22%
	Apr '16	199	177	0	286	463	35,338	50	9,747	45,085	22%
	May '16	200	98	0	286	384	35,687	125	9,872	45,559	22%
	Jun '16	201	33	0	286	319	35,980	175	10,021	46,001	22%
	Jul '16	202	47	0	286	333	36,280	180	10,160	46,440	22%
2016/2017	Aug '16	203	31	0	286	317	36,587	180	10,334	46,921	22%
	Sep '16	204	63	0	286	349	36,896	180	10,431	47,327	22%
	Oct '16	205	95	0	286	381	37,223	100	10,500	47,723	22%
	Nov '16	206	148	0	286	434	37,594	60	10,510	48,104	22%
	Dec '16	207	210	0	286	496	38,005	0	10,468	48,473	22%
	Jan '17	208	200	0	286	486	38,396	0	10,411	48,806	21%
	Feb '17	209	231	0	286	517	38,763	0	10,388	49,151	21%
	Mar '17	210	169	0	286	455	39,201	50	10,393	49,594	21%
	Apr '17	211	177	0	286	463	39,606	50	10,402	50,008	21%
	May '17	212	98	0	286	384	39,976	125	10,487	50,463	21%
	Jun '17	213	33	0	286	319	40,277	175	10,655	50,932	21%

HISTORICAL

PLANNED



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
2017/2018	Jul '17	214	47		286	333	40,584	180	10,835	51,419	21%
	Aug '17	215	31		286	317	40,872	180	11,015	51,887	21%
	Sep '17	216	63		286	349	41,187	180	11,195	52,382	21%
	Oct '17	217	95		286	381	41,535	100	11,295	52,830	21%
	Nov '17	218	148		286	434	41,803	60	11,268	53,071	21%
	Dec '17	219	210		286	496	42,042	0	11,215	53,257	21%
	Jan '18	220	200		286	486	41,735	0	11,215	52,950	21%
	Feb '18	221	231		286	517	42,019	0	11,215	53,234	21%
	Mar '18	222	169		286	455	42,454	50	11,149	53,603	21%
	Apr '18	223	177		286	463	42,888	50	11,083	53,971	21%
	May '18	224	98		286	384	43,242	125	11,121	54,363	20%
	Jun '18	225	33		286	319	43,543	175	11,296	54,839	21%
2018/2019	Jul '18	226	47		286	333	43,859	180	11,409	55,268	21%
	Aug '18	227	31		286	317	44,168	180	11,589	55,757	21%
	Sep '18	228	63		286	349	44,512	180	11,769	56,281	21%
	Oct '18	229	95		286	381	44,877	100	11,734	56,611	21%
	Nov '18	230	148		286	434	45,197	60	11,706	56,903	21%
	Dec '18	231	210		286	496	45,406	0	11,706	57,112	20%
	Jan '19	232	200		286	486	45,854	0	11,667	57,521	20%
	Feb '19	233	231		286	517	45,962	0	11,658	57,620	20%
	Mar '19	234	169		286	455	46,370	50	11,708	58,078	20%
	Apr '19	235	177		286	463	46,698	50	11,743	58,441	20%
	May '19	236	98		286	384	47,014	125	11,857	58,871	20%
	Jun '19	237	33		286	319	47,309	175	12,032	59,341	20%
2019/2020	Jul '19	238	47		286	333	47,642	180	12,212	59,854	20%
	Aug '19	239	31		286	317	47,938	180	12,392	60,330	21%
	Sep '19	240	63		286	349	48,086	180	12,548	60,634	21%
	Oct '19	241	95		286	381	47,994	100	12,546	60,540	21%
	Nov '19	242	148		286	434	47,860	60	12,486	60,346	21%
	Dec '19	243	210		286	496	47,828	0	12,486	60,314	21%
	Jan '20	244	200		286	486	47,709	0	12,486	60,195	21%
	Feb '20	245	231		286	517	47,719	0	12,486	60,205	21%
	Mar '20	246	169		286	455	47,784	50	12,536	60,320	21%
	Apr '20	247	177		286	463	47,567	50	12,586	60,153	21%
	May '20	248	98		286	384	47,567	125	12,711	60,278	21%
	Jun '20	249	33		286	319	47,600	175	12,886	60,486	21%
2020/2021	Jul '20	250	47		286	333	47,647	180	13,066	60,713	22%
	Aug '20	251	31		286	317	47,678	180	13,246	60,924	22%
	Sep '20	252	63		286	349	47,741	180	13,426	61,167	22%
	Oct '20	253	95		286	381	47,807	100	13,412	61,219	22%
	Nov '20	254	148		286	434	47,828	60	13,352	61,180	22%
	Dec '20	255	210		286	496	47,466	0	13,340	60,806	22%
	Jan '21	256	200		286	486	47,562	0	13,340	60,902	22%
	Feb '21	257	231		286	517	47,470	0	13,297	60,767	22%
	Mar '21	258	169		286	455	47,403	50	13,347	60,750	22%
	Apr '21	259	177		286	463	47,577	50	13,290	60,867	22%
	May '21	260	98		286	384	47,662	125	13,260	60,922	22%
	Jun '21	261	33		286	319	47,604	175	13,229	60,833	22%
2021/2022	Jul '21	262	47		286	333	47,348	180	13,233	60,581	22%
	Aug '21	263	31		286	317	47,088	180	13,272	60,360	22%
	Sep '21	264	63		286	349	46,807	180	13,446	60,253	22%
	Oct '21	265	95		286	381	46,687	100	13,546	60,233	22%
	Nov '21	266	148		286	434	46,624	60	13,606	60,230	23%
	Dec '21	267	210		286	496	46,798	0	13,606	60,404	23%
	Jan '22	268	200		286	486	46,909	0	13,542	60,451	22%
	Feb '22	269	231		286	517	47,045	0	13,536	60,581	22%
	Mar '22	270	169		286	455	46,967	50	13,586	60,553	22%
	Apr '22	271	177		286	463	47,009	50	13,636	60,645	22%
	May '22	272	98		286	384	47,104	125	13,761	60,865	23%
	Jun '22	273	33		286	319	47,125	175	13,936	61,061	23%
2022/2023	Jul '22	274	47		286	333	47,165	180	14,116	61,281	23%
	Aug '22	275	31		286	317	47,189	180	14,296	61,485	23%
	Sep '22	276	63		286	349	47,247	180	14,476	61,723	23%
	Oct '22	277	95		286	381	47,337	100	14,576	61,913	24%
	Nov '22	278	148		286	434	47,476	60	14,556	62,032	23%
	Dec '22	279	210		286	496	47,351	0	14,489	61,840	23%
	Jan '23	280	200		286	486	47,479	0	14,344	61,823	23%
	Feb '23	281	231		286	517	47,673	0	14,119	61,792	23%
	Mar '23	282	169		286	455	47,779	50	13,855	61,634	22%
	Apr '23	283	177		286	463	47,955	50	13,826	61,781	22%
	May '23	284	98		286	384	48,030	125	13,692	61,722	22%
	Jun '23	285	33		286	319	48,059	175	13,658	61,717	22%

P L A N N E D



RWC Management Plan for Ely Basin

(120-month averaging period)

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

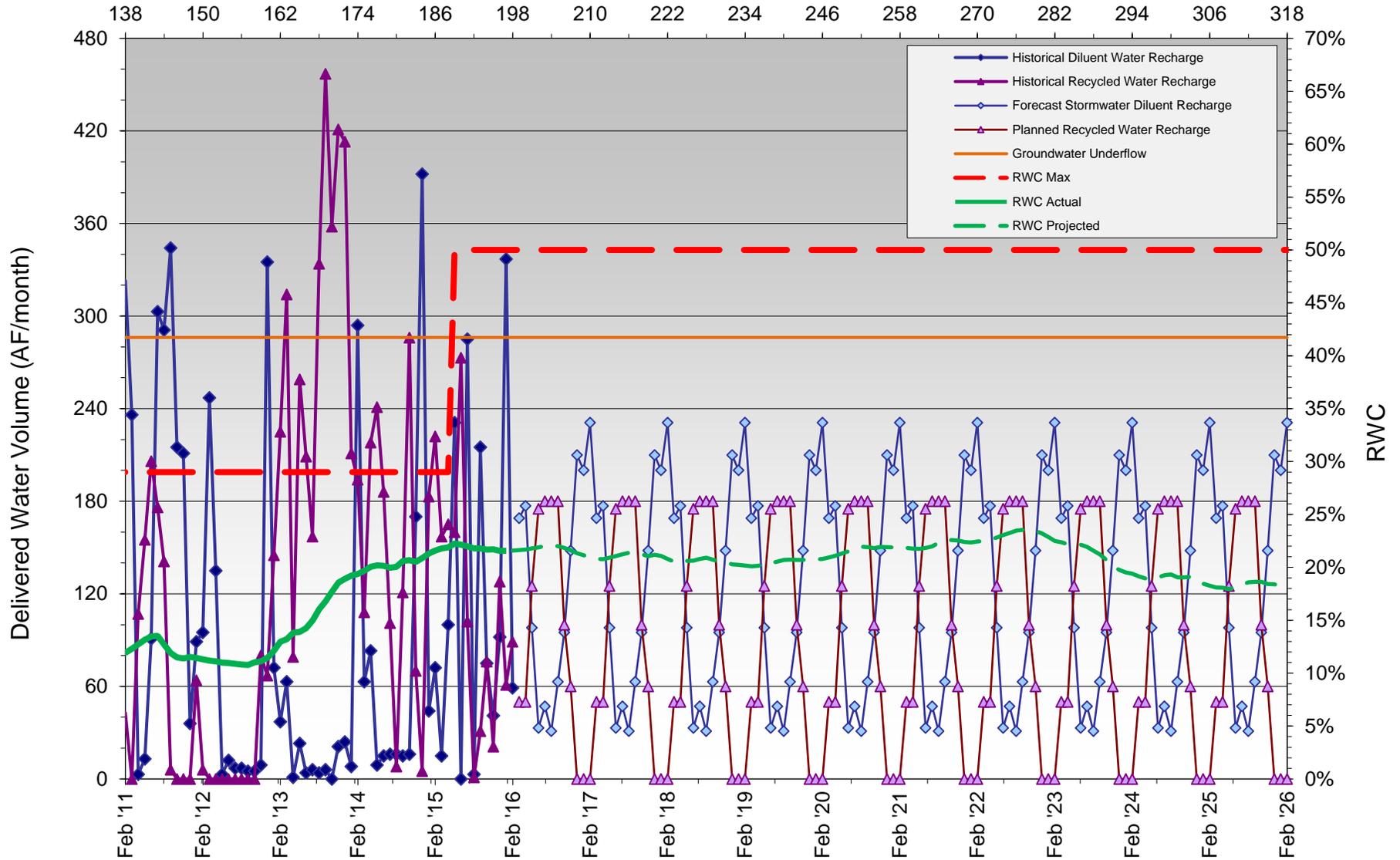
Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period	
2023/2024	Jul '23	286	47		286	333	48,100	180	13,681	61,781	22%	P L A N E D
	Aug '23	287	31		286	317	48,127	180	13,527	61,654	22%	
	Sep '23	288	63		286	349	48,184	180	13,250	61,434	22%	
	Oct '23	289	95		286	381	48,279	100	12,992	61,271	21%	
	Nov '23	290	148		286	434	48,406	60	12,631	61,037	21%	
	Dec '23	291	210		286	496	48,592	0	12,218	60,810	20%	
	Jan '24	292	200		286	486	48,784	0	12,007	60,791	20%	
	Feb '24	293	231		286	517	48,721	0	11,813	60,534	20%	
	Mar '24	294	169		286	455	48,827	50	11,755	60,582	19%	
	Apr '24	295	177		286	463	48,921	50	11,587	60,508	19%	
	May '24	296	98		286	384	49,010	125	11,471	60,481	19%	
	Jun '24	297	33		286	319	49,028	175	11,460	60,488	19%	
2024/2025	Jul '24	298	47		286	333	49,059	180	11,539	60,598	19%	
	Aug '24	299	31		286	317	49,074	180	11,711	60,785	19%	
	Sep '24	300	63		286	349	49,122	180	11,770	60,892	19%	
	Oct '24	301	95		286	381	49,201	100	11,584	60,785	19%	
	Nov '24	302	148		286	434	49,179	60	11,574	60,753	19%	
	Dec '24	303	210		286	496	48,997	0	11,569	60,566	19%	
	Jan '25	304	200		286	486	49,153	0	11,386	60,539	19%	
	Feb '25	305	231		286	517	49,312	0	11,164	60,476	18%	
	Mar '25	306	169		286	455	49,466	50	11,057	60,523	18%	
	Apr '25	307	177		286	463	49,543	50	10,942	60,485	18%	
	May '25	308	98		286	384	49,410	125	10,907	60,317	18%	
	Jun '25	309	33		286	319	49,443	175	10,809	60,252	18%	
2025/2026	Jul '25	310	47		286	333	49,205	180	10,887	60,092	18%	
	Aug '25	311	31		286	317	49,233	180	11,066	60,299	18%	
	Sep '25	312	63		286	349	49,081	180	11,215	60,296	19%	
	Oct '25	313	95		286	381	49,101	100	11,239	60,340	19%	
	Nov '25	314	148		286	434	49,208	60	11,278	60,486	19%	
	Dec '25	315	210		286	496	49,326	0	11,150	60,476	18%	
	Jan '26	316	200		286	486	49,189	0	11,089	60,278	18%	
	Feb '26	317	231		286	517	49,361	0	11,000	60,361	18%	

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 Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
	Feb '11	65	79.	0.	266.6	345.6	10208	37.	3199.1	13407	24%
	Mar '11	66	70.	0.	266.6	336.6	10538	0.	3199.1	13737	23%
	Apr '11	67	0.	0.	266.6	266.6	10799	52.	3251.1	14050	23%
	May '11	68	0.	2.	266.6	268.6	11067	84.	3335.1	14403	23%
	Jun '11	69	0.	8.	266.6	274.6	11342	74.	3409.1	14751	23%
2011/12	Jul '11	70	0.	0.	266.6	266.6	11607	14.	3423.1	15030	23%
	Aug '11	71	4.	68.1	266.6	338.7	11946	0.	3423.1	15369	22%
	Sep '11	72	32.	447.2	266.6	745.8	12692	20.	3443.1	16135	21%
	Oct '11	73	17.	0.	266.6	283.6	12975	35.	3478.1	16453	21%
	Nov '11	74	11.	0.	266.6	277.6	13192	202.	3680.1	16872	22%
	Dec '11	75	1.	0.	266.6	267.6	13457	226.	3906.1	17364	22%
	Jan '12	76	49.	0.	266.6	315.6	13738	16.	3922.1	17660	22%
	Feb '12	77	59.	0.	266.6	325.6	14063	83.	4005.1	18068	22%
	Mar '12	78	53.	0.	266.6	319.6	14379	79.	4084.1	18463	22%
	Apr '12	79	30.	0.	266.6	296.6	14674	66.	4150.1	18824	22%
	May '12	80	0.	0.	266.6	266.6	14941	40.	4190.1	19131	22%
	Jun '12	81	2.	0.	266.6	268.6	15209	2.	4192.1	19402	22%
2012/13	Jul '12	82	22.	0.	266.6	288.6	15498	57.	4249.1	19747	22%
	Aug '12	83	50.	0.	266.6	316.6	15815	44.	4293.1	20108	21%
	Sep '12	84	29.	0.	266.6	295.6	16110	0.	4293.1	20403	21%
	Oct '12	85	51.	0.	266.6	317.6	16428	0.	4293.1	20721	21%
	Nov '12	86	13.	0.	266.6	279.6	16626	177.	4470.1	21096	21%
	Dec '12	87	6.	0.	266.6	272.6	16777	144.	4614.1	21391	22%
	Jan '13	88	0.	0.	266.6	266.6	17043	115.	4729.1	21773	22%
	Feb '13	89	8.	0.	266.6	274.6	17172	3.	4732.1	21904	22%
	Mar '13	90	13.	0.	266.6	279.6	17346	147.	4879.1	22225	22%
	Apr '13	91	0.	0.	266.6	266.6	17523	71.	4950.1	22474	22%
	May '13	92	6.	0.	266.6	272.6	17789	0.	4950.1	22739	22%
	Jun '13	93	1.	0.	266.6	267.6	18057	116.	5066.1	23123	22%
2013/14	Jul '13	94	4.	0.	266.6	270.6	18327	201.	5267.1	23594	22%
	Aug '13	95	0.	0.	266.6	266.6	18594	11.	5278.1	23872	22%
	Sep '13	96	0.	0.	266.6	266.6	18860	0.	5278.1	24139	22%
	Oct '13	97	1.	0.	266.6	267.6	19128	1.	5279.1	24407	22%
	Nov '13	98	59.	0.	266.6	325.6	19449	339.	5618.1	25067	22%
	Dec '13	99	8.	0.	266.6	274.6	19688	108.	5726.1	25415	23%
	Jan '14	100	9.	3.	266.6	278.1	19966	86.	5812.1	25778	23%
	Feb '14	101	19.	1.	266.6	286.6	20124	67.	5879.1	26003	23%
	Mar '14	102	13.	0.	266.6	279.6	20349	224.	6103.1	26452	23%
	Apr '14	103	23.	10.	266.6	299.1	20648	379.	6482.1	27130	24%
	May '14	104	33.	0.	266.6	299.6	20947	292.	6774.1	27721	24%
	Jun '14	105	2.	0.	266.6	268.6	21216	212.	6986.1	28202	25%
2014/15	Jul '14	106	0.	0.	266.6	266.6	21483	118.	7104.1	28587	25%
	Aug '14	107	0.	0.	266.6	266.6	21749	82.	7186.1	28935	25%
	Sep '14	108	0.	0.	266.6	266.6	22016	236.	7422.1	29438	25%
	Oct '14	109	0.	0.	266.6	266.6	22165	226.	7648.1	29813	26%
	Nov '14	110	0.	0.	266.6	266.6	22429	272.	7920.1	30350	26%
	Dec '14	111	185.	0.	266.6	451.6	22842	46.	7966.1	30808	26%
	Jan '15	112	8.	0.	266.6	274.6	22967	194.	8160.1	31127	26%
	Feb '15	113	47.	0.	266.6	313.6	23153	180.	8340.1	31493	26%
	Mar '15	114	0.	0.	266.6	266.6	23392	115.	8455.1	31848	27%
	Apr '15	115	0.	0.	266.6	266.6	23655	229.	8684.1	32339	27%
	May '15	116	3.	0.	266.6	269.6	23873	139.	8823.1	32696	27%
	Jun '15	117	0.	0.	266.6	266.6	23920	197.	9020.1	32941	27%
2015/16	Jul '15	118	0.	0.	266.6	266.6	23922	39.	9059.1	32981	27%
	Aug '15	119	0.	0.	266.6	266.6	23701	56.	9115.1	32816	28%
	Sep '15	120	9.	0.	266.6	275.6	23846	107.	9083.3	32930	28%
	Oct '15	121	14.	0.	266.6	280.6	24105	73.	9063.6	33169	27%
	Nov '15	122	14.	0.	266.6	280.6	24386	84.	9055.3	33441	27%
	Dec '15	123	64.	0.	266.6	330.6	24709	53.	9076.7	33785	27%
	Jan '16	124	35.	0.	266.6	301.6	24998	23.	9016.8	34014	27%
	Feb '16	125	5.	0.	266.6	271.6	25235	27.	8964.6	34199	26%
	Mar '16	126	37.	0.	266.6	303.6	25512	100.	9064.6	34576	26%
	Apr '16	127	28.	0.	266.6	294.6	25763	175.	9239.6	35002	26%
	May '16	128	21.	0.	266.6	287.6	25967	200.	9439.6	35407	27%
	Jun '16	129	16.	0.	266.6	282.6	26206	225.	9664.6	35870	27%
2016/2017	Jul '16	130	21.	0.	266.6	287.6	26364	225.	9706.9	36071	27%
	Aug '16	131	20.	0.	266.6	286.6	26604	225.	9751.9	36356	27%
	Sep '16	132	23.	0.	266.6	289.6	26804	225.	9976.9	36781	27%
	Oct '16	133	26.	0.	266.6	292.6	27054	175.	10008.2	37062	27%
	Nov '16	134	27.	0.	266.6	293.6	27289	100.	10072.8	37362	27%
	Dec '16	135	68.	0.	266.6	334.6	27539	0.	10072.8	37612	27%
	Jan '17	136	45.	0.	266.6	311.6	27834	0.	10072.8	37907	27%
	Feb '17	137	75.	0.	266.6	341.6	28136	0.	10030.8	38167	26%
	Mar '17	138	37.	0.	266.6	303.6	28405	100.	10130.8	38536	26%
	Apr '17	139	28.	0.	266.6	294.6	28649	175.	10242.8	38892	26%
	May '17	140	21.	0.	266.6	287.6	28879	200.	10442.8	39322	27%
	Jun '17	141	16.	0.	266.6	282.6	29072	225.	10667.8	39739	27%

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

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 Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2017/2018	Jul '17	142	21.		266.6	287.6	29266	225.	10751.8	40018	27%
	Aug '17	143	20.		266.6	286.6	29460	225.	10898.8	40359	27%
	Sep '17	144	23.		266.6	289.6	29657	225.	11108.8	40766	27%
	Oct '17	145	26.		266.6	292.6	29877	175.	11261.	41138	27%
	Nov '17	146	27.		266.6	293.6	30069	100.	11263.	41332	27%
	Dec '17	147	68.		266.6	334.6	30301	0.	11263.	41564	27%
	Jan '18	148	45.		266.6	311.6	30487	0.	11263.	41750	27%
	Feb '18	149	75.		266.6	341.6	30731	0.	11224.	41955	27%
	Mar '18	150	37.		266.6	303.6	30991	100.	11244.	42235	27%
	Apr '18	151	28.		266.6	294.6	31222	175.	11412.	42634	27%
	May '18	152	21.		266.6	287.6	31470	200.	11526.	42996	27%
	Jun '18	153	16.		266.6	282.6	31729	225.	11751.	43480	27%
2018/2019	Jul '18	154	21.		266.6	287.6	31998	225.	11976.	43974	27%
	Aug '18	155	20.		266.6	286.6	32279	225.	12201.	44480	27%
	Sep '18	156	23.		266.6	289.6	32566	225.	12426.	44992	28%
	Oct '18	157	26.		266.6	292.6	32855	175.	12601.	45456	28%
	Nov '18	158	27.		266.6	293.6	33146	100.	12701.	45847	28%
	Dec '18	159	68.		266.6	334.6	33445	0.	12701.	46146	28%
	Jan '19	160	45.		266.6	311.6	33757	0.	12701.	46458	27%
	Feb '19	161	75.		266.6	341.6	34036	0.	12678.	46714	27%
	Mar '19	162	37.		266.6	303.6	34308	100.	12755.	47063	27%
	Apr '19	163	28.		266.6	294.6	34595	175.	12930.	47525	27%
	May '19	164	21.		266.6	287.6	34864	200.	13130.	47994	27%
	Jun '19	165	16.		266.6	282.6	35144	225.	13355.	48499	28%
2019/2020	Jul '19	166	21.		266.6	287.6	35423	225.	13580.	49003	28%
	Aug '19	167	20.		266.6	286.6	35705	225.	13805.	49510	28%
	Sep '19	168	23.		266.6	289.6	35992	225.	13996.	49988	28%
	Oct '19	169	26.		266.6	292.6	35987	175.	13982.	49969	28%
	Nov '19	170	27.		266.6	293.6	35988	100.	13839.	49827	28%
	Dec '19	171	68.		266.6	334.6	35898	0.	13746.	49644	28%
	Jan '20	172	45.		266.6	311.6	35729	0.	13727.	49456	28%
	Feb '20	173	75.		266.6	341.6	35604	0.	13727.	49331	28%
	Mar '20	174	37.		266.6	303.6	35625	100.	13766.	49391	28%
	Apr '20	175	28.		266.6	294.6	35607	175.	13885.	49492	28%
	May '20	176	21.		266.6	287.6	35628	200.	13974.	49602	28%
	Jun '20	177	16.		266.6	282.6	35644	225.	14149.	49793	28%
2020/2021	Jul '20	178	21.		266.6	287.6	35665	225.	14353.	50018	29%
	Aug '20	179	20.		266.6	286.6	35685	225.	14550.	50235	29%
	Sep '20	180	23.		266.6	289.6	35696	225.	14490.	50186	29%
	Oct '20	181	26.		266.6	292.6	35709	175.	14571.	50280	29%
	Nov '20	182	27.		266.6	293.6	35700	100.	14620.	50320	29%
	Dec '20	183	68.		266.6	334.6	35619	0.	14620.	50239	29%
	Jan '21	184	45.		266.6	311.6	35652	0.	14570.	50222	29%
	Feb '21	185	75.		266.6	341.6	35648	0.	14533.	50181	29%
	Mar '21	186	37.		266.6	303.6	35615	100.	14633.	50248	29%
	Apr '21	187	28.		266.6	294.6	35643	175.	14756.	50399	29%
	May '21	188	21.		266.6	287.6	35662	200.	14872.	50534	29%
	Jun '21	189	16.		266.6	282.6	35670	225.	15023.	50693	30%
2021/2022	Jul '21	190	21.		266.6	287.6	35691	225.	15234.	50925	30%
	Aug '21	191	20.		266.6	286.6	35639	225.	15459.	51098	30%
	Sep '21	192	23.		266.6	289.6	35183	225.	15664.	50847	31%
	Oct '21	193	26.		266.6	292.6	35192	175.	15804.	50996	31%
	Nov '21	194	27.		266.6	293.6	35208	100.	15702.	50910	31%
	Dec '21	195	68.		266.6	334.6	35275	0.	15476.	50751	30%
	Jan '22	196	45.		266.6	311.6	35271	0.	15460.	50731	30%
	Feb '22	197	75.		266.6	341.6	35287	0.	15377.	50664	30%
	Mar '22	198	37.		266.6	303.6	35271	100.	15398.	50669	30%
	Apr '22	199	28.		266.6	294.6	35269	175.	15507.	50776	31%
	May '22	200	21.		266.6	287.6	35290	200.	15667.	50957	31%
	Jun '22	201	16.		266.6	282.6	35304	225.	15890.	51194	31%
2022/2023	Jul '22	202	21.		266.6	287.6	35303	225.	16058.	51361	31%
	Aug '22	203	20.		266.6	286.6	35273	225.	16239.	51512	32%
	Sep '22	204	23.		266.6	289.6	35267	225.	16464.	51731	32%
	Oct '22	205	26.		266.6	292.6	35242	175.	16639.	51881	32%
	Nov '22	206	27.		266.6	293.6	35256	100.	16562.	51818	32%
	Dec '22	207	68.		266.6	334.6	35318	0.	16418.	51736	32%
	Jan '23	208	45.		266.6	311.6	35363	0.	16303.	51666	32%
	Feb '23	209	75.		266.6	341.6	35430	0.	16300.	51730	32%
	Mar '23	210	37.		266.6	303.6	35454	100.	16253.	51707	31%
	Apr '23	211	28.		266.6	294.6	35482	175.	16357.	51839	32%
	May '23	212	21.		266.6	287.6	35497	200.	16557.	52054	32%
	Jun '23	213	16.		266.6	282.6	35512	225.	16666.	52178	32%

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 Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2023/2024	Jul '23	214	21.		266.6	287.6	35529	225.	16690.	52219	32%
	Aug '23	215	20.		266.6	286.6	35549	225.	16904.	52453	32%
	Sep '23	216	23.		266.6	289.6	35572	225.	17129.	52701	33%
	Oct '23	217	26.		266.6	292.6	35597	175.	17303.	52900	33%
	Nov '23	218	27.		266.6	293.6	35565	100.	17064.	52629	32%
	Dec '23	219	68.		266.6	334.6	35625	0.	16956.	52581	32%
	Jan '24	220	45.		266.6	311.6	35658	0.	16870.	52528	32%
	Feb '24	221	75.		266.6	341.6	35713	0.	16803.	52516	32%
	Mar '24	222	37.		266.6	303.6	35737	100.	16679.	52416	32%
	Apr '24	223	28.		266.6	294.6	35733	175.	16475.	52208	32%
	May '24	224	21.		266.6	287.6	35721	200.	16383.	52104	31%
	Jun '24	225	16.		266.6	282.6	35735	225.	16396.	52131	31%
2024/2025	Jul '24	226	21.		266.6	287.6	35756	225.	16503.	52259	32%
	Aug '24	227	20.		266.6	286.6	35776	225.	16646.	52422	32%
	Sep '24	228	23.		266.6	289.6	35799	225.	16635.	52434	32%
	Oct '24	229	26.		266.6	292.6	35825	175.	16584.	52409	32%
	Nov '24	230	27.		266.6	293.6	35852	100.	16412.	52264	31%
	Dec '24	231	68.		266.6	334.6	35735	0.	16366.	52101	31%
	Jan '25	232	45.		266.6	311.6	35772	0.	16172.	51944	31%
	Feb '25	233	75.		266.6	341.6	35800	0.	15992.	51792	31%
	Mar '25	234	37.		266.6	303.6	35837	100.	15977.	51814	31%
	Apr '25	235	28.		266.6	294.6	35865	175.	15923.	51788	31%
	May '25	236	21.		266.6	287.6	35883	200.	15984.	51867	31%
	Jun '25	237	16.		266.6	282.6	35899	225.	16012.	51911	31%
2025/26	Jul '25	238	21.		266.6	287.6	35920	225.	16198.	52118	31%
	Aug '25	239	20.		266.6	286.6	35940	225.	16367.	52307	31%
	Sep '25	240	23.		266.6	289.6	35954	225.	16485.	52439	31%
	Oct '25	241	26.		266.6	292.6	35966	175.	16587.	52553	32%
	Nov '25	242	27.		266.6	293.6	35979	100.	16603.	52582	32%
	Dec '25	243	68.		266.6	334.6	35983	0.	16550.	52533	32%
	Jan '26	244	45.		266.6	311.6	35993	0.	16527.	52520	31%
Feb '26	245	75.		266.6	341.6	36063	0.	16500.	52563	31%	

P L A N N E D

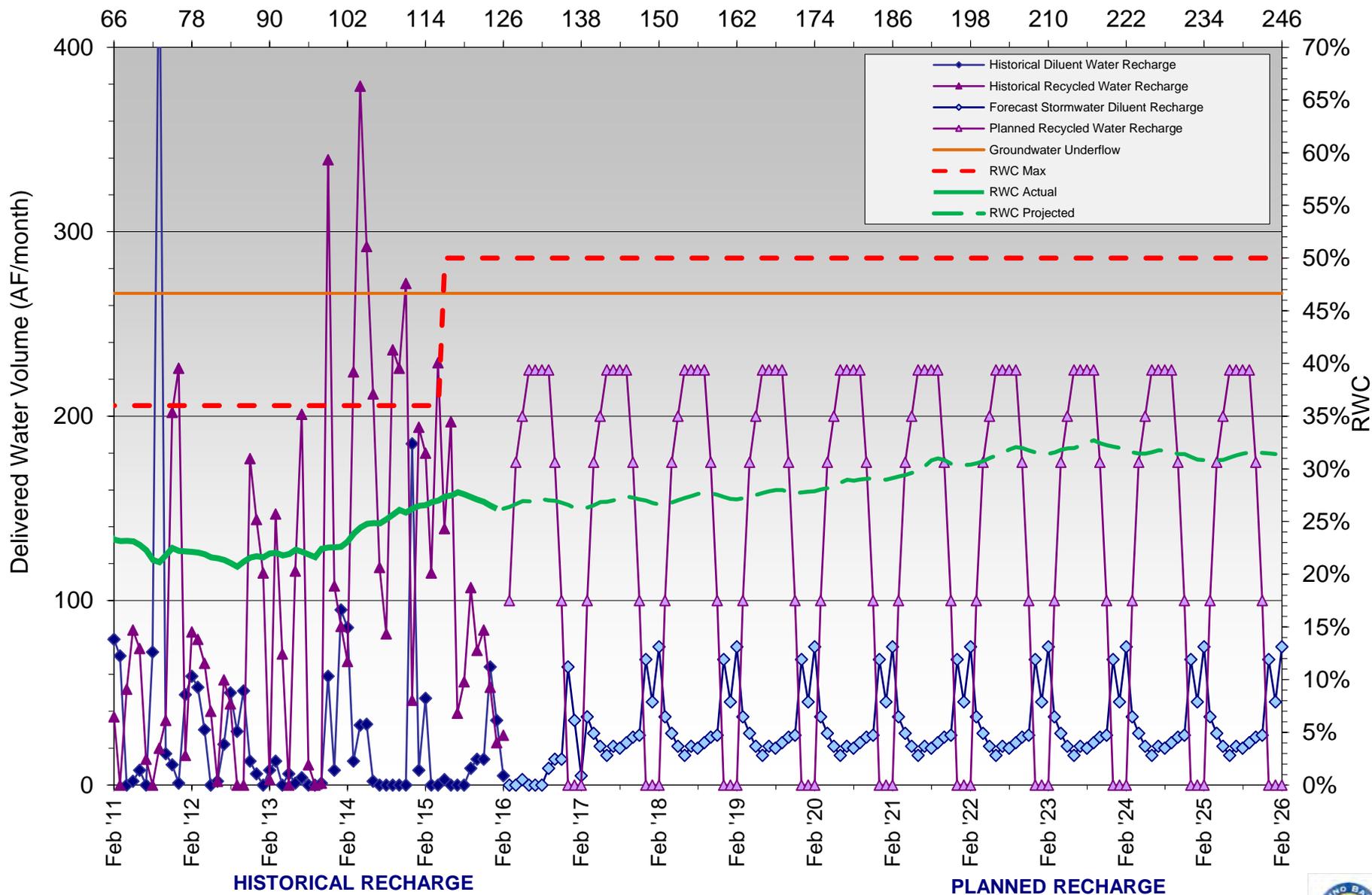
Notes:

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 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
2010/11	Feb '11	20	315.	0.	903.8	1218.8	20,914.5	177.	3,233.0	24,147.5	13%
	Mar '11	21	414.	0.	903.8	1317.8	22,232.3	126.	3,359.0	25,591.3	13%
	Apr '11	22	142.	0.	903.8	1045.8	23,278.0	237.	3,596.0	26,874.0	13%
	May '11	23	62.	298.9	903.8	1264.7	24,542.7	176.	3,772.0	28,314.7	13%
	Jun '11	24	34.	583.2	903.8	1521.	26,063.6	184.	3,956.0	30,019.6	13%
2011/12	Jul '11	25	80.	787.4	903.8	1771.2	27,834.8	253.	4,209.0	32,043.8	13%
	Aug '11	26	31.	286.6	903.8	1221.4	29,056.1	15.	4,224.0	33,280.1	13%
	Sep '11	27	47.	567.2	903.8	1518.	30,574.1	30.	4,254.0	34,828.1	12%
	Oct '11	28	138.	82.8	903.8	1124.6	31,698.6	182.	4,436.0	36,134.6	12%
	Nov '11	29	122.	0.	903.8	1025.8	32,724.4	97.	4,533.0	37,257.4	12%
	Dec '11	30	78.	0.	903.8	981.8	33,706.1	164.	4,697.0	38,403.1	12%
	Jan '12	31	104.	0.	903.8	1007.8	34,713.9	91.	4,788.0	39,501.9	12%
	Feb '12	32	176.	0.	903.8	1079.8	35,793.7	160.	4,948.0	40,741.7	12%
	Mar '12	33	222.	0.	903.8	1125.8	36,919.4	94.	5,042.0	41,961.4	12%
	Apr '12	34	220.	0.	903.8	1123.8	38,043.2	147.	5,189.0	43,232.2	12%
	May '12	35	61.	0.	903.8	964.8	39,007.9	375.	5,564.0	44,571.9	12%
Jun '12	36	60.	0.	903.8	963.8	39,971.7	181.	5,745.0	45,716.7	13%	
2012/13	Jul '12	37	50.	0.	903.8	953.8	40,925.4	12.	5,757.0	46,682.4	12%
	Aug '12	38	12.	0.	903.8	915.8	41,841.2	0.	5,757.0	47,598.2	12%
	Sep '12	39	4.	0.	903.8	907.8	42,748.9	0.	5,757.0	48,505.9	12%
	Oct '12	40	18.	0.	903.8	921.8	43,670.7	0.	5,757.0	49,427.7	12%
	Nov '12	41	101.	0.	903.8	1004.8	44,675.5	154.	5,911.0	50,586.5	12%
	Dec '12	42	361.	0.	903.8	1264.8	45,940.2	220.	6,131.0	52,071.2	12%
	Jan '13	43	147.	0.	903.8	1050.8	46,991.0	353.	6,484.0	53,475.0	12%
	Feb '13	44	113.	0.	903.8	1016.8	48,007.7	297.	6,781.0	54,788.7	12%
	Mar '13	45	78.	0.	903.8	981.8	48,989.5	275.	7,056.0	56,045.5	13%
	Apr '13	46	40.	0.	903.8	943.8	49,933.2	386.	7,442.0	57,375.2	13%
	May '13	47	54.	0.	903.8	957.8	50,891.0	262.	7,704.0	58,595.0	13%
Jun '13	48	43.	0	903.8	946.8	51,837.7	239.	7,943.0	59,780.7	13%	
2013/14	Jul '13	49	72.	0	903.8	975.8	52,813.5	74.	8,017.0	60,830.5	13%
	Aug '13	50	68.	0	903.8	971.8	53,785.2	216.	8,233.0	62,018.2	13%
	Sep '13	51	58.	0	903.8	961.8	54,747.0	353.	8,586.0	63,333.0	14%
	Oct '13	52	53.	0	903.8	956.8	55,703.8	164.	8,750.0	64,453.8	14%
	Nov '13	53	60.	0	903.8	963.8	56,667.5	4.	8,754.0	65,421.5	13%
	Dec '13	54	72.	0	903.8	975.8	57,643.3	251.	9,005.0	66,648.3	14%
	Jan '14	55	43.	86	903.8	1032.8	58,676.0	72.	9,077.0	67,753.0	13%
	Feb '14	56	131.	66	903.8	1101.1	59,777.1	0.	9,077.0	68,854.1	13%
	Mar '14	57	103.	160	903.8	1166.9	60,943.9	0.	9,077.0	70,020.9	13%
	Apr '14	58	48.	38	903.8	989.4	61,933.3	49.	9,126.0	71,059.3	13%
	May '14	59	3.	0	903.8	906.8	62,840.0	0.	9,126.0	71,966.0	13%
Jun '14	60	6.	0	903.8	909.8	63,749.8	172.	9,298.0	73,047.8	13%	
2014/15	Jul '14	61	9.	0	903.8	912.8	64,662.6	184.	9,482.0	74,144.6	13%
	Aug '14	62	23.	0	903.8	926.8	65,589.3	192.	9,674.0	75,263.3	13%
	Sep '14	63	40.	0	903.8	943.8	66,533.1	243.	9,917.0	76,450.1	13%
	Oct '14	64	25.	0	903.8	928.8	67,461.8	335.	10,252.0	77,713.8	13%
	Nov '14	65	112.	0	903.8	1015.8	68,477.6	250.	10,502.0	78,979.6	13%
	Dec '14	66	419.	0	903.8	1322.8	69,800.3	6.	10,508.0	80,308.3	13%
	Jan '15	67	132.	0	903.8	1035.8	70,836.1	29.	10,537.0	81,373.1	13%
	Feb '15	68	95.	0	903.8	998.8	71,834.8	243.	10,780.0	82,614.8	13%
	Mar '15	69	69.	0.	903.8	972.8	72,807.6	325.	11,105.0	83,912.6	13%
	Apr '15	70	41.	0.	903.8	944.8	73,752.3	282.	11,387.0	85,139.3	13%
	May '15	71	121.	0.	903.8	1024.8	74,777.1	348.	11,735.0	86,512.1	14%
Jun '15	72	12.	0.	903.8	915.8	75,692.9	531.	12,266.0	87,958.9	14%	
2015/16	Jul '15	73	134.	0.	903.8	1037.8	76,699.6	268.	12,534.0	89,233.6	14%
	Aug '15	74	31.	0.	903.8	934.8	77,603.4	141.	12,675.0	90,278.4	14%
	Sep '15	75	123.	0.	903.8	1026.8	78,570.1	219.	12,894.0	91,464.1	14%
	Oct '15	76	86.	0.	903.8	989.8	79,481.9	363.	13,257.0	92,738.9	14%
	Nov '15	77	54.	0.	903.8	957.8	80,379.6	228.	13,485.0	93,864.6	14%
	Dec '15	78	188.	0.	903.8	1091.8	81,411.4	274.	13,759.0	95,170.4	14%
	Jan '16	79	239.	0.	903.8	1142.8	82,521.6	390.	14,149.0	96,670.6	15%
	Feb '16	80	54.	0.	903.8	957.8	83,415.0	358.	14,507.0	97,922.0	15%
	Mar '16	81	121.	723.	844.	84,098.3	550.	15,057.0	99,155.3	15%	
	Apr '16	82	77.	723.	800.	84,771.4	600.	15,657.0	100,428.4	16%	
	May '16	83	43.	723.	766.	85,500.4	0.	15,657.0	101,157.4	15%	
Jun '16	84	23.	723.	746.	86,221.4	0.	15,657.0	101,878.4	15%		
2016/17	Jul '16	85	29.	723.	752.	86,958.4	200.	15,857.0	102,815.4	15%	
	Aug '16	86	26.	723.	749.	87,671.4	200.	16,057.0	103,728.4	15%	
	Sep '16	87	32.	723.	755.	88,391.4	300.	16,357.0	104,748.4	16%	
	Oct '16	88	56.	723.	779.	89,137.4	400.	16,757.0	105,894.4	16%	
	Nov '16	89	81.	723.	804.	89,905.4	500.	17,257.0	107,162.4	16%	
	Dec '16	90	240.	723.	963.	90,842.8	600.	17,857.0	108,699.8	16%	
	Jan '17	91	142.	723.	865.	91,685.7	600.	18,457.0	110,142.7	17%	
	Feb '17	92	169.	723.	892.	92,558.7	600.	19,057.0	111,615.7	17%	
	Mar '17	93	121.	723.	844.	93,395.3	600.	19,657.0	113,052.3	17%	
	Apr '17	94	77.	723.	800.	94,191.3	400.	20,057.0	114,248.3	18%	
	May '17	95	43.	723.	766.	94,955.3	0.	20,057.0	115,012.3	17%	
Jun '17	96	23.	723.	746.	95,699.3	0.	20,057.0	115,756.3	17%		

H I S T O R I C A L

P L A N N E D



RWC Management Plan for RP3 Basins

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2017/18	Jul '17	97	29.		723.	752.	96,451.3	200.	20,257.0	116,708.3	17%
	Aug '17	98	26.		723.	749.	97,197.3	200.	20,457.0	117,654.3	17%
	Sep '17	99	32.		723.	755.	97,949.3	300.	20,757.0	118,706.3	17%
	Oct '17	100	56.		723.	779.	98,719.3	400.	21,157.0	119,876.3	18%
	Nov '17	101	81.		723.	804.	99,476.3	500.	21,657.0	121,133.3	18%
	Dec '17	102	240.		723.	963.	100,331.3	600.	22,257.0	122,588.3	18%
	Jan '18	103	142.		723.	865.	101,031.3	600.	22,857.0	123,888.3	18%
	Feb '18	104	169.		723.	892.	101,793.3	600.	23,457.0	125,250.3	19%
	Mar '18	105	121.		723.	844.	102,632.3	600.	24,057.0	126,689.3	19%
	Apr '18	106	77.		723.	800.	103,429.3	400.	24,457.0	127,886.3	19%
May '18	107	43.		723.	766.	104,161.3	0.	24,457.0	128,618.3	19%	
Jun '18	108	23.		723.	746.	104,903.3	0.	24,457.0	129,360.3	19%	
2018/19	Jul '18	109	29.		723.	752.	105,655.3	200.	24,657.0	130,312.3	19%
	Aug '18	110	26.		723.	749.	106,388.4	200.	24,857.0	131,245.4	19%
	Sep '18	111	32.		723.	755.	107,127.4	300.	25,157.0	132,284.4	19%
	Oct '18	112	56.		723.	779.	107,893.4	400.	25,557.0	133,450.4	19%
	Nov '18	113	81.		723.	804.	108,670.4	500.	26,057.0	134,727.4	19%
	Dec '18	114	240.		723.	963.	109,477.4	600.	26,657.0	136,134.4	20%
	Jan '19	115	142.		723.	865.	110,330.4	600.	27,257.0	137,587.4	20%
	Feb '19	116	169.		723.	892.	110,949.4	600.	27,857.0	138,806.4	20%
	Mar '19	117	121.		723.	844.	111,746.4	600.	28,457.0	140,203.4	20%
	Apr '19	118	77.		723.	800.	112,528.4	400.	28,857.0	141,385.4	20%
May '19	119	43.		723.	766.	113,288.4	0.	28,857.0	142,145.4	20%	
Jun '19	120	23.		723.	746.	114,034.4	0.	28,751.0	142,785.4	20%	
2019/20	Jul '19	121	29.		723.	752.	114,764.4	200.	28,867.0	143,631.4	20%
	Aug '19	122	26.		723.	749.	115,483.4	200.	28,919.0	144,402.4	20%
	Sep '19	123	32.		723.	755.	116,202.4	300.	28,999.0	145,201.4	20%
	Oct '19	124	56.		723.	779.	116,954.7	400.	29,196.0	145,150.7	20%
	Nov '19	125	81.		723.	804.	117,754.9	500.	29,409.0	145,163.9	20%
	Dec '19	126	240.		723.	963.	118,441.2	600.	29,906.0	145,347.2	21%
	Jan '20	127	142.		723.	865.	119,176.4	600.	30,430.0	145,306.4	21%
	Feb '20	128	169.		723.	892.	119,949.6	600.	30,917.0	145,411.6	21%
	Mar '20	129	121.		723.	844.	120,746.6	600.	31,304.0	145,634.9	21%
	Apr '20	130	77.		723.	800.	121,569.1	400.	31,633.0	145,732.1	22%
May '20	131	43.		723.	766.	122,424.4	0.	31,361.0	145,273.4	22%	
Jun '20	132	23.		723.	746.	123,312.6	0.	31,100.0	144,812.6	21%	
2020/21	Jul '20	133	29.		723.	752.	124,245.9	200.	31,071.0	144,624.9	21%
	Aug '20	134	26.		723.	749.	125,199.1	200.	31,090.0	144,483.1	22%
	Sep '20	135	32.		723.	755.	126,174.4	300.	31,342.0	144,561.4	22%
	Oct '20	136	56.		723.	779.	127,164.6	400.	31,719.0	144,742.6	22%
	Nov '20	137	81.		723.	804.	128,169.9	500.	32,026.0	144,803.9	22%
	Dec '20	138	240.		723.	963.	129,191.1	600.	32,504.0	144,597.1	22%
	Jan '21	139	142.		723.	865.	130,228.4	600.	33,001.0	144,820.4	23%
	Feb '21	140	169.		723.	892.	131,281.6	600.	33,424.0	144,916.6	23%
	Mar '21	141	121.		723.	844.	132,350.9	600.	33,898.0	144,916.9	23%
	Apr '21	142	77.		723.	800.	133,436.1	400.	34,061.0	144,834.1	24%
May '21	143	43.		723.	766.	134,537.4	0.	33,885.0	144,159.5	24%	
Jun '21	144	23.		723.	746.	135,654.6	0.	33,701.0	143,200.5	24%	
2021/22	Jul '21	145	29.		723.	752.	136,787.9	200.	33,648.0	142,128.4	24%
	Aug '21	146	26.		723.	749.	137,937.1	200.	33,833.0	141,841.0	24%
	Sep '21	147	32.		723.	755.	139,094.4	300.	34,103.0	141,348.1	24%
	Oct '21	148	56.		723.	779.	140,268.6	400.	34,321.0	141,220.5	24%
	Nov '21	149	81.		723.	804.	141,459.9	500.	34,724.0	141,401.8	25%
	Dec '21	150	240.		723.	963.	142,677.1	600.	35,160.0	141,819.0	25%
	Jan '22	151	142.		723.	865.	143,910.4	600.	35,669.0	142,185.3	25%
	Feb '22	152	169.		723.	892.	145,160.6	600.	36,109.0	142,437.5	25%
	Mar '22	153	121.		723.	844.	146,427.9	600.	36,615.0	142,661.8	26%
	Apr '22	154	77.		723.	800.	147,712.1	400.	36,868.0	142,591.0	26%
May '22	155	43.		723.	766.	149,012.4	0.	36,493.0	142,017.3	26%	
Jun '22	156	23.		723.	746.	150,328.6	0.	36,312.0	141,618.5	26%	
2022/23	Jul '22	157	29.		723.	752.	151,660.9	200.	36,500.0	141,604.8	26%
	Aug '22	158	26.		723.	749.	153,000.1	200.	36,700.0	141,638.0	26%
	Sep '22	159	32.		723.	755.	154,355.4	300.	37,000.0	141,785.3	26%
	Oct '22	160	56.		723.	779.	155,726.6	400.	37,400.0	142,042.5	26%
	Nov '22	161	81.		723.	804.	157,113.9	500.	37,746.0	142,187.8	27%
	Dec '22	162	240.		723.	963.	158,518.1	600.	38,126.0	142,266.0	27%
	Jan '23	163	142.		723.	865.	159,939.4	600.	38,373.0	142,327.3	27%
	Feb '23	164	169.		723.	892.	161,376.6	600.	38,676.0	142,505.5	27%
	Mar '23	165	121.		723.	844.	162,830.9	600.	39,001.0	142,692.8	27%
	Apr '23	166	77.		723.	800.	164,302.1	400.	39,015.0	142,563.0	27%
May '23	167	43.		723.	766.	165,790.4	0.	38,753.0	142,109.3	27%	
Jun '23	168	23.		723.	746.	167,295.6	0.	38,514.0	141,669.5	27%	

P L A N N E D



RWC Management Plan for RP3 Basins

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2023/24	Jul '23	169	29.		723.	752.	102,931.8	200.	38,640.0	141,571.8	27%
	Aug '23	170	26.		723.	749.	102,709.0	200.	38,624.0	141,333.0	27%
	Sep '23	171	32.		723.	755.	102,502.3	300.	38,571.0	141,073.3	27%
	Oct '23	172	56.		723.	779.	102,324.5	400.	38,807.0	141,131.5	27%
	Nov '23	173	81.		723.	804.	102,164.8	500.	39,303.0	141,467.8	28%
	Dec '23	174	240.		723.	963.	102,152.0	600.	39,652.0	141,804.0	28%
	Jan '24	175	142.		723.	865.	101,984.3	600.	40,180.0	142,164.3	28%
	Feb '24	176	169.		723.	892.	101,775.2	600.	40,780.0	142,555.2	29%
	Mar '24	177	121.		723.	844.	101,452.3	600.	41,380.0	142,832.3	29%
	Apr '24	178	77.		723.	800.	101,263.0	400.	41,731.0	142,994.0	29%
	May '24	179	43.		723.	766.	101,122.2	0.	41,731.0	142,853.2	29%
	Jun '24	180	23.		723.	746.	100,958.5	0.	41,559.0	142,517.5	29%
2024/25	Jul '24	181	29.		723.	752.	100,797.7	200.	41,575.0	142,372.7	29%
	Aug '24	182	26.		723.	749.	100,620.0	200.	41,583.0	142,203.0	29%
	Sep '24	183	32.		723.	755.	100,431.2	300.	41,640.0	142,071.2	29%
	Oct '24	184	56.		723.	779.	100,281.5	400.	41,705.0	141,986.5	29%
	Nov '24	185	81.		723.	804.	100,069.7	500.	41,955.0	142,024.7	30%
	Dec '24	186	240.		723.	963.	99,710.0	600.	42,549.0	142,259.0	30%
	Jan '25	187	142.		723.	865.	99,539.2	600.	43,120.0	142,659.2	30%
	Feb '25	188	169.		723.	892.	99,432.5	600.	43,477.0	142,909.5	30%
	Mar '25	189	121.		723.	844.	99,303.7	600.	43,752.0	143,055.7	31%
	Apr '25	190	77.		723.	800.	99,159.0	400.	43,870.0	143,029.0	31%
	May '25	191	43.		723.	766.	98,900.2	0.	43,522.0	142,422.2	31%
	Jun '25	192	23.		723.	746.	98,730.5	0.	42,991.0	141,721.5	30%
2025/26	Jul '25	193	29.		723.	752.	98,444.7	200.	42,923.0	141,367.7	30%
	Aug '25	194	26.		723.	749.	98,259.0	200.	42,982.0	141,241.0	30%
	Sep '25	195	32.		723.	755.	97,987.2	300.	43,063.0	141,050.2	31%
	Oct '25	196	56.		723.	779.	97,776.5	400.	43,100.0	140,876.5	31%
	Nov '25	197	81.		723.	804.	97,622.7	500.	43,372.0	140,994.7	31%
	Dec '25	198	240.		723.	963.	97,494.0	600.	43,698.0	141,192.0	31%
	Jan '26	199	142.		723.	865.	97,216.2	600.	43,908.0	141,124.2	31%
	Feb '26	200	169.		723.	892.	97,150.5	600.	44,150.0	141,300.5	31%

P L A N N E D

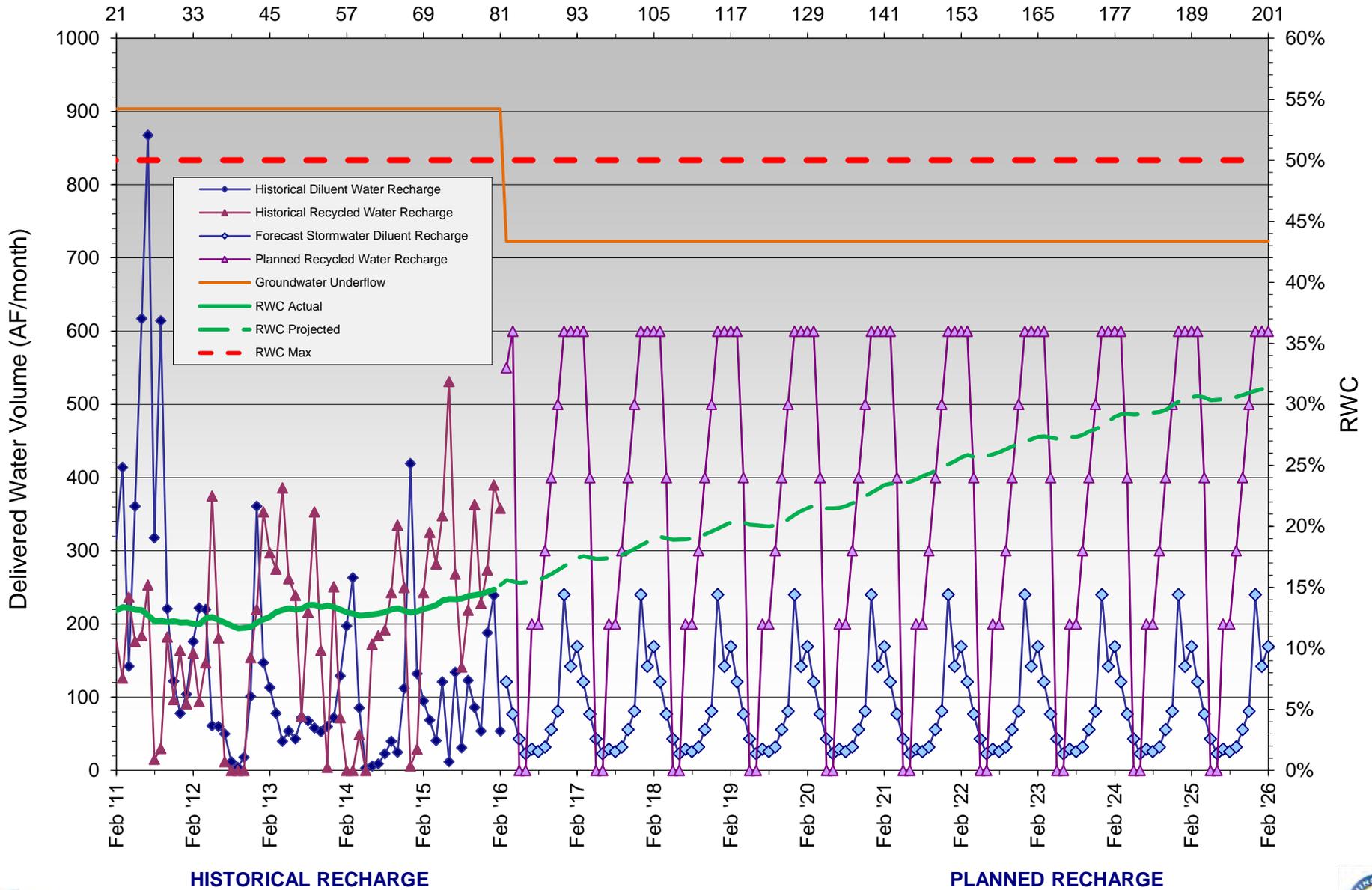
Notes:

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 - RP3 Basin

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



RWC Management Plan for Declez Basin

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period	
Feb '11	-11	196.	0.		196.	4,174.5	0.	0.	4,174.5	0%	H I S T O R I C A L	
Mar '11	-10	138.	0.		138.	4,312.5	0.	0.	4,312.5	0%		
Apr '11	-9	2.	0.	0.	2.	4,314.5	0.	0.	4,314.5	0%		
May '11	-8	14.	0.	0.	14.	4,328.5	0.	0.	4,328.5	0%		
Jun '11	-7	9.	0.	0.	9.	4,337.5	0.	0.	4,337.5	0%		
2011/12	Jul '11	-6	81.	0.	0.	81.	4,418.5	0.	0.	4,418.5		0%
Aug '11	-5	3.	0.	0.	3.	4,421.5	0.	0.	4,421.5	0%		
Sep '11	-4	6.	0.	0.	6.	4,427.5	0.	0.	4,427.5	0%		
Oct '11	-3	74.	0.	0.	74.	4,501.5	0.	0.	4,501.5	0%		
Nov '11	-2	120.	0.	0.	120.	4,621.5	0.	0.	4,621.5	0%		
Dec '11	-1	56.	0.	0.	56.	4,677.5	0.	0.	4,677.5	0%		
Jan '12	0	87.	0.	0.	87.	4,764.5	65.	65.	4,829.5	1%		
Feb '12	1	46.	0.	0.	46.	4,810.5	0.	65.	4,875.5	1%		
Mar '12	2	184.	0.	0.	184.	4,994.5	0.	65.	5,059.5	1%		
Apr '12	3	133.	0.	0.	133.	5,127.5	0.	65.	5,192.5	1%		
May '12	4	7.	0.	0.	7.	5,134.5	0.	65.	5,199.5	1%		
Jun '12	5	1.	0.	0.	1.	5,135.5	0.	65.	5,200.5	1%		
2012/13	Jul '12	6	1.	0.	0.	1.	5,136.5	0.	65.	5,201.5	1%	
Aug '12	7	10.	0.	0.	10.	5,146.5	0.	65.	5,211.5	1%		
Sep '12	8	15.	0.	0.	15.	5,161.5	0.	65.	5,226.5	1%		
Oct '12	9	134.	0.	0.	134.	5,295.5	0.	65.	5,360.5	1%		
Nov '12	10	21.	0.	0.	21.	5,316.5	0.	65.	5,381.5	1%		
Dec '12	11	168.	0.	0.	168.	5,484.5	0.	65.	5,549.5	1%		
Jan '13	12	48.	0.	0.	48.	5,532.5	0.	65.	5,597.5	1%		
Feb '13	13	58.	0.	0.	58.	5,590.5	0.	65.	5,655.5	1%		
Mar '13	14	61.	0.	0.	61.	5,651.5	0.	65.	5,716.5	1%		
Apr '13	15	4.	0.	0.	4.	5,655.5	0.	65.	5,720.5	1%		
May '13	16	6.	0.	0.	6.	5,661.5	0.	65.	5,726.5	1%		
Jun '13	17	4	0	0	4	5,665.5	0.	65.	5,730.5	1%		
2013/14	Jul '13	18	6.	0.	0.	6.	5,671.5	0.	65.	5,736.5	1%	
Aug '13	19	3.	0.	0.	3.	5,674.5	0.	65.	5,739.5	1%		
Sep '13	20	2.	0.	0.	2.	5,676.5	0.	65.	5,741.5	1%		
Oct '13	21	18.	0.	0.	18.	5,694.5	0.	65.	5,759.5	1%		
Nov '13	22	52.	0.	0.	52.	5,746.5	0.	65.	5,811.5	1%		
Dec '13	23	66.	0.	0.	66.	5,812.5	0.	65.	5,877.5	1%		
Jan '14	24	3.	98.6	0.	101.6	5,914.1	0.	65.	5,979.1	1%		
Feb '14	25	24.	152.	0.	176.	6,090.1	0.	65.	6,155.1	1%		
Mar '14	26	56.	116.6	0.	172.6	6,262.7	0.	65.	6,327.7	1%		
Apr '14	27	108.	7.2	0.	115.2	6,377.9	0.	65.	6,442.9	1%		
May '14	28	1.	0.	0.	1.	6,378.9	0.	65.	6,443.9	1%		
Jun '14	29	2	0	0	2	6,380.9	0.	65.	6,445.9	1%		
2014/15	Jul '14	30	2.	0.	0.	2.	6,382.9	0.	65.	6,447.9	1%	
Aug '14	31	72.	0.	0.	72.	6,454.9	0.	65.	6,519.9	1%		
Sep '14	32	30.	0.	0.	30.	6,484.9	0.	65.	6,549.9	1%		
Oct '14	33	3.	0.	0.	3.	6,487.9	0.	65.	6,552.9	1%		
Nov '14	34	100.	0.	0.	100.	6,587.9	0.	65.	6,652.9	1%		
Dec '14	35	315.	0.	0.	315.	6,902.9	0.	65.	6,967.9	1%		
Jan '15	36	47.	0.	0.	47.	6,949.9	0.	65.	7,014.9	1%		
Feb '15	37	106.	0.	0.	106.	7,055.9	0.	65.	7,120.9	1%		
Mar '15	38	15.	0.	0.	15.	7,070.9	0.	65.	7,135.9	1%		
Apr '15	39	41.	0.	0.	41.	7,111.9	0.	65.	7,176.9	1%		
May '15	40	99.	0.	0.	99.	7,210.9	0.	65.	7,275.9	1%		
Jun '15	41	3	0	0	3	7,213.9	0.	65.	7,278.9	1%		
2015/16	Jul '15	42	49.	0.	0.	49.	7,252.4	0.	65.	7,317.4	1%	
Aug '15	43	3.	0.	0.	3.	7,244.9	0.	65.	7,309.9	1%		
Sep '15	44	147.	0.	0.	147.	7,361.9	0.	65.	7,426.9	1%		
Oct '15	45	36.	0.	0.	36.	7,283.5	0.	65.	7,348.5	1%		
Nov '15	46	4.	0.	0.	4.	7,257.5	0.	65.	7,322.5	1%		
Dec '15	47	49.	0.	0.	49.	7,276.5	50.	115.	7,391.5	2%		
Jan '16	48	158.	0.	0.	158.	7,399.2	78.	193.	7,592.2	3%		
Feb '16	49	34.	0.	0.	34.	7,323.3	153.	346.	7,669.3	5%		
Mar '16	50	80.4		180.8	261.2	7,393.9	150.	496.	7,889.9	6%		
Apr '16	51	55.2		180.8	236.	7,528.5	150.	646.	8,174.5	8%		
May '16	52	22.9		180.8	203.7	7,674.6	150.	796.	8,470.6	9%		
Jun '16	53	10.8		180.8	191.6	7,850.2	150.	946.	8,796.2	11%		
2016/17	Jul '16	54	21.3		180.8	202.1	8,037.6	150.	1,096.	9,133.6	12%	
Aug '16	55	9.8		180.8	190.5	8,208.2	150.	1,246.	9,454.2	13%		
Sep '16	56	14.6		180.8	195.3	8,385.5	150.	1,396.	9,781.5	14%		
Oct '16	57	44.3		180.8	225.1	8,576.7	150.	1,546.	10,122.7	15%		
Nov '16	58	70.9		180.8	251.6	8,797.3	150.	1,696.	10,493.3	16%		
Dec '16	59	135.1		180.8	315.9	9,023.4	0.	1,696.	10,719.4	16%		
Jan '17	60	87.5		180.8	268.2	9,208.5	0.	1,696.	10,904.5	16%		
Feb '17	61	158.6		180.8	339.3	9,400.8	50.	1,746.	11,146.8	16%		
Mar '17	62	80.4		180.8	261.2	9,641.	150.	1,896.	11,537.	16%		
Apr '17	63	55.2		180.8	236.	9,789.	150.	2,046.	11,835.	17%		
May '17	64	22.9		180.8	203.7	9,974.7	150.	2,196.	12,170.7	18%		
Jun '17	65	10.8		180.8	191.6	10,166.3	0.	2,196.	12,362.3	18%		

H I S T O R I C A L

S U P

P L A N N E D



(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
2017/18	Jul '17	66	21.3		180.8	202.1	10,368.3	150.	2,346.	12,714.3	18%
	Aug '17	67	9.8		180.8	190.5	10,552.8	150.	2,496.	13,048.8	19%
	Sep '17	68	14.6		180.8	195.3	10,715.2	150.	2,646.	13,361.2	20%
	Oct '17	69	44.3		180.8	225.1	10,926.2	150.	2,796.	13,722.2	20%
	Nov '17	70	70.9		180.8	251.6	11,069.9	150.	2,946.	14,015.9	21%
	Dec '17	71	135.1		180.8	315.9	11,308.7	0.	2,946.	14,254.7	21%
	Jan '18	72	87.5		180.8	268.2	11,321.	0.	2,946.	14,267.	21%
	Feb '18	73	158.6		180.8	339.3	11,514.3	50.	2,996.	14,510.3	21%
	Mar '18	74	80.4		180.8	261.2	11,748.4	150.	3,146.	14,894.4	21%
	Apr '18	75	55.2		180.8	236.	11,971.4	150.	3,296.	15,267.4	22%
May '18	76	22.9		180.8	203.7	12,139.1	150.	3,446.	15,585.1	22%	
Jun '18	77	10.8		180.8	191.6	12,316.7	0.	3,446.	15,762.7	22%	
2018/19	Jul '18	78	21.3		180.8	202.1	12,499.8	150.	3,596.	16,095.8	22%
	Aug '18	79	9.8		180.8	190.5	12,686.3	150.	3,746.	16,432.3	23%
	Sep '18	80	14.6		180.8	195.3	12,874.6	150.	3,896.	16,770.6	23%
	Oct '18	81	44.3		180.8	225.1	13,085.7	150.	4,046.	17,131.7	24%
	Nov '18	82	70.9		180.8	251.6	13,264.3	150.	4,196.	17,460.3	24%
	Dec '18	83	135.1		180.8	315.9	13,373.2	0.	4,196.	17,569.2	24%
	Jan '19	84	87.5		180.8	268.2	13,615.4	0.	4,196.	17,811.4	24%
	Feb '19	85	158.6		180.8	339.3	13,730.7	50.	4,246.	17,976.7	24%
	Mar '19	86	80.4		180.8	261.2	13,940.9	150.	4,396.	18,336.9	24%
	Apr '19	87	55.2		180.8	236.	14,171.9	150.	4,546.	18,717.9	24%
May '19	88	22.9		180.8	203.7	14,369.5	150.	4,696.	19,065.5	25%	
Jun '19	89	10.8		180.8	191.6	14,541.1	0.	4,696.	19,237.1	24%	
2019/20	Jul '19	90	21.3		180.8	202.1	14,722.2	150.	4,846.	19,568.2	25%
	Aug '19	91	9.8		180.8	190.5	14,895.7	150.	4,996.	19,891.7	25%
	Sep '19	92	14.6		180.8	195.3	15,085.	150.	5,146.	20,231.	25%
	Oct '19	93	44.3		180.8	225.1	15,295.1	150.	5,296.	20,591.1	26%
	Nov '19	94	70.9		180.8	251.6	15,507.7	150.	5,446.	20,953.7	26%
	Dec '19	95	135.1		180.8	315.9	15,650.6	0.	5,446.	21,096.6	26%
	Jan '20	96	87.5		180.8	268.2	15,845.8	0.	5,446.	21,291.8	26%
	Feb '20	97	158.6		180.8	339.3	15,944.1	50.	5,496.	21,440.1	26%
	Mar '20	98	80.4		180.8	261.2	16,150.3	150.	5,646.	21,796.3	26%
	Apr '20	99	55.2		180.8	236.	16,264.3	150.	5,796.	22,060.3	26%
May '20	100	22.9		180.8	203.7	16,462.	150.	5,946.	22,408.	27%	
Jun '20	101	10.8		180.8	191.6	16,647.6	0.	5,946.	22,593.6	26%	
2020/21	Jul '20	102	21.3		180.8	202.1	16,846.6	150.	6,096.	22,942.6	27%
	Aug '20	103	9.8		180.8	190.5	17,029.1	150.	6,246.	23,275.1	27%
	Sep '20	104	14.6		180.8	195.3	17,222.5	150.	6,396.	23,618.5	27%
	Oct '20	105	44.3		180.8	225.1	17,402.5	150.	6,546.	23,948.5	27%
	Nov '20	106	70.9		180.8	251.6	17,559.1	150.	6,696.	24,255.1	28%
	Dec '20	107	135.1		180.8	315.9	17,562.	0.	6,696.	24,258.	28%
	Jan '21	108	87.5		180.8	268.2	17,778.2	0.	6,696.	24,474.2	27%
	Feb '21	109	158.6		180.8	339.3	17,921.5	50.	6,746.	24,667.5	27%
	Mar '21	110	80.4		180.8	261.2	18,044.7	150.	6,896.	24,940.7	28%
	Apr '21	111	55.2		180.8	236.	18,278.7	150.	7,046.	25,324.7	28%
May '21	112	22.9		180.8	203.7	18,468.4	150.	7,196.	25,664.4	28%	
Jun '21	113	10.8		180.8	191.6	18,651.	0.	7,196.	25,847.	28%	
2021/22	Jul '21	114	21.3		180.8	202.1	18,772.	150.	7,346.	26,118.	28%
	Aug '21	115	9.8		180.8	190.5	18,959.6	150.	7,496.	26,455.6	28%
	Sep '21	116	14.6		180.8	195.3	19,148.9	150.	7,646.	26,794.9	29%
	Oct '21	117	44.3		180.8	225.1	19,300.	150.	7,796.	27,096.	29%
	Nov '21	118	70.9		180.8	251.6	19,431.6	150.	7,946.	27,377.6	29%
	Dec '21	119	135.1		180.8	315.9	19,691.4	0.	7,946.	27,637.4	29%
	Jan '22	120	87.5		180.8	268.2	19,872.7	0.	7,881.	27,753.7	28%
	Feb '22	121	158.6		180.8	339.3	20,166.	50.	7,931.	28,097.	28%
	Mar '22	122	80.4		180.8	261.2	20,243.2	150.	8,081.	28,324.2	29%
	Apr '22	123	55.2		180.8	236.	20,346.1	150.	8,231.	28,577.1	29%
May '22	124	22.9		180.8	203.7	20,542.8	150.	8,381.	28,923.8	29%	
Jun '22	125	10.8		180.8	191.6	20,733.4	0.	8,381.	29,114.4	29%	
2022/23	Jul '22	126	21.3		180.8	202.1	20,934.5	150.	8,531.	29,465.5	29%
	Aug '22	127	9.8		180.8	190.5	21,115.	150.	8,681.	29,796.	29%
	Sep '22	128	14.6		180.8	195.3	21,295.3	150.	8,831.	30,126.3	29%
	Oct '22	129	44.3		180.8	225.1	21,386.4	150.	8,981.	30,367.4	30%
	Nov '22	130	70.9		180.8	251.6	21,617.	150.	9,131.	30,748.	30%
	Dec '22	131	135.1		180.8	315.9	21,764.9	0.	9,131.	30,895.9	30%
	Jan '23	132	87.5		180.8	268.2	21,985.1	0.	9,131.	31,116.1	29%
	Feb '23	133	158.6		180.8	339.3	22,266.4	50.	9,181.	31,447.4	29%
	Mar '23	134	80.4		180.8	261.2	22,466.6	150.	9,331.	31,797.6	29%
	Apr '23	135	55.2		180.8	236.	22,698.6	150.	9,481.	32,179.6	29%
May '23	136	22.9		180.8	203.7	22,896.3	150.	9,631.	32,527.3	30%	
Jun '23	137	10.8		180.8	191.6	23,083.8	0.	9,631.	32,714.8	29%	

P L A N N E D



(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
2023/24	Jul '23	138	21.3		180.8	202.1	23,279.9	150.	9,781.	33,060.9	30%
	Aug '23	139	9.8		180.8	190.5	23,467.4	150.	9,931.	33,398.4	30%
	Sep '23	140	14.6		180.8	195.3	23,660.7	150.	10,081.	33,741.7	30%
	Oct '23	141	44.3		180.8	225.1	23,867.8	150.	10,231.	34,098.8	30%
	Nov '23	142	70.9		180.8	251.6	24,067.4	150.	10,381.	34,448.4	30%
	Dec '23	143	135.1		180.8	315.9	24,317.3	0.	10,381.	34,698.3	30%
	Jan '24	144	87.5		180.8	268.2	24,483.9	0.	10,381.	34,864.9	30%
	Feb '24	145	158.6		180.8	339.3	24,647.2	50.	10,431.	35,078.2	30%
	Mar '24	146	80.4		180.8	261.2	24,735.8	150.	10,581.	35,316.8	30%
	Apr '24	147	55.2		180.8	236.	24,856.6	150.	10,731.	35,587.6	30%
	May '24	148	22.9		180.8	203.7	25,059.3	150.	10,881.	35,940.3	30%
	Jun '24	149	10.8		180.8	191.6	25,248.9	0.	10,881.	36,129.9	30%
2024/25	Jul '24	150	21.3		180.8	202.1	25,448.9	150.	11,031.	36,479.9	30%
	Aug '24	151	9.8		180.8	190.5	25,567.5	150.	11,181.	36,748.5	30%
	Sep '24	152	14.6		180.8	195.3	25,732.8	150.	11,331.	37,063.8	31%
	Oct '24	153	44.3		180.8	225.1	25,954.9	150.	11,481.	37,435.9	31%
	Nov '24	154	70.9		180.8	251.6	26,106.5	150.	11,631.	37,737.5	31%
	Dec '24	155	135.1		180.8	315.9	26,107.3	0.	11,631.	37,738.3	31%
	Jan '25	156	87.5		180.8	268.2	26,328.6	0.	11,631.	37,959.6	31%
	Feb '25	157	158.6		180.8	339.3	26,561.9	50.	11,681.	38,242.9	31%
	Mar '25	158	80.4		180.8	261.2	26,808.	150.	11,831.	38,639.	31%
	Apr '25	159	55.2		180.8	236.	27,003.	150.	11,981.	38,984.	31%
	May '25	160	22.9		180.8	203.7	27,107.7	150.	12,131.	39,238.7	31%
	Jun '25	161	10.8		180.8	191.6	27,296.3	0.	12,131.	39,427.3	31%
2025/26	Jul '25	162	21.3		180.8	202.1	27,449.4	150.	12,281.	39,730.4	31%
	Aug '25	163	9.8		180.8	190.5	27,636.9	150.	12,431.	40,067.9	31%
	Sep '25	164	14.6		180.8	195.3	27,685.2	150.	12,581.	40,266.2	31%
	Oct '25	165	44.3		180.8	225.1	27,874.3	150.	12,731.	40,605.3	31%
	Nov '25	166	70.9		180.8	251.6	28,121.9	150.	12,881.	41,002.9	31%
	Dec '25	167	135.1		180.8	315.9	28,388.8	0.	12,831.	41,219.8	31%
	Jan '26	168	87.5		180.8	268.2	28,499.	0.	12,753.	41,252.	31%
	Feb '26	169	158.6		180.8	339.3	28,804.3	50.	12,650.	41,454.3	31%

Notes:

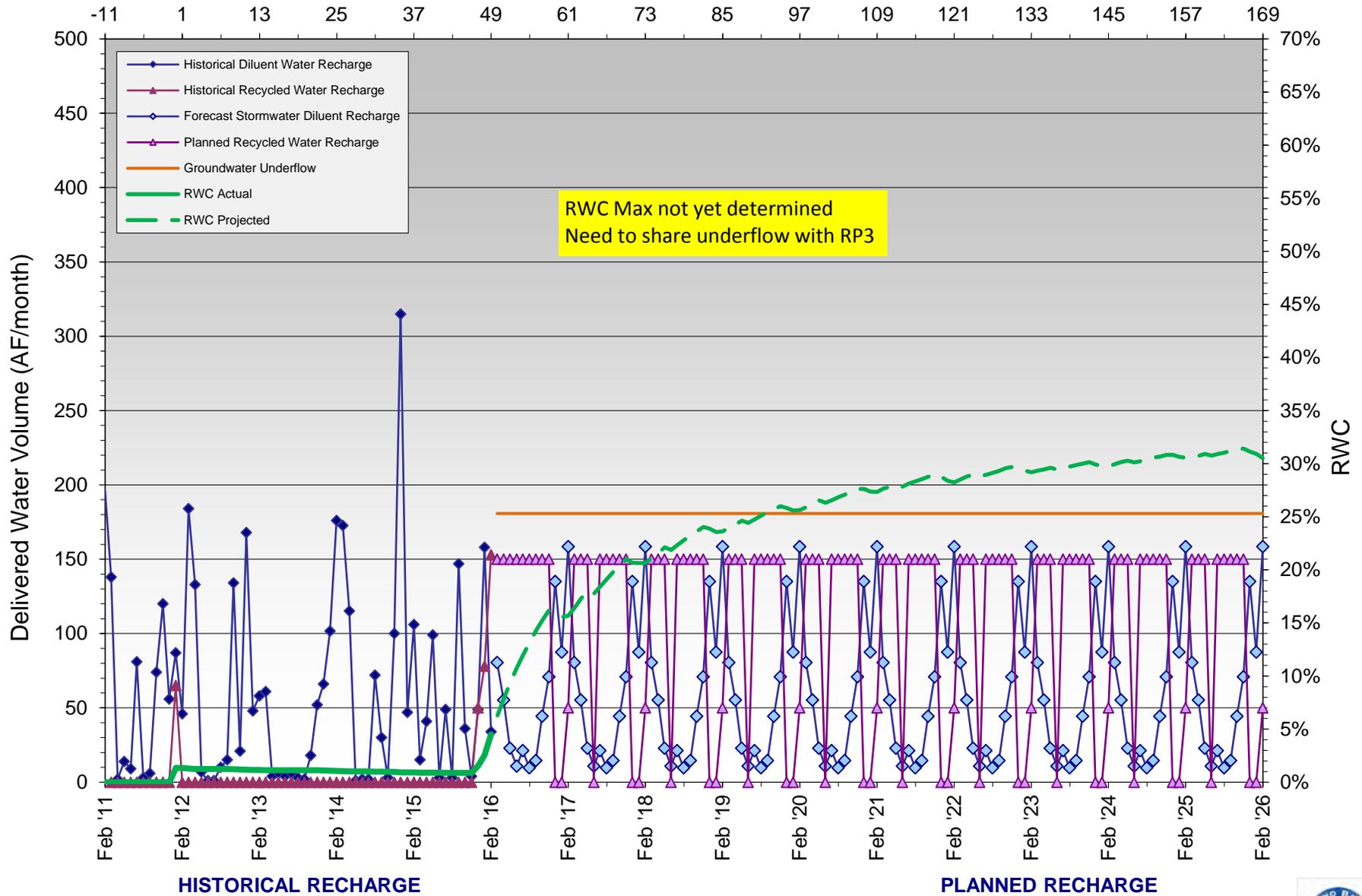
DW = Diluent Water; Total DW is the sum of Stormwater & Local Runoff (SW), Imported Water from the State Water Project (MWD), and groundwater underflow.
RW = Recycled Water
RWC = 120-month running total of recycled water / 120-month running total of all diluent and recycled water.
While an RWC calculation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

P L A N N E D



RWC Management Plan - Declez Basin

Months Since Initial Recycled Water Delivery



RWC Management Plan for San Seavain 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
	Feb '11	7	143.	0.	139.	282.	21532	0.	326	21858	1%
	Mar '11	8	133.	0.	139.	272.	21804	0.	326	22130	1%
	Apr '11	9	0.	0.	139.	139.	21943	0.	326	22269	1%
	May '11	10	7.	537.9	139.	683.9	22627	36.	362	22989	2%
	Jun '11	11	0.	1169.2	139.	1308.2	23935	34.	396	24331	2%
2011/12	Jul '11	12	0.	1010.7	139.	1149.7	25084	113.	509	25593	2%
	Aug '11	13	0.	11.2	139.	150.2	25235	90.	599	25834	2%
	Sep '11	14	0.	205.6	139.	344.6	25579	0.	599	26178	2%
	Oct '11	15	39.	0.	139.	178.	25757	0.	599	26356	2%
	Nov '11	16	32.	0.	139.	171.	25928	0.	599	26527	2%
	Dec '11	17	20.	0.	139.	159.	26087	0.	599	26686	2%
	Jan '12	18	55.	0.	139.	194.	26281	159.	758	27039	3%
	Feb '12	19	54.	0.	139.	193.	26474	74.	832	27306	3%
	Mar '12	20	160.	0.	139.	299.	26773	16.	848	27621	3%
	Apr '12	21	76.	0.	139.	215.	26988	4.	852	27840	3%
	May '12	22	0.	0.	139.	139.	27127	3.	855	27982	3%
	Jun '12	23	0.	0.	139.	139.	27266	54.	909	28175	3%
2012/13	Jul '12	24	0.	0.	139.	139.	27405	122.	1031	28436	4%
	Aug '12	25	1.	0.	139.	140.	27545	84.	1115	28660	4%
	Sep '12	26	0.	0.	139.	139.	27684	39.	1154	28838	4%
	Oct '12	27	1.	0.	139.	140.	27824	63.	1217	29041	4%
	Nov '12	28	14.	0.	139.	153.	27977	66.	1283	29260	4%
	Dec '12	29	79.	0.	139.	218.	28194	1.	1284	29478	4%
	Jan '13	30	21.	0.	139.	160.	28354	59.	1343	29697	5%
	Feb '13	31	9.	0.	139.	148.	28502	19.	1362	29864	5%
	Mar '13	32	13.	0.	139.	152.	28654	53.	1415	30069	5%
	Apr '13	33	5.	0.	139.	144.	28798	41.	1456	30254	5%
	May '13	34	4.	0.	139.	143.	28941	26.	1482	30423	5%
	Jun '13	35	0.	0.	139.	139.	29080	2.	1484	30564	5%
2013/14	Jul '13	36	0.	0.	139.	139.	29219	0.	1484	30703	5%
	Aug '13	37	0.	0.	139.	139.	29358	0.	1484	30842	5%
	Sep '13	38	0.	0.	139.	139.	29497	154.	1638	31135	5%
	Oct '13	39	11.	0.	139.	150.	29647	69.	1707	31354	5%
	Nov '13	40	39.	0.	139.	178.	29825	9.	1716	31541	5%
	Dec '13	41	6.	0.	139.	145.	29970	0.	1716	31686	5%
	Jan '14	42	0.	0.	139.	139.	30109	12.	1728	31837	5%
	Feb '14	43	69.	0.	139.	208.	30317	16.	1744	32061	5%
	Mar '14	44	20.	0.	139.	159.	30476	0.	1744	32220	5%
	Apr '14	45	17.	0.	139.	156.	30632	2.	1746	32378	5%
	May '14	46	0.	0.	139.	139.	30771	12.	1758	32529	5%
	Jun '14	47	0.	0.	139.	139.	30910	0.	1758	32668	5%
2014/15	Jul '14	48	0.	0.	139.	139.	31049	0.	1758	32807	5%
	Aug '14	49	6.	0.	139.	145.	31193	0.	1758	32951	5%
	Sep '14	50	1.	0.	139.	140.	31333	1.	1759	33092	5%
	Oct '14	51	0.	0.	139.	139.	31472	0.	1759	33231	5%
	Nov '14	52	18.	0.	139.	157.	31629	0.	1759	33388	5%
	Dec '14	53	247.	0.	139.	386.	32015	0.	1759	33774	5%
	Jan '15	54	6.	0.	139.	133.	32148	0.	1759	33907	5%
	Feb '15	55	39.	0.	139.	178.	32326	0.	1759	34085	5%
	Mar '15	56	2.	0.	139.	141.	32467	0.	1759	34226	5%
	Apr '15	57	0.	0.	139.	139.	32606	0.	1759	34365	5%
	May '15	58	17.	0.	139.	156.	32368	0.	1759	34127	5%
	Jun '15	59	0.	0.	139.	139.	31316	0.	1759	33075	5%
2015/16	Jul '15	60	9.	0.	139.	148.	30995	0.	1759	32754	5%
	Aug '15	61	0.	0.	139.	139.	30921	0.	1759	32680	5%
	Sep '15	62	53.	0.	139.	192.	30555	0.	1759	32314	5%
	Oct '15	63	47.	0.	139.	186.	30166	0.	1759	31925	6%
	Nov '15	64	1.	0.	139.	140.	29164	0.	1759	30923	6%
	Dec '15	65	80.	0.	139.	219.	28396	0.	1759	30155	6%
	Jan '16	66	244.	0.	139.	383.	27811	0.	1759	29570	6%
	Feb '16	67	33.	0.	139.	172.	26859	0.	1759	28618	6%
	Mar '16	68	90.	0.	139.	229.	26124	0.	1759	27883	6%
	Apr '16	69	134.	0.	139.	273.	25210	0.	1759	26969	7%
	May '16	70	24.	0.	139.	163.	23987	0.	1759	25746	7%
	Jun '16	71	3.	0.	139.	142.	23180	0.	1759	24939	7%
2016/17	Jul '16	72	1.	0.	139.	140.	23305	120.	1879	25184	7%
	Aug '16	73	1.	0.	139.	140.	22415	120.	1999	24414	8%
	Sep '16	74	5.	0.	139.	144.	21553	120.	2119	23672	9%
	Oct '16	75	25.	0.	139.	164.	20706	120.	2239	22945	10%
	Nov '16	76	23.	0.	139.	162.	20303	120.	2359	22662	10%
	Dec '16	77	144.	0.	139.	283.	19567	0.	2359	21926	11%
	Jan '17	78	113.	0.	139.	252.	18882	0.	2359	21241	11%
	Feb '17	79	83.	0.	139.	222.	18762	0.	2359	21121	11%
	Mar '17	80	90.	0.	139.	229.	18986	0.	2359	21345	11%
	Apr '17	81	134.	0.	139.	273.	19256	0.	2359	21615	11%
	May '17	82	24.	0.	139.	163.	19388	120.	2479	21867	11%
	Jun '17	83	3.	0.	139.	142.	19500	120.	2599	22099	12%

H I S T O R I C A L

P L A N N E D



RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2017/18	Jul '17	84	1.		139.	140.	19640	120.	2719	22359	12%
	Aug '17	85	1.		139.	140.	19780	120.	2839	22619	13%
	Sep '17	86	5.		139.	144.	19922	120.	2959	22881	13%
	Oct '17	87	25.		139.	164.	20080	120.	3079	23159	13%
	Nov '17	88	23.		139.	162.	20204	120.	3199	23403	14%
	Dec '17	89	144.		139.	283.	20412	0.	3199	23611	14%
	Jan '18	90	113.		139.	252.	20111	0.	3199	23310	14%
	Feb '18	91	83.		139.	222.	20304	0.	3199	23503	14%
	Mar '18	92	90.		139.	229.	20533	0.	3199	23732	13%
	Apr '18	93	134.		139.	273.	20806	0.	3199	24005	13%
	May '18	94	24.		139.	163.	20922	120.	3319	24241	14%
	Jun '18	95	3.		139.	142.	21064	120.	3439	24503	14%
2018/19	Jul '18	96	1.		139.	140.	21204	120.	3559	24763	14%
	Aug '18	97	1.		139.	140.	21344	120.	3679	25023	15%
	Sep '18	98	5.		139.	144.	21488	120.	3799	25287	15%
	Oct '18	99	25.		139.	164.	21652	120.	3919	25571	15%
	Nov '18	100	23.		139.	162.	21806	120.	4039	25845	16%
	Dec '18	101	144.		139.	283.	22003	0.	4039	26042	16%
	Jan '19	102	113.		139.	252.	22239	0.	4039	26278	15%
	Feb '19	103	83.		139.	222.	22354	0.	4039	26393	15%
	Mar '19	104	90.		139.	229.	22575	0.	4039	26614	15%
	Apr '19	105	134.		139.	273.	22848	0.	4039	26887	15%
	May '19	106	24.		139.	163.	23011	120.	4159	27170	15%
	Jun '19	107	3.		139.	142.	23153	120.	4279	27432	16%
2019/20	Jul '19	108	1.		139.	140.	23293	120.	4399	27692	16%
	Aug '19	109	1.		139.	140.	23432	120.	4519	27951	16%
	Sep '19	110	5.		139.	144.	23576	120.	4639	28215	16%
	Oct '19	111	25.		139.	164.	23684	120.	4759	28443	17%
	Nov '19	112	23.		139.	162.	23825	120.	4879	28704	17%
	Dec '19	113	144.		139.	283.	23774	0.	4879	28653	17%
	Jan '20	114	113.		139.	252.	23736	0.	4879	28615	17%
	Feb '20	115	83.		139.	222.	23735	0.	4879	28614	17%
	Mar '20	116	90.		139.	229.	23948	0.	4879	28827	17%
	Apr '20	117	134.		139.	273.	24168	0.	4879	29047	17%
	May '20	118	24.		139.	163.	24331	120.	4999	29330	17%
	Jun '20	119	3.		139.	142.	24473	120.	5119	29592	17%
2020/21	Jul '20	120	1.		139.	140.	24613	120.	5189	29802	17%
	Aug '20	121	1.		139.	140.	24753	120.	5265	30018	18%
	Sep '20	122	5.		139.	144.	24897	120.	5343	30240	18%
	Oct '20	123	25.		139.	164.	24966	120.	5390	30356	18%
	Nov '20	124	23.		139.	162.	24908	120.	5497	30405	18%
	Dec '20	125	144.		139.	283.	24475	0.	5465	29940	18%
	Jan '21	126	113.		139.	252.	24575	0.	5393	29968	18%
	Feb '21	127	83.		139.	222.	24515	0.	5393	29908	18%
	Mar '21	128	90.		139.	229.	24472	0.	5393	29865	18%
	Apr '21	129	134.		139.	273.	24606	0.	5393	29999	18%
	May '21	130	24.		139.	163.	24085	120.	5477	29562	19%
	Jun '21	131	3.		139.	142.	22919	120.	5563	28482	20%
2021/22	Jul '21	132	1.		139.	140.	21909	120.	5570	27479	20%
	Aug '21	133	1.		139.	140.	21899	120.	5600	27499	20%
	Sep '21	134	5.		139.	144.	21698	120.	5720	27418	21%
	Oct '21	135	25.		139.	164.	21684	120.	5840	27524	21%
	Nov '21	136	23.		139.	162.	21675	120.	5960	27635	22%
	Dec '21	137	144.		139.	283.	21799	0.	5960	27759	21%
	Jan '22	138	113.		139.	252.	21857	0.	5801	27658	21%
	Feb '22	139	83.		139.	222.	21886	0.	5727	27613	21%
	Mar '22	140	90.		139.	229.	21816	0.	5711	27527	21%
	Apr '22	141	134.		139.	273.	21874	0.	5707	27581	21%
	May '22	142	24.		139.	163.	21898	120.	5824	27722	21%
	Jun '22	143	3.		139.	142.	21901	120.	5890	27791	21%
2022/23	Jul '22	144	1.		139.	140.	21902	120.	5888	27790	21%
	Aug '22	145	1.		139.	140.	21902	120.	5924	27826	21%
	Sep '22	146	5.		139.	144.	21907	120.	6005	27912	22%
	Oct '22	147	25.		139.	164.	21931	120.	6062	27993	22%
	Nov '22	148	23.		139.	162.	21940	120.	6116	28056	22%
	Dec '22	149	144.		139.	283.	22005	0.	6115	28120	22%
	Jan '23	150	113.		139.	252.	22097	0.	6056	28153	22%
	Feb '23	151	83.		139.	222.	22171	0.	6037	28208	21%
	Mar '23	152	90.		139.	229.	22248	0.	5984	28232	21%
	Apr '23	153	134.		139.	273.	22377	0.	5943	28320	21%
	May '23	154	24.		139.	163.	22397	120.	6037	28434	21%
	Jun '23	155	3.		139.	142.	22400	120.	6155	28555	22%

P L A N N E D



RWC Management Plan for San Sevaine Basin 1 through 5

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2023/24	Jul '23	156	1.		139.	140.	22401	120.	6275	28676	22%
	Aug '23	157	1.		139.	140.	22402	120.	6395	28797	22%
	Sep '23	158	5.		139.	144.	22407	120.	6361	28768	22%
	Oct '23	159	25.		139.	164.	22421	120.	6412	28833	22%
	Nov '23	160	23.		139.	162.	22405	120.	6523	28928	23%
	Dec '23	161	144.		139.	283.	22543	0.	6523	29066	22%
	Jan '24	162	113.		139.	252.	22656	0.	6511	29167	22%
	Feb '24	163	83.		139.	222.	22670	0.	6495	29165	22%
	Mar '24	164	90.		139.	229.	22740	0.	6495	29235	22%
	Apr '24	165	134.		139.	273.	22857	0.	6493	29350	22%
	May '24	166	24.		139.	163.	22881	120.	6601	29482	22%
	Jun '24	167	3.		139.	142.	22884	120.	6721	29605	23%
2024/25	Jul '24	168	1.		139.	140.	22885	120.	6841	29726	23%
	Aug '24	169	1.		139.	140.	22880	120.	6961	29841	23%
	Sep '24	170	5.		139.	144.	22884	120.	7080	29964	24%
	Oct '24	171	25.		139.	164.	22909	120.	7200	30109	24%
	Nov '24	172	23.		139.	162.	22914	120.	7320	30234	24%
	Dec '24	173	144.		139.	283.	22811	0.	7320	30131	24%
	Jan '25	174	113.		139.	252.	22930	0.	7320	30250	24%
	Feb '25	175	83.		139.	222.	22974	0.	7320	30294	24%
	Mar '25	176	90.		139.	229.	23062	0.	7320	30382	24%
	Apr '25	177	134.		139.	273.	23196	0.	7320	30516	24%
	May '25	178	24.		139.	163.	23203	120.	7440	30643	24%
	Jun '25	179	3.		139.	142.	23206	120.	7560	30766	25%
2025/26	Jul '25	180	1.		139.	140.	23198	120.	7680	30878	25%
	Aug '25	181	1.		139.	140.	23199	120.	7800	30999	25%
	Sep '25	182	5.		139.	144.	23151	120.	7920	31071	25%
	Oct '25	183	25.		139.	164.	23129	120.	8040	31169	26%
	Nov '25	184	23.		139.	162.	23151	120.	8160	31311	26%
	Dec '25	185	144.		139.	283.	23215	0.	8160	31375	26%
	Jan '26	186	113.		139.	252.	23084	0.	8160	31244	26%
Feb '26	187	83.		139.	222.	23134	0.	8160	31294	26%	

P L A N E D

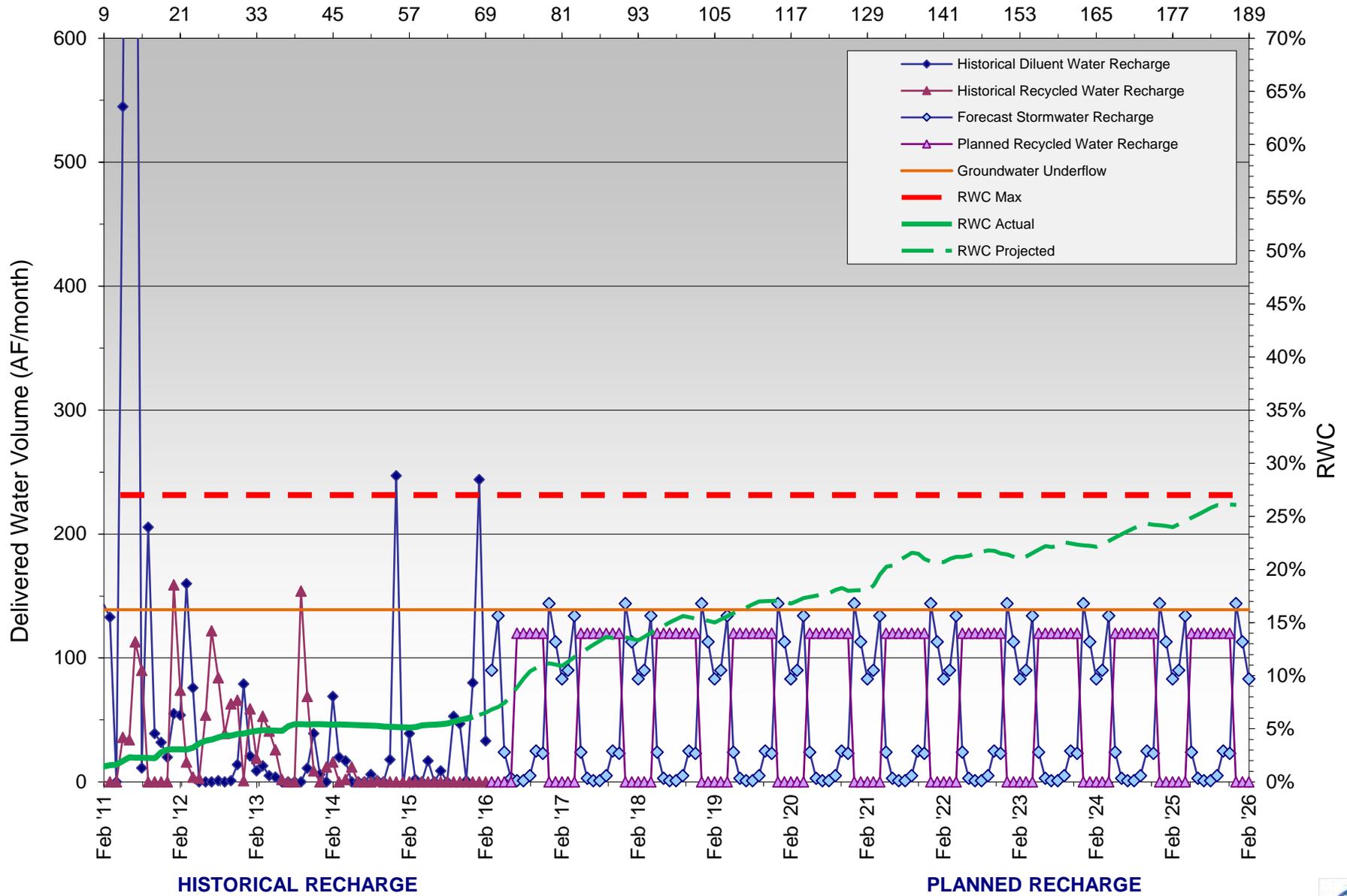
Notes:

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 - 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	
	Feb '11	55	233.	0.	67.3	300.3	9573	0.	763	10337	7%	H I S T O R I C A L
	Mar '11	56	264.	0.	67.3	331.3	9905	0.	763	10668	7%	
	Apr '11	57	333.	0.	67.3	400.3	10305	0.	763	11068	7%	
	May '11	58	181.	0.	67.3	248.3	10553	0.	763	11316	7%	
	Jun '11	59	90.	0.	67.3	157.3	10710	0.	763	11474	7%	
2011/12	Jul '11	60	16.	0.	67.3	83.3	10794	0.	763	11557	7%	
	Aug '11	61	22.	0.	67.3	89.3	10883	0.	763	11646	7%	
	Sep '11	62	2.	0.	67.3	69.3	10952	0.	763	11716	7%	
	Oct '11	63	0.	0.	67.3	67.3	11020	0.	763	11783	6%	
	Nov '11	64	81.	0.	67.3	148.3	11148	41.	804	11952	7%	
	Dec '11	65	88.	0.	67.3	155.3	11285	60.	864	12149	7%	
	Jan '12	66	146.	0.	67.3	213.3	11478	29.	893	12371	7%	
	Feb '12	67	221.	0.	67.3	288.3	11742	0.	893	12636	7%	
	Mar '12	68	295.	0.	67.3	362.3	12092	0.	893	12985	7%	
	Apr '12	69	258.	0.	67.3	325.3	12414	0.	893	13307	7%	
	May '12	70	14.	0.	67.3	81.3	12494	0.	893	13387	7%	
	Jun '12	71	20.	0.	67.3	87.3	12581	0.	893	13474	7%	
2012/13	Jul '12	72	83.	0.	67.3	150.3	12731	0.	893	13624	7%	
	Aug '12	73	36.	0.	67.3	103.3	12834	0.	893	13728	7%	
	Sep '12	74	31.	0.	67.3	98.3	12933	0.	893	13826	6%	
	Oct '12	75	61.	0.	67.3	128.3	13061	0.	893	13954	6%	
	Nov '12	76	61.	0.	67.3	128.3	13179	0.	893	14072	6%	
	Dec '12	77	290.	0.	67.3	357.3	13506	0.	893	14399	6%	
	Jan '13	78	149.	0.	67.3	216.3	13722	0.	893	14615	6%	
	Feb '13	79	116.	0.	67.3	183.3	13876	26.	919	14795	6%	
	Mar '13	80	48.	0.	67.3	115.3	13959	21.	940	14899	6%	
	Apr '13	81	0.	0.	67.3	67.3	13989	0.	940	14929	6%	
	May '13	82	0.	0.	67.3	67.3	14004	0.	940	14944	6%	
	Jun '13	83	0.	0.	67.3	67.3	14071	0.	940	15011	6%	
2013/14	Jul '13	84	0.	0.	67.3	67.3	14138	0.	940	15078	6%	
	Aug '13	85	0.	0.	67.3	67.3	14205	0.	940	15146	6%	
	Sep '13	86	0.	0.	67.3	67.3	14273	0.	940	15213	6%	
	Oct '13	87	0.	0.	67.3	67.3	14340	0.	940	15280	6%	
	Nov '13	88	0.	0.	67.3	67.3	14407	0.	940	15348	6%	
	Dec '13	89	72.	0.	67.3	139.3	14547	174.	1114	15661	7%	
	Jan '14	90	45.	0.	67.3	112.3	14659	102.	1216	15875	8%	
	Feb '14	91	94.	0.	67.3	161.3	14820	70.	1286	16106	8%	
	Mar '14	92	63.	0.	67.3	130.3	14950	20.	1306	16257	8%	
	Apr '14	93	61.	0.	67.3	128.3	15079	105.	1411	16490	9%	
	May '14	94	21.	0.	67.3	88.3	15167	136.	1547	16714	9%	
	Jun '14	95	23.	0.	67.3	90.3	15257	32.	1579	16836	9%	
2014/15	Jul '14	96	0.	0.	67.3	67.3	15324	0.	1579	16904	9%	
	Aug '14	97	76.	0.	67.3	143.3	15468	205.	1784	17252	10%	
	Sep '14	98	54.	0.	67.3	121.3	15589	128.	1912	17501	11%	
	Oct '14	99	39.	0.	67.3	106.3	15635	63.	1975	17610	11%	
	Nov '14	100	108.	0.	67.3	175.3	15679	58.	2033	17712	11%	
	Dec '14	101	255.	0.	67.3	322.3	15836	2.	2035	17871	11%	
	Jan '15	102	117.	0.	67.3	184.3	15924	0.	2035	17959	11%	
	Feb '15	103	93.	0.	67.3	160.3	15996	60.	2095	18092	12%	
	Mar '15	104	52.	0.	67.3	119.3	16050	143.	2238	18288	12%	
	Apr '15	105	0.	0.	67.3	67.3	16117	0.	2238	18356	12%	
	May '15	106	0.	0.	67.3	67.3	16184	0.	2238	18422	12%	
	Jun '15	107	0.	0.	67.3	67.3	16251	0.	2238	18490	12%	
2015/16	Jul '15	108	0.	0.	67.3	67.3	16319	0.	2238	18557	12%	
	Aug '15	109	1.	0.	67.3	68.3	16387	0.	2238	18625	12%	
	Sep '15	110	120.	0.	67.3	187.3	16485	145.	2383	18868	13%	
	Oct '15	111	98.	0.	67.3	165.3	16555	238.	2621	19176	14%	
	Nov '15	112	45.	0.	67.3	112.3	16489	79.	2700	19189	14%	
	Dec '15	113	105.	0.	67.3	172.3	16302	224.	2924	19226	15%	
	Jan '16	114	269.	0.	67.3	336.3	16376	102.	3026	19403	16%	
	Feb '16	115	51.	0.	67.3	118.3	16343	198.	3224	19567	16%	
	Mar '16	116	99.	0.	67.3	166.3	16082	50.	3274	19357	17%	
	Apr '16	117	91.	0.	67.3	158.3	15851	50.	3324	19175	17%	
	May '16	118	41.	0.	67.3	108.3	15862	50.	3374	19236	18%	
	Jun '16	119	17.	0.	67.3	84.3	15935	50.	3424	19360	18%	
2016/17	Jul '16	120	11.	0.	67.3	78.3	15951	0.	3402	19353	18%	
	Aug '16	121	18.	0.	67.3	85.3	16015	0.	3289	19304	17%	
	Sep '16	122	38.	0.	67.3	105.3	16014	60.	3235	19249	17%	
	Oct '16	123	47.	0.	67.3	114.3	15964	60.	3295	19259	17%	
	Nov '16	124	70.	0.	67.3	137.3	16073	60.	3355	19427	17%	
	Dec '16	125	175.	0.	67.3	242.3	16285	0.	3251	19536	17%	
	Jan '17	126	126.	0.	67.3	193.3	16451	0.	3181	19631	16%	
	Feb '17	127	136.	0.	67.3	203.3	16642	0.	3137	19779	16%	
	Mar '17	128	99.	0.	67.3	166.3	16783	0.	3080	19863	16%	
	Apr '17	129	91.	0.	67.3	158.3	16936	60.	3126	20062	16%	
	May '17	130	41.	0.	67.3	108.3	17032	60.	3107	20139	15%	
	Jun '17	131	17.	0.	67.3	84.3	17116	60.	3164	20280	16%	



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
2017/18	Jul '17	132	11.		67.3	78.3	17190	0.	3164	20354	16%
	Aug '17	133	18.		67.3	85.3	17237	0.	3164	20401	16%
	Sep '17	134	38.		67.3	105.3	17338	60.	3224	20562	16%
	Oct '17	135	47.		67.3	114.3	17391	60.	3284	20675	16%
	Nov '17	136	70.		67.3	137.3	17432	60.	3344	20776	16%
	Dec '17	137	175.		67.3	242.3	17459	0.	3344	20803	16%
	Jan '18	138	126.		67.3	193.3	17342	0.	3344	20686	16%
	Feb '18	139	136.		67.3	203.3	17294	0.	3344	20638	16%
	Mar '18	140	99.		67.3	166.3	17443	0.	3344	20787	16%
	Apr '18	141	91.		67.3	158.3	17587	60.	3404	20991	16%
	May '18	142	41.		67.3	108.3	17553	60.	3464	21017	16%
	Jun '18	143	17.		67.3	84.3	17626	60.	3524	21150	17%
2018/19	Jul '18	144	11.		67.3	78.3	17697	0.	3524	21221	17%
	Aug '18	145	18.		67.3	85.3	17780	0.	3524	21304	17%
	Sep '18	146	38.		67.3	105.3	17758	60.	3584	21342	17%
	Oct '18	147	47.		67.3	114.3	17792	60.	3616	21408	17%
	Nov '18	148	70.		67.3	137.3	17848	60.	3646	21494	17%
	Dec '18	149	175.		67.3	242.3	17747	0.	3646	21393	17%
	Jan '19	150	126.		67.3	193.3	17911	0.	3646	21557	17%
	Feb '19	151	136.		67.3	203.3	17769	0.	3646	21415	17%
	Mar '19	152	99.		67.3	166.3	17888	0.	3646	21534	17%
	Apr '19	153	91.		67.3	158.3	18036	60.	3706	21742	17%
	May '19	154	41.		67.3	108.3	18126	60.	3736	21862	17%
	Jun '19	155	17.		67.3	84.3	18133	60.	3787	21920	17%
2019/20	Jul '19	156	11.		67.3	78.3	18180	0.	3787	21967	17%
	Aug '19	157	18.		67.3	85.3	18246	0.	3767	22013	17%
	Sep '19	158	38.		67.3	105.3	18323	60.	3809	22132	17%
	Oct '19	159	47.		67.3	114.3	18290	60.	3869	22159	17%
	Nov '19	160	70.		67.3	137.3	18311	60.	3929	22240	18%
	Dec '19	161	175.		67.3	242.3	18085	0.	3929	22014	18%
	Jan '20	162	126.		67.3	193.3	17917	0.	3929	21846	18%
	Feb '20	163	136.		67.3	203.3	17723	0.	3929	21652	18%
	Mar '20	164	99.		67.3	166.3	17788	0.	3929	21717	18%
	Apr '20	165	91.		67.3	158.3	17721	60.	3989	21710	18%
	May '20	166	41.		67.3	108.3	17724	60.	4049	21773	19%
	Jun '20	167	17.		67.3	84.3	17741	60.	4109	21850	19%
2020/21	Jul '20	168	11.		67.3	78.3	17729	0.	4109	21838	19%
	Aug '20	169	18.		67.3	85.3	17694	0.	4101	21795	19%
	Sep '20	170	38.		67.3	105.3	17675	60.	4161	21836	19%
	Oct '20	171	47.		67.3	114.3	17632	60.	4221	21853	19%
	Nov '20	172	70.		67.3	137.3	17537	60.	4281	21818	20%
	Dec '20	173	175.		67.3	242.3	17347	0.	4281	21628	20%
	Jan '21	174	126.		67.3	193.3	17283	0.	4281	21564	20%
	Feb '21	175	136.		67.3	203.3	17186	0.	4281	21467	20%
	Mar '21	176	99.		67.3	166.3	17021	0.	4281	21302	20%
	Apr '21	177	91.		67.3	158.3	16779	60.	4341	21120	21%
	May '21	178	41.		67.3	108.3	16639	60.	4401	21040	21%
	Jun '21	179	17.		67.3	84.3	16566	60.	4461	21027	21%
2021/22	Jul '21	180	11.		67.3	78.3	16561	0.	4461	21022	21%
	Aug '21	181	18.		67.3	85.3	16557	0.	4461	21018	21%
	Sep '21	182	38.		67.3	105.3	16593	60.	4521	21114	21%
	Oct '21	183	47.		67.3	114.3	16640	60.	4581	21221	22%
	Nov '21	184	70.		67.3	137.3	16629	60.	4600	21229	22%
	Dec '21	185	175.		67.3	242.3	16716	0.	4540	21256	21%
	Jan '22	186	126.		67.3	193.3	16696	0.	4511	21207	21%
	Feb '22	187	136.		67.3	203.3	16611	0.	4511	21122	21%
	Mar '22	188	99.		67.3	166.3	16415	0.	4511	20926	22%
	Apr '22	189	91.		67.3	158.3	16248	60.	4571	20819	22%
	May '22	190	41.		67.3	108.3	16275	60.	4631	20906	22%
	Jun '22	191	17.		67.3	84.3	16272	60.	4691	20963	22%
2022/23	Jul '22	192	11.		67.3	78.3	16200	0.	4691	20891	22%
	Aug '22	193	18.		67.3	85.3	16182	0.	4691	20873	22%
	Sep '22	194	38.		67.3	105.3	16189	60.	4751	20940	23%
	Oct '22	195	47.		67.3	114.3	16175	60.	4811	20986	23%
	Nov '22	196	70.		67.3	137.3	16184	60.	4871	21055	23%
	Dec '22	197	175.		67.3	242.3	16069	0.	4871	20940	23%
	Jan '23	198	126.		67.3	193.3	16046	0.	4871	20917	23%
	Feb '23	199	136.		67.3	203.3	16066	0.	4845	20911	23%
	Mar '23	200	99.		67.3	166.3	16117	0.	4824	20941	23%
	Apr '23	201	91.		67.3	158.3	16208	60.	4884	21092	23%
	May '23	202	41.		67.3	108.3	16249	60.	4944	21193	23%
	Jun '23	203	17.		67.3	84.3	16266	60.	5004	21270	24%

P L A N N E D



RWC Management Plan for Turner Basin Cells 1 & 2
(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2023/24	Jul '23	204	11.		67.3	78.3	16277	0.	5004	21281	24%
	Aug '23	205	18.		67.3	85.3	16295	0.	5004	21299	23%
	Sep '23	206	38.		67.3	105.3	16333	60.	5064	21397	24%
	Oct '23	207	47.		67.3	114.3	16380	60.	5124	21504	24%
	Nov '23	208	70.		67.3	137.3	16450	60.	5184	21634	24%
	Dec '23	209	175.		67.3	242.3	16553	0.	5010	21563	23%
	Jan '24	210	126.		67.3	193.3	16634	0.	4908	21542	23%
	Feb '24	211	136.		67.3	203.3	16676	0.	4838	21514	22%
	Mar '24	212	99.		67.3	166.3	16712	0.	4818	21530	22%
	Apr '24	213	91.		67.3	158.3	16742	60.	4773	21515	22%
	May '24	214	41.		67.3	108.3	16762	60.	4697	21459	22%
	Jun '24	215	17.		67.3	84.3	16756	60.	4725	21481	22%
2024/25	Jul '24	216	11.		67.3	78.3	16767	0.	4725	21492	22%
	Aug '24	217	18.		67.3	85.3	16709	0.	4520	21229	21%
	Sep '24	218	38.		67.3	105.3	16693	60.	4452	21145	21%
	Oct '24	219	47.		67.3	114.3	16701	60.	4449	21150	21%
	Nov '24	220	70.		67.3	137.3	16663	60.	4451	21114	21%
	Dec '24	221	175.		67.3	242.3	16583	0.	4449	21032	21%
	Jan '25	222	126.		67.3	193.3	16592	0.	4449	21041	21%
	Feb '25	223	136.		67.3	203.3	16635	0.	4389	21024	21%
	Mar '25	224	99.		67.3	166.3	16682	0.	4246	20928	20%
	Apr '25	225	91.		67.3	158.3	16773	60.	4306	21079	20%
	May '25	226	41.		67.3	108.3	16814	60.	4366	21180	21%
	Jun '25	227	17.		67.3	84.3	16831	60.	4426	21257	21%
2025/26	Jul '25	228	11.		67.3	78.3	16842	0.	4426	21268	21%
	Aug '25	229	18.		67.3	85.3	16859	0.	4426	21285	21%
	Sep '25	230	38.		67.3	105.3	16777	60.	4341	21118	21%
	Oct '25	231	47.		67.3	114.3	16726	60.	4163	20889	20%
	Nov '25	232	70.		67.3	137.3	16751	60.	4144	20895	20%
	Dec '25	233	175.		67.3	242.3	16821	0.	3920	20741	19%
	Jan '26	234	126.		67.3	193.3	16678	0.	3818	20496	19%
	Feb '26	235	136.		67.3	203.3	16763	0.	3620	20383	18%

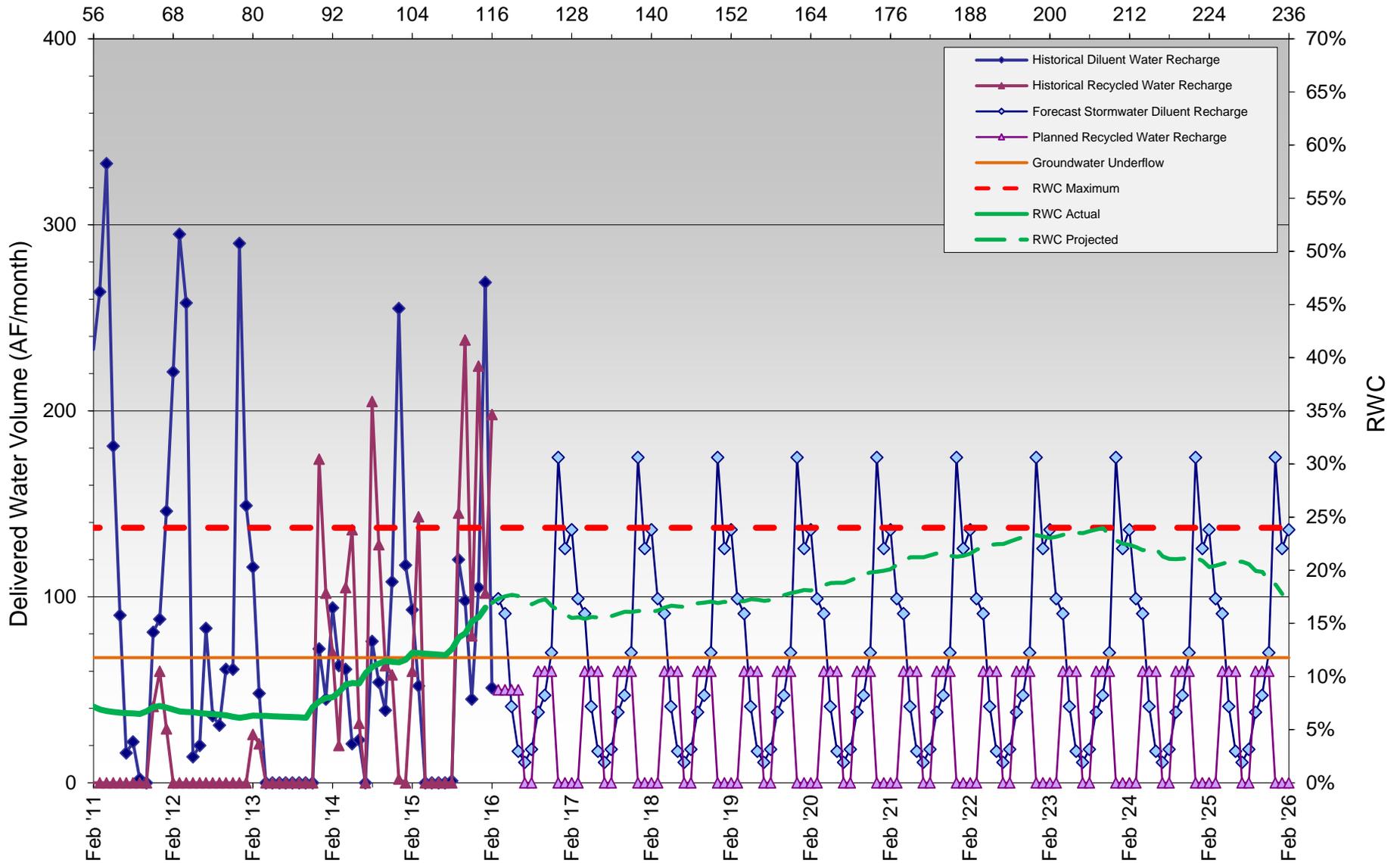
Notes:

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	
	Feb '11	55	50.	0.	59.7	109.7	5144	0.	1090	6234	17%	H I S T O R I C A L
	Mar '11	56	49.	0.	59.7	108.7	5253	0.	1090	6342	17%	
	Apr '11	57	0.	0.	59.7	59.7	5312	0.	1090	6402	17%	
	May '11	58	0.	0.	59.7	59.7	5372	0.	1090	6462	17%	
	Jun '11	59	0.	0.	59.7	59.7	5432	0.	1090	6522	17%	
2011/12	Jul '11	60	0.	0.	59.7	59.7	5492	0.	1090	6581	17%	
	Aug '11	61	3.	54.6	59.7	117.3	5609	7.	1097	6706	16%	
	Sep '11	62	41.	144.5	59.7	245.2	5854	186.	1283	7137	18%	
	Oct '11	63	63.	0.	59.7	122.7	5977	223.	1506	7483	20%	
	Nov '11	64	66.	0.	59.7	125.7	6103	96.	1602	7704	21%	
	Dec '11	65	69.	0.	59.7	128.7	6232	52.	1654	7885	21%	
	Jan '12	66	86.	0.	59.7	145.7	6377	72.	1726	8103	21%	
	Feb '12	67	109.	0.	59.7	168.7	6546	97.	1823	8369	22%	
	Mar '12	68	126.	0.	59.7	185.7	6732	35.	1858	8589	22%	
	Apr '12	69	88.	0.	59.7	147.7	6880	15.	1873	8752	21%	
	May '12	70	40.	0.	59.7	99.7	6979	56.	1929	8908	22%	
	Jun '12	71	25.	0.	59.7	84.7	7064	65.	1994	9058	22%	
2012/13	Jul '12	72	25.	0.	59.7	84.7	7149	51.	2045	9193	22%	
	Aug '12	73	36.	0.	59.7	95.7	7245	35.	2080	9324	22%	
	Sep '12	74	31.	0.	59.7	90.7	7335	24.	2104	9439	22%	
	Oct '12	75	22.	0.	59.7	81.7	7417	9.	2113	9530	22%	
	Nov '12	76	30.	0.	59.7	89.7	7507	5.	2118	9624	22%	
	Dec '12	77	47.	0.	59.7	106.7	7614	5.	2123	9736	22%	
	Jan '13	78	15.	0.	59.7	74.7	7688	0.	2123	9811	22%	
	Feb '13	79	25.	0.	59.7	84.7	7773	0.	2123	9896	21%	
	Mar '13	80	14.	0.	59.7	73.7	7847	0.	2123	9969	21%	
	Apr '13	81	0.	0.	59.7	59.7	7907	0.	2123	10029	21%	
	May '13	82	0.	0.	59.7	59.7	7966	0.	2123	10089	21%	
	Jun '13	83	0.	0	59.7	59.7	8026	0.	2123	10149	21%	
2013/14	Jul '13	84	0.	0	59.7	59.7	8086	0.	2123	10208	21%	
	Aug '13	85	0.	0	59.7	59.7	8146	0.	2123	10268	21%	
	Sep '13	86	24.	0	59.7	83.7	8229	107.	2230	10459	21%	
	Oct '13	87	20.	0	59.7	79.7	8309	117.	2347	10656	22%	
	Nov '13	88	17.	0	59.7	76.7	8386	89.	2436	10821	23%	
	Dec '13	89	5.	0	59.7	64.7	8451	85.	2521	10971	23%	
	Jan '14	90	16.	0	59.7	75.7	8526	139.	2660	11186	24%	
	Feb '14	91	62.	0	59.7	121.7	8648	120.	2780	11428	24%	
	Mar '14	92	50.	0	59.7	109.7	8758	47.	2827	11584	24%	
	Apr '14	93	0.	0	59.7	59.7	8817	0.	2827	11644	24%	
	May '14	94	23.	0	59.7	82.7	8900	168.	2995	11895	25%	
	Jun '14	95	12.	0	59.7	71.7	8972	54.	3049	12021	25%	
2014/15	Jul '14	96	11.	0	59.7	70.7	9043	0.	3049	12091	25%	
	Aug '14	97	0.	0	59.7	59.7	9102	0.	3049	12151	25%	
	Sep '14	98	0.	0	59.7	59.7	9162	0.	3049	12211	25%	
	Oct '14	99	0.	0	59.7	59.7	9101	0.	3049	12150	25%	
	Nov '14	100	0.	0	59.7	59.7	9033	0.	3049	12081	25%	
	Dec '14	101	348.	0	59.7	407.7	9223	0.	3049	12271	25%	
	Jan '15	102	4.	0	59.7	63.7	9029	0.	3049	12078	25%	
	Feb '15	103	65.	0	59.7	124.7	8922	53.	3102	12023	26%	
	Mar '15	104	71.	0.	59.7	130.7	8878	155.	3257	12135	27%	
	Apr '15	105	39.	0.	59.7	98.7	8977	0.	3257	12233	27%	
	May '15	106	0.	0.	59.7	59.7	9036	0.	3257	12293	26%	
	Jun '15	107	2.	0.	59.7	61.7	9098	81.	3338	12435	27%	
2015/16	Jul '15	108	87.	0.	59.7	146.7	9245	85.	3423	12667	27%	
	Aug '15	109	15.	0.	59.7	74.7	9319	163.	3586	12905	28%	
	Sep '15	110	74.	0.	59.7	133.7	9453	51.	3637	13090	28%	
	Oct '15	111	64.	0.	59.7	123.7	9577	65.	3702	13278	28%	
	Nov '15	112	44.	0.	59.7	103.7	9681	3.	3705	13385	28%	
	Dec '15	113	144.	0.	59.7	203.7	9760	1.	3706	13466	28%	
	Jan '16	114	82.	0.	59.7	141.7	9827	0.	3706	13533	27%	
	Feb '16	115	41.	0.	59.7	100.7	9857	0.	3706	13563	27%	
	Mar '16	116	71.	0.	59.7	130.7	9816	90.	3796	13612	28%	
	Apr '16	117	44.	0.	59.7	103.7	9660	90.	3886	13545	29%	
	May '16	118	19.	0.	59.7	78.7	9666	0.	3886	13552	29%	
	Jun '16	119	19.	0.	59.7	78.7	9658	0.	3886	13544	29%	
2016/17	Jul '16	120	21.	0.	59.7	80.7	9709	90.	3838	13546	28%	
	Aug '16	121	16.	0.	59.7	75.7	9751	90.	3693	13443	27%	
	Sep '16	122	22.	0.	59.7	81.7	9810	90.	3743	13553	28%	
	Oct '16	123	33.	0.	59.7	92.7	9838	90.	3833	13671	28%	
	Nov '16	124	37.	0.	59.7	96.7	9919	90.	3923	13842	28%	
	Dec '16	125	104.	0.	59.7	163.7	10069	40.	3897	13966	28%	
	Jan '17	126	70.	0.	59.7	129.7	10189	40.	3906	14095	28%	
	Feb '17	127	76.	0.	59.7	135.7	10316	40.	3925	14241	28%	
	Mar '17	128	71.	0.	59.7	130.7	10442	90.	3999	14441	28%	
	Apr '17	129	44.	0.	59.7	103.7	10543	90.	4081	14624	28%	
	May '17	130	19.	0.	59.7	78.7	10614	0.	4024	14638	27%	
	Jun '17	131	19.	0.	59.7	78.7	10683	0.	4024	14707	27%	

H I S T O R I C A L

P L A N N E D



RWC Management Plan for Turner Basin Cells 3 & 4
(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2017/18	Jul '17	132	21.		59.7	80.7	10762	90.	4114	14876	28%
	Aug '17	133	16.		59.7	75.7	10828	90.	4204	15032	28%
	Sep '17	134	22.		59.7	81.7	10898	90.	4294	15192	28%
	Oct '17	135	33.		59.7	92.7	10988	90.	4384	15372	29%
	Nov '17	136	37.		59.7	96.7	11018	90.	4474	15492	29%
	Dec '17	137	104.		59.7	163.7	11120	40.	4514	15634	29%
	Jan '18	138	70.		59.7	129.7	11107	40.	4554	15661	29%
	Feb '18	139	76.		59.7	135.7	11234	40.	4594	15828	29%
	Mar '18	140	71.		59.7	130.7	11364	90.	4684	16048	29%
	Apr '18	141	44.		59.7	103.7	11464	90.	4774	16238	29%
	May '18	142	19.		59.7	78.7	11505	0.	4774	16279	29%
	Jun '18	143	19.		59.7	78.7	11556	0.	4774	16330	29%
2018/19	Jul '18	144	21.		59.7	80.7	11632	90.	4864	16496	29%
	Aug '18	145	16.		59.7	75.7	11703	90.	4954	16657	30%
	Sep '18	146	22.		59.7	81.7	11771	90.	5044	16815	30%
	Oct '18	147	33.		59.7	92.7	11827	90.	5068	16895	30%
	Nov '18	148	37.		59.7	96.7	11887	90.	5150	17037	30%
	Dec '18	149	104.		59.7	163.7	12001	40.	5190	17191	30%
	Jan '19	150	70.		59.7	129.7	12121	40.	5230	17351	30%
	Feb '19	151	76.		59.7	135.7	12189	40.	5270	17459	30%
	Mar '19	152	71.		59.7	130.7	12309	90.	5360	17669	30%
	Apr '19	153	44.		59.7	103.7	12411	90.	5450	17861	31%
	May '19	154	19.		59.7	78.7	12489	0.	5450	17939	30%
	Jun '19	155	19.		59.7	78.7	12568	0.	5450	18018	30%
2019/2020	Jul '19	156	21.		59.7	80.7	12648	90.	5540	18188	30%
	Aug '19	157	16.		59.7	75.7	12724	90.	5630	18354	31%
	Sep '19	158	22.		59.7	81.7	12806	90.	5720	18526	31%
	Oct '19	159	33.		59.7	92.7	12839	90.	5810	18649	31%
	Nov '19	160	37.		59.7	96.7	12873	90.	5900	18773	31%
	Dec '19	161	104.		59.7	163.7	12879	40.	5877	18756	31%
	Jan '20	162	70.		59.7	129.7	12764	40.	5790	18554	31%
	Feb '20	163	76.		59.7	135.7	12665	40.	5830	18495	32%
	Mar '20	164	71.		59.7	130.7	12622	90.	5876	18498	32%
	Apr '20	165	44.		59.7	103.7	12583	90.	5951	18534	32%
	May '20	166	19.		59.7	78.7	12575	0.	5881	18456	32%
	Jun '20	167	19.		59.7	78.7	12519	0.	5841	18360	32%
2020/21	Jul '20	168	21.		59.7	80.7	12445	90.	5925	18370	32%
	Aug '20	169	16.		59.7	75.7	12377	90.	5993	18370	33%
	Sep '20	170	22.		59.7	81.7	12345	90.	6066	18411	33%
	Oct '20	171	33.		59.7	92.7	12323	90.	6156	18479	33%
	Nov '20	172	37.		59.7	96.7	12321	90.	6246	18567	34%
	Dec '20	173	104.		59.7	163.7	12264	40.	6286	18550	34%
	Jan '21	174	70.		59.7	129.7	12333	40.	6326	18659	34%
	Feb '21	175	76.		59.7	135.7	12359	40.	6366	18725	34%
	Mar '21	176	71.		59.7	130.7	12381	90.	6456	18837	34%
	Apr '21	177	44.		59.7	103.7	12425	90.	6546	18971	35%
	May '21	178	19.		59.7	78.7	12444	0.	6546	18990	34%
	Jun '21	179	19.		59.7	78.7	12463	0.	6546	19009	34%
2021/22	Jul '21	180	21.		59.7	80.7	12484	90.	6636	19120	35%
	Aug '21	181	16.		59.7	75.7	12442	90.	6719	19161	35%
	Sep '21	182	22.		59.7	81.7	12279	90.	6623	18902	35%
	Oct '21	183	33.		59.7	92.7	12249	90.	6490	18739	35%
	Nov '21	184	37.		59.7	96.7	12220	90.	6484	18704	35%
	Dec '21	185	104.		59.7	163.7	12255	40.	6472	18727	35%
	Jan '22	186	70.		59.7	129.7	12239	40.	6440	18679	34%
	Feb '22	187	76.		59.7	135.7	12206	40.	6383	18589	34%
	Mar '22	188	71.		59.7	130.7	12151	90.	6438	18589	35%
	Apr '22	189	44.		59.7	103.7	12107	90.	6513	18620	35%
	May '22	190	19.		59.7	78.7	12086	0.	6457	18543	35%
	Jun '22	191	19.		59.7	78.7	12080	0.	6392	18472	35%
2022/23	Jul '22	192	21.		59.7	80.7	12076	90.	6431	18507	35%
	Aug '22	193	16.		59.7	75.7	12056	90.	6486	18542	35%
	Sep '22	194	22.		59.7	81.7	12047	90.	6552	18599	35%
	Oct '22	195	33.		59.7	92.7	12058	90.	6633	18691	35%
	Nov '22	196	37.		59.7	96.7	12065	90.	6718	18783	36%
	Dec '22	197	104.		59.7	163.7	12122	40.	6753	18875	36%
	Jan '23	198	70.		59.7	129.7	12177	40.	6793	18970	36%
	Feb '23	199	76.		59.7	135.7	12228	40.	6833	19061	36%
	Mar '23	200	71.		59.7	130.7	12285	90.	6923	19208	36%
	Apr '23	201	44.		59.7	103.7	12329	90.	7013	19342	36%
	May '23	202	19.		59.7	78.7	12348	0.	7013	19361	36%
	Jun '23	203	19.		59.7	78.7	12367	0.	7013	19380	36%

P L A N N E D



RWC Management Plan for Turner Basin Cells 3 & 4
(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period
2023/24	Jul '23	204	21.		59.7	80.7	12388	90.	7103	19491	36%
	Aug '23	205	16.		59.7	75.7	12404	90.	7193	19597	37%
	Sep '23	206	22.		59.7	81.7	12402	90.	7176	19578	37%
	Oct '23	207	33.		59.7	92.7	12415	90.	7149	19564	37%
	Nov '23	208	37.		59.7	96.7	12435	90.	7150	19585	37%
	Dec '23	209	104.		59.7	163.7	12534	40.	7105	19639	36%
	Jan '24	210	70.		59.7	129.7	12588	40.	7006	19594	36%
	Feb '24	211	76.		59.7	135.7	12602	40.	6926	19528	35%
	Mar '24	212	71.		59.7	130.7	12623	90.	6969	19592	36%
	Apr '24	213	44.		59.7	103.7	12667	90.	7059	19726	36%
	May '24	214	19.		59.7	78.7	12663	0.	6891	19554	35%
	Jun '24	215	19.		59.7	78.7	12670	0.	6837	19507	35%
2024/25	Jul '24	216	21.		59.7	80.7	12680	90.	6927	19607	35%
	Aug '24	217	16.		59.7	75.7	12696	90.	7017	19713	36%
	Sep '24	218	22.		59.7	81.7	12718	90.	7107	19825	36%
	Oct '24	219	33.		59.7	92.7	12751	90.	7197	19948	36%
	Nov '24	220	37.		59.7	96.7	12788	90.	7287	20075	36%
	Dec '24	221	104.		59.7	163.7	12544	40.	7327	19871	37%
	Jan '25	222	70.		59.7	129.7	12610	40.	7367	19977	37%
	Feb '25	223	76.		59.7	135.7	12621	40.	7354	19975	37%
	Mar '25	224	71.		59.7	130.7	12621	90.	7289	19910	37%
	Apr '25	225	44.		59.7	103.7	12626	90.	7379	20005	37%
	May '25	226	19.		59.7	78.7	12645	0.	7379	20024	37%
	Jun '25	227	19.		59.7	78.7	12662	0.	7298	19960	37%
2025/26	Jul '25	228	21.		59.7	80.7	12596	90.	7303	19899	37%
	Aug '25	229	16.		59.7	75.7	12597	90.	7230	19827	36%
	Sep '25	230	22.		59.7	81.7	12545	90.	7269	19814	37%
	Oct '25	231	33.		59.7	92.7	12514	90.	7294	19808	37%
	Nov '25	232	37.		59.7	96.7	12507	90.	7381	19888	37%
	Dec '25	233	104.		59.7	163.7	12467	40.	7420	19887	37%
	Jan '26	234	70.		59.7	129.7	12455	40.	7460	19915	37%
	Feb '26	235	76.		59.7	135.7	12490	40.	7500	19990	38%

P L A N N E D

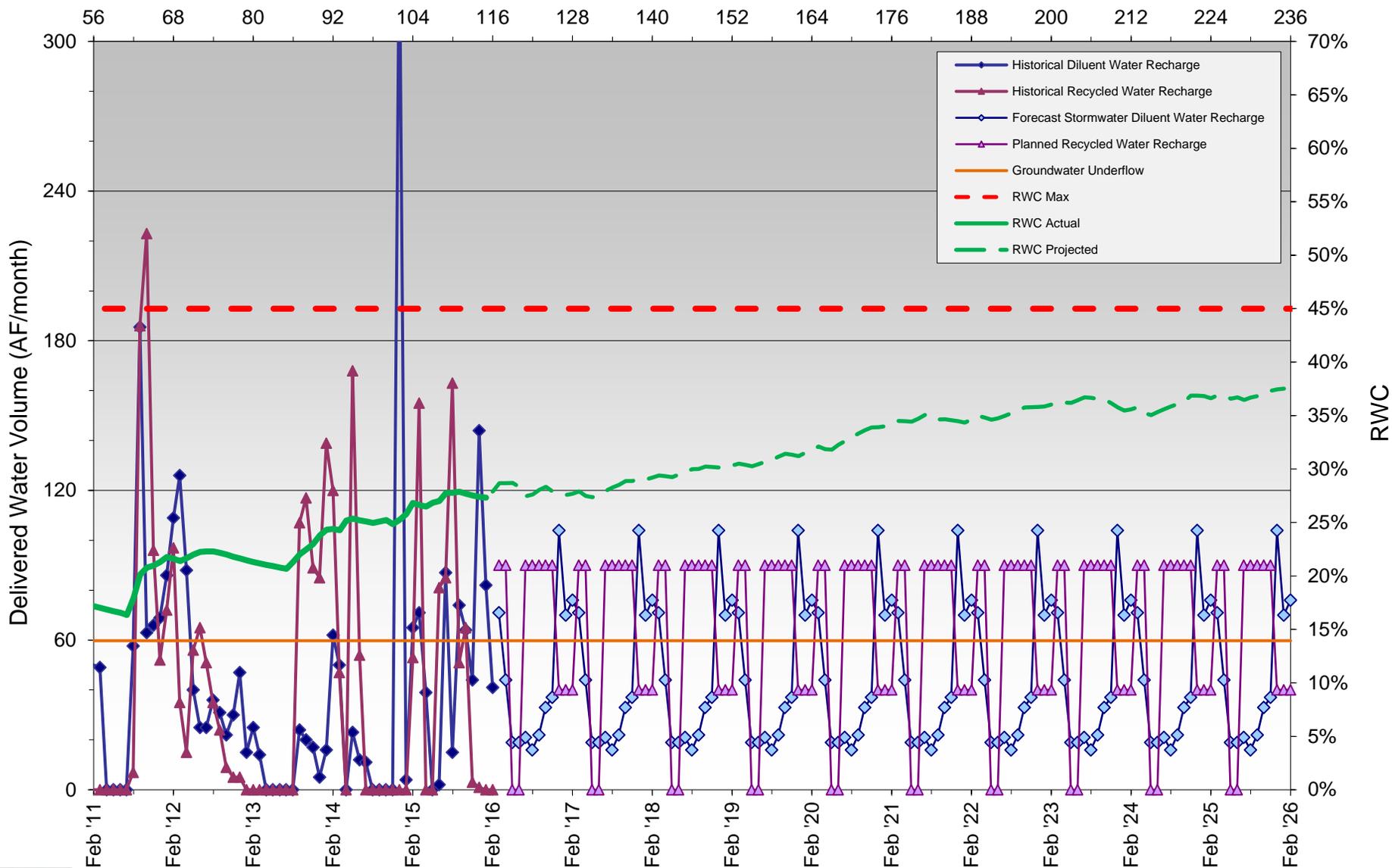
Notes:

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



RWC Management Plan - Turner Basin Cells 3 & 4

Months Since Initial Recycled Water Delivery



HISTORICAL RECHARGE

PLANNED RECHARGE



RWC Management Plan for Victoria Basin

(120-month averaging period)

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

Date	No. Mos. Since Initial RW Delivery	SW (AF)	MWD (AF)	Underflow (AF)	DW Total (AF)	DW 120-Month Total (AF)	RW (AF)	RW 120-Month Total (AF)	DW + RW 120-Month Total (AF)	RWC	Period	
	Feb '11	5	72.	0.	139.	211.	2,948.1	67.	532.	3,480.1	15%	S U P
	Mar '11	6	59.	0.	139.	198.	3,146.1	39.	571.	3,717.1	15%	
	Apr '11	7	5.	0.	139.	144.	3,290.1	0.	571.	3,861.1	15%	
	May '11	8	6.	68.8	139.	213.8	3,503.8	141.	712.	4,215.8	17%	
	Jun '11	9	3.	0.	139.	142.	3,645.8	61.	773.	4,418.8	17%	
2011/12	Jul '11	10	4.	0.	139.	143.	3,788.7	62.	835.	4,623.7	18%	
	Aug '11	11	1.	122.7	139.	262.7	4,051.4	52.	887.	4,938.4	18%	
	Sep '11	12	0.	158.3	139.	297.3	4,348.6	0.	887.	5,235.6	17%	
	Oct '11	13	30.	0.	139.	169.	4,517.6	0.	887.	5,404.6	16%	
	Nov '11	14	25.	0.	139.	164.	4,681.5	15.	902.	5,583.5	16%	
	Dec '11	15	9.	0.	139.	148.	4,829.5	25.	927.	5,756.5	16%	
	Jan '12	16	11.	0.	139.	150.	4,979.4	0.	927.	5,906.4	16%	
	Feb '12	17	4.	0.	139.	143.	5,122.4	0.	927.	6,049.4	15%	
	Mar '12	18	18.	0.	139.	157.	5,279.3	0.	927.	6,206.3	15%	
	Apr '12	19	96.	0.	139.	235.	5,514.3	18.	945.	6,459.3	15%	
	May '12	20	20.	0.	139.	159.	5,673.2	271.	1,216.	6,889.2	18%	
	Jun '12	21	3.	0.	139.	142.	5,815.2	222.	1,438.	7,253.2	20%	
2012/13	Jul '12	22	3.	0.	139.	142.	5,957.1	94.	1,532.	7,489.1	20%	
	Aug '12	23	5.	0.	139.	144.	6,101.1	118.	1,650.	7,751.1	21%	
	Sep '12	24	1.	0.	139.	140.	6,241.	55.	1,705.	7,946.	21%	
	Oct '12	25	1.	0.	139.	140.	6,381.	131.	1,836.	8,217.	22%	
	Nov '12	26	6.	0.	139.	145.	6,525.9	71.	1,907.	8,432.9	23%	
	Dec '12	27	19.	0.	139.	158.	6,683.9	21.	1,928.	8,611.9	22%	
	Jan '13	28	35.	0.	139.	174.	6,857.8	12.	1,940.	8,797.8	22%	
	Feb '13	29	10.	0.	139.	149.	7,006.8	10.	1,950.	8,956.8	22%	
	Mar '13	30	7.	0.	139.	146.	7,152.7	57.	2,007.	9,159.7	22%	
	Apr '13	31	1.	0.	139.	140.	7,292.7	98.	2,105.	9,397.7	22%	
	May '13	32	5.	0.	139.	144.	7,436.6	93.	2,198.	9,634.6	23%	
	Jun '13	33	1.	0.	139.	140.	7,576.6	82.	2,280.	9,856.6	23%	
2013/14	Jul '13	34	2.	0	139.	141.	7,717.5	74.	2,354.	10,071.5	23%	
	Aug '13	35	2.	0	139.	141.	7,858.5	42.	2,396.	10,254.5	23%	
	Sep '13	36	2.	0	139.	141.	7,999.4	46.	2,442.	10,441.4	23%	
	Oct '13	37	7.	0	139.	146.	8,145.4	0.	2,442.	10,587.4	23%	
	Nov '13	38	12.	0	139.	151.	8,296.3	0	2,442.	10,738.3	23%	
	Dec '13	39	10.	0	139.	149.	8,445.3	118.	2,560.	11,005.3	23%	
	Jan '14	40	2.	0	139.	141.	8,586.3	158.	2,718.	11,304.3	24%	
	Feb '14	41	37.	0	139.	176.	8,762.2	191.	2,909.	11,671.2	25%	
	Mar '14	42	99.	0	139.	238.	9,000.2	142.	3,051.	12,051.2	25%	
	Apr '14	43	15.	0	139.	154.	9,154.1	250.	3,301.	12,455.1	27%	
	May '14	44	2.	0	139.	141.	9,295.1	214.	3,515.	12,810.1	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.	9,720.9	107.	3,857.	13,577.9	28%	
	Sep '14	48	2.	0	139.	141.	9,861.9	155.	4,012.	13,873.9	29%	
	Oct '14	49	3.	0	139.	142.	10,003.8	75.	4,087.	14,090.8	29%	
	Nov '14	50	57.	0	139.	196.	10,199.8	4.	4,091.	14,290.8	29%	
	Dec '14	51	153.	0	139.	292.	10,491.7	0.	4,091.	14,582.7	28%	
	Jan '15	52	18.	0	139.	157.	10,648.7	63.	4,154.	14,802.7	28%	
	Feb '15	53	40.	0	139.	179.	10,827.6	57.	4,211.	15,038.6	28%	
	Mar '15	54	12.	0.	139.	151.	10,978.6	79.	4,290.	15,268.6	28%	
	Apr '15	55	0.	0.	139.	139.	11,058.5	127.	4,417.	15,475.5	29%	
	May '15	56	13.	0.	139.	152.	11,184.5	141.	4,558.	15,742.5	29%	
	Jun '15	57	1.	0.	139.	140.	11,312.4	32.	4,590.	15,902.4	29%	
2015/16	Jul '15	58	4.	0.	139.	143.	11,455.4	139.	4,729.	16,184.4	29%	
	Aug '15	59	1.	0.	139.	140.	11,595.3	165.	4,894.	16,489.3	30%	
	Sep '15	60	37.	0.	139.	176.	11,771.3	136.	5,030.	16,801.3	30%	
	Oct '15	61	35.	0.	139.	174.	11,896.2	101.	5,131.	17,027.2	30%	
	Nov '15	62	0.	0.	139.	139.	12,035.2	34.	5,165.	17,200.2	30%	
	Dec '15	63	86.	0.	139.	225.	12,250.7	60.	5,225.	17,475.7	30%	
	Jan '16	64	87.	0.	139.	226.	12,450.9	0.	5,225.	17,675.9	30%	
	Feb '16	65	10.	0.	139.	149.	12,557.2	0.	5,225.	17,782.2	29%	
	Mar '16	66	33.	0.	139.	172.	12,619.3	0.	5,225.	17,844.3	29%	
	Apr '16	67	24.	0.	139.	163.	12,723.6	0.	5,225.	17,948.6	29%	
	May '16	68	13.	0.	139.	152.	12,846.8	0.	5,225.	18,071.8	29%	
	Jun '16	69	4.	0.	139.	143.	12,977.8	0.	5,225.	18,202.8	29%	
2016/17	Jul '16	70	3.	0.	139.	142.	13,111.	170.	5,395.	18,506.	29%	
	Aug '16	71	2.	0.	139.	141.	13,248.9	0.	5,395.	18,643.9	29%	
	Sep '16	72	5.	0.	139.	144.	13,389.8	0.	5,395.	18,784.8	29%	
	Oct '16	73	18.	0.	139.	157.	13,538.7	180.	5,575.	19,113.7	29%	
	Nov '16	74	22.	0.	139.	161.	13,695.7	180.	5,755.	19,450.7	30%	
	Dec '16	75	77.	0.	139.	216.	13,822.8	100.	5,855.	19,677.8	30%	
	Jan '17	76	51.	0.	139.	190.	13,998.1	100.	5,955.	19,953.1	30%	
	Feb '17	77	56.	0.	139.	195.	14,123.3	100.	6,055.	20,178.3	30%	
	Mar '17	78	33.	0.	139.	172.	14,287.	160.	6,215.	20,502.	30%	
	Apr '17	79	24.	0.	139.	163.	14,415.	180.	6,395.	20,810.	31%	
	May '17	80	13.	0.	139.	152.	14,559.9	180.	6,575.	21,134.9	31%	
	Jun '17	81	4.	0.	139.	143.	14,693.9	180.	6,755.	21,448.9	31%	



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
2017/18	Jul '17	82	3.		139.	142.	14,835.8	170.	6,925.	21,760.8	32%
	Aug '17	83	2.		139.	141.	14,976.8	0.	6,925.	21,901.8	32%
	Sep '17	84	5.		139.	144.	15,115.7	0.	6,925.	22,040.7	31%
	Oct '17	85	18.		139.	157.	15,264.7	180.	7,105.	22,369.7	32%
	Nov '17	86	22.		139.	161.	15,376.6	180.	7,285.	22,661.6	32%
	Dec '17	87	77.		139.	216.	15,526.6	100.	7,385.	22,911.6	32%
	Jan '18	88	51.		139.	190.	15,536.5	100.	7,485.	23,021.5	33%
	Feb '18	89	56.		139.	195.	15,670.5	100.	7,585.	23,255.5	33%
	Mar '18	90	33.		139.	172.	15,840.4	160.	7,745.	23,585.4	33%
	Apr '18	91	24.		139.	163.	15,996.4	180.	7,925.	23,921.4	33%
	May '18	92	13.		139.	152.	16,102.3	180.	8,105.	24,207.3	33%
	Jun '18	93	4.		139.	143.	16,242.3	180.	8,285.	24,527.3	34%
2018/19	Jul '18	94	3.		139.	142.	16,381.2	170.	8,455.	24,836.2	34%
	Aug '18	95	2.		139.	141.	16,519.2	0.	8,455.	24,974.2	34%
	Sep '18	96	5.		139.	144.	16,661.1	0.	8,455.	25,116.1	34%
	Oct '18	97	18.		139.	157.	16,814.1	180.	8,635.	25,449.1	34%
	Nov '18	98	22.		139.	161.	16,940.	180.	8,815.	25,755.	34%
	Dec '18	99	77.		139.	216.	17,082.	100.	8,915.	25,997.	34%
	Jan '19	100	51.		139.	190.	17,256.9	100.	9,015.	26,271.9	34%
	Feb '19	101	56.		139.	195.	17,356.9	100.	9,115.	26,471.9	34%
	Mar '19	102	33.		139.	172.	17,515.9	160.	9,275.	26,790.9	35%
	Apr '19	103	24.		139.	163.	17,675.8	180.	9,455.	27,130.8	35%
	May '19	104	13.		139.	152.	17,824.8	180.	9,635.	27,459.8	35%
	Jun '19	105	4.		139.	143.	17,967.7	180.	9,815.	27,782.7	35%
2019/20	Jul '19	106	3.		139.	142.	18,108.7	170.	9,985.	28,093.7	36%
	Aug '19	107	2.		139.	141.	18,249.6	0.	9,985.	28,234.6	35%
	Sep '19	108	5.		139.	144.	18,393.6	0.	9,985.	28,378.6	35%
	Oct '19	109	18.		139.	157.	18,511.5	180.	10,165.	28,676.5	35%
	Nov '19	110	22.		139.	161.	18,653.5	180.	10,345.	28,998.5	36%
	Dec '19	111	77.		139.	216.	18,780.4	100.	10,445.	29,225.4	36%
	Jan '20	112	51.		139.	190.	18,817.4	100.	10,545.	29,362.4	36%
	Feb '20	113	56.		139.	195.	18,838.3	100.	10,645.	29,483.3	36%
	Mar '20	114	33.		139.	172.	19,010.3	160.	10,805.	29,815.3	36%
	Apr '20	115	24.		139.	163.	19,153.2	180.	10,985.	30,138.2	36%
	May '20	116	13.		139.	152.	19,305.2	180.	11,165.	30,470.2	37%
	Jun '20	117	4.		139.	143.	19,447.1	180.	11,345.	30,792.1	37%
2020/21	Jul '20	118	3.		139.	142.	19,586.1	170.	11,515.	31,101.1	37%
	Aug '20	119	2.		139.	141.	19,725.	0.	11,515.	31,240.	37%
	Sep '20	120	5.		139.	144.	19,867.	0.	11,448.	31,315.	37%
	Oct '20	121	18.		139.	157.	19,870.	180.	11,475.	31,345.	37%
	Nov '20	122	22.		139.	161.	19,858.	180.	11,538.	31,396.	37%
	Dec '20	123	77.		139.	216.	19,693.	100.	11,596.	31,289.	37%
	Jan '21	124	51.		139.	190.	19,726.	100.	11,610.	31,336.	37%
	Feb '21	125	56.		139.	195.	19,710.	100.	11,643.	31,353.	37%
	Mar '21	126	33.		139.	172.	19,684.	160.	11,764.	31,448.	37%
	Apr '21	127	24.		139.	163.	19,703.	180.	11,944.	31,647.	38%
	May '21	128	13.		139.	152.	19,641.2	180.	11,983.	31,624.2	38%
	Jun '21	129	4.		139.	143.	19,642.2	180.	12,102.	31,744.2	38%
2021/22	Jul '21	130	3.		139.	142.	19,641.2	170.	12,210.	31,851.2	38%
	Aug '21	131	2.		139.	141.	19,519.5	0.	12,158.	31,677.5	38%
	Sep '21	132	5.		139.	144.	19,366.2	0.	12,158.	31,524.2	39%
	Oct '21	133	18.		139.	157.	19,354.2	180.	12,338.	31,692.2	39%
	Nov '21	134	22.		139.	161.	19,351.2	180.	12,503.	31,854.2	39%
	Dec '21	135	77.		139.	216.	19,419.2	100.	12,578.	31,997.2	39%
	Jan '22	136	51.		139.	190.	19,459.2	100.	12,678.	32,137.2	39%
	Feb '22	137	56.		139.	195.	19,511.2	100.	12,778.	32,289.2	40%
	Mar '22	138	33.		139.	172.	19,526.2	160.	12,938.	32,464.2	40%
	Apr '22	139	24.		139.	163.	19,454.2	180.	13,100.	32,554.2	40%
	May '22	140	13.		139.	152.	19,447.2	180.	13,009.	32,456.2	40%
	Jun '22	141	4.		139.	143.	19,448.2	180.	12,967.	32,415.2	40%
2022/23	Jul '22	142	3.		139.	142.	19,448.2	170.	13,043.	32,491.2	40%
	Aug '22	143	2.		139.	141.	19,445.2	0.	12,925.	32,370.2	40%
	Sep '22	144	5.		139.	144.	19,449.2	0.	12,870.	32,319.2	40%
	Oct '22	145	18.		139.	157.	19,466.2	180.	12,919.	32,385.2	40%
	Nov '22	146	22.		139.	161.	19,482.2	180.	13,028.	32,510.2	40%
	Dec '22	147	77.		139.	216.	19,540.2	100.	13,107.	32,647.2	40%
	Jan '23	148	51.		139.	190.	19,556.2	100.	13,195.	32,751.2	40%
	Feb '23	149	56.		139.	195.	19,602.2	100.	13,285.	32,887.2	40%
	Mar '23	150	33.		139.	172.	19,628.2	160.	13,388.	33,016.2	41%
	Apr '23	151	24.		139.	163.	19,651.2	180.	13,470.	33,121.2	41%
	May '23	152	13.		139.	152.	19,659.2	180.	13,557.	33,216.2	41%
	Jun '23	153	4.		139.	143.	19,662.2	180.	13,655.	33,317.2	41%

P L A N N E D



RWC Management Plan for Victoria Basin

(120-month averaging period)

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

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
2023/24	Jul '23	154	3.		139.	142.	19,663.2	170.	13,751.	33,414.2	41%
	Aug '23	155	2.		139.	141.	19,663.2	0.	13,709.	33,372.2	41%
	Sep '23	156	5.		139.	144.	19,666.2	0.	13,663.	33,329.2	41%
	Oct '23	157	18.		139.	157.	19,677.2	180.	13,843.	33,520.2	41%
	Nov '23	158	22.		139.	161.	19,687.2	180.	14,023.	33,710.2	42%
	Dec '23	159	77.		139.	216.	19,754.2	100.	14,005.	33,759.2	41%
	Jan '24	160	51.		139.	190.	19,803.2	100.	13,947.	33,750.2	41%
	Feb '24	161	56.		139.	195.	19,822.2	100.	13,856.	33,678.2	41%
	Mar '24	162	33.		139.	172.	19,756.2	160.	13,874.	33,630.2	41%
	Apr '24	163	24.		139.	163.	19,765.2	180.	13,804.	33,569.2	41%
	May '24	164	13.		139.	152.	19,776.2	180.	13,770.	33,546.2	41%
	Jun '24	165	4.		139.	143.	19,778.2	180.	13,806.	33,584.2	41%
2024/25	Jul '24	166	3.		139.	142.	19,779.2	170.	13,885.	33,664.2	41%
	Aug '24	167	2.		139.	141.	19,776.2	0.	13,778.	33,554.2	41%
	Sep '24	168	5.		139.	144.	19,779.2	0.	13,623.	33,402.2	41%
	Oct '24	169	18.		139.	157.	19,794.2	180.	13,728.	33,522.2	41%
	Nov '24	170	22.		139.	161.	19,759.2	180.	13,904.	33,663.2	41%
	Dec '24	171	77.		139.	216.	19,683.2	100.	14,004.	33,687.2	42%
	Jan '25	172	51.		139.	190.	19,716.2	100.	14,041.	33,757.2	42%
	Feb '25	173	56.		139.	195.	19,732.2	100.	14,084.	33,816.2	42%
	Mar '25	174	33.		139.	172.	19,753.2	160.	14,165.	33,918.2	42%
	Apr '25	175	24.		139.	163.	19,777.2	180.	14,218.	33,995.2	42%
	May '25	176	13.		139.	152.	19,777.2	180.	14,257.	34,034.2	42%
	Jun '25	177	4.		139.	143.	19,780.2	180.	14,405.	34,185.2	42%
2025/26	Jul '25	178	3.		139.	142.	19,779.2	170.	14,436.	34,215.2	42%
	Aug '25	179	2.		139.	141.	19,780.2	0.	14,271.	34,051.2	42%
	Sep '25	180	5.		139.	144.	19,748.2	0.	14,135.	33,883.2	42%
	Oct '25	181	18.		139.	157.	19,731.2	180.	14,214.	33,945.2	42%
	Nov '25	182	22.		139.	161.	19,753.2	180.	14,360.	34,113.2	42%
	Dec '25	183	77.		139.	216.	19,744.2	100.	14,400.	34,144.2	42%
	Jan '26	184	51.		139.	190.	19,708.2	100.	14,500.	34,208.2	42%
	Feb '26	185	56.		139.	195.	19,754.2	100.	14,600.	34,354.2	42%

P L A N N E D

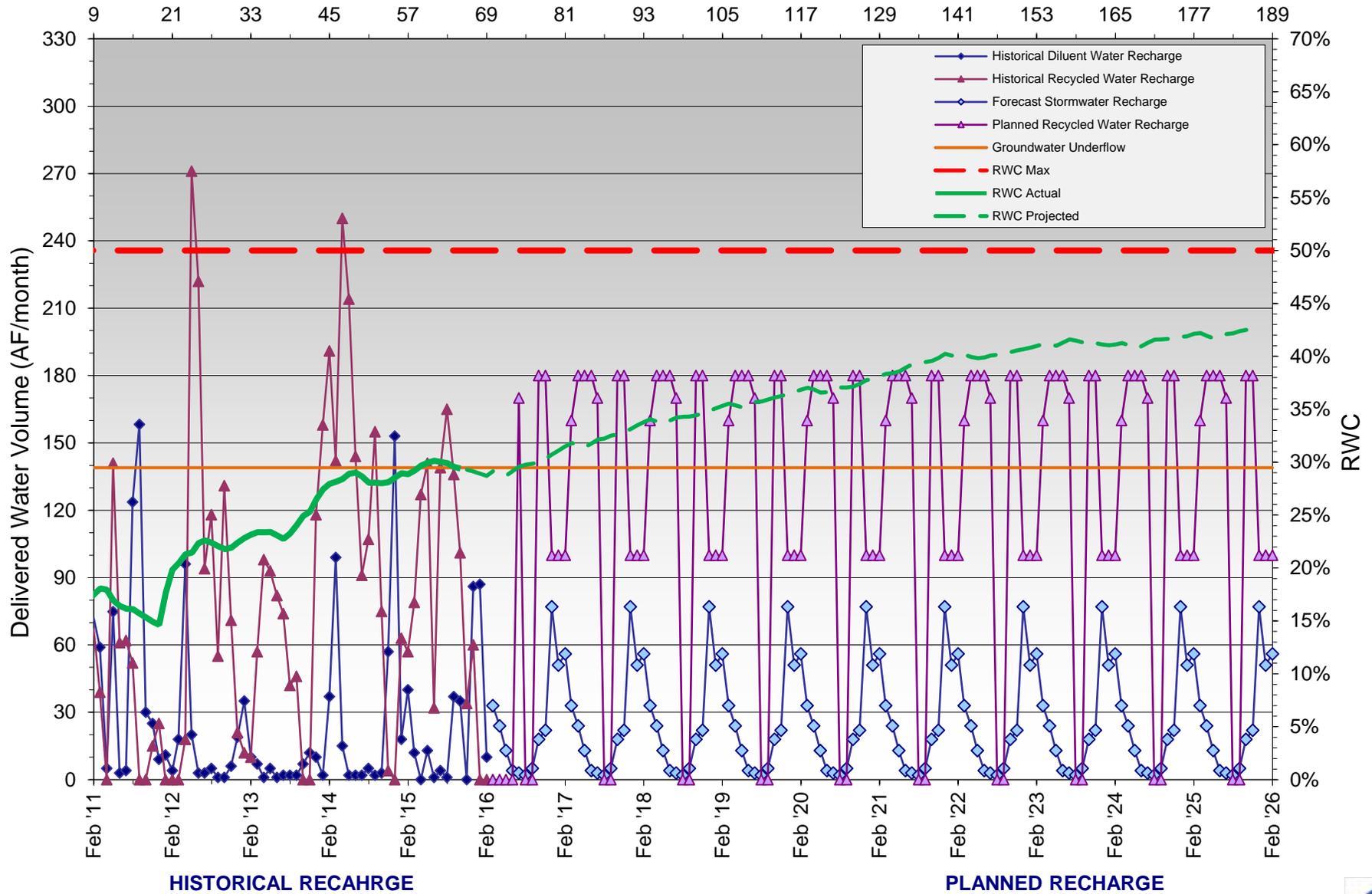
Notes:

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



HISTORICAL RECAHRGE

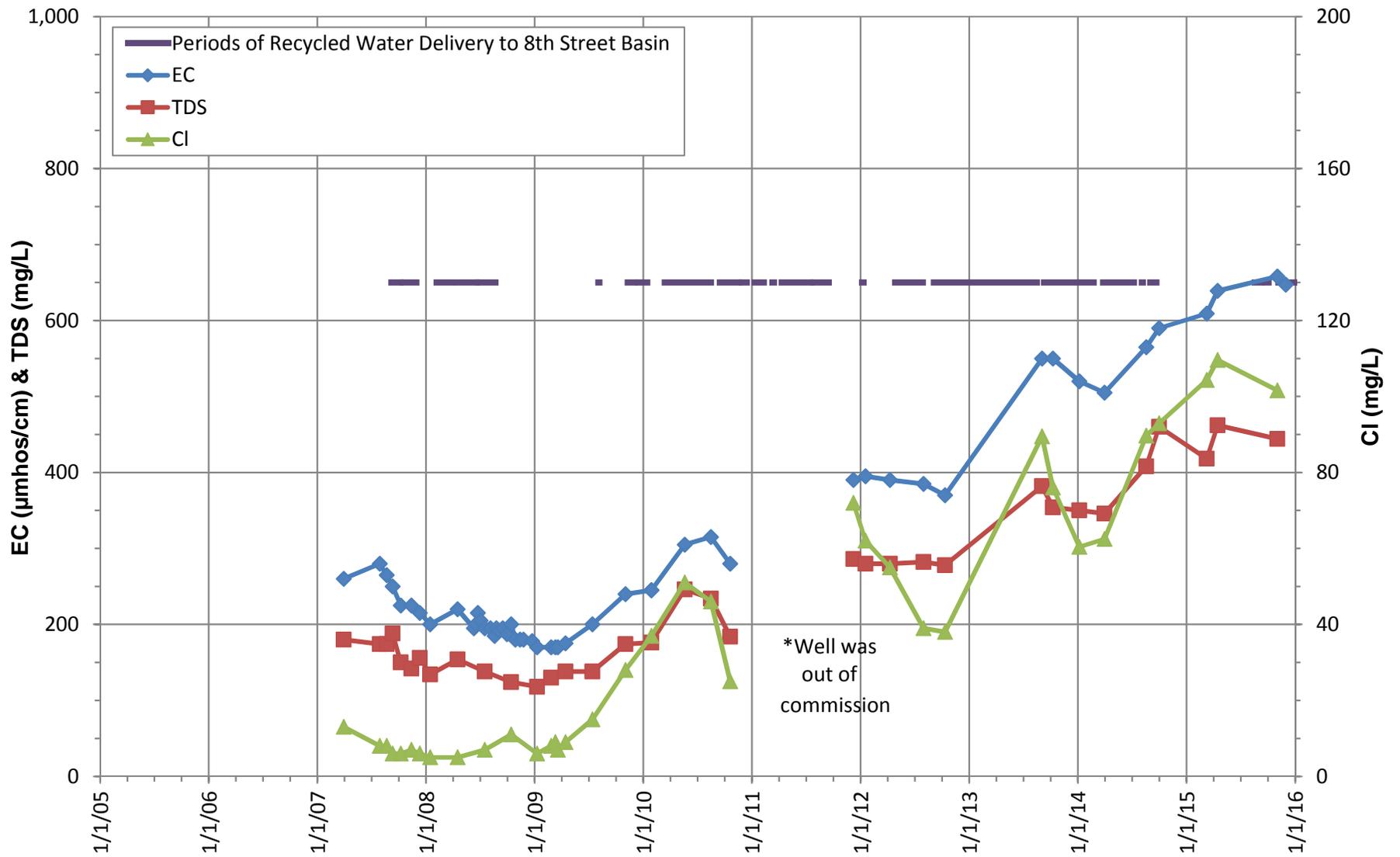
PLANNED RECHARGE



APPENDIX C

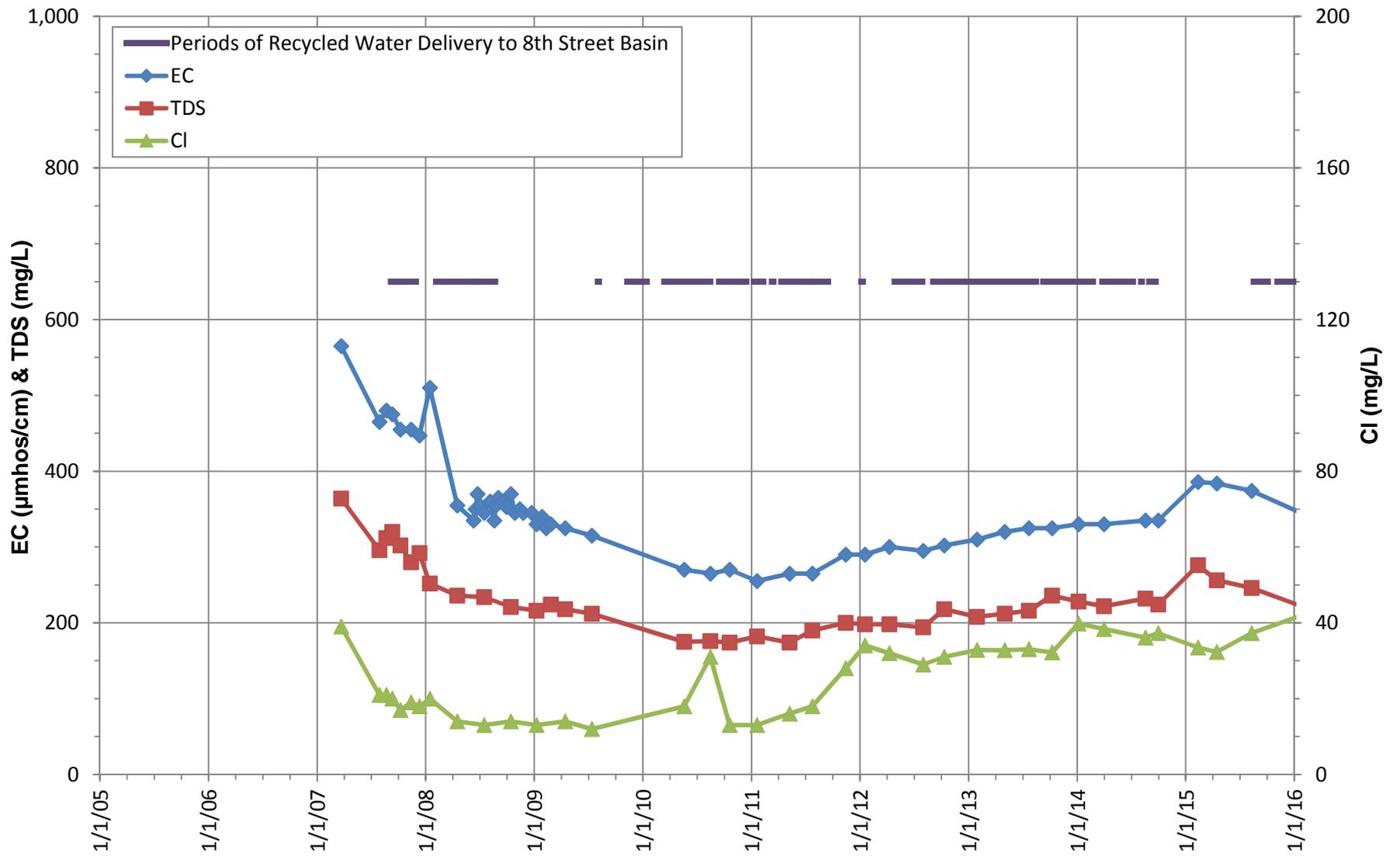
EVIDENCE FOR BLENDING:

EC, TDS, CHLORIDE TIME-SERIES GRAPHS



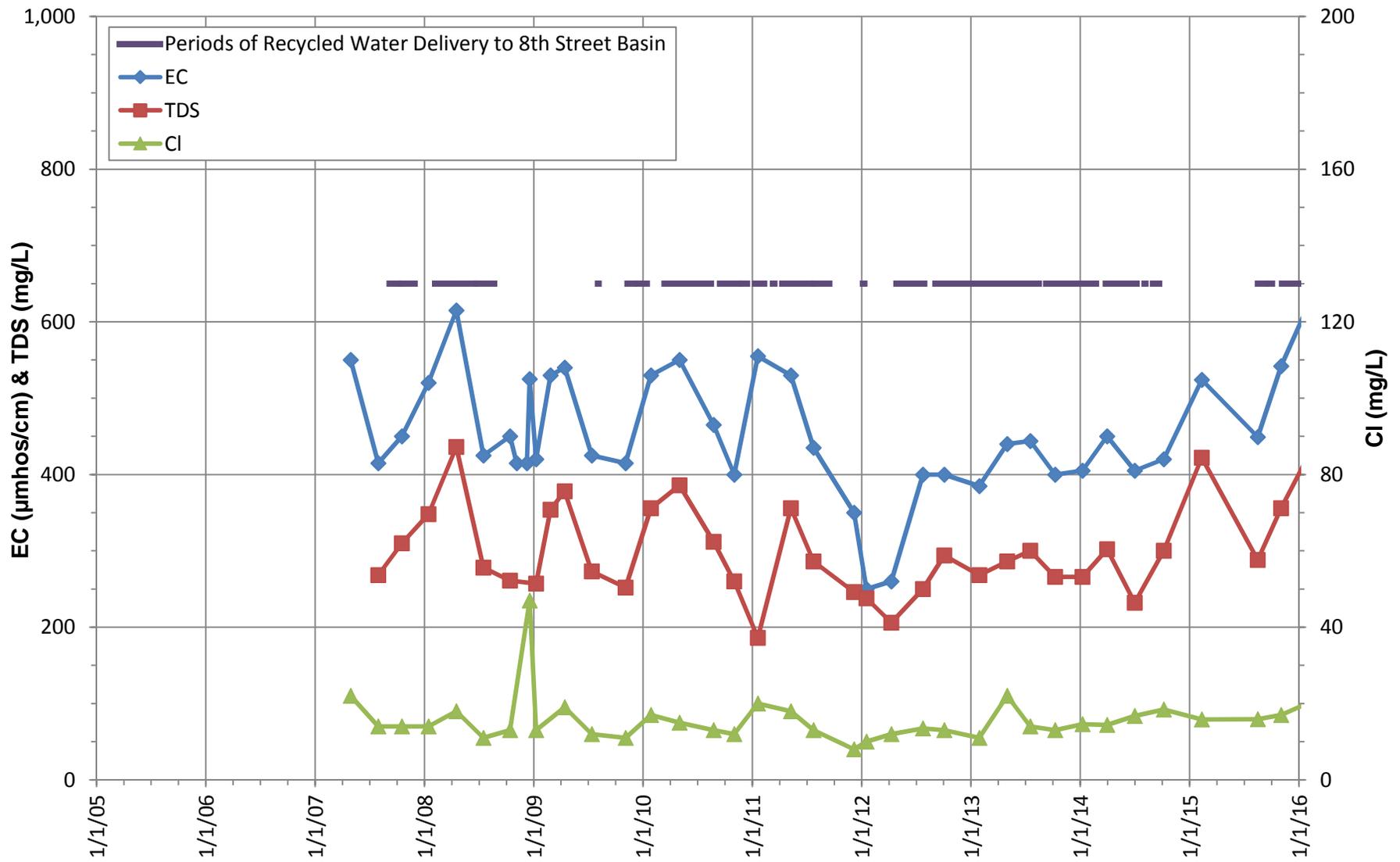
**EC, TDS, CHLORIDE TRENDS
8TH STREET BASIN
MW 8TH-1/1**





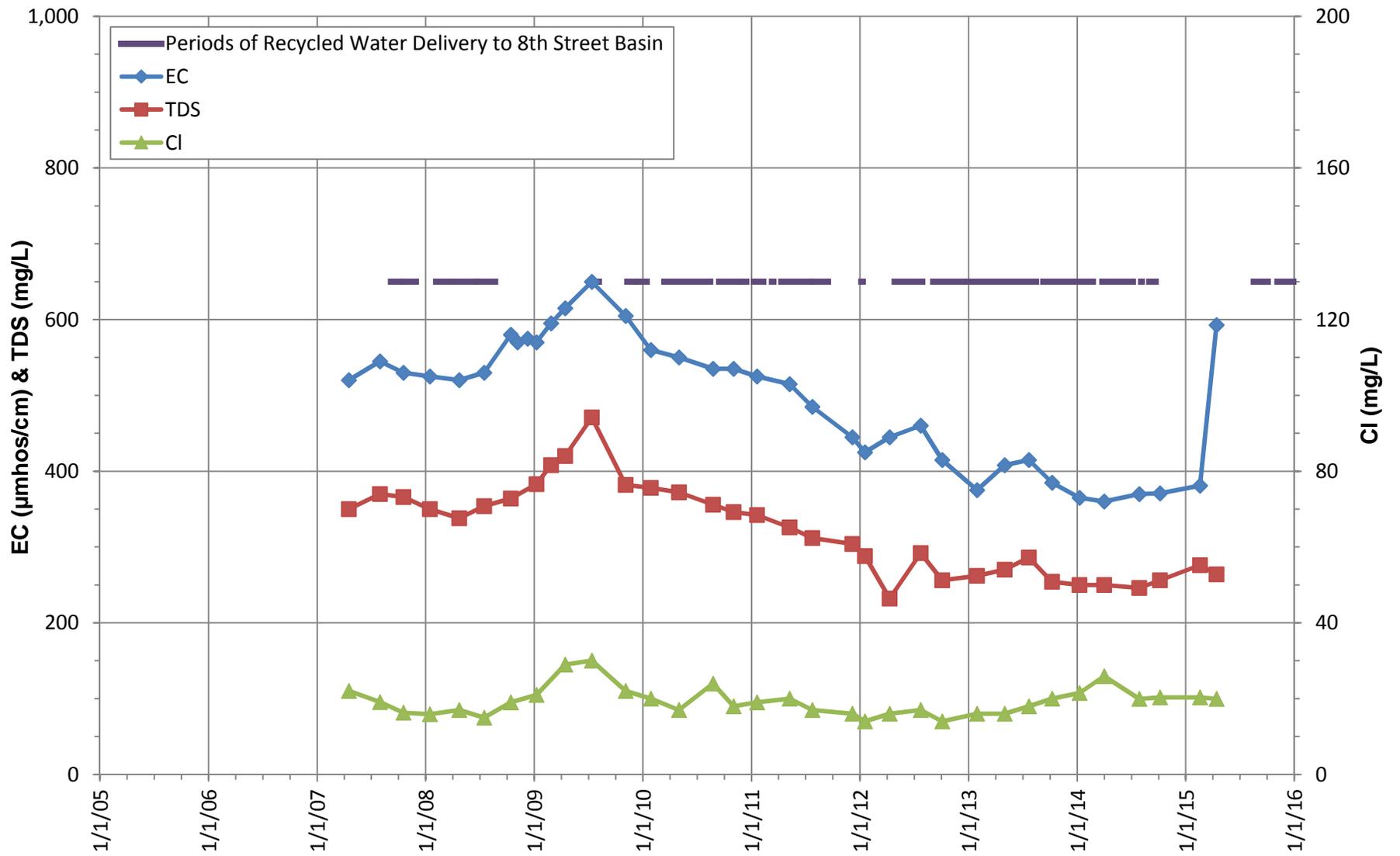
**EC, TDS, CHLORIDE TRENDS
8TH STREET BASIN
MW 8TH-1/2**





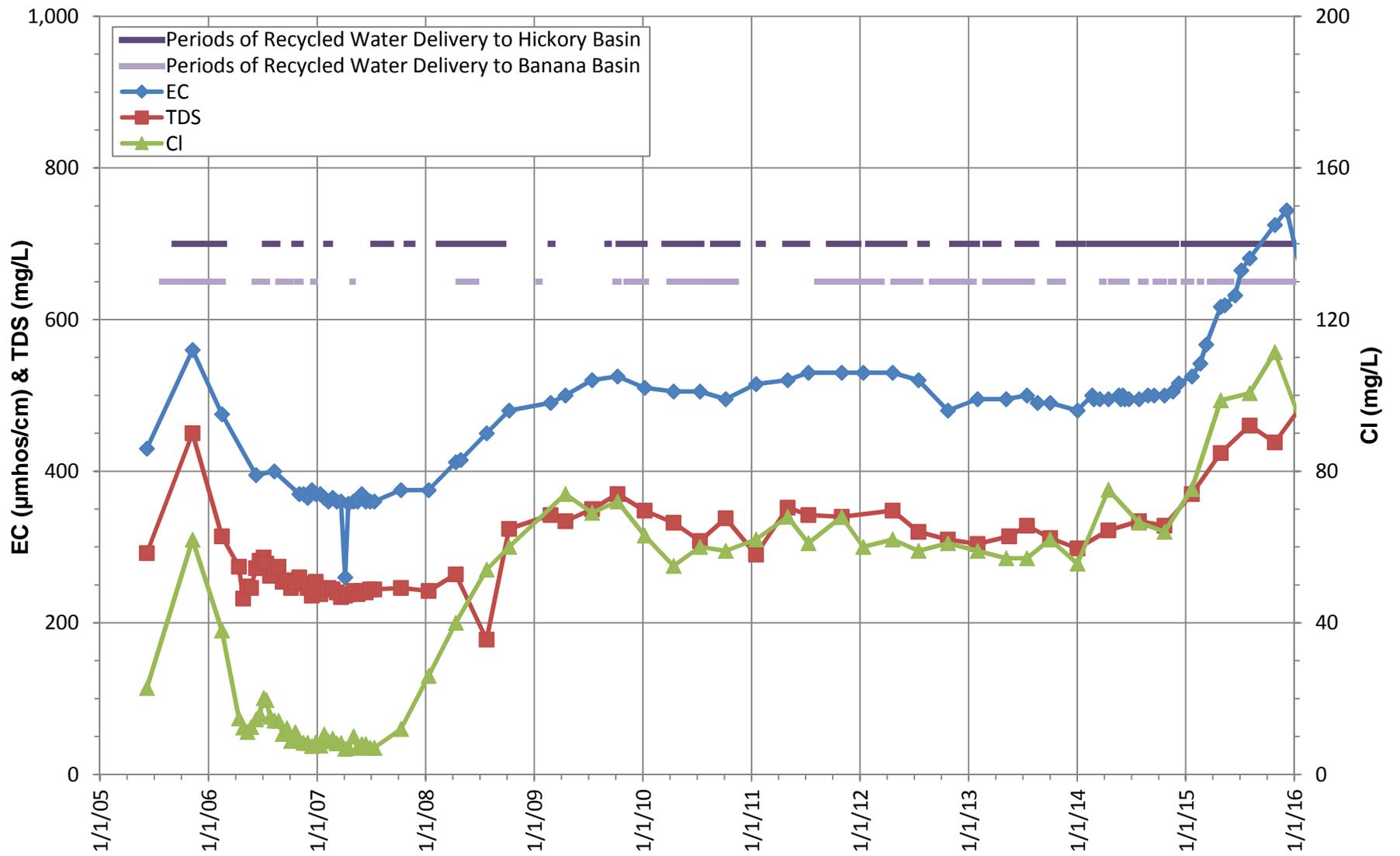
**EC, TDS, CHLORIDE TRENDS
8TH STREET BASIN
MW 8TH-2/1**





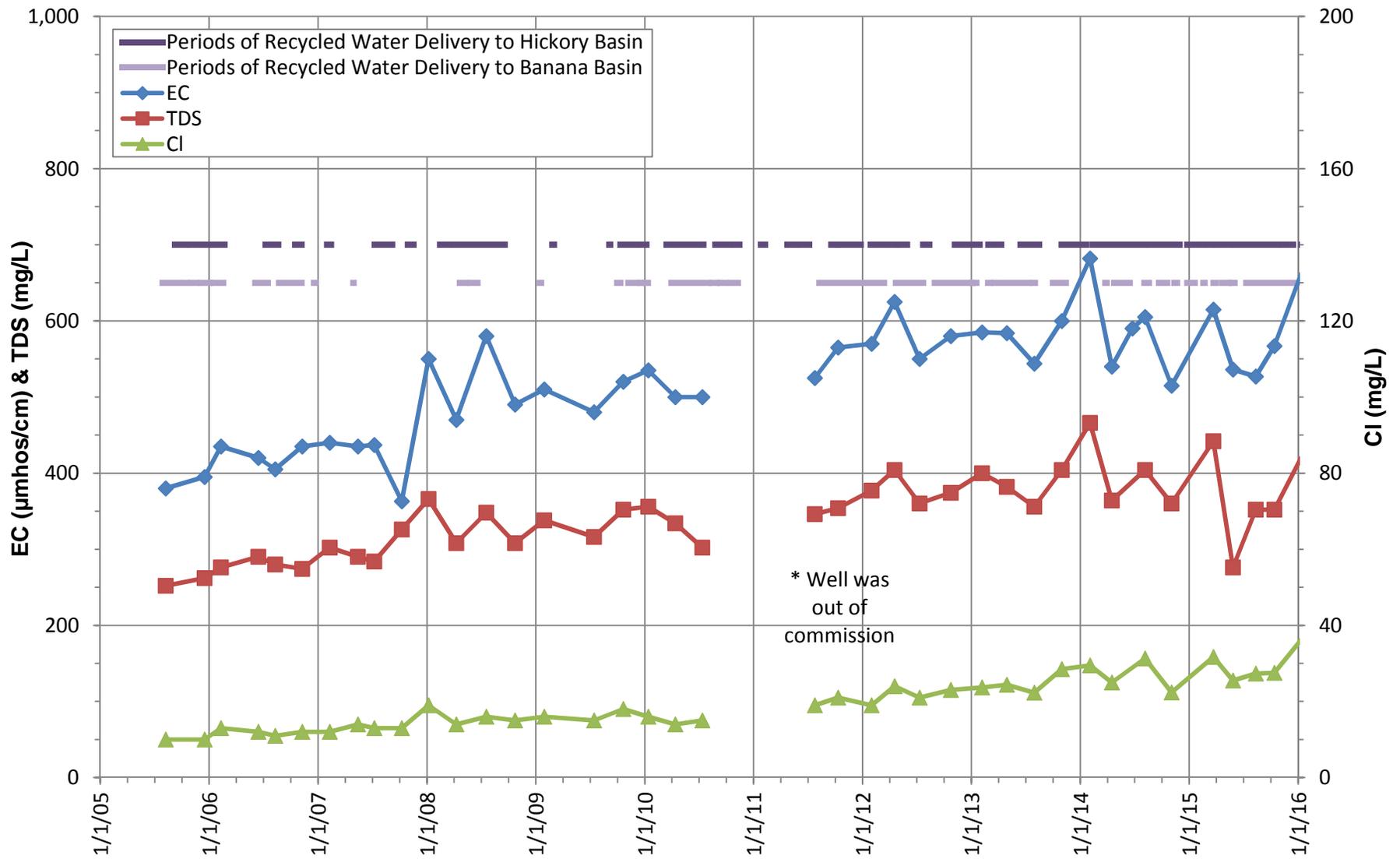
**EC, TDS, CHLORIDE TRENDS
8TH STREET BASIN
MW 8TH-2/2**





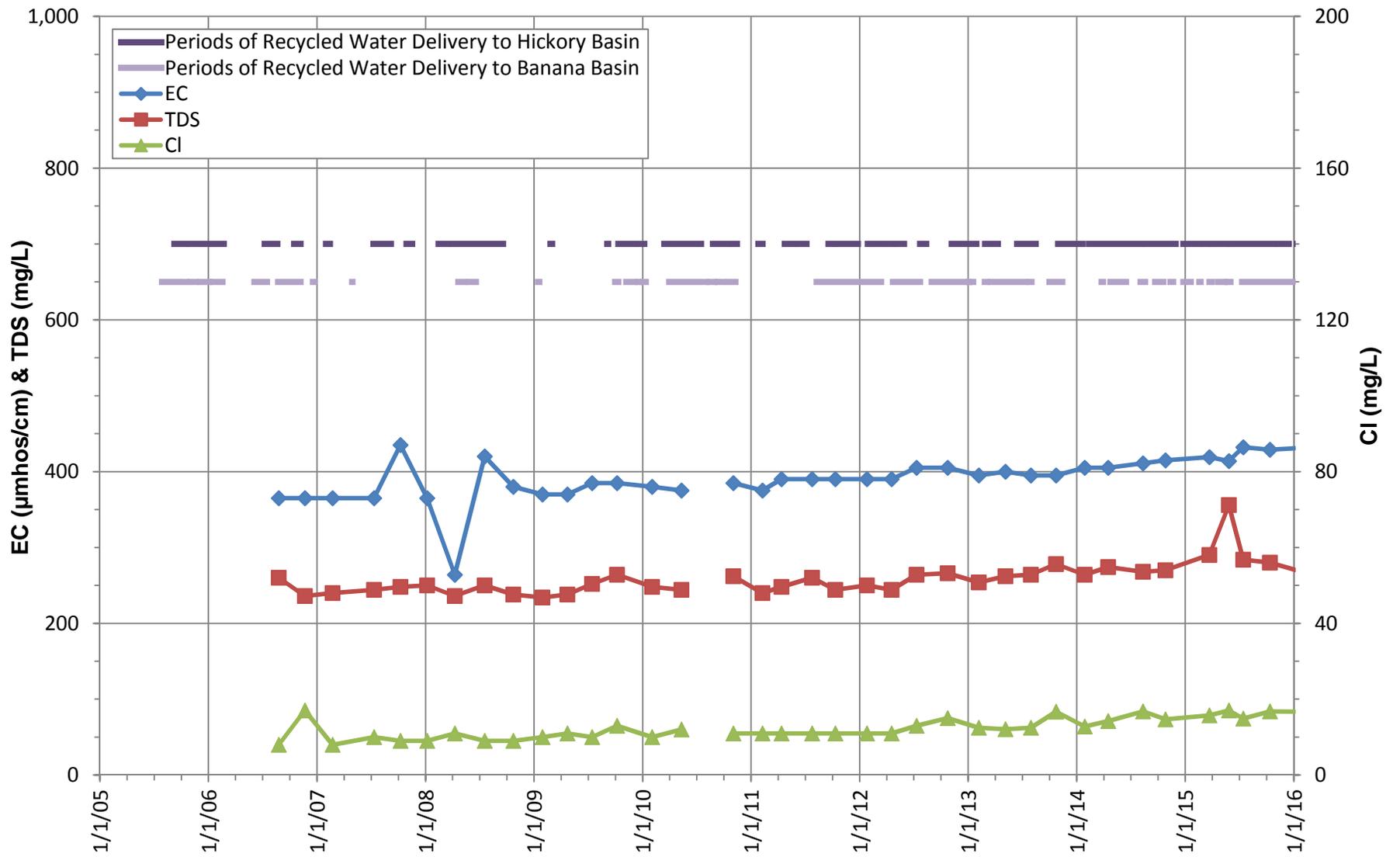
**EC, TDS, CHLORIDE TRENDS
HICKORY BANANA BASINS
MW BH-1/2**





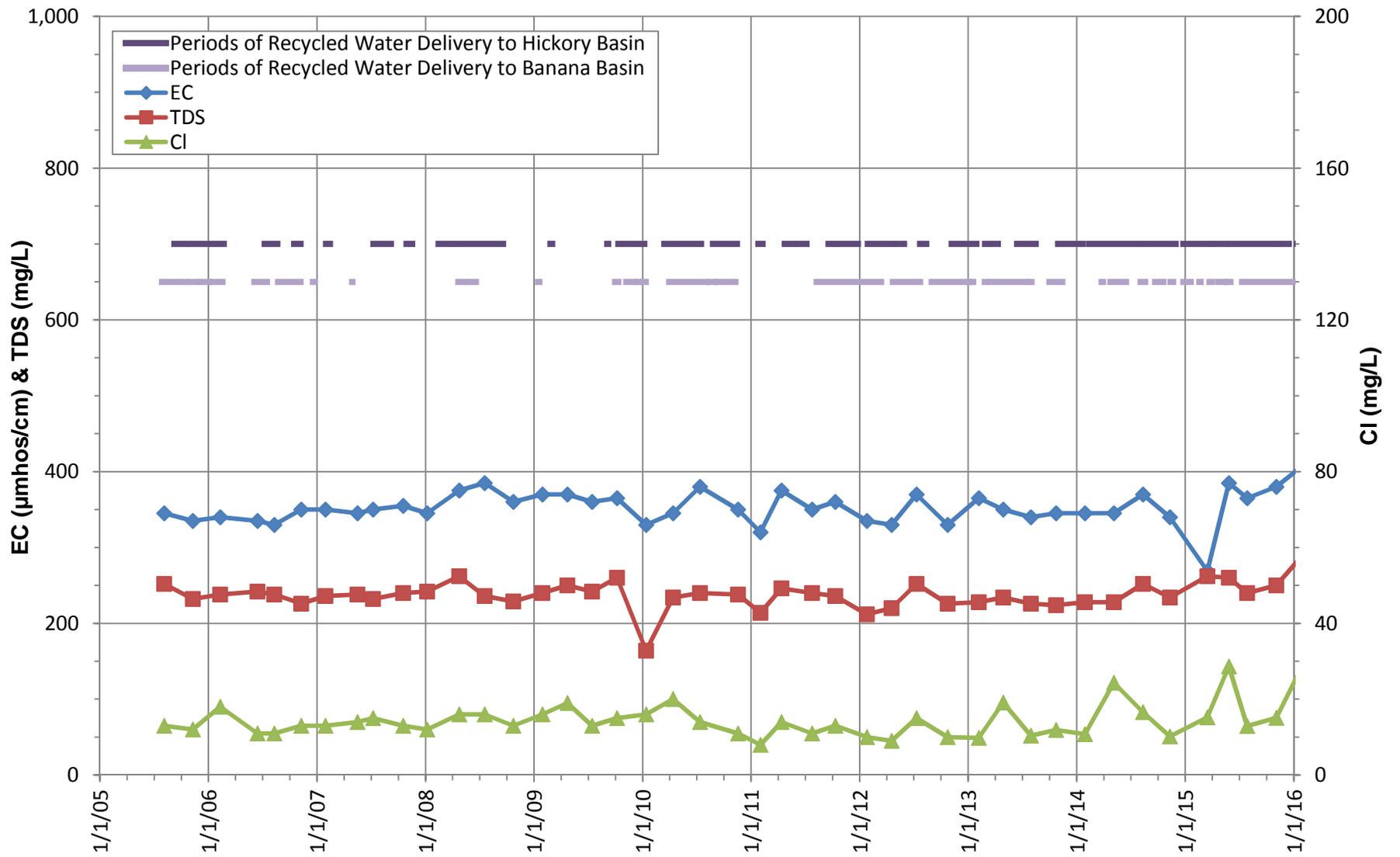
**EC, TDS, CHLORIDE TRENDS
BANANA-HICKORY BASINS
CALIFORNIA SPEEDWAY INFIELD WELL**





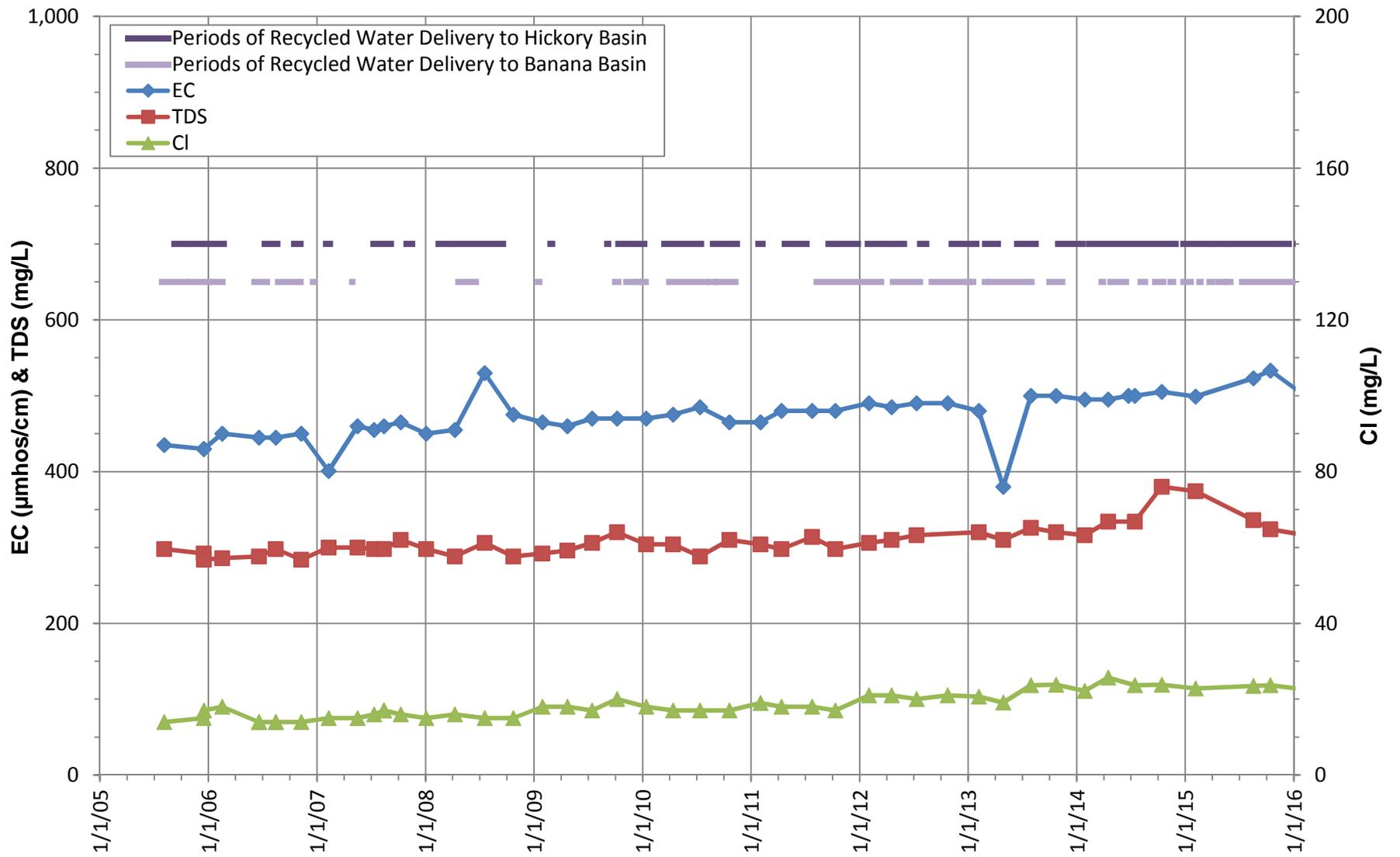
**EC, TDS, CHLORIDE TRENDS
BANANA-HICKORY BASINS
CALIFORNIA SPEEDWAY NO. 2**





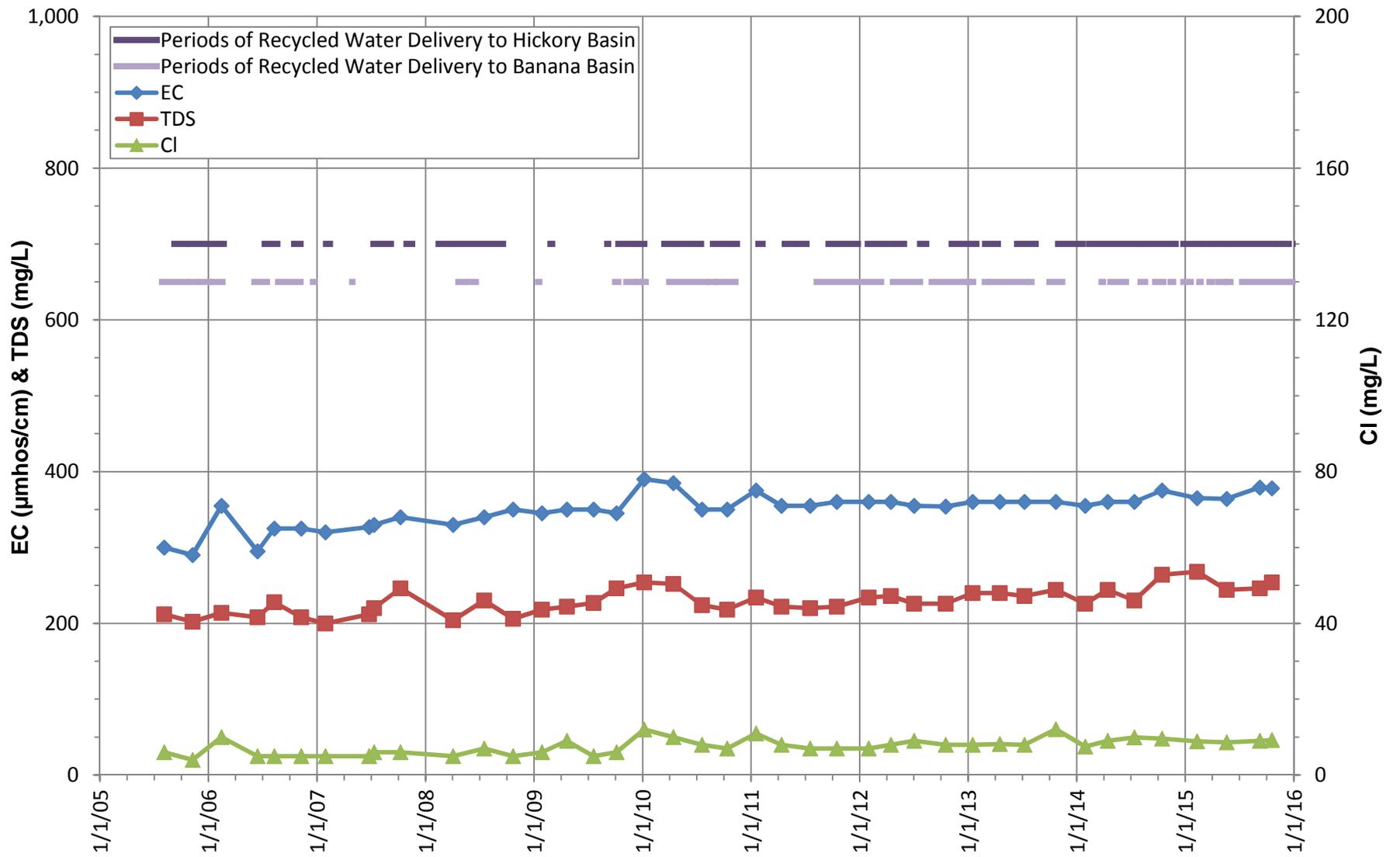
**EC, TDS, CHLORIDE TRENDS
BANANA-HICKORY BASINS
RELIANT EAST WELL**





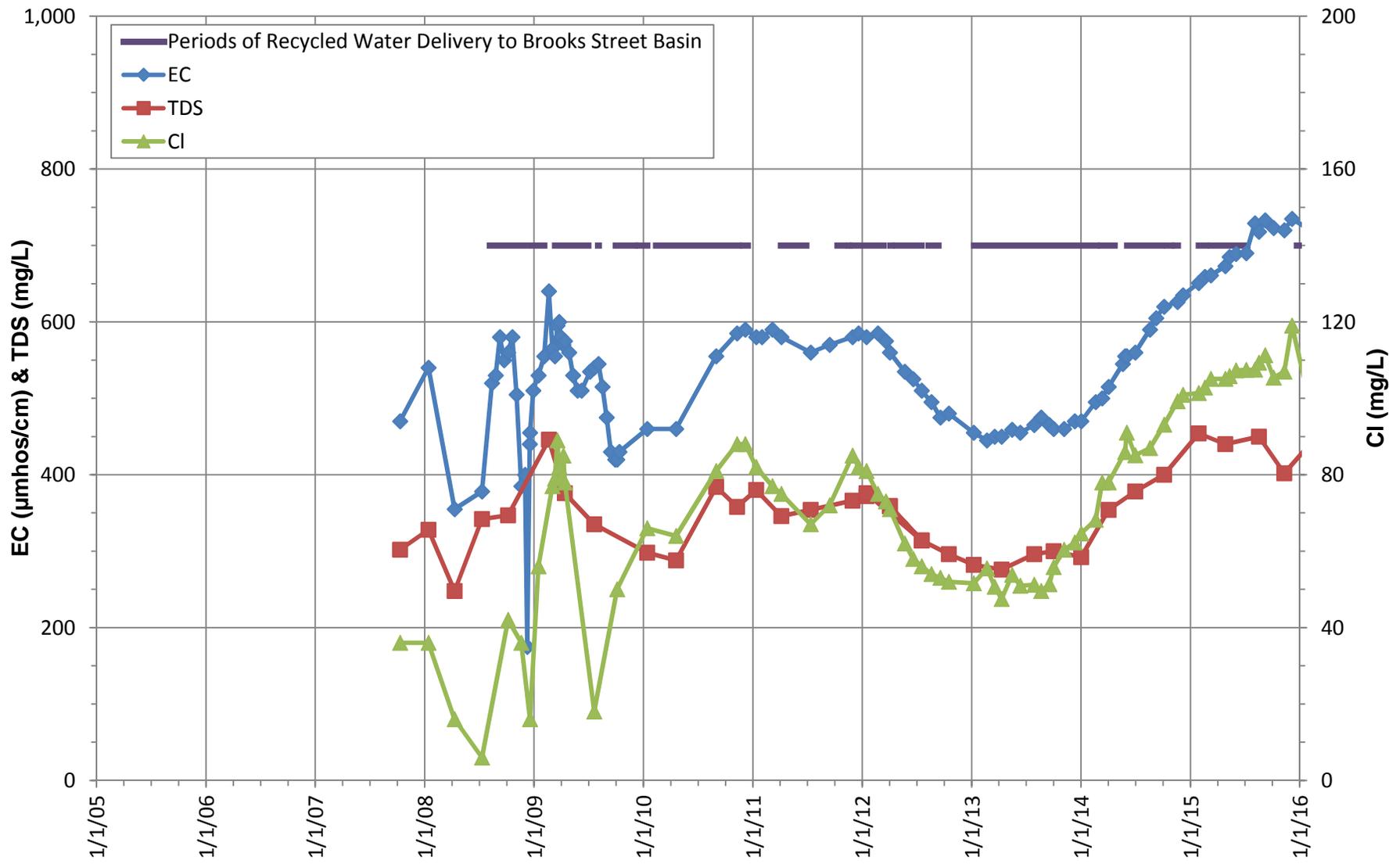
**EC, TDS, CHLORIDE TRENDS
BANANA-HICKORY BASINS
FONTANA WATER CO. 37A**





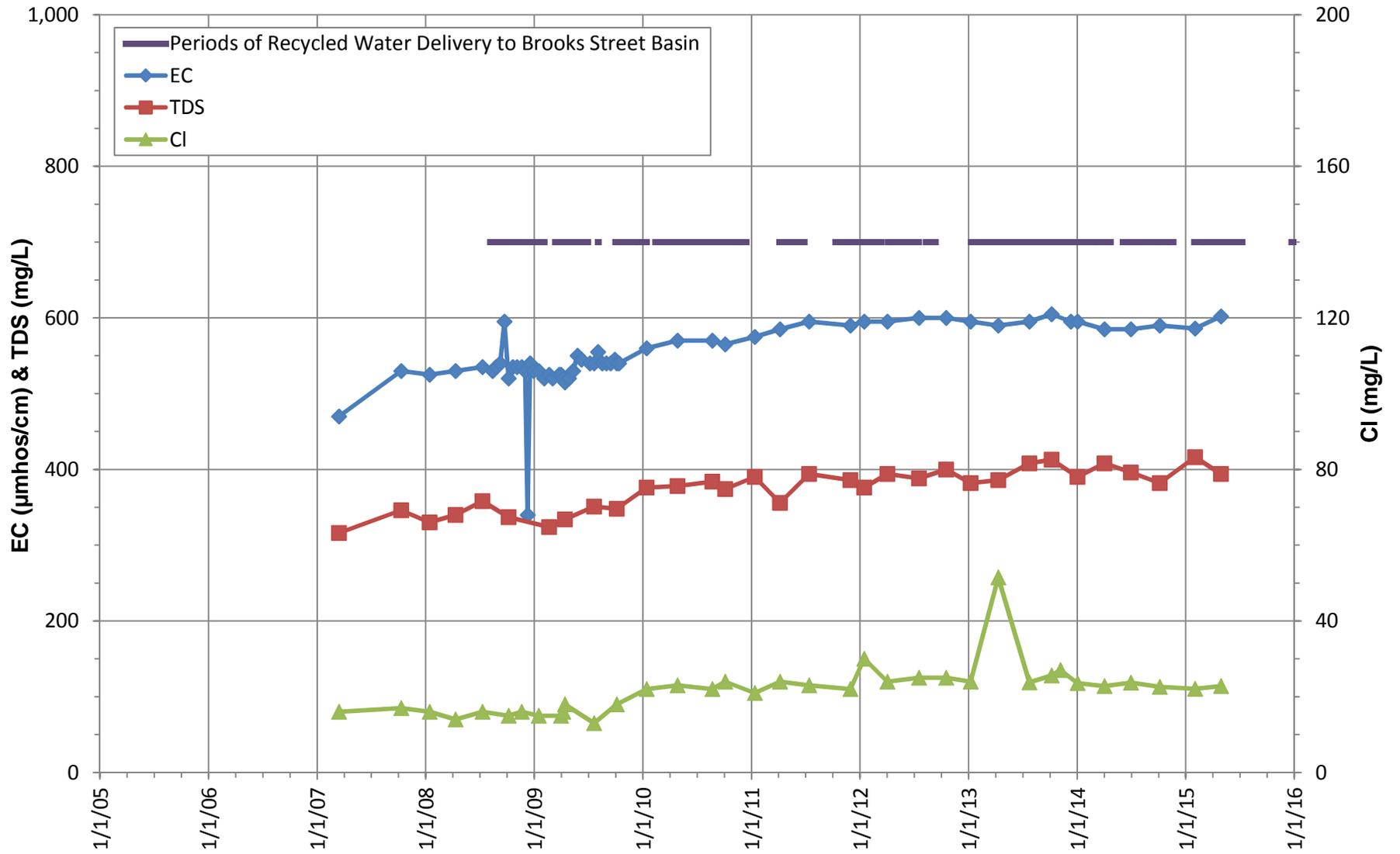
**EC, TDS, CHLORIDE TRENDS
BANANA-HICKORY BASINS
ONTARIO NO. 20**





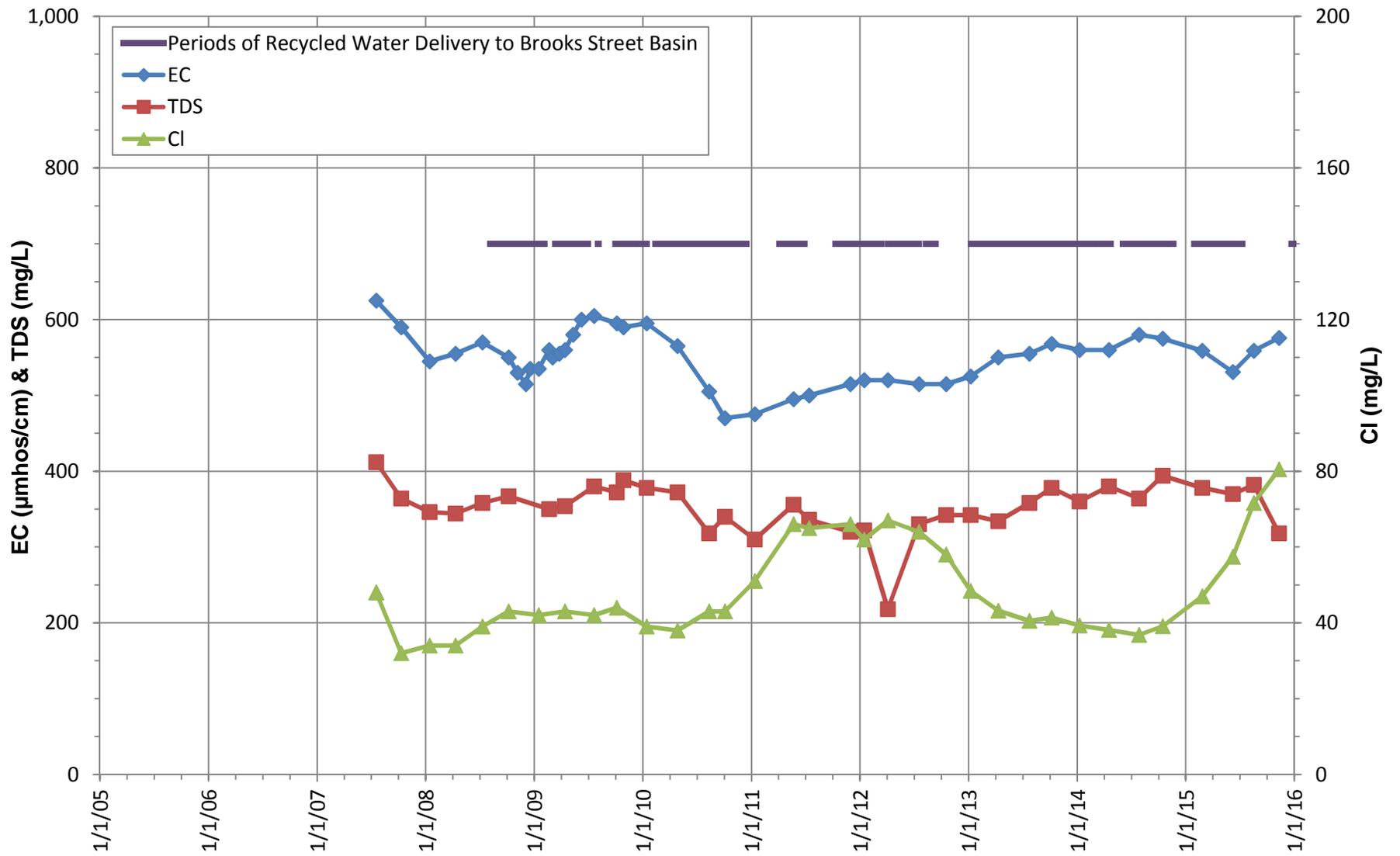
**EC, TDS, CHLORIDE TRENDS
BROOKS STREET BASIN
MW BRK-1/1**





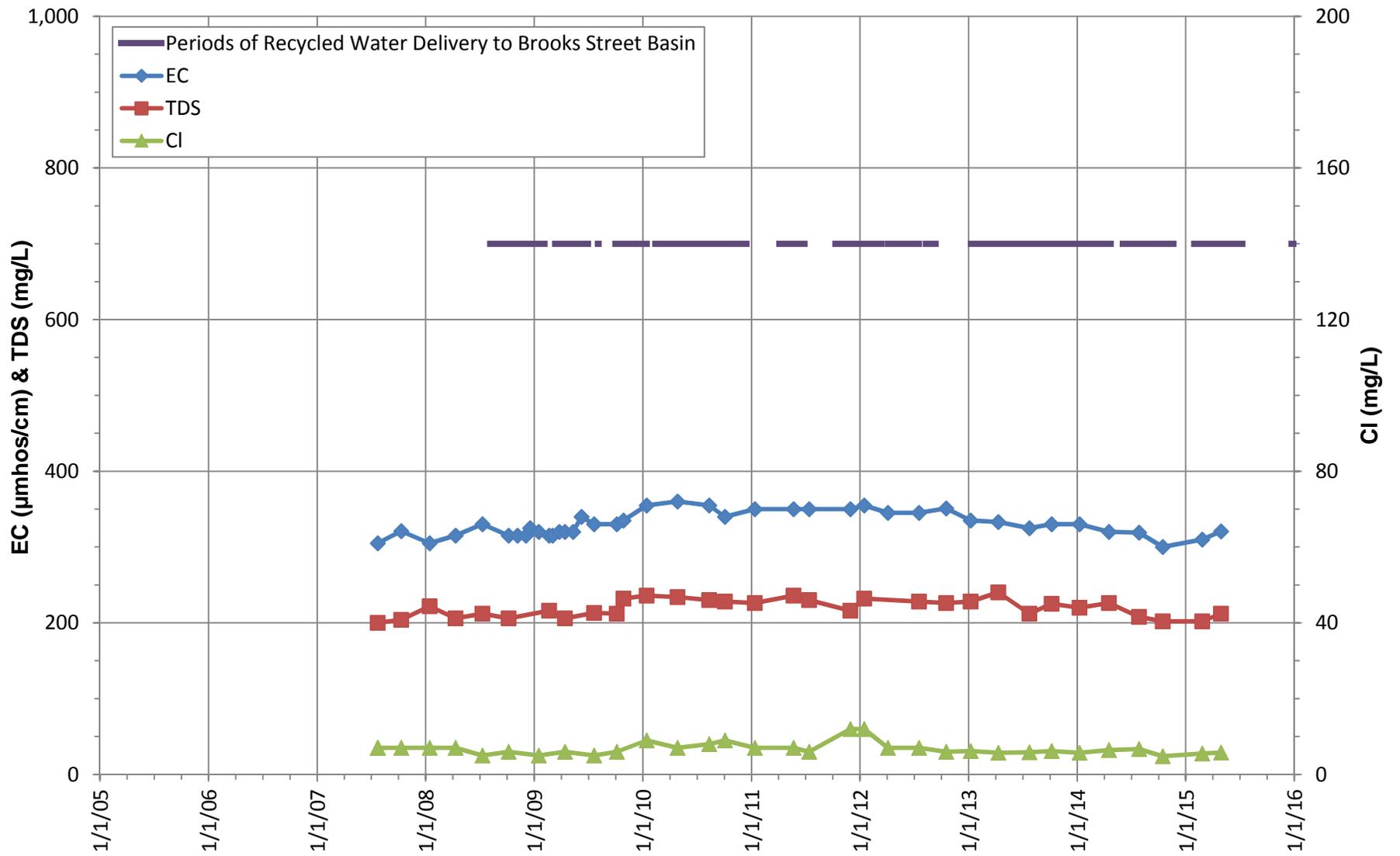
**EC, TDS, CHLORIDE TRENDS
BROOKS STREET BASIN
MW BRK-1/2**





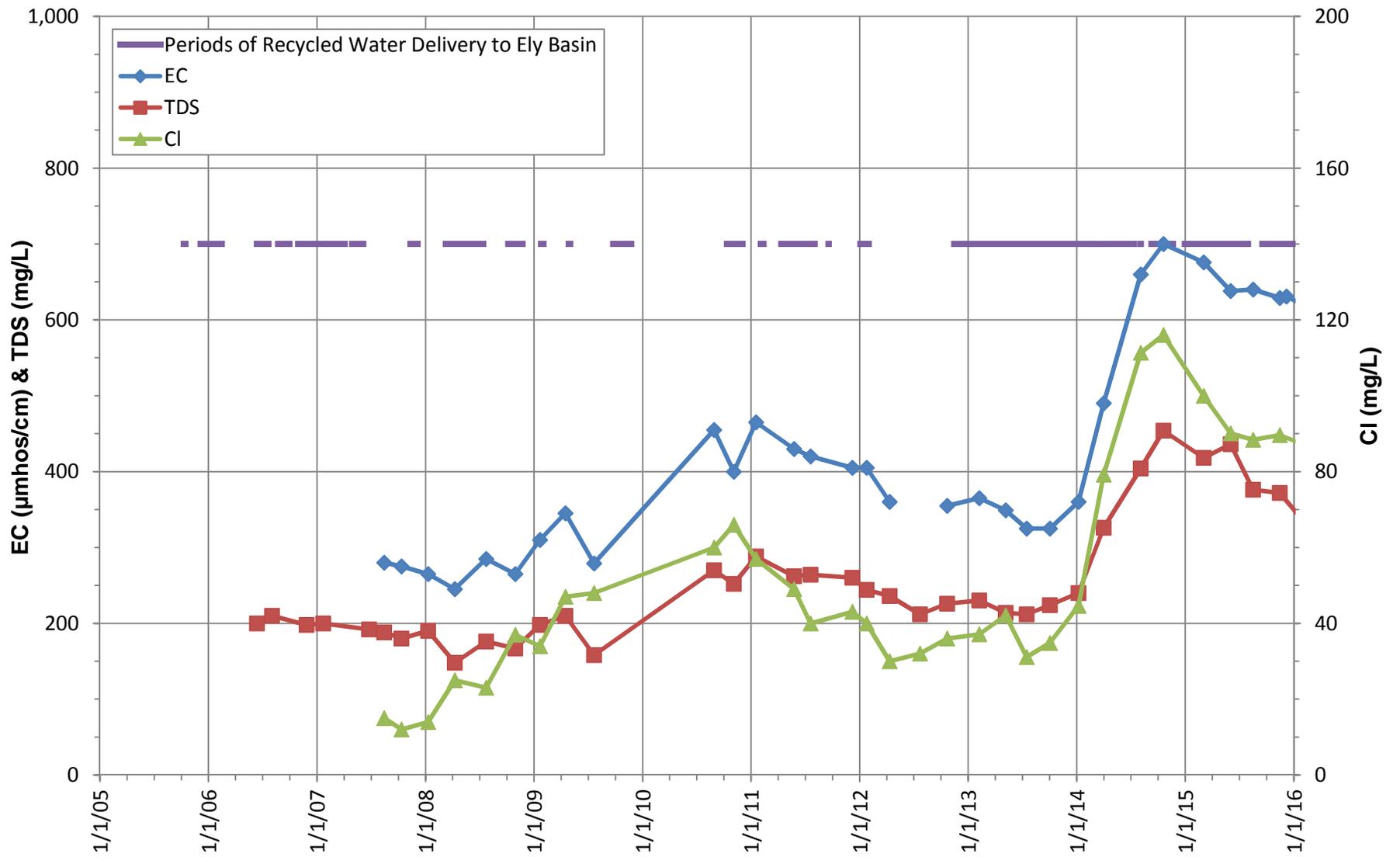
**EC, TDS, CHLORIDE TRENDS
BROOKS STREET BASIN
MW BRK-2/1**





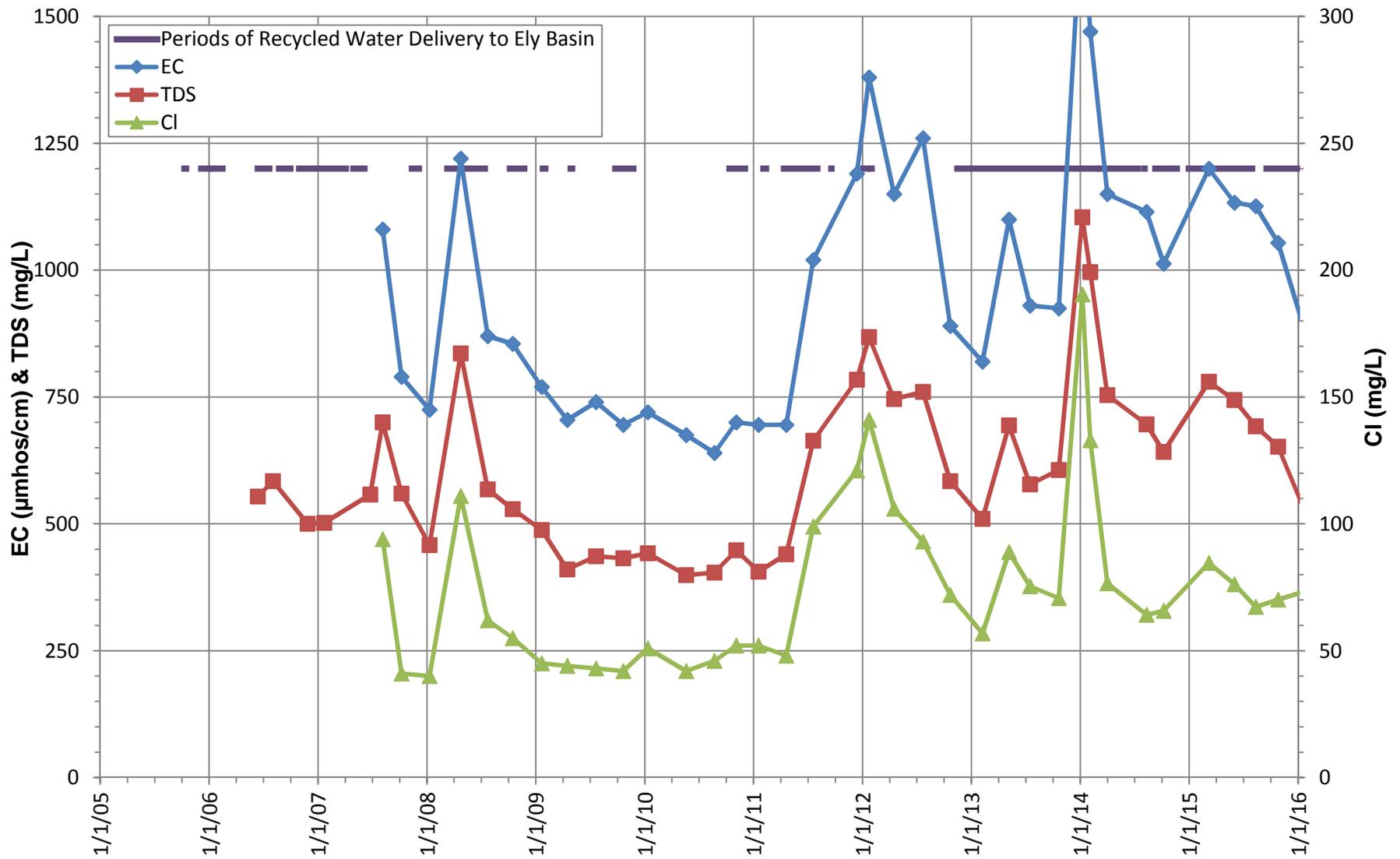
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BROOKS STREET BASIN
MW BRK-2/2**





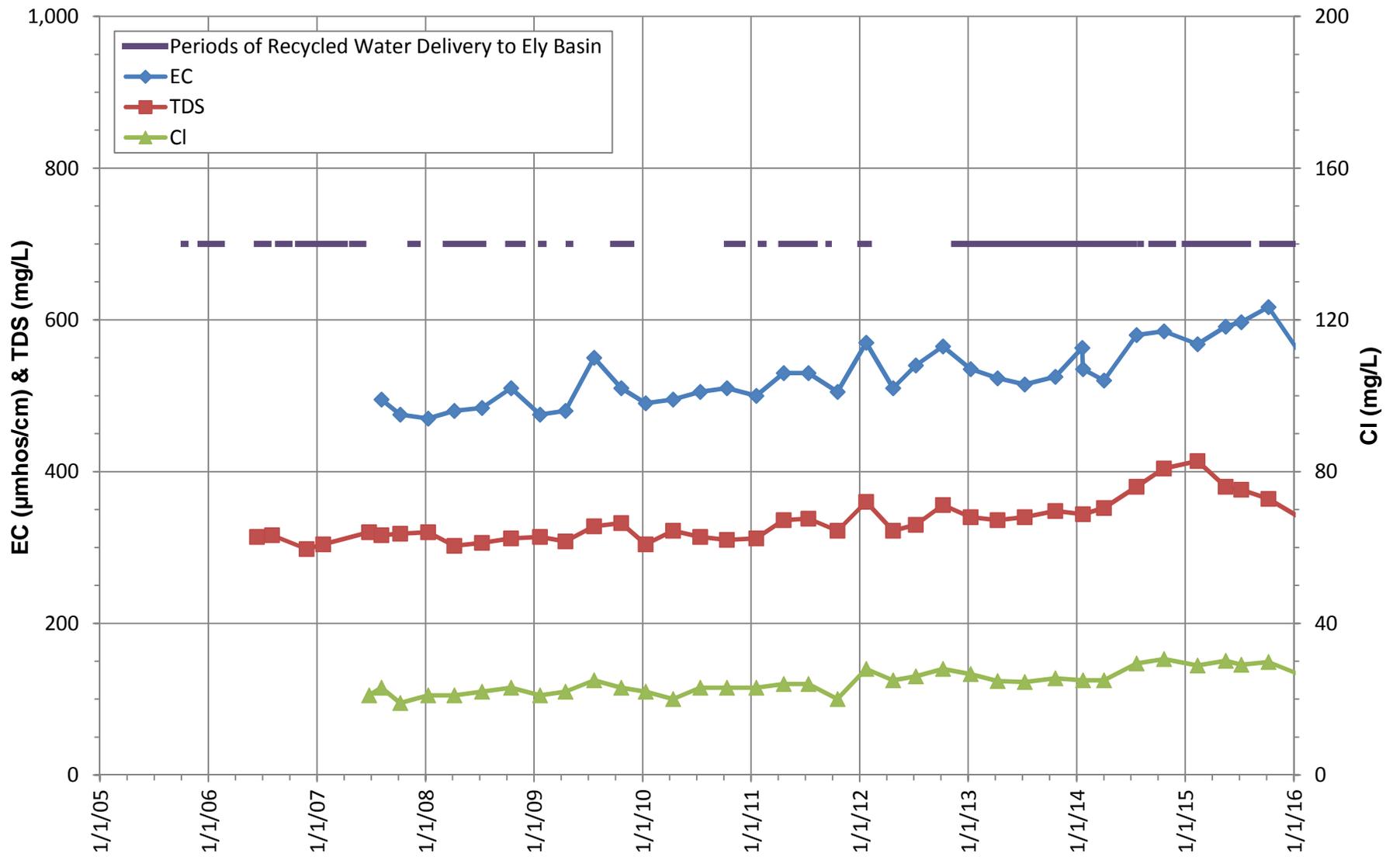
**EC, TDS, CHLORIDE TRENDS
ELY BASIN
PHILADELPHIA WELL**





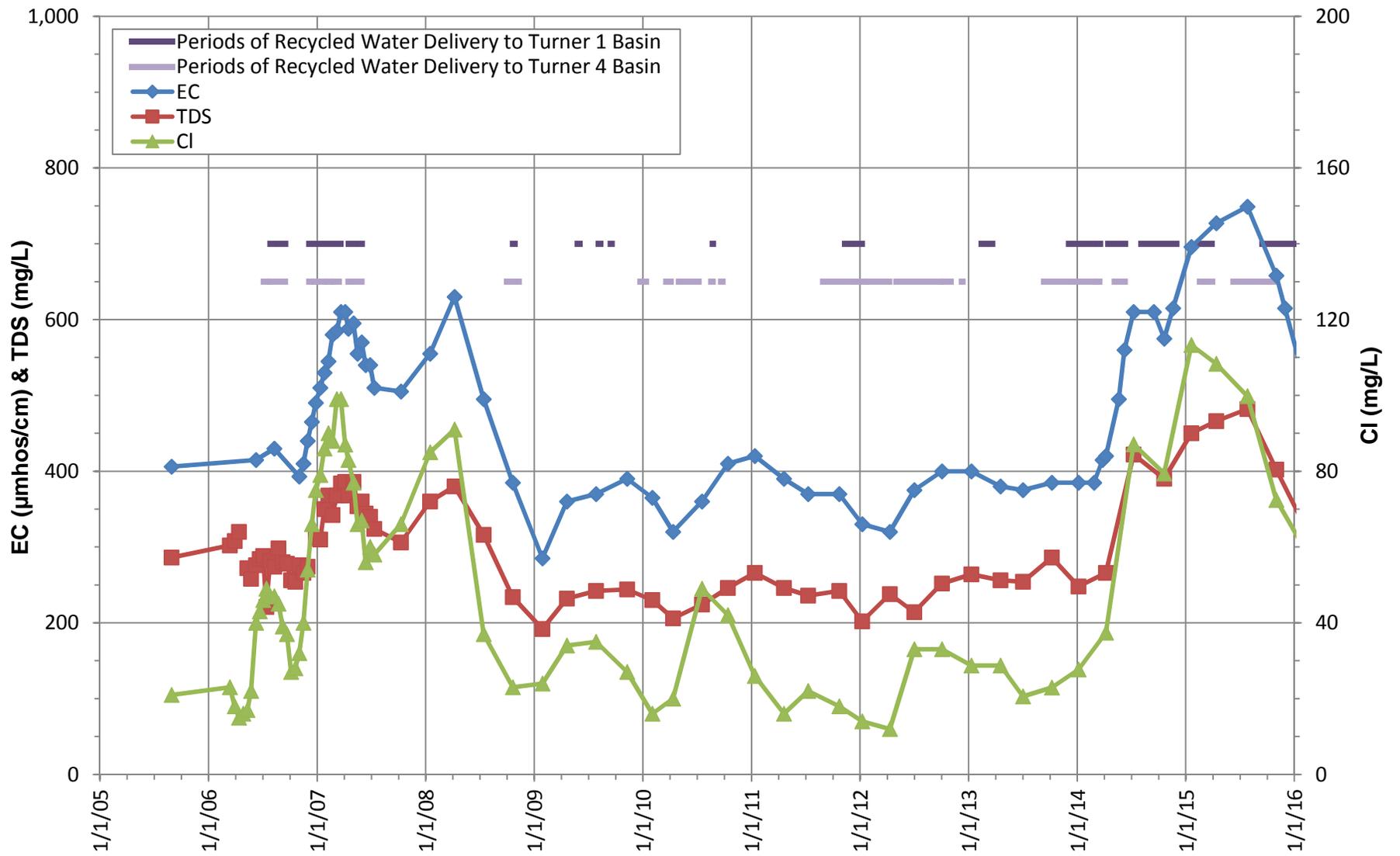
**EC, TDS, CHLORIDE TRENDS
ELY BASIN
WALNUT WELL**





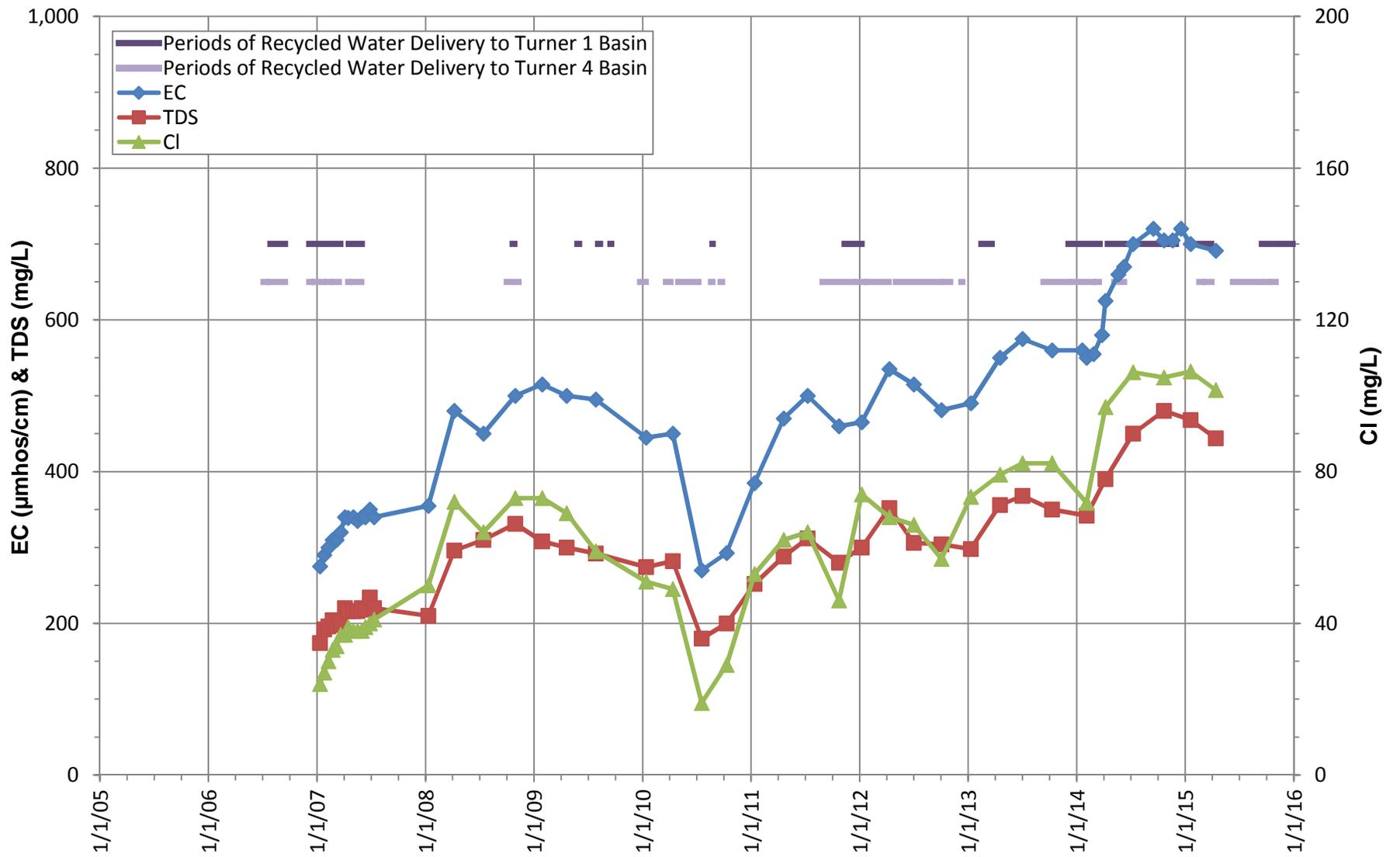
**EC, TDS, CHLORIDE TRENDS
ELY BASIN
RIVERSIDE WELL**





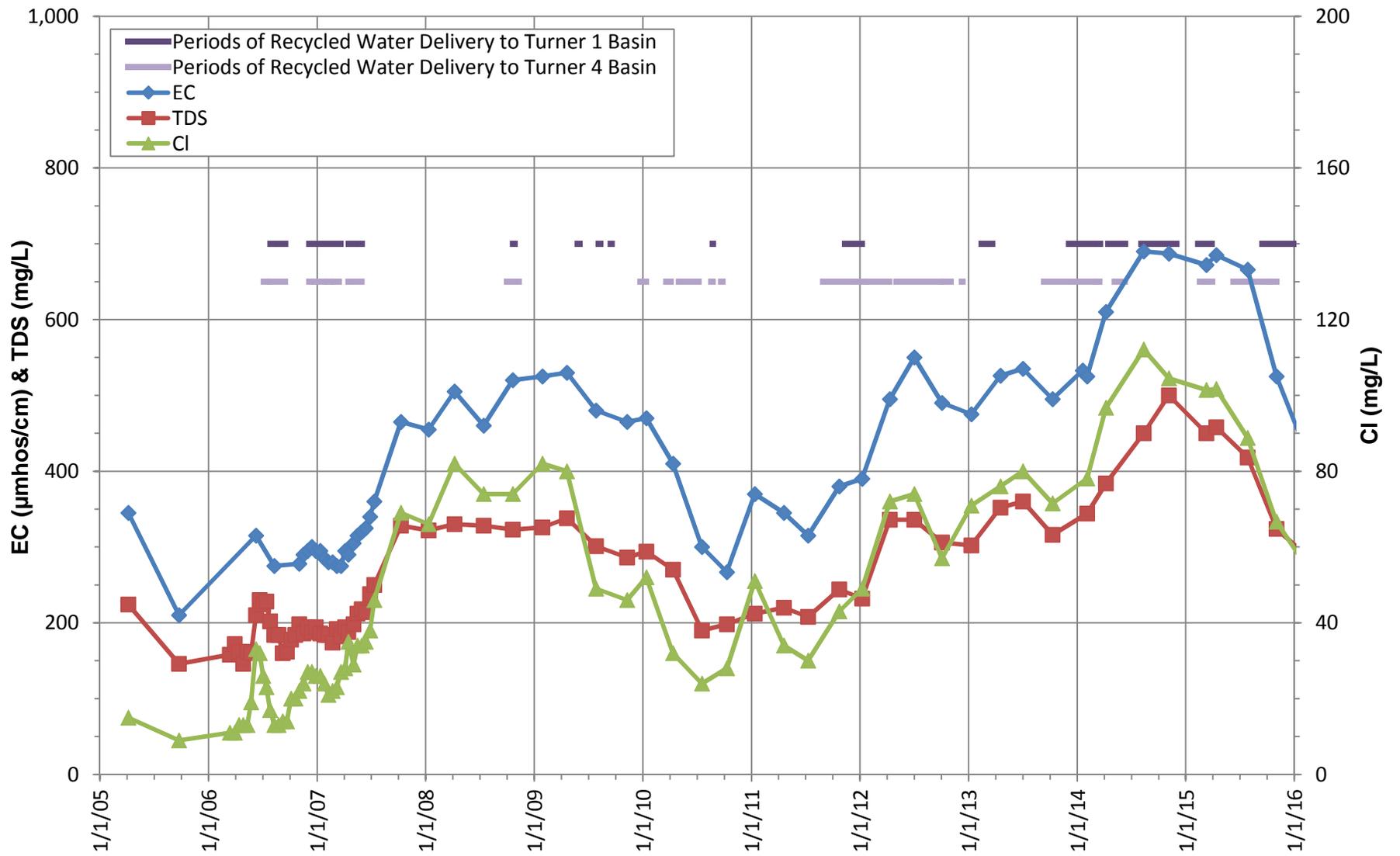
**EC, TDS, CHLORIDE TRENDS
TURNER BASINS
MW TRN-1/2**





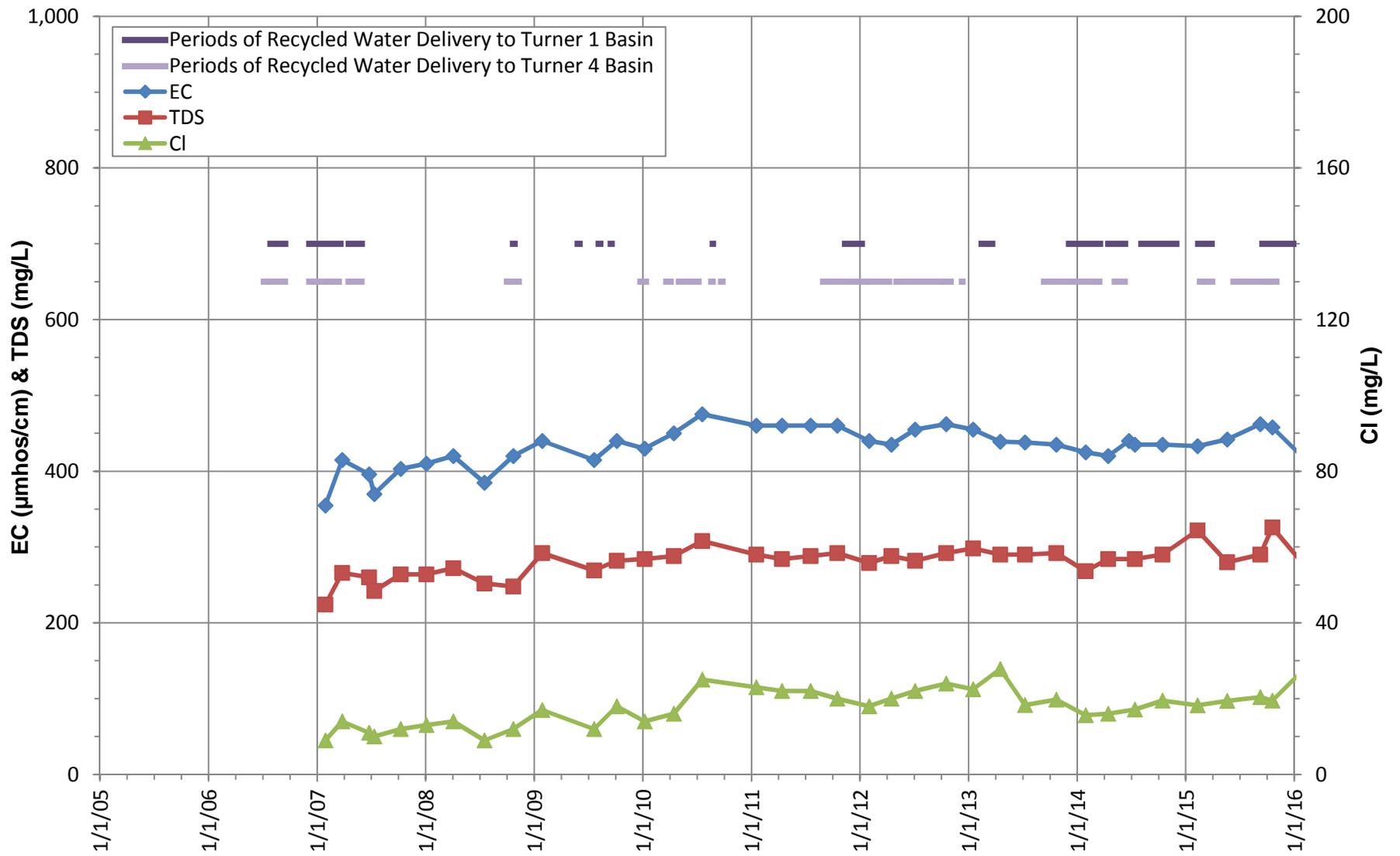
**EC, TDS, CHLORIDE TRENDS
TURNER BASINS
MW TRN-2/1**





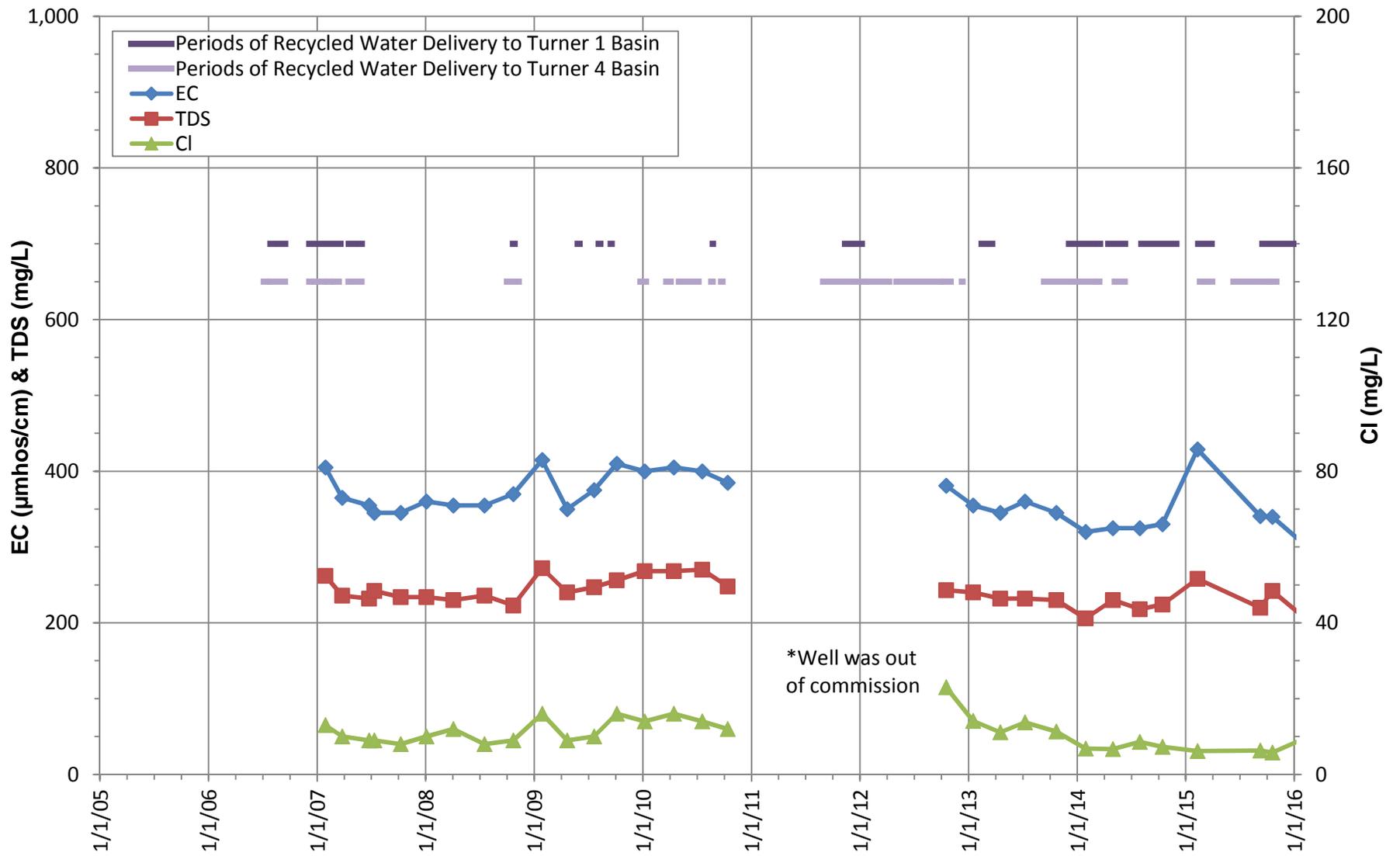
**EC, TDS, CHLORIDE TRENDS
TURNER BASINS
MW TRN-2/2**





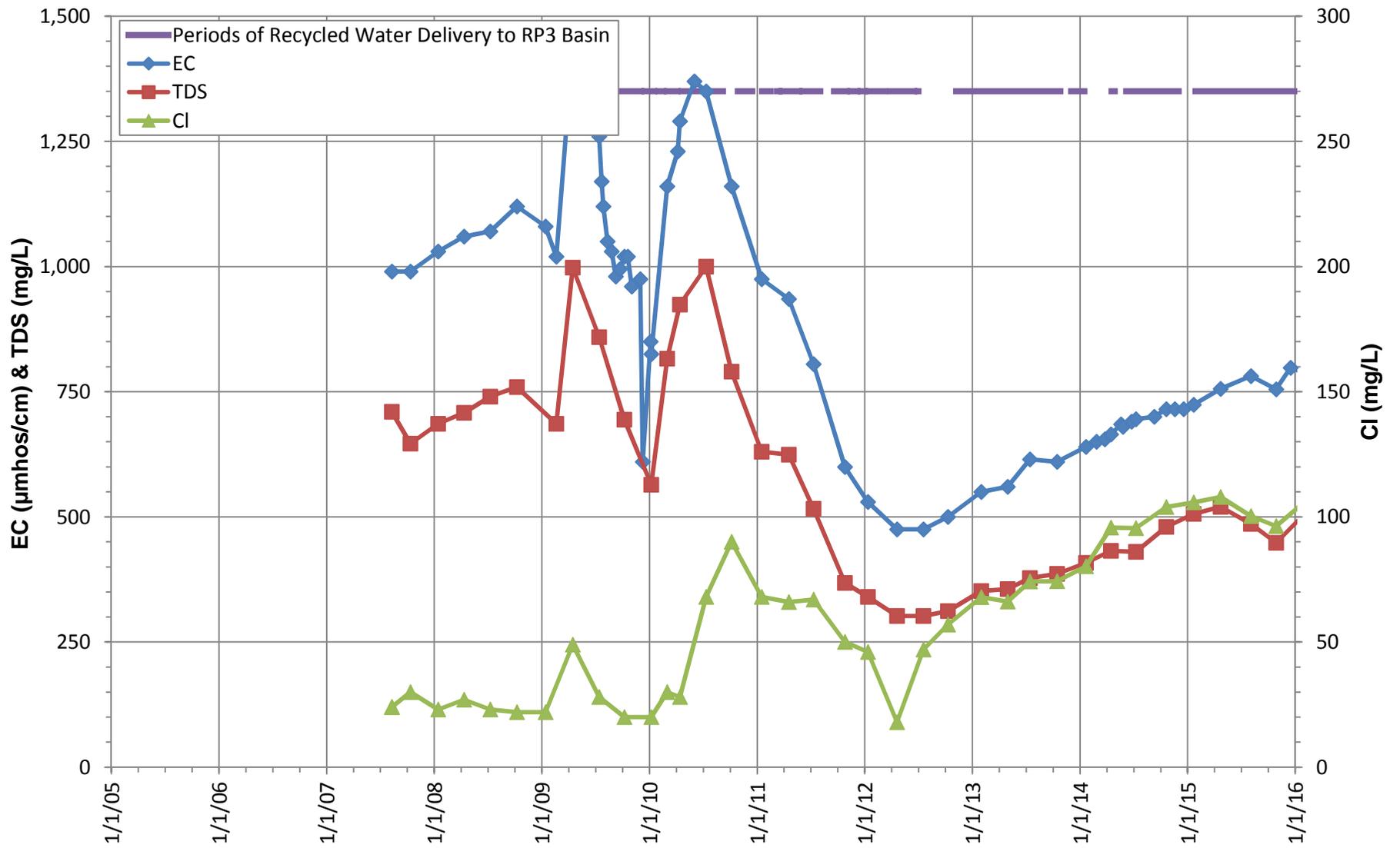
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TURNER BASINS
ONTARIO NO. 25**





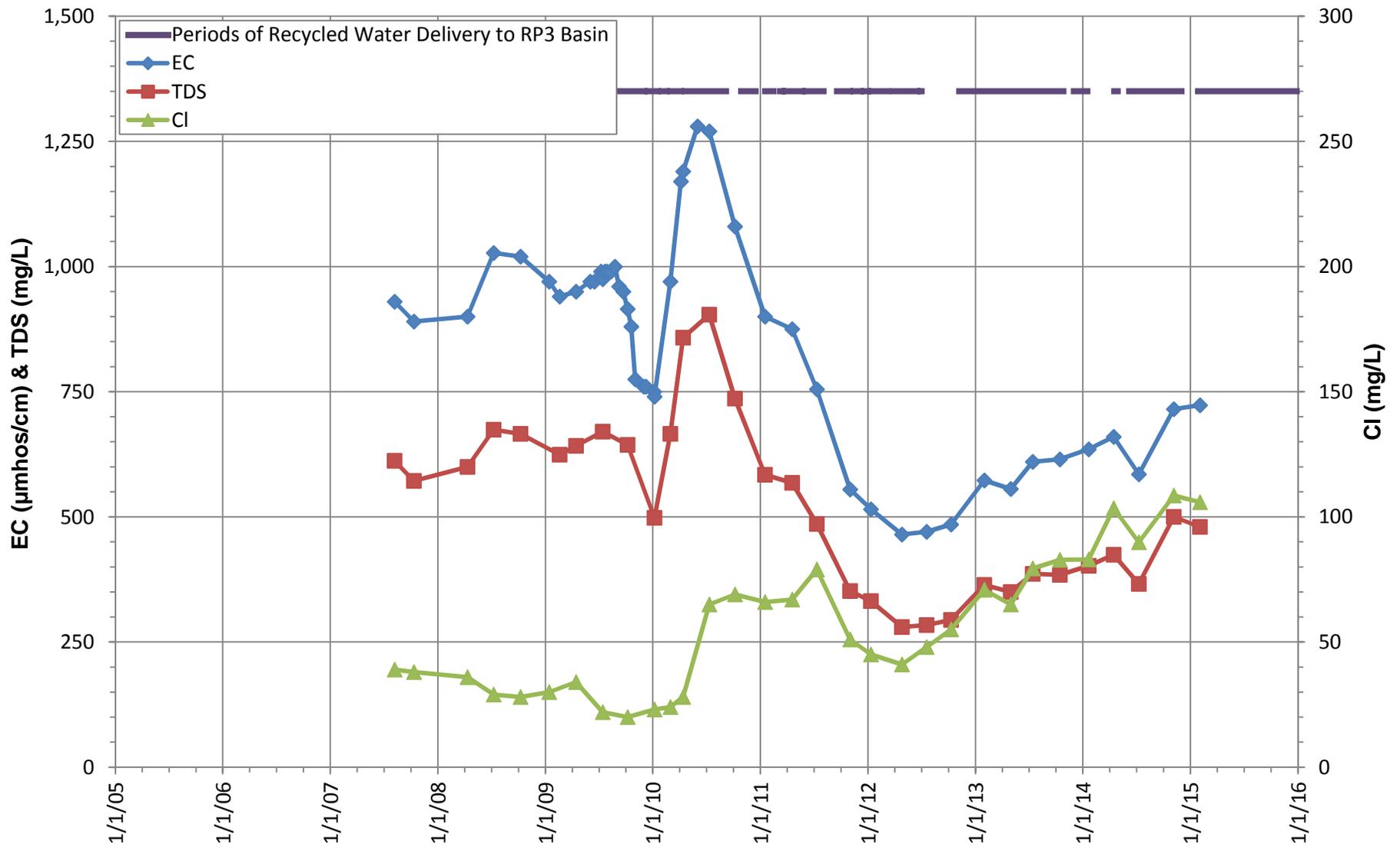
**EC, TDS, CHLORIDE TRENDS
TURNER BASINS
ONTARIO NO. 29**





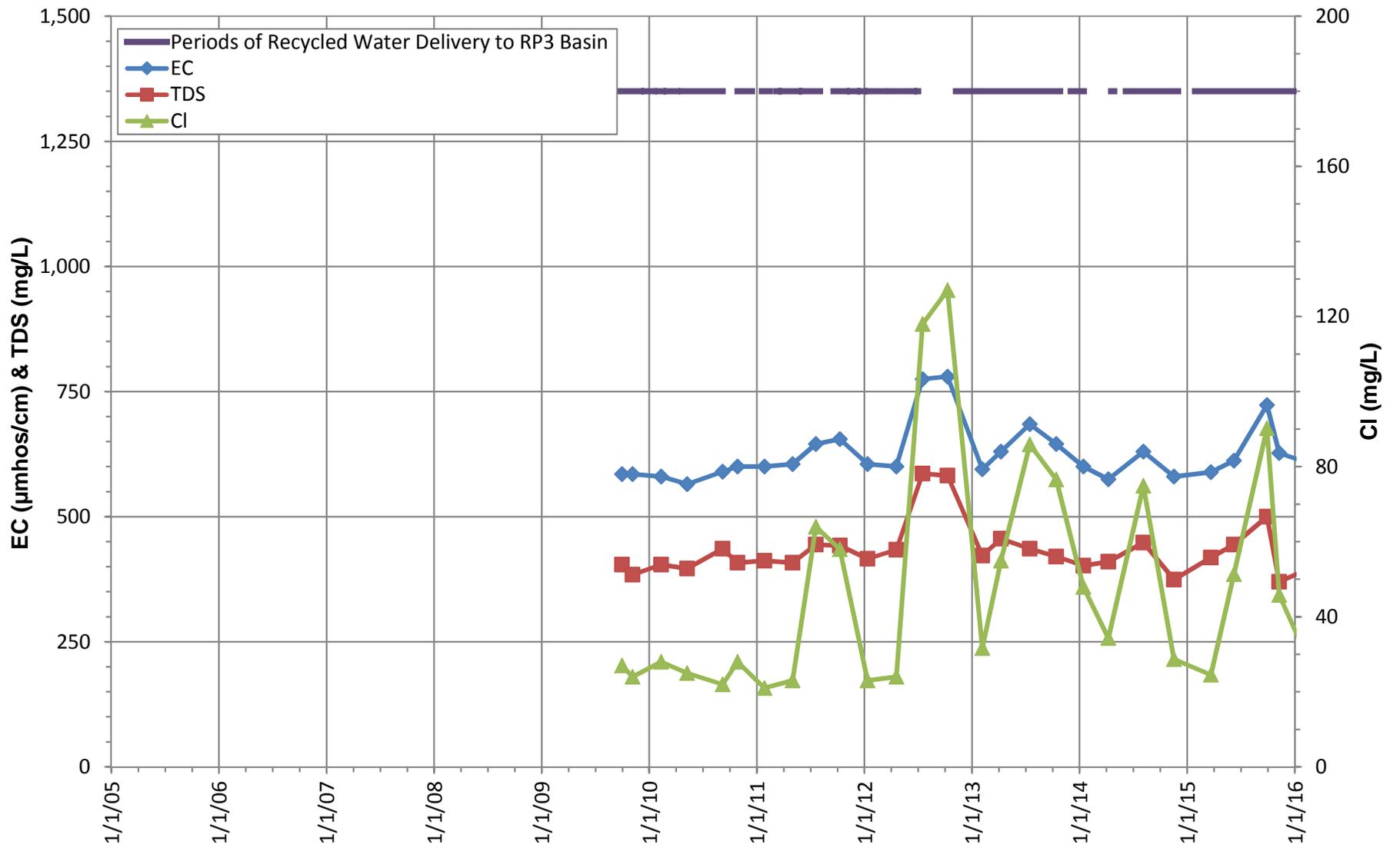
**EC, TDS, CHLORIDE TRENDS
RP3 BASINS
RP3-1/1**





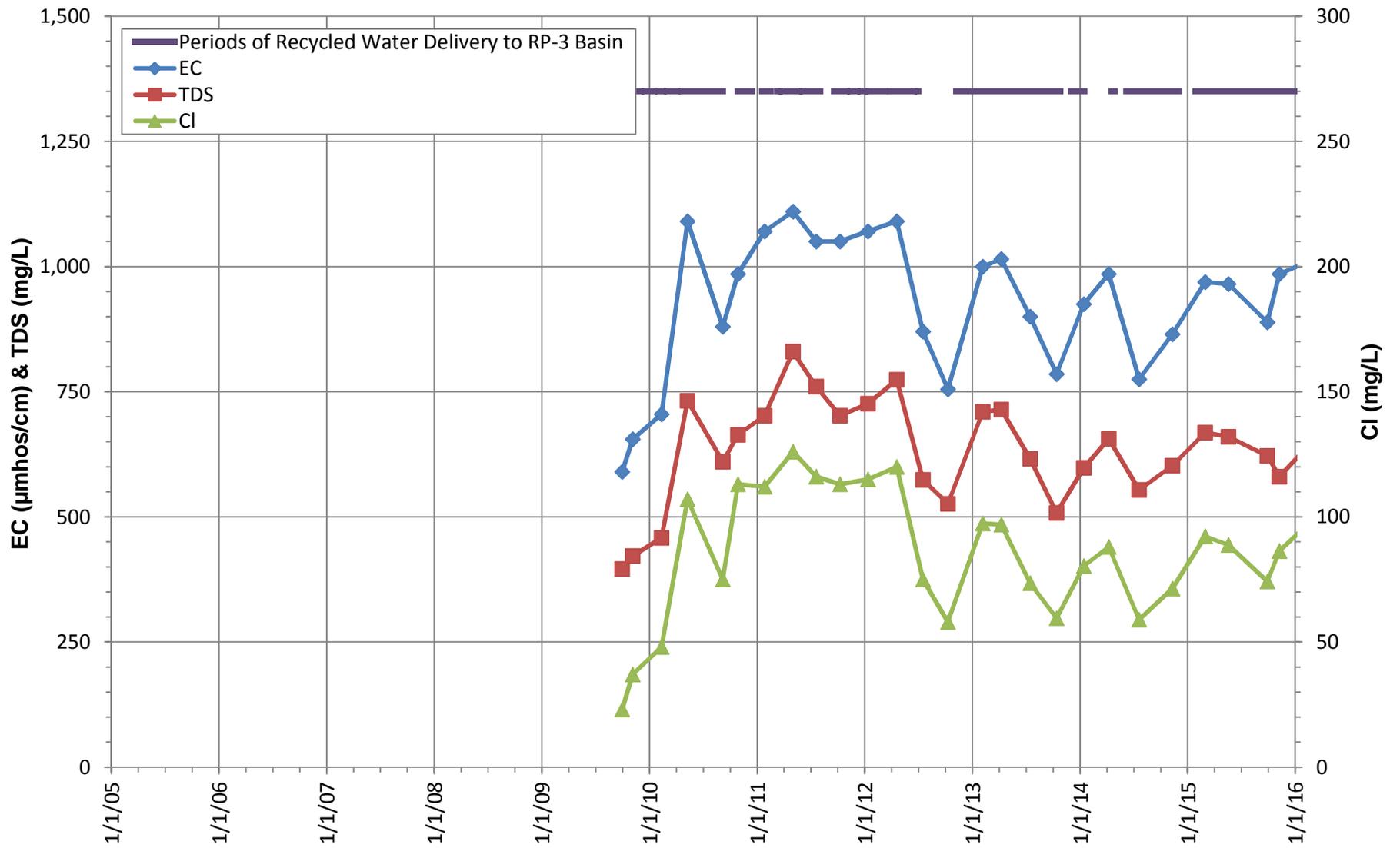
**EC, TDS, CHLORIDE TRENDS
RP3 BASINS
RP3-1/2**





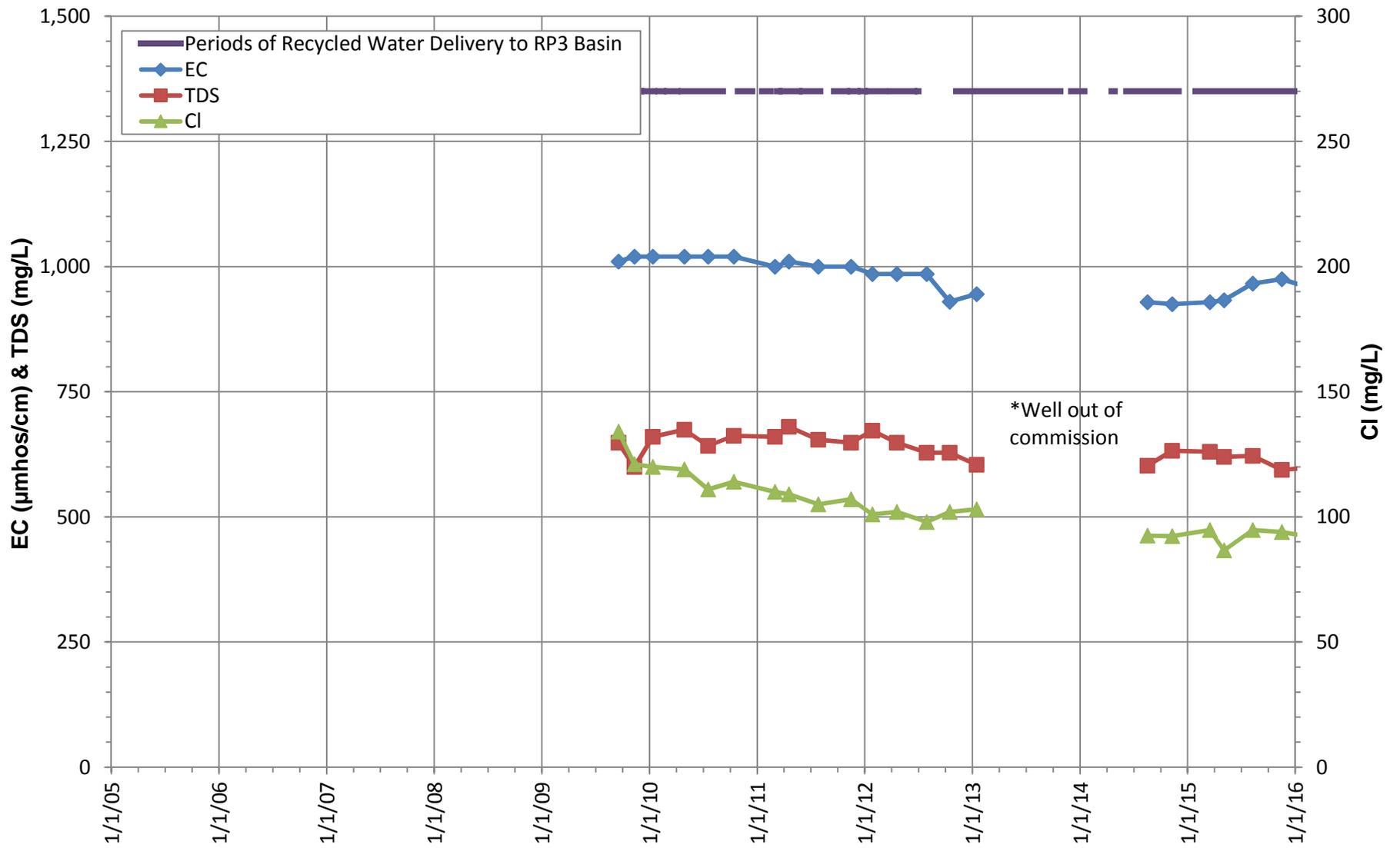
**EC, TDS, CHLORIDE TRENDS
RP3 BASINS
ALCOA MW-1**





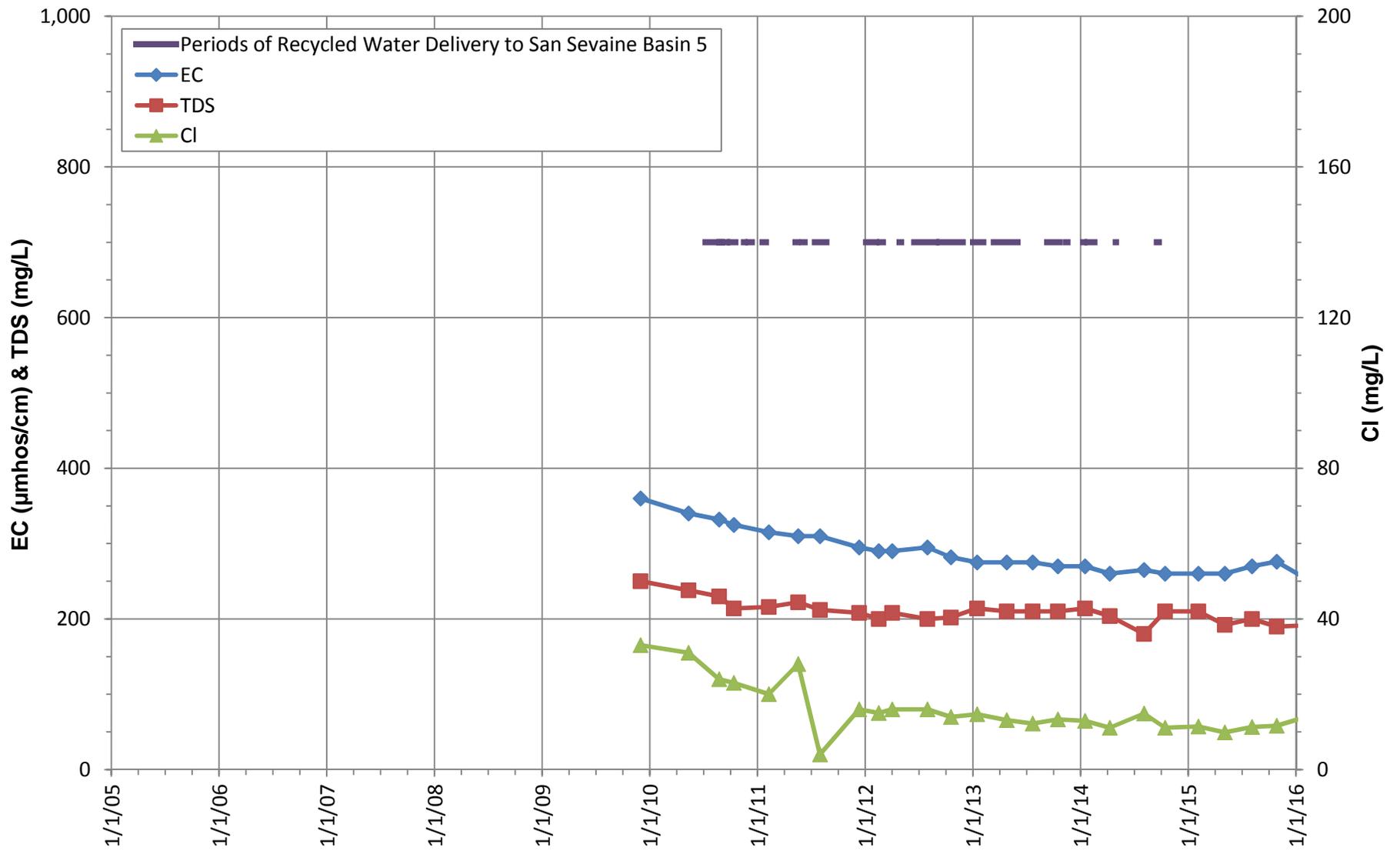
**EC, TDS, CHLORIDE TRENDS
RP3 BASINS
ALCOA MW-3**





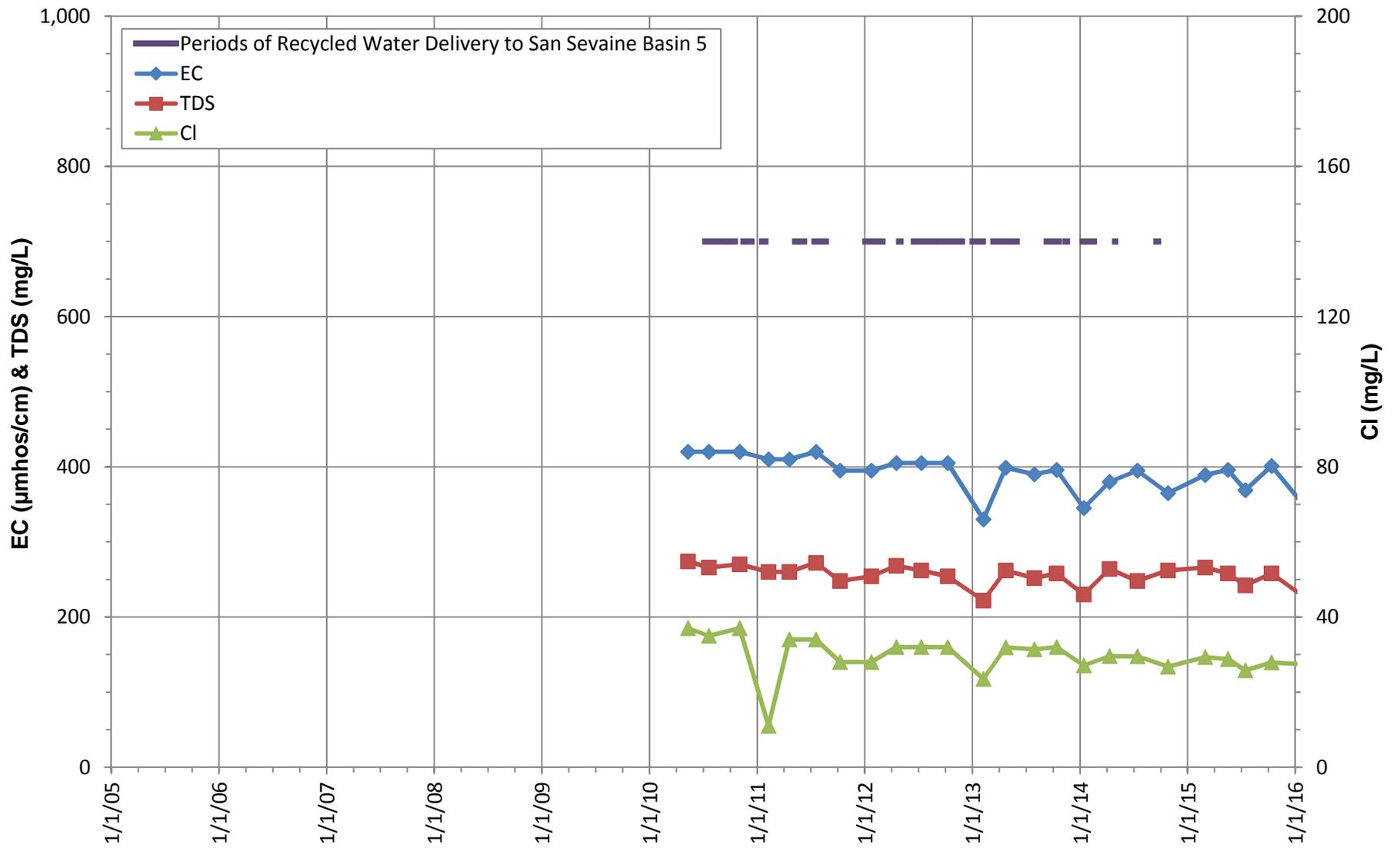
**EC, TDS, CHLORIDE TRENDS
RP3 BASINS
Southridge JHS Well**





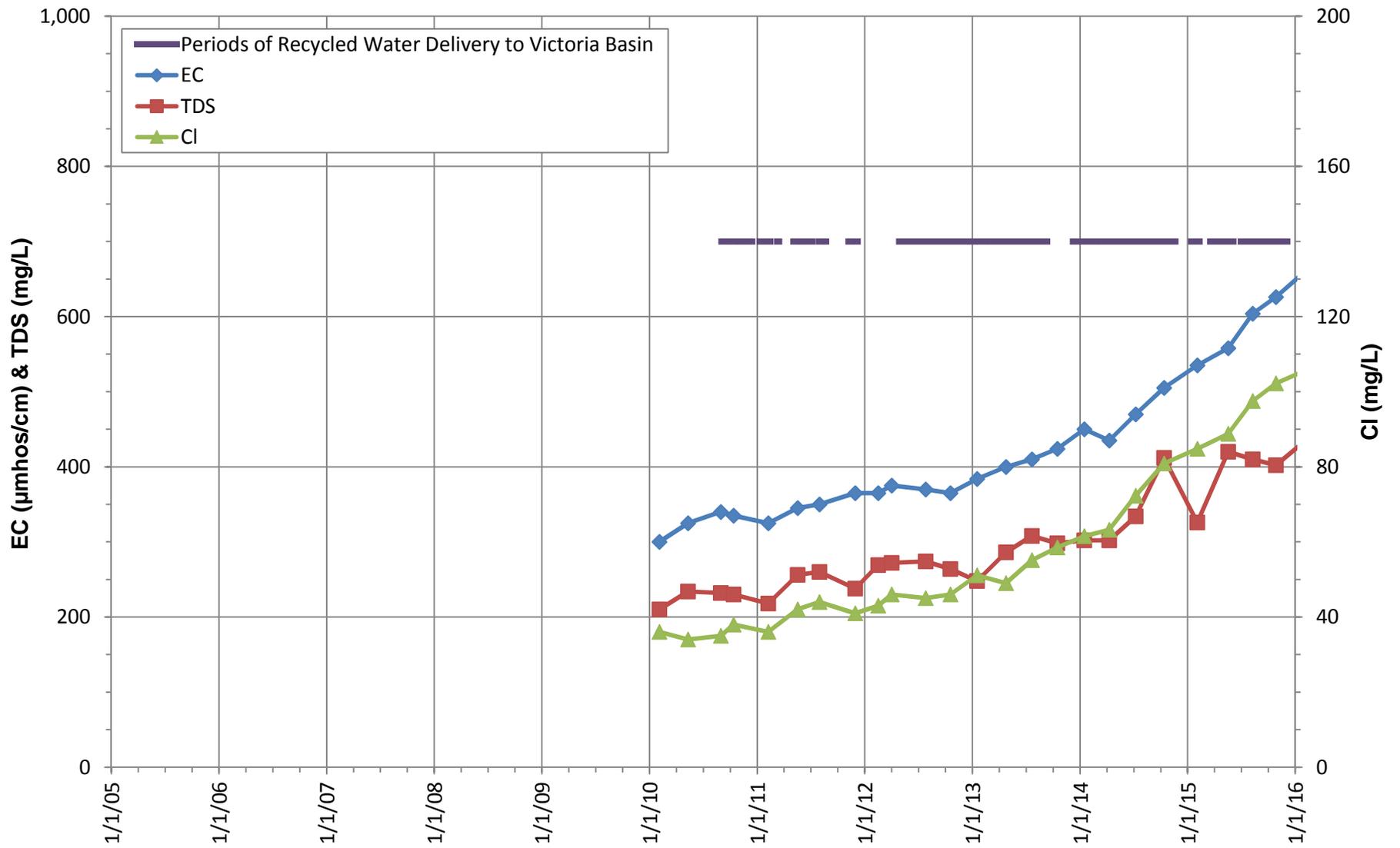
**EC, TDS, CHLORIDE TRENDS
SAN SEVAINE BASINS
SS-1/1**





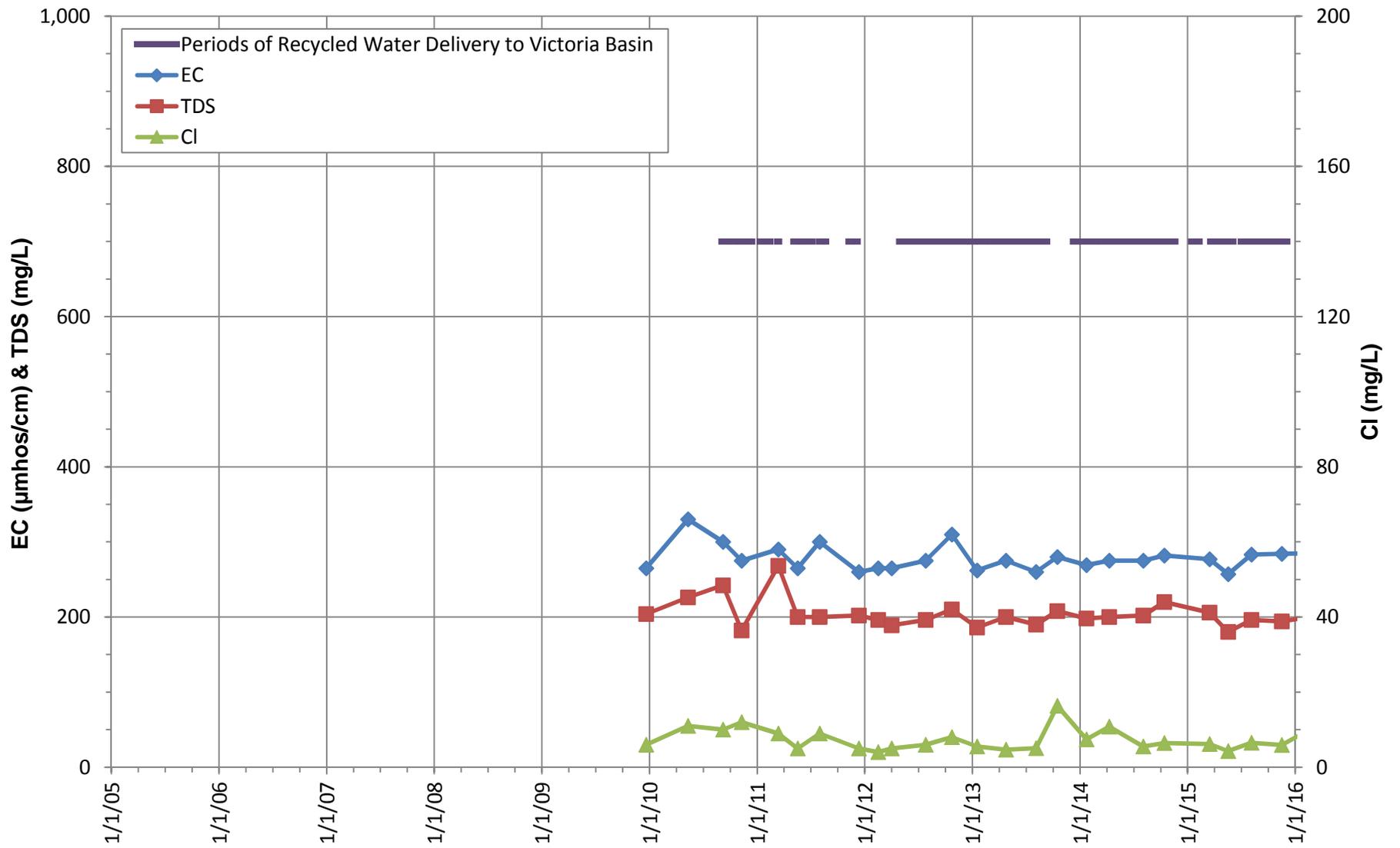
**EC, TDS, CHLORIDE TRENDS
SAN SEVAINE BASINS
Unitex 91090**





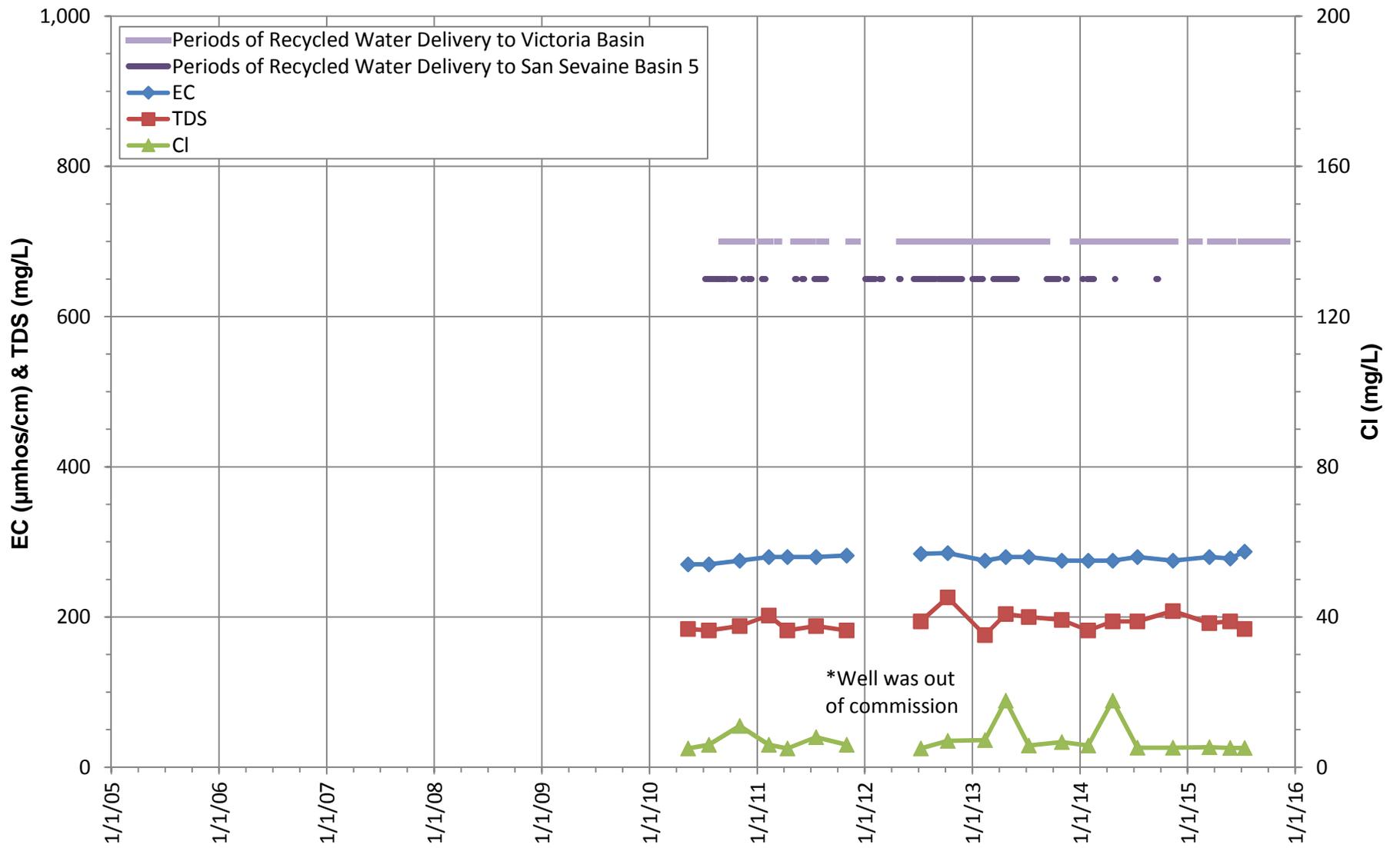
EC, TDS, CHLORIDE TRENDS
 VICTORIA BASIN
 VCT-1/1





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

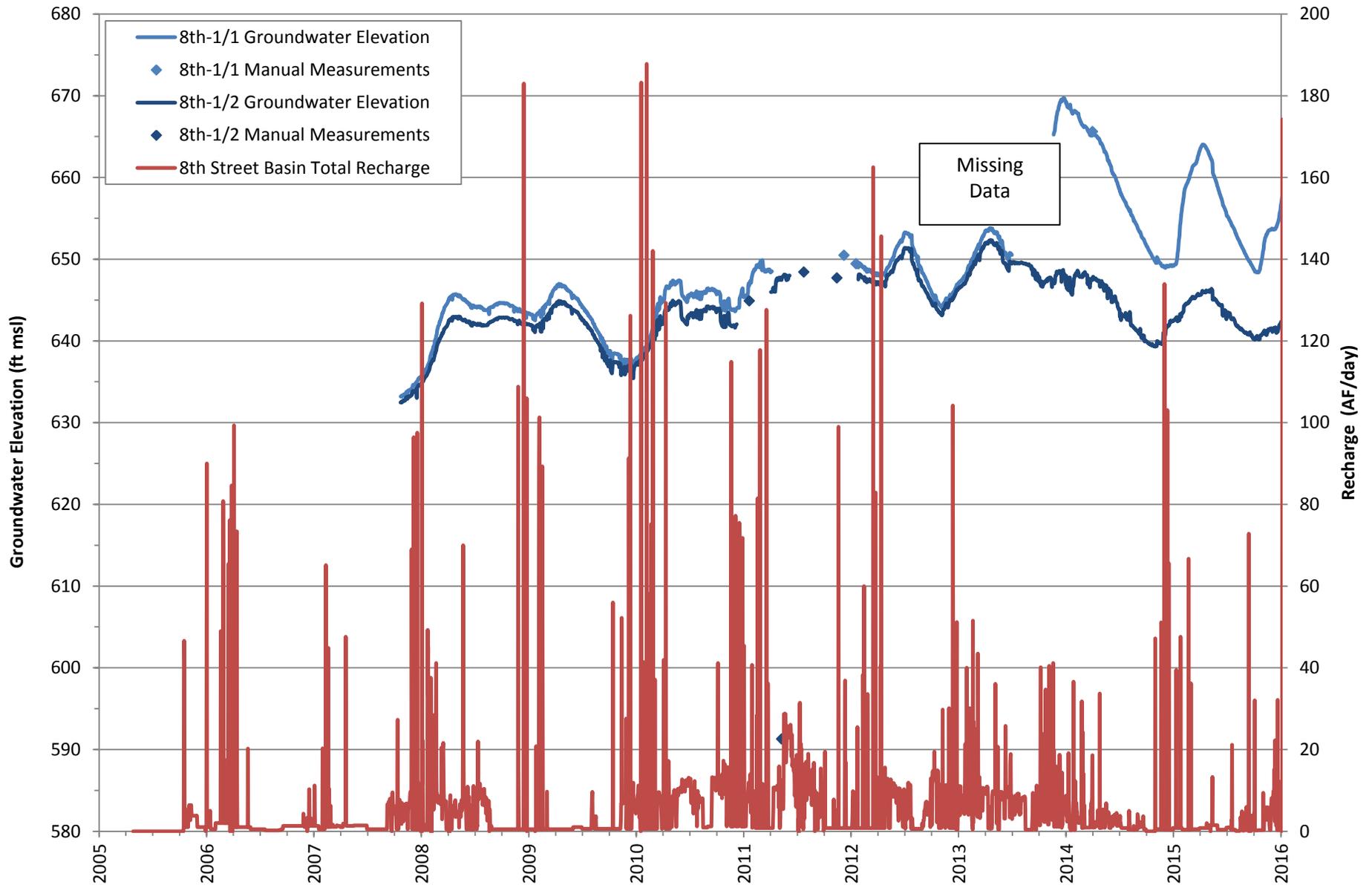




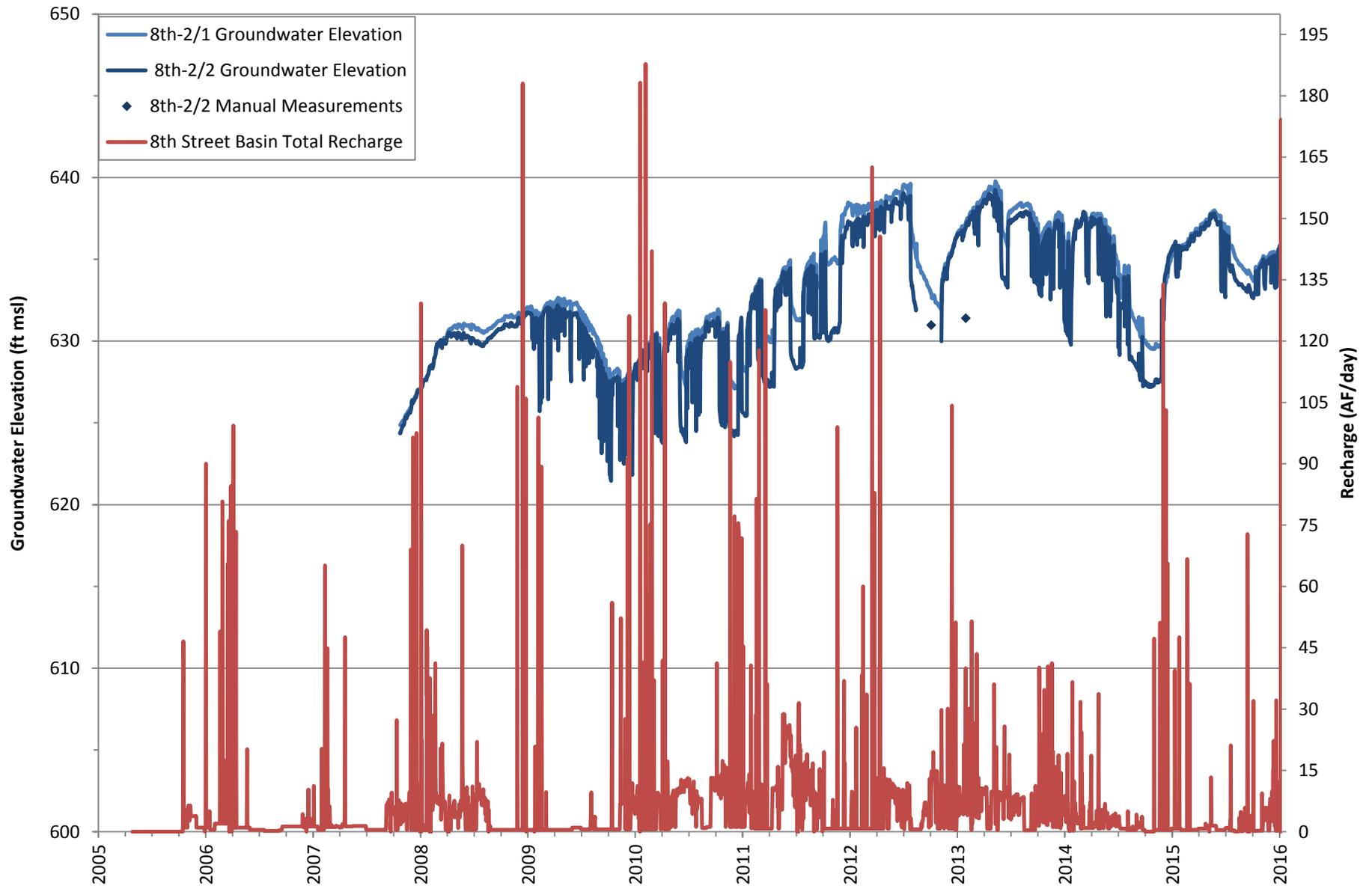
**EC, TDS, CHLORIDE TRENDS
SAN SEVAINE & VICTORIA BASINS
CVWD Well No. 39**



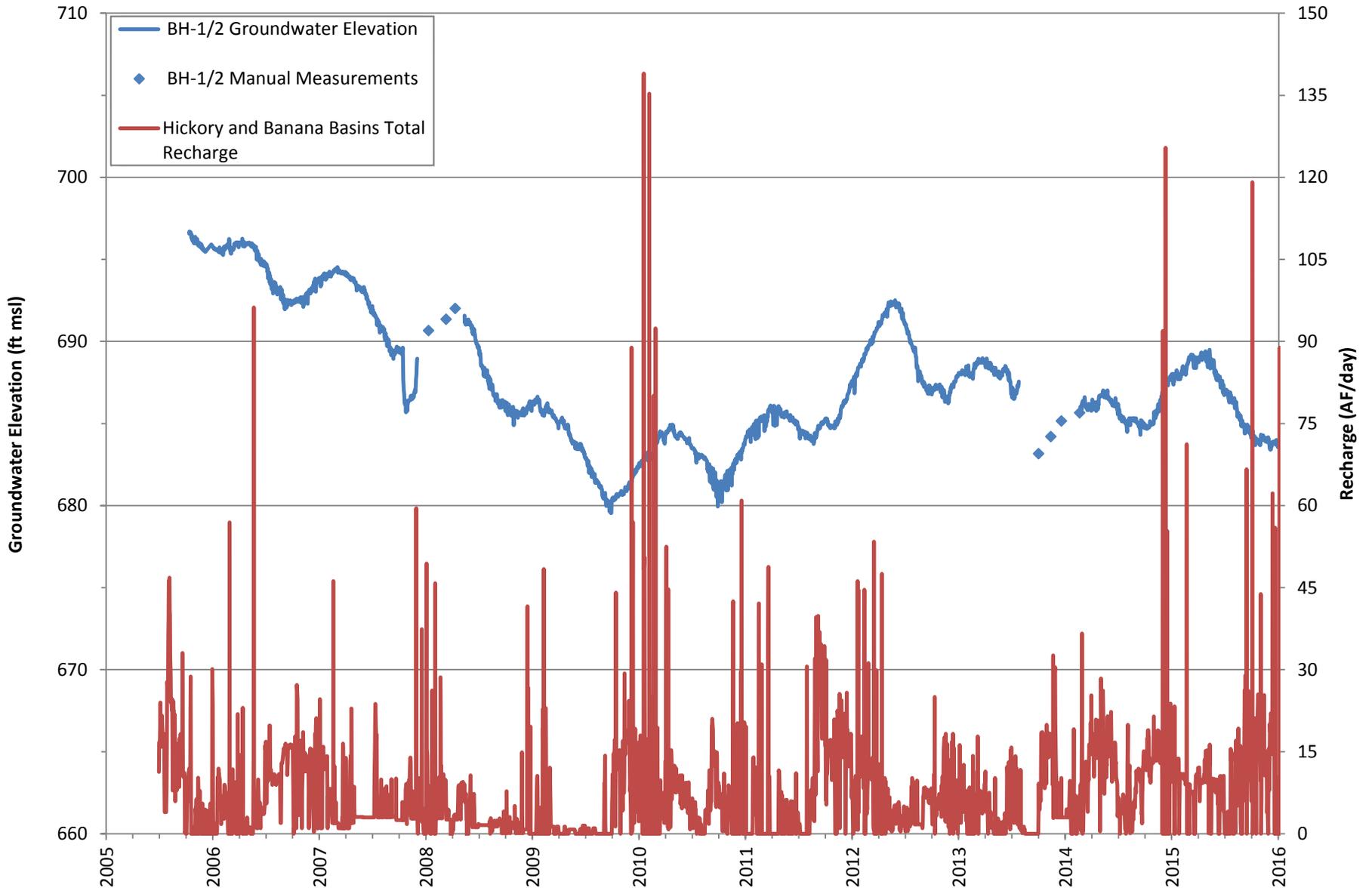
APPENDIX D
MONITORING WELL HYDROGRAPHS



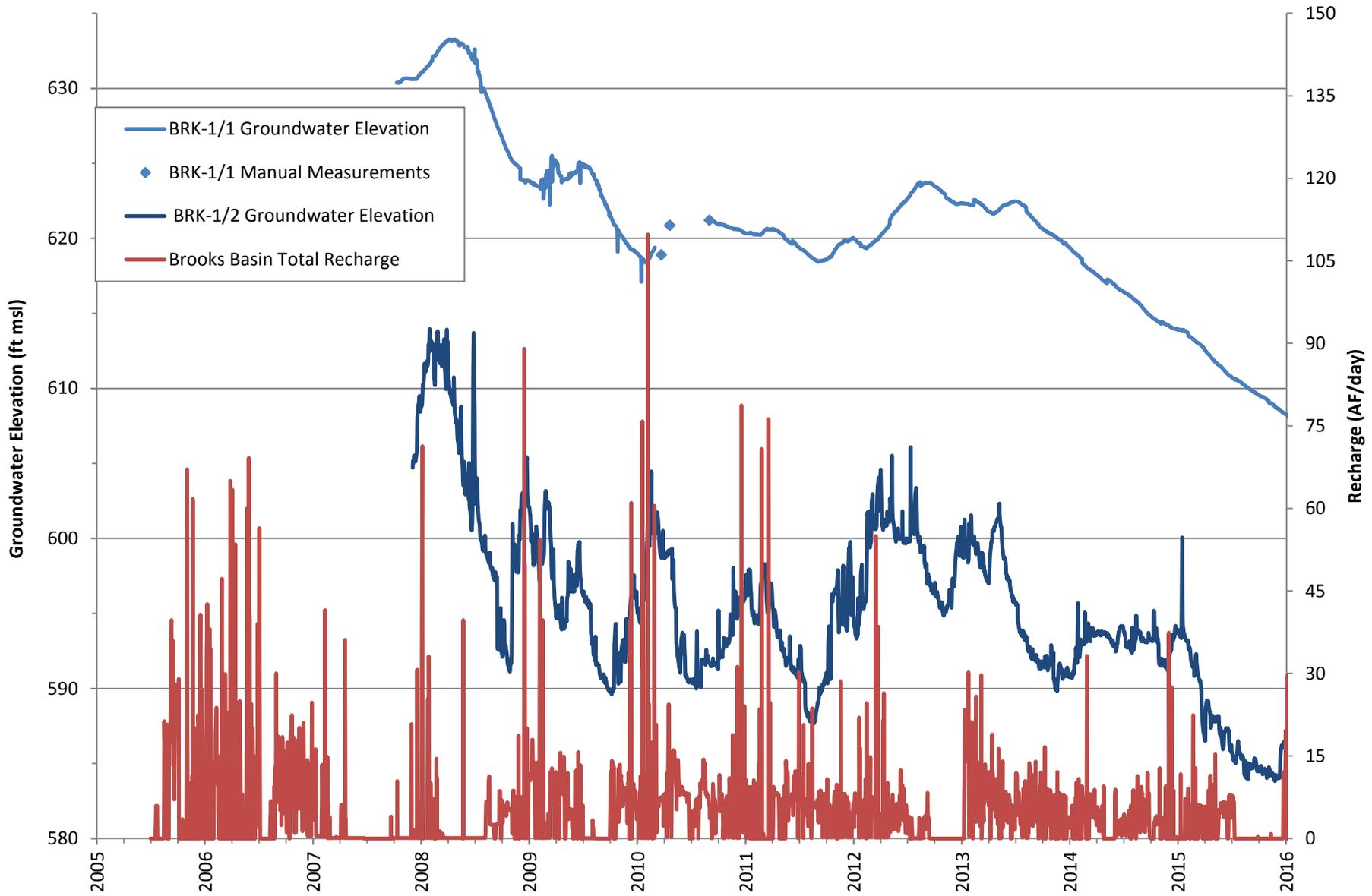
**HYDROGRAPH
MW 8TH-1/1 & 8TH-1/2**



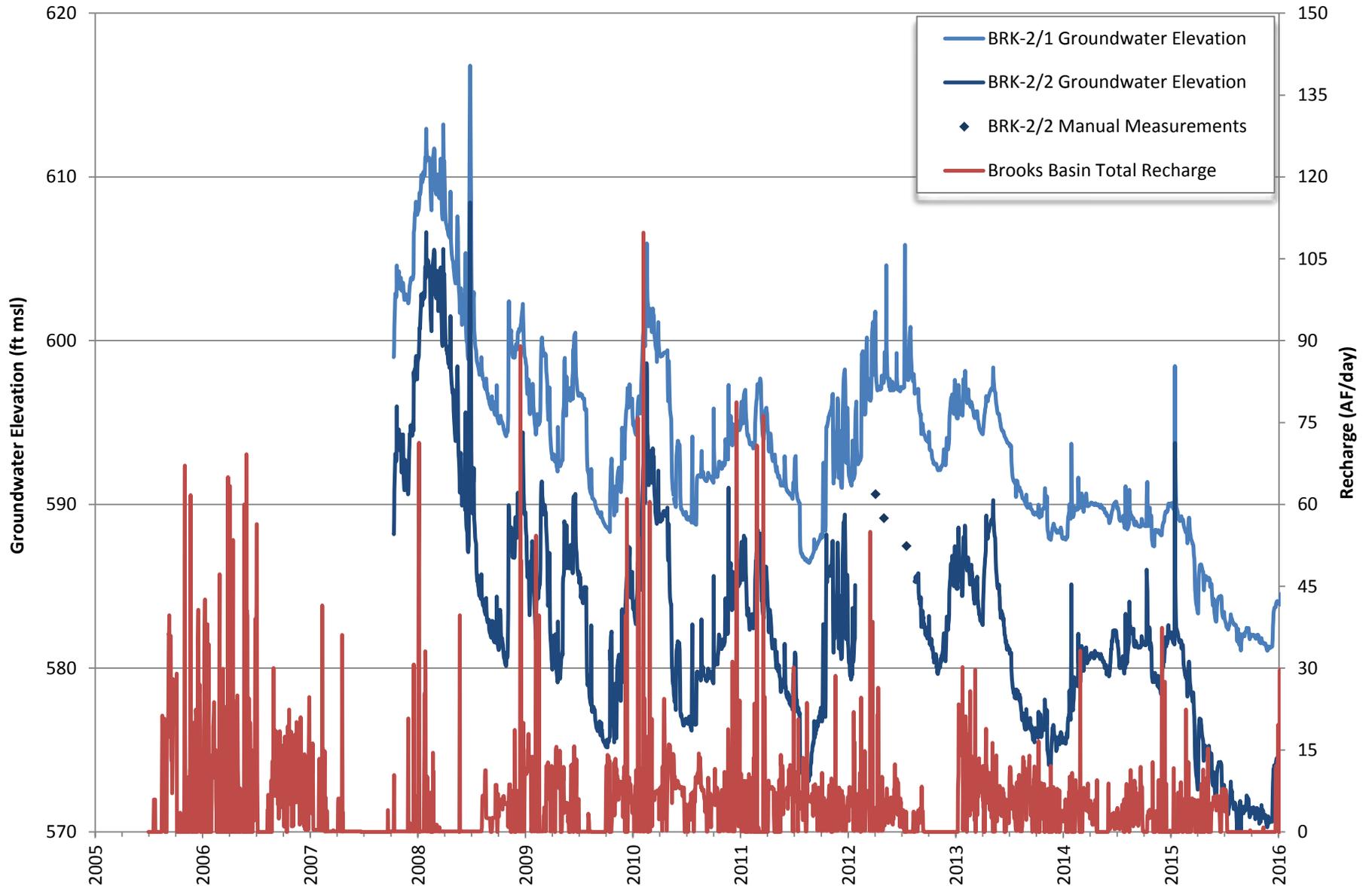
**HYDROGRAPH
MW 8TH-2/1 & 8TH-2/2**



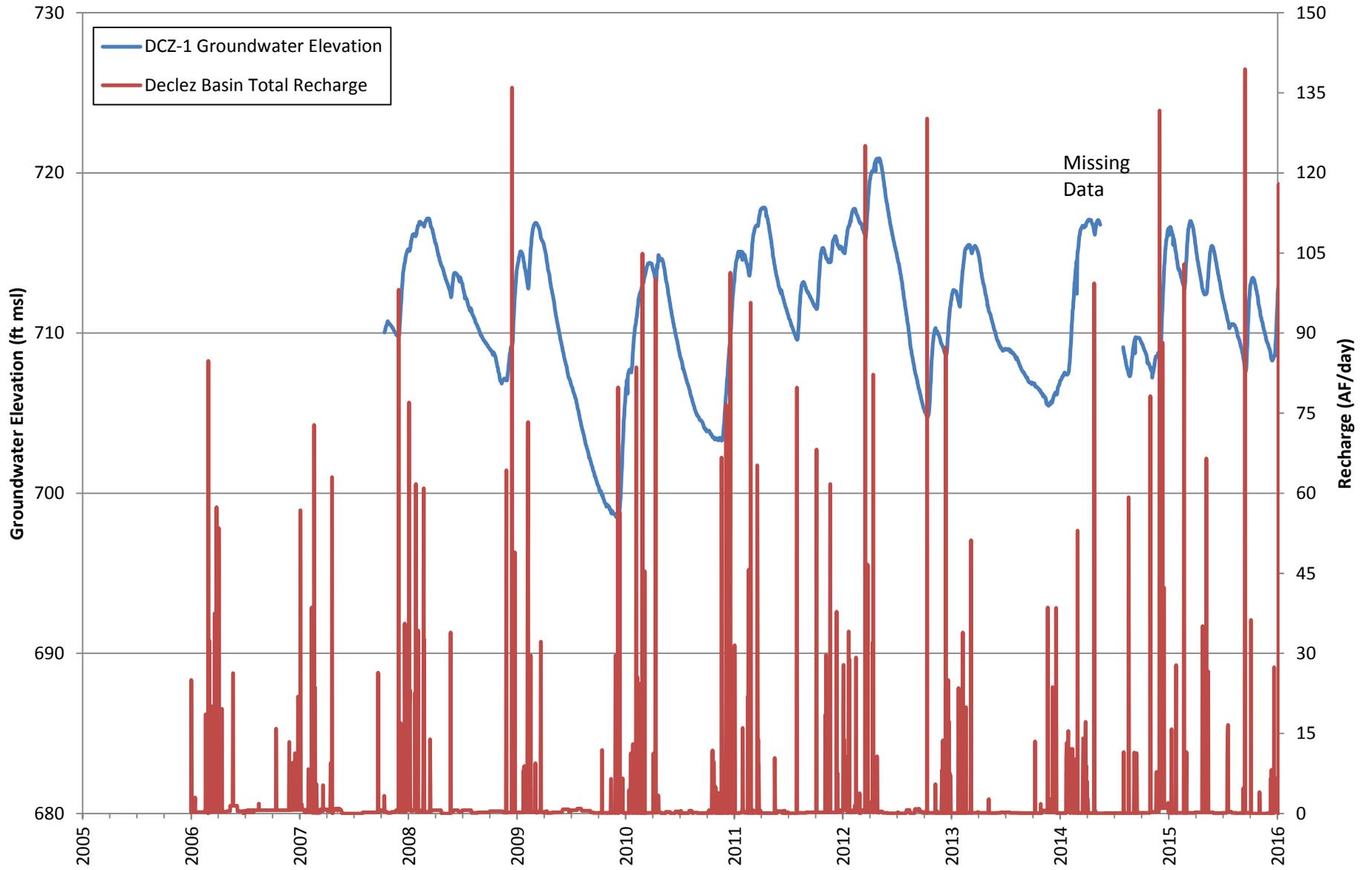
**HYDROGRAPH
MW BH-1/2**



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

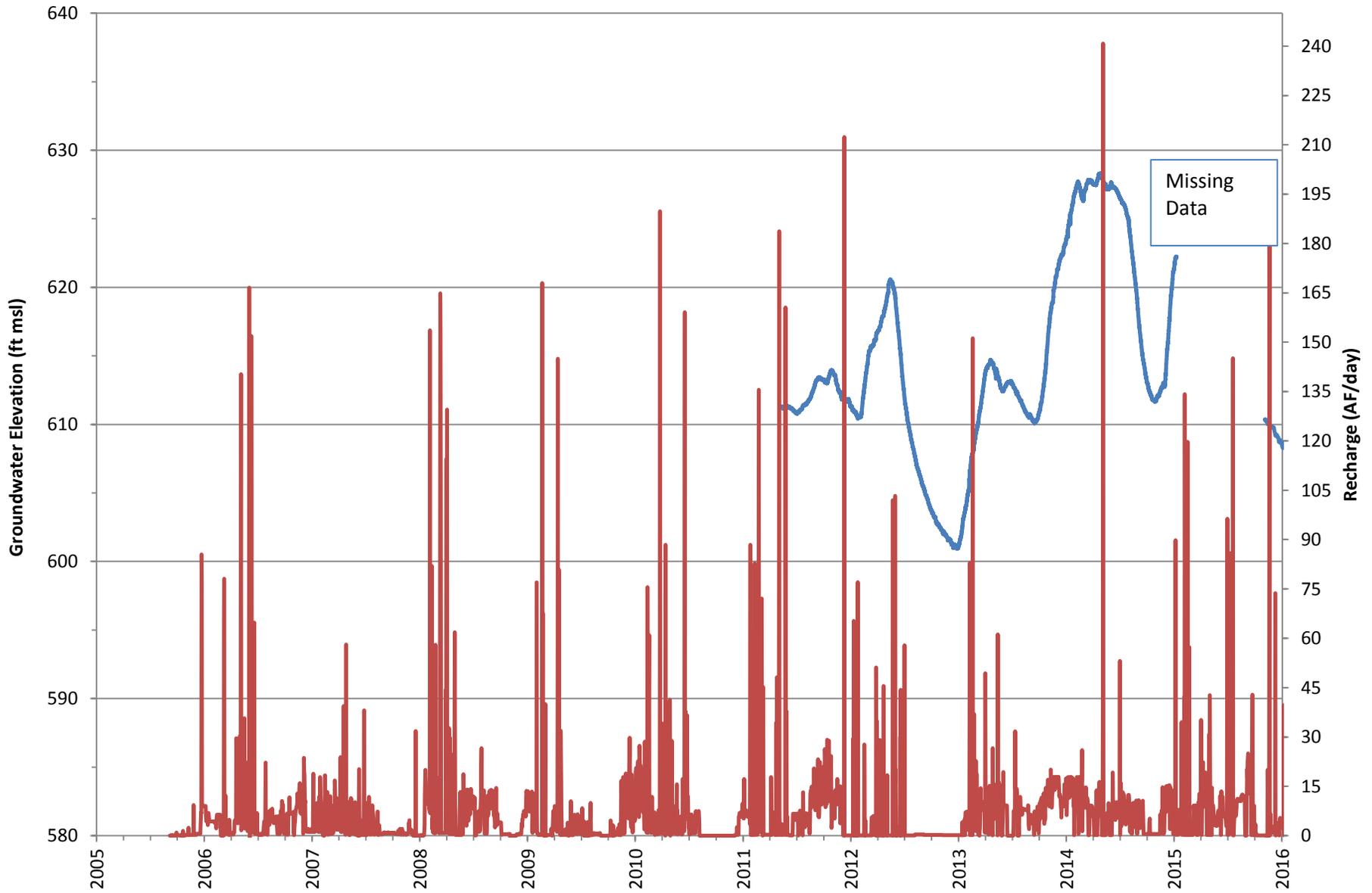


**HYDROGRAPH
MW BRK-2/1 & BRK-2/2**



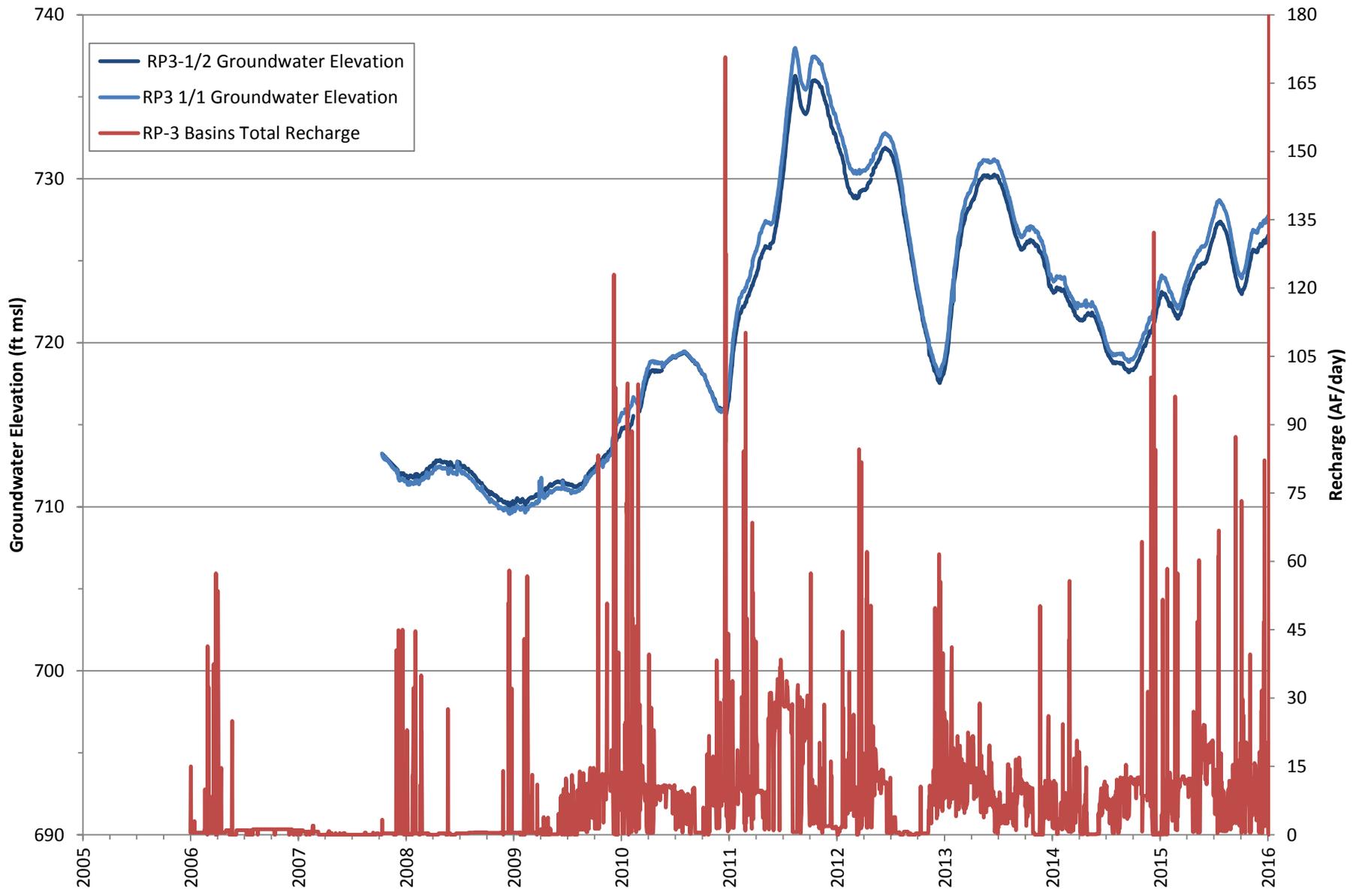
**HYDROGRAPH
MW DCZ-1**



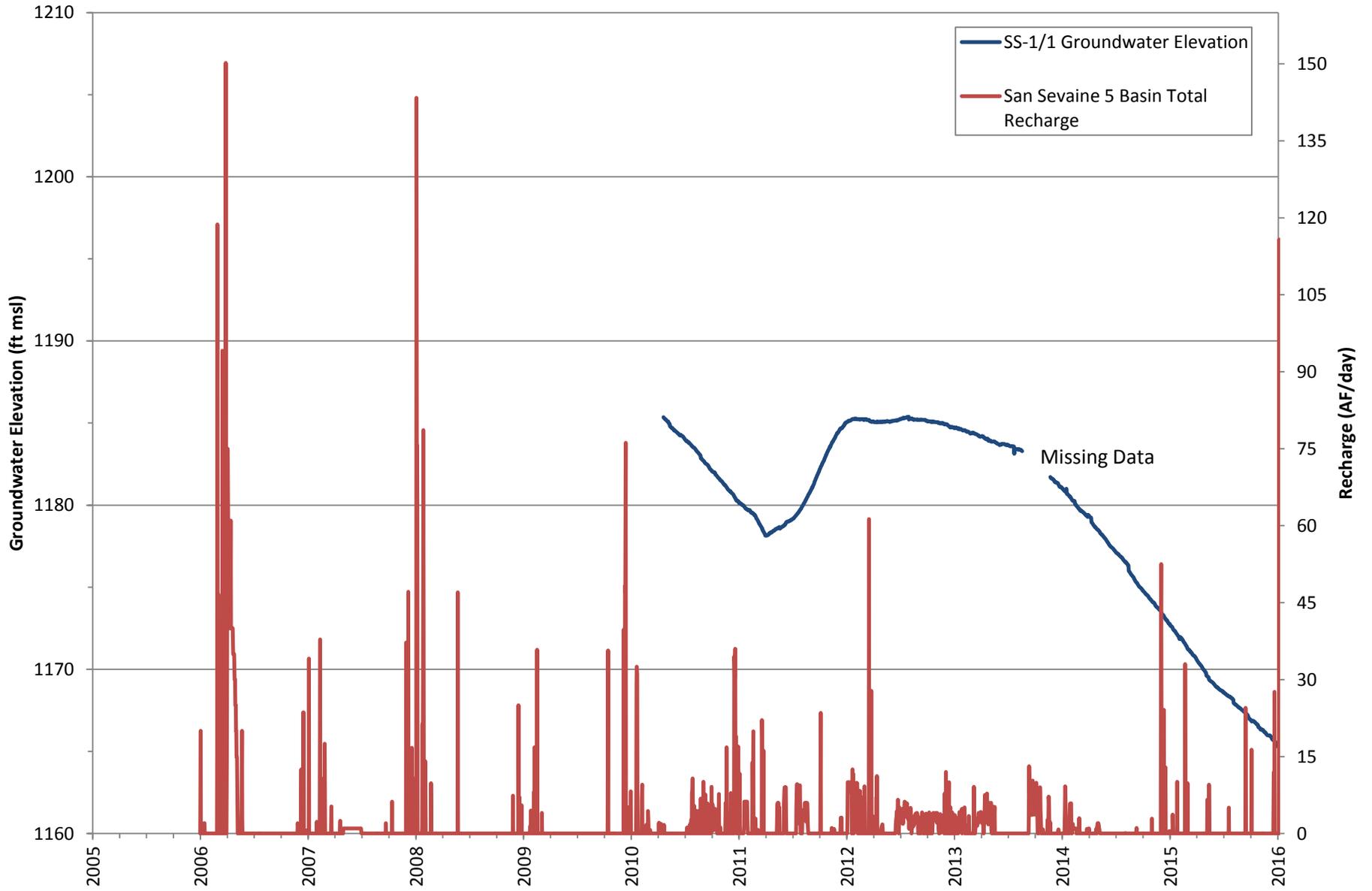


HYDROGRAPH
Ely MW1 (Philadelphia Well)

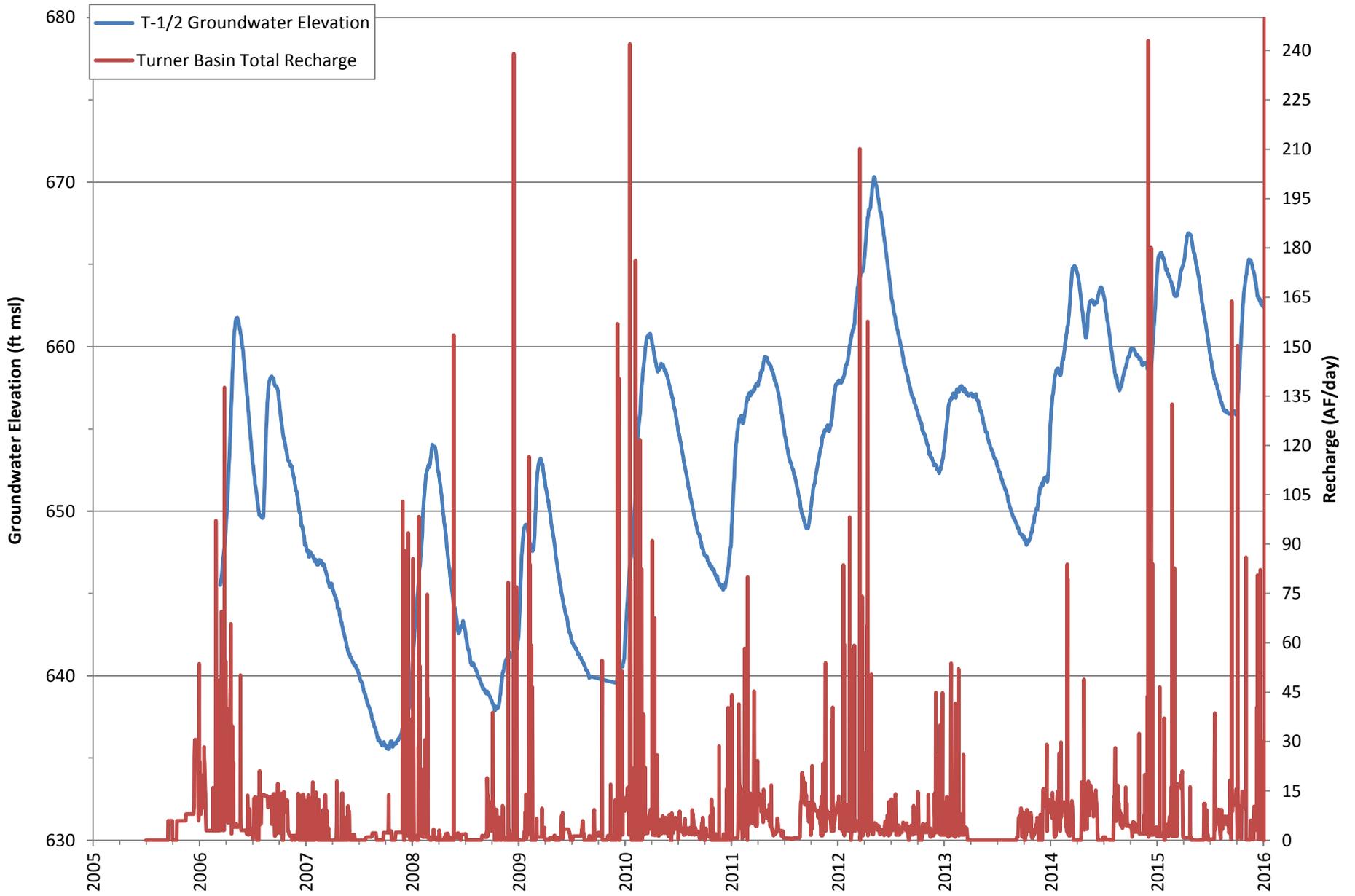




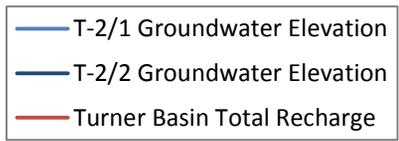
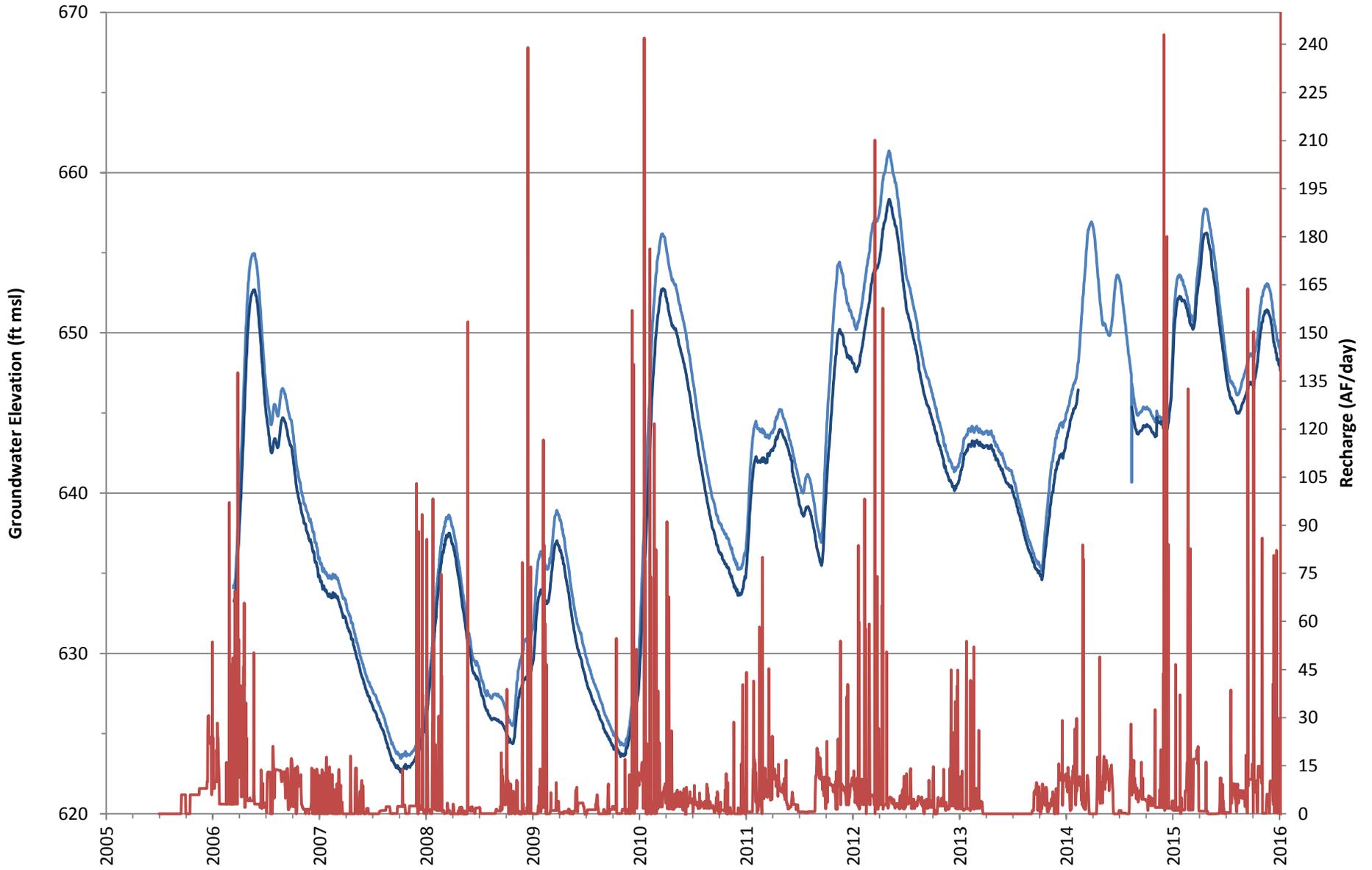
HYDROGRAPH
MW RP3-1/1 & RP3-1/2



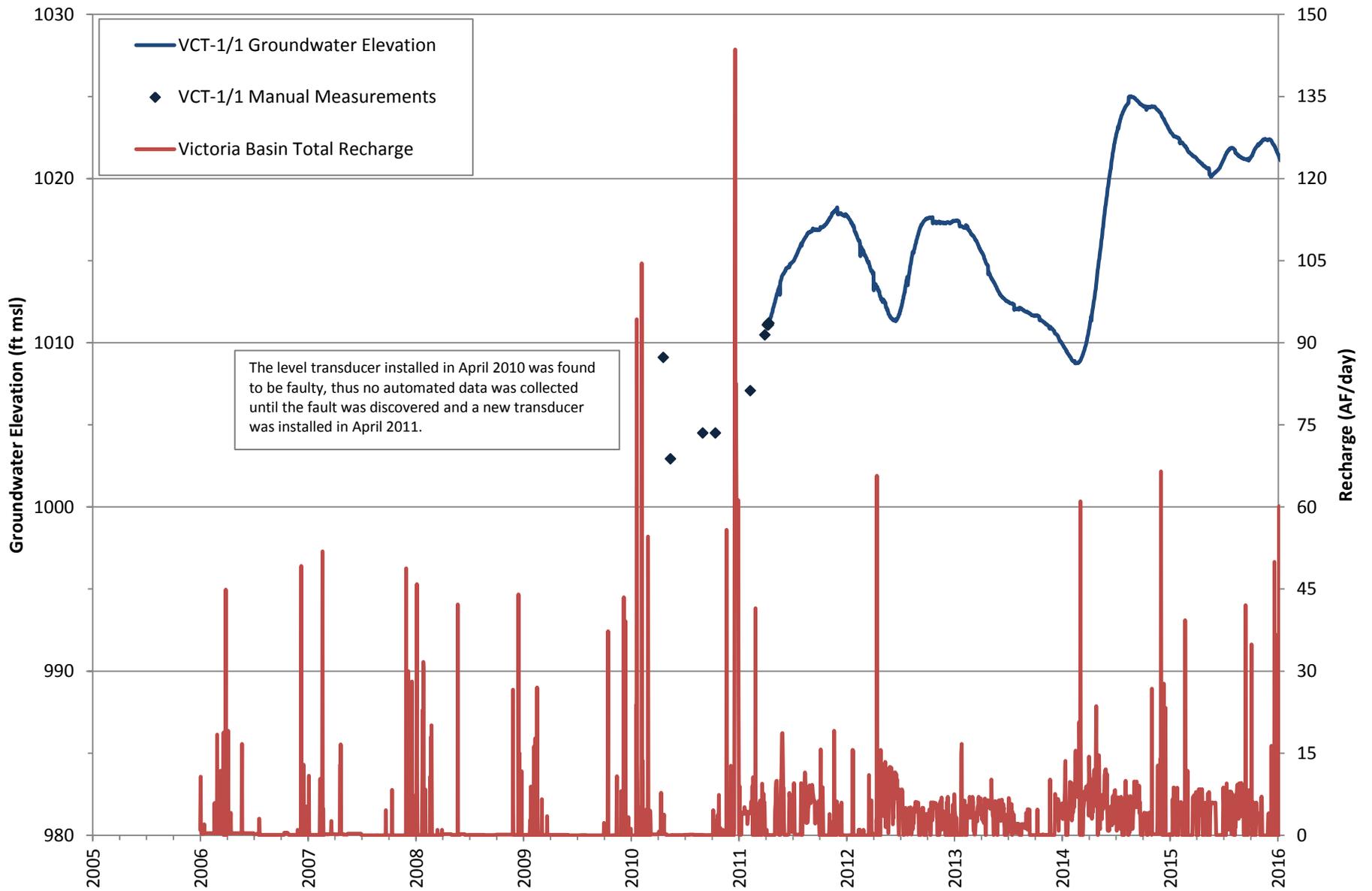
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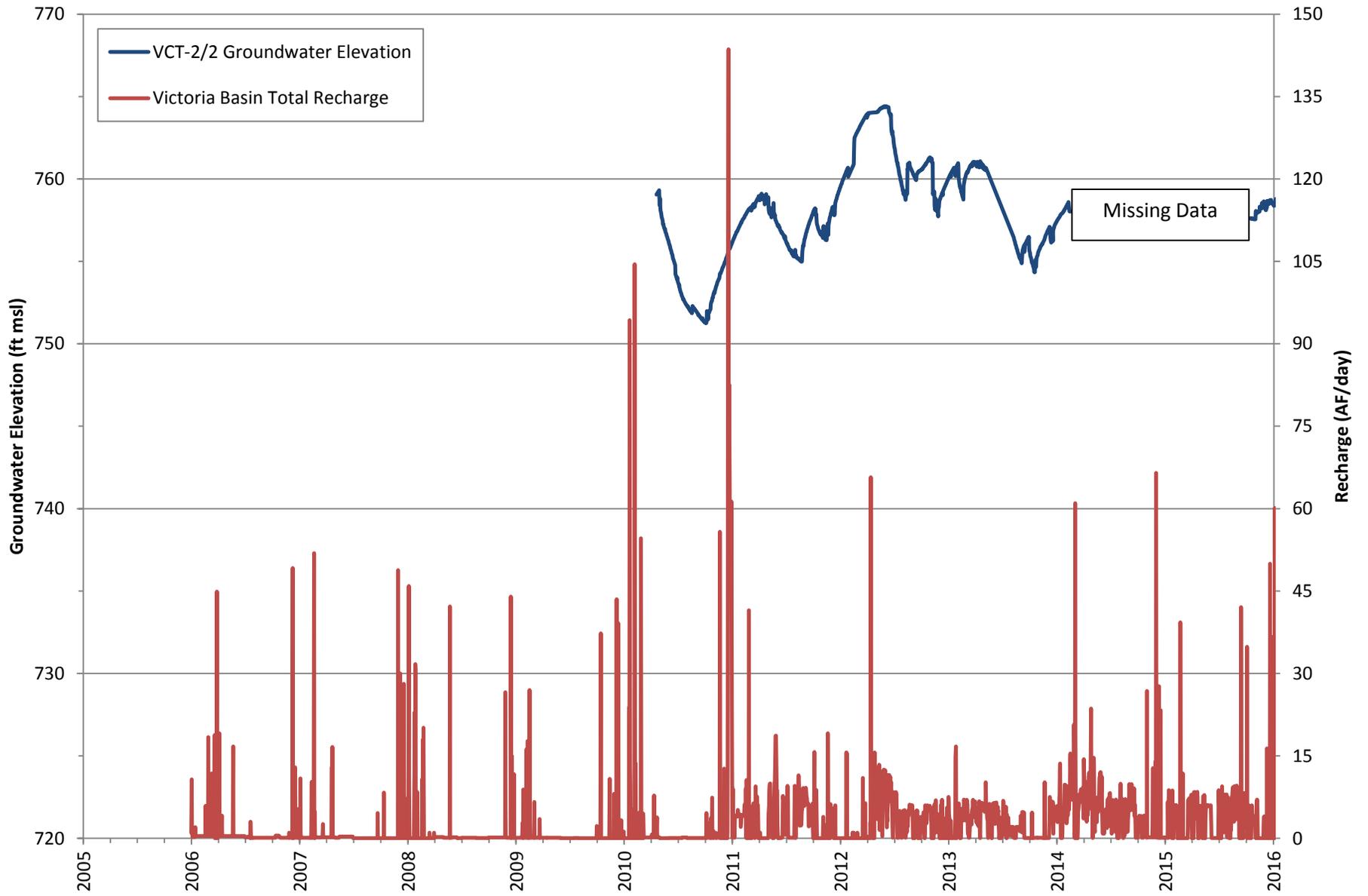
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MW TRN-1/2**



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



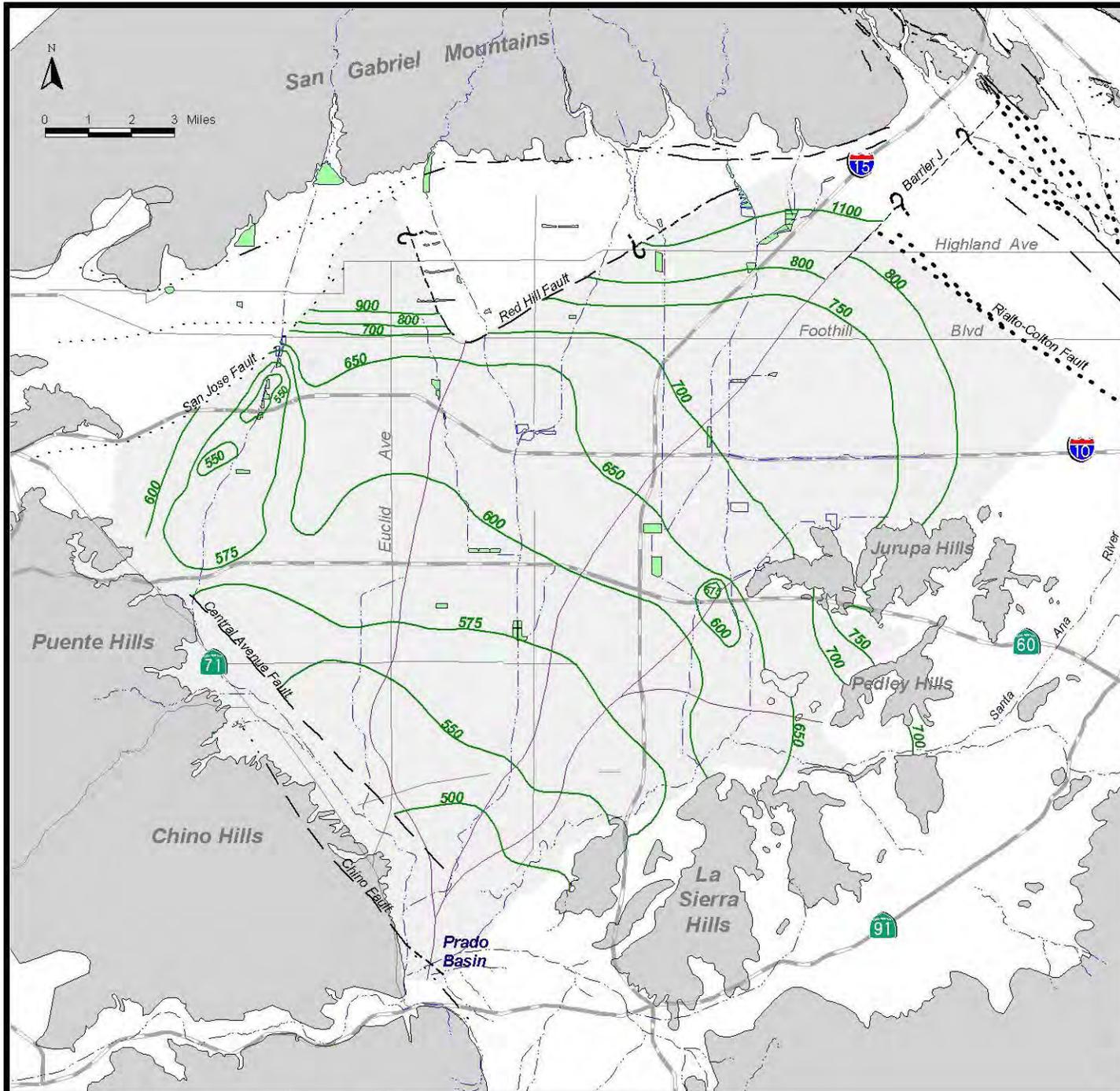
**HYDROGRAPH
MW VCT-1/1**



**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

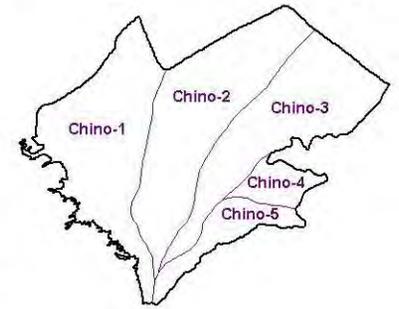
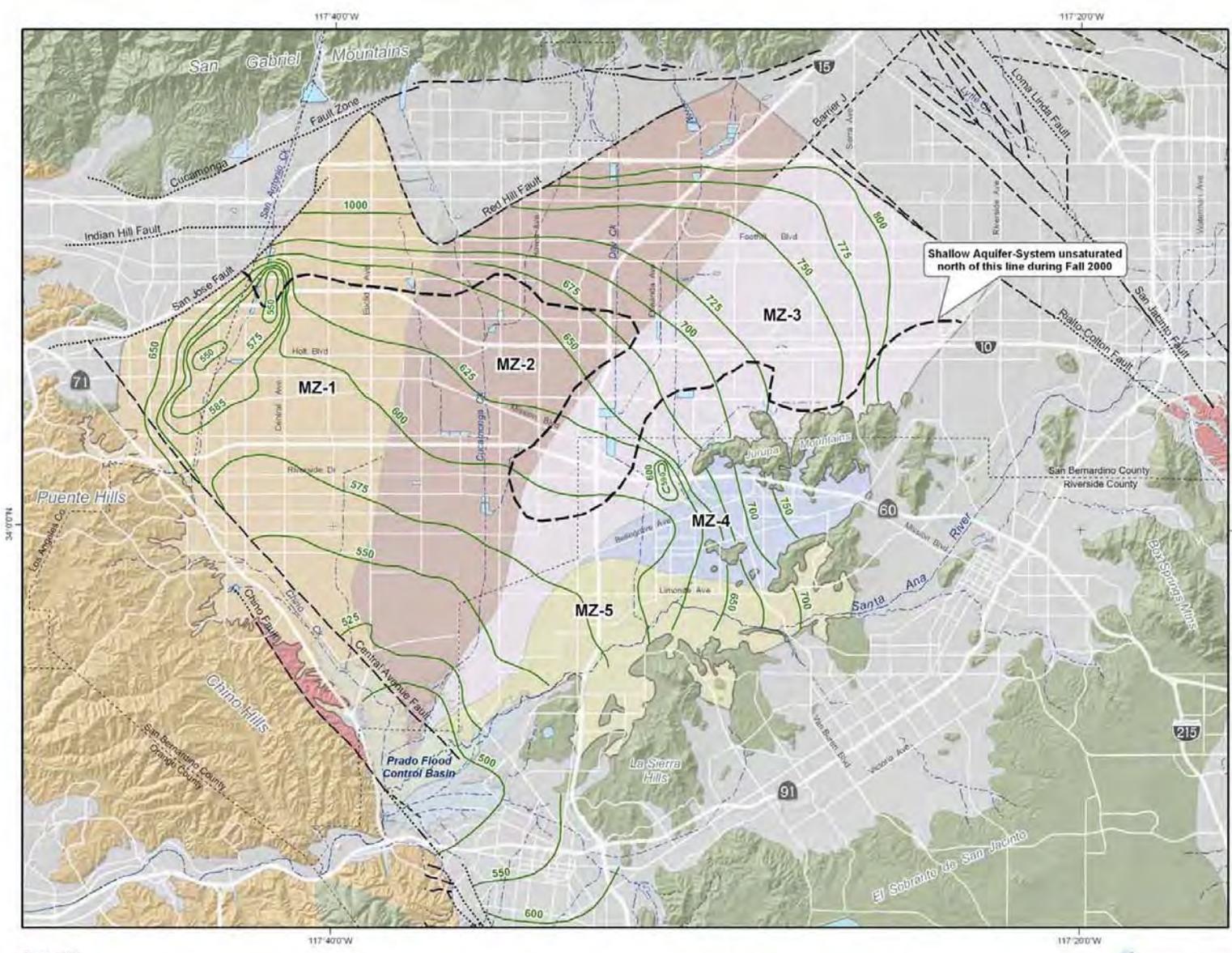


Figure 2-19
Fall 1997
Groundwater Elevation Map

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ENVIRONMENTAL, INC.

Date: August 19, 1999

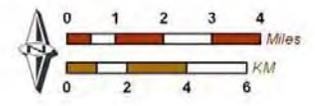


- Main Features**
- 800 Groundwater Elevation Contours -- Fall 2000 (feet above mean sea level)
 - 775
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Plio-Pleistocene Sedimentary Rocks
 - Cretaceous to Miocene Sedimentary Rocks
 - Pre-Tertiary Igneous and Metamorphic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



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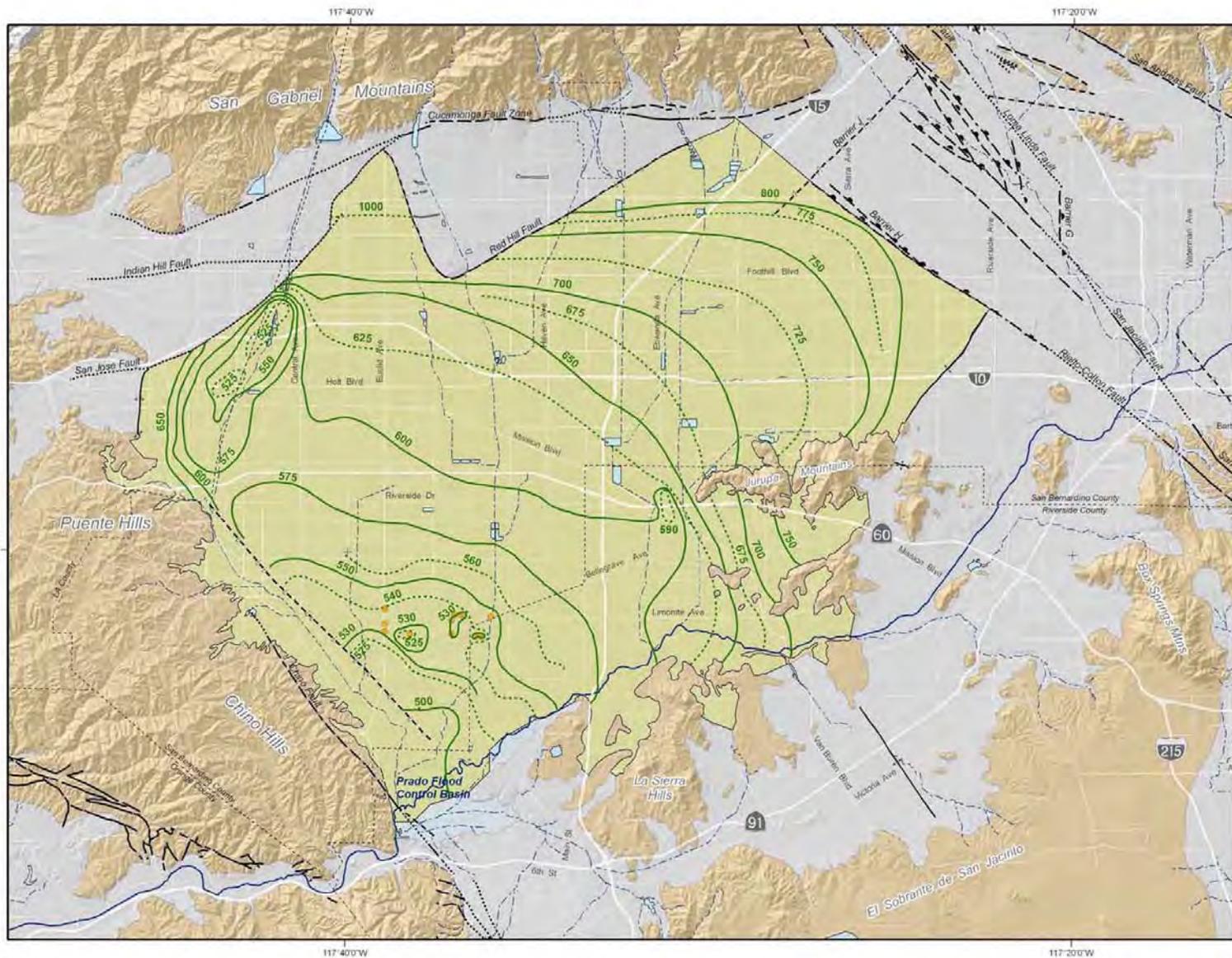
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 Update: WEL
 Date: 20050714
 File: Figure 8-03.mxd



Inland Empire
 WATER RECHARGE
 Phase II Recycled Water
 Groundwater Recharge Project

**Groundwater Elevation Map
 Fall 2000**

Figure 8-3

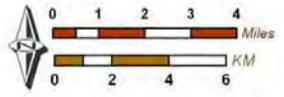


- Main Features**
- 800 Groundwater Elevation Contours (feet above mean sea-level)
 - 775
 - Chino-I Desalter Well
 - Chino Basin Hydrologic Boundary
- Geology**
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic,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



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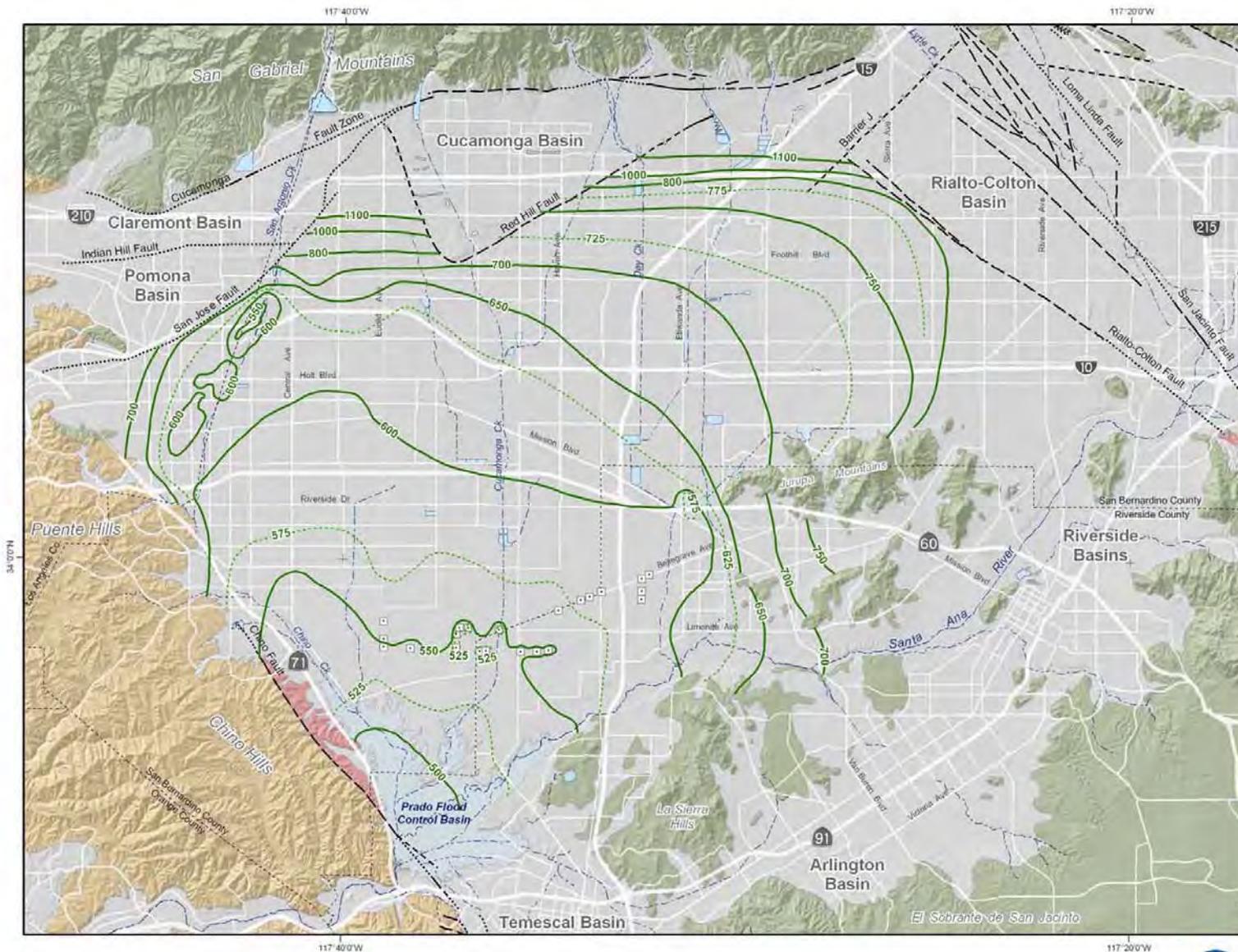
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 File: Figure_3-6.mxd




 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
 775 (feet above mean sea-level)

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

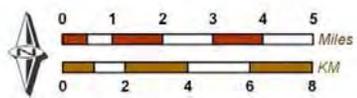
Faults

- Location Certain
- - - Location Approximate
- ⋯ Location Concealed
- - - - Location Uncertain



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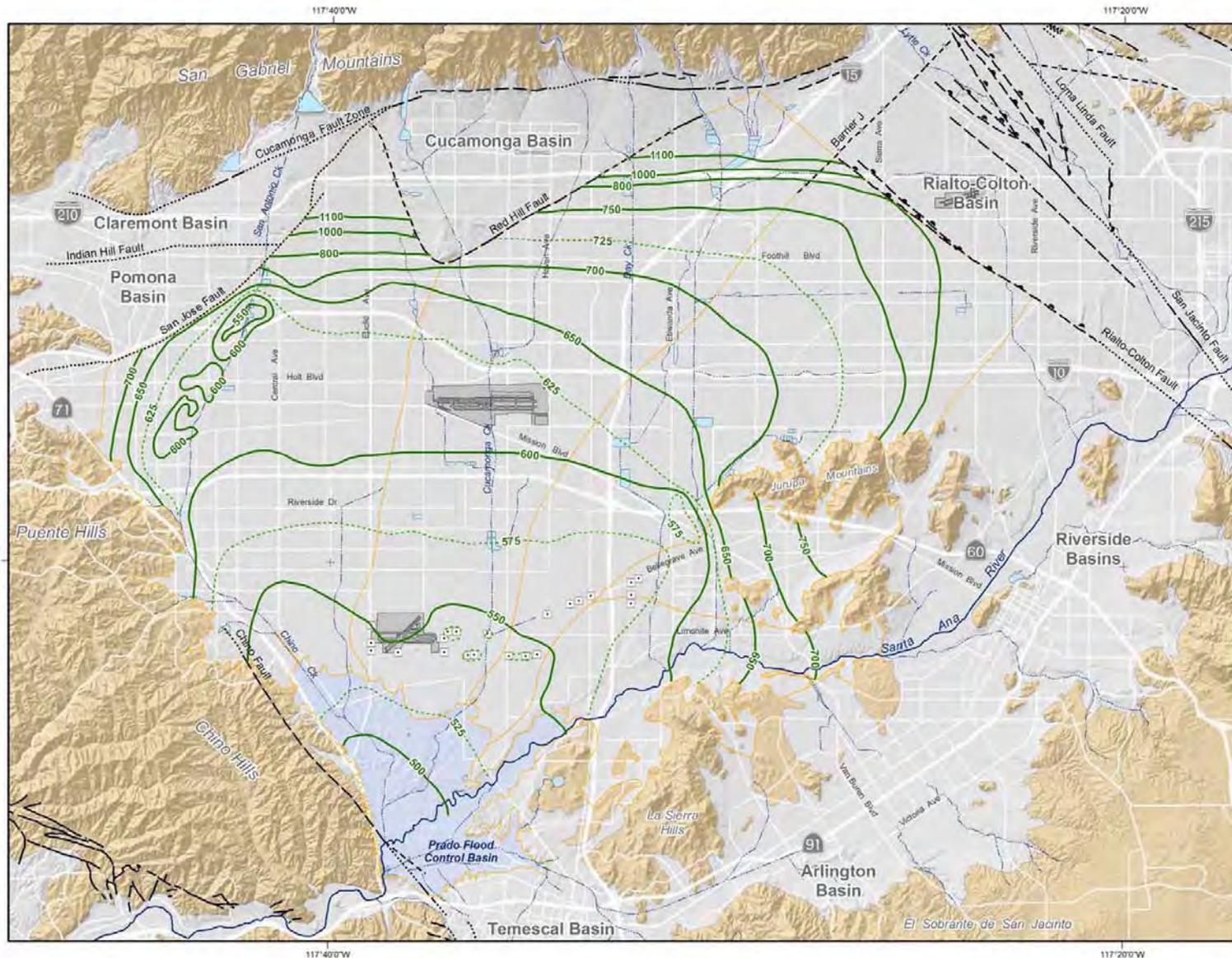
Author: ETL
 Date: 2007/05/11
 File: Figure_3-18.mxd



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

Groundwater Elevation Contours
 Fall 2006 -- Chino Basin

Figure 2-7a



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

Other Features

- Management Zone Boundary
- Chino Desalter Well
- Streams & Flood Control Channels
- Flood Control & Conservation Basins

Geology

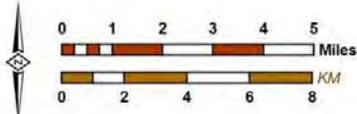
- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

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



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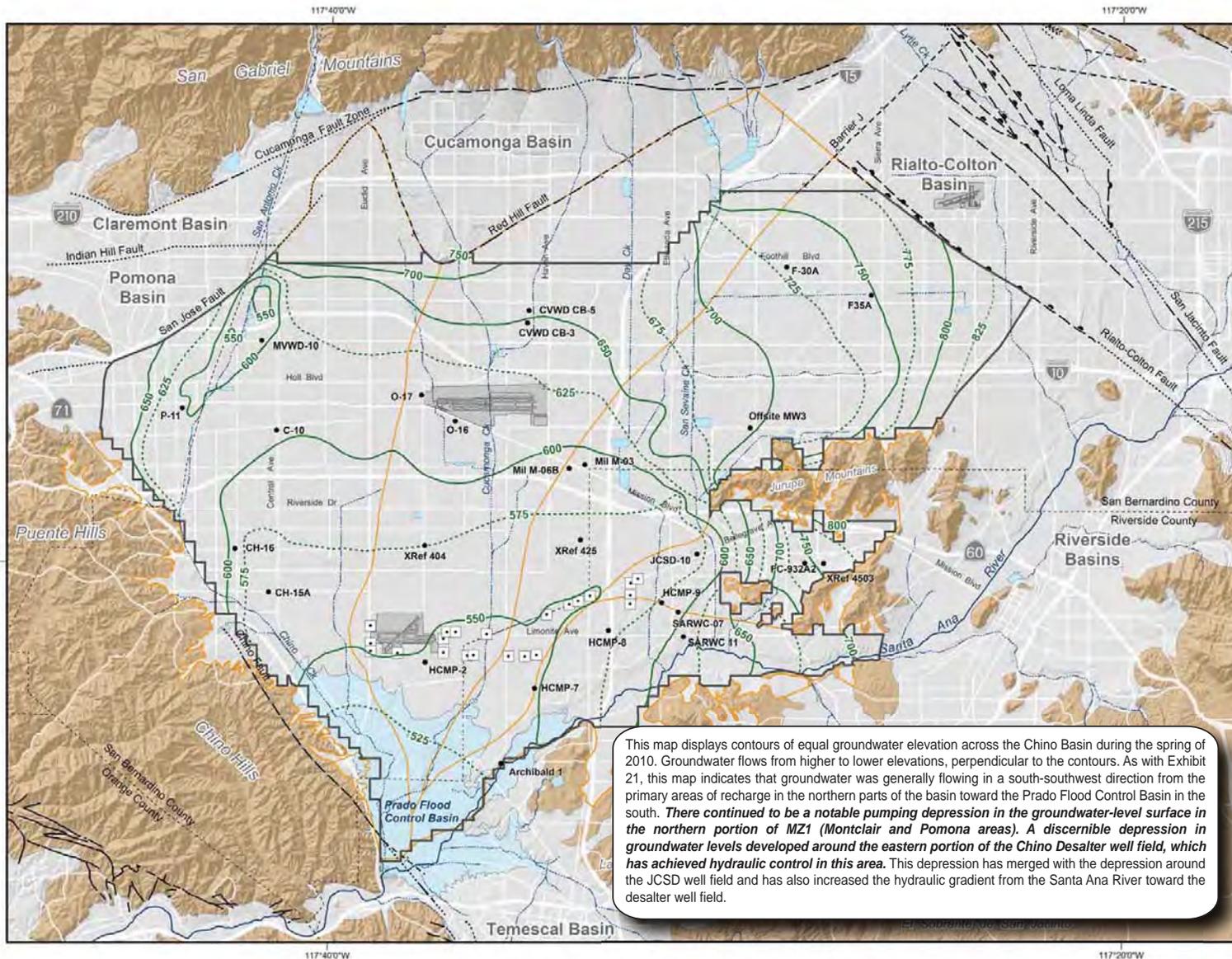
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2008 State of the Basin Report
 Groundwater Levels

Groundwater Elevation Contours
 Fall 2008 -- Chino Basin

Figure 3-19

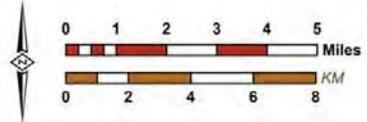


- Groundwater Elevation Contours (feet above mean sea-level)
- Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
- Well used for Time History Analysis (Exhibits 16 through 20)
- OBMP Management Zones
- Chino Desalter Wells
- Streams & Flood Control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



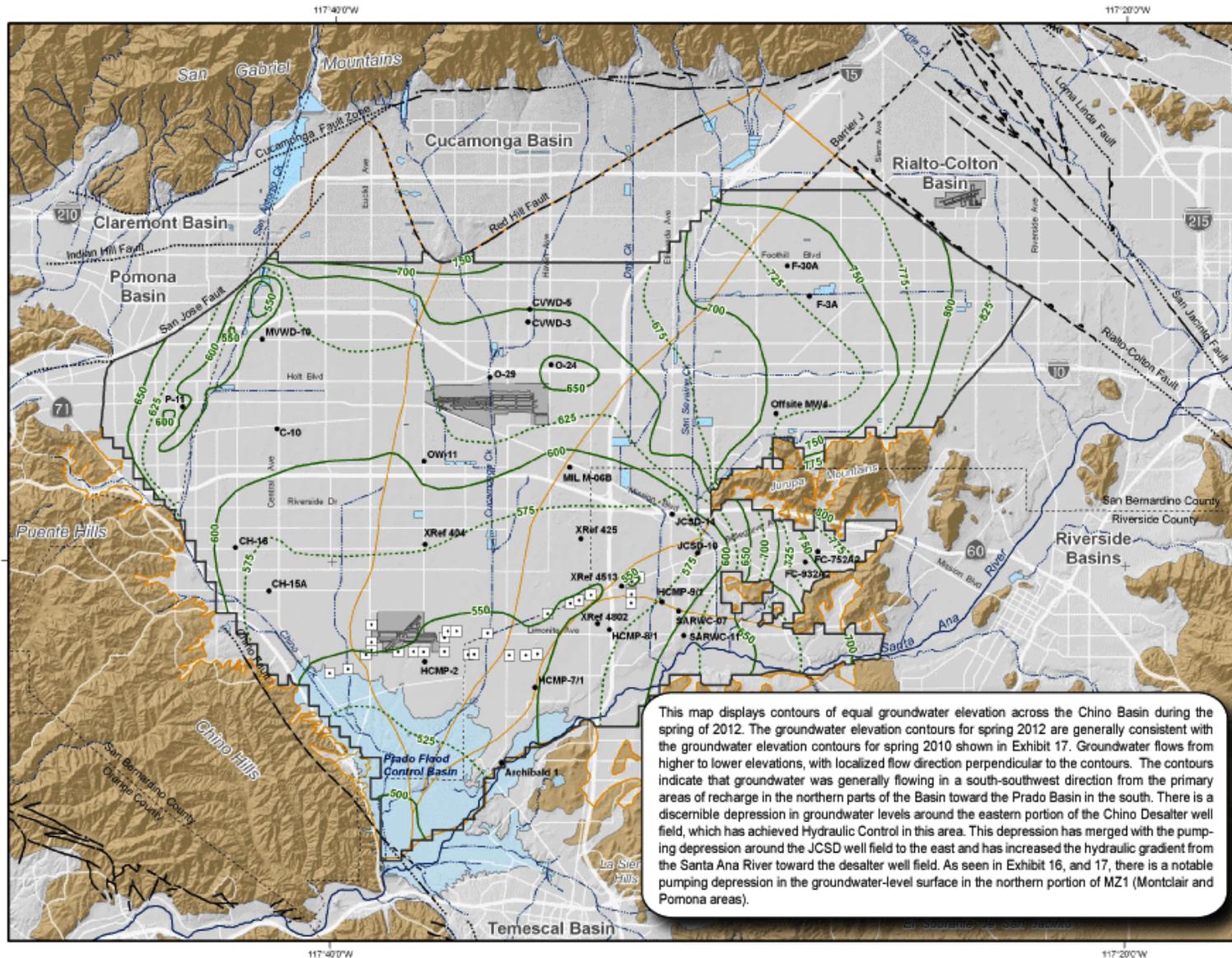
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2010 State of the Basin
 Groundwater Levels

Groundwater Elevation Contours
 Spring 2010

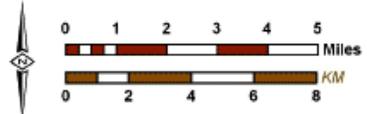


- Groundwater Elevation Contours (feet above mean sea-level)
 - Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of water level data)
 - Well With a Water-Level Time History Plotted on Exhibits 24 through 28.
 - OBMP Management Zones
 - Chino Desalter Wells
 - Streams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



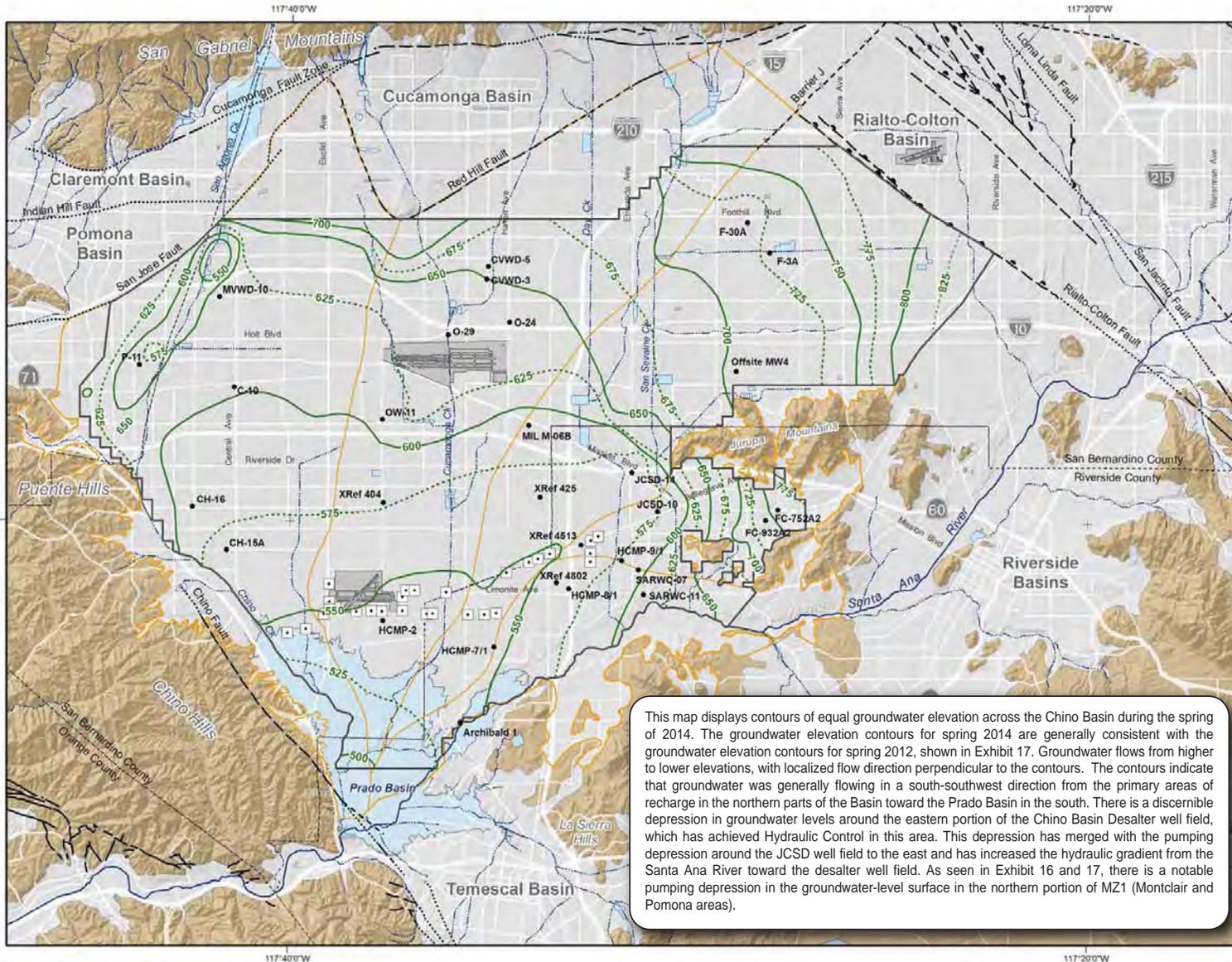
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 File: Exhib18.mxd



2012 State of the Basin
 Groundwater Levels

Groundwater Elevation Contours in Spring 2012
 Shallow Aquifer System



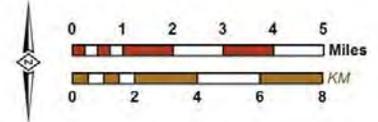
- Groundwater Elevation Contours (feet above mean sea-level)
 - Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater level data)
 - Well With a Groundwater-Level Time History Plotted on Exhibits 24 through 28
 - OBMP Management Zones
 - Chino Basin Desalter 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
 - Approximate Location of Groundwater Barrier



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Author: amalone
 Date: 6/23/2015
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2014 State of the Basin
 Groundwater Levels

**Groundwater Elevation Contours
 in Spring 2014**
 Shallow Aquifer System