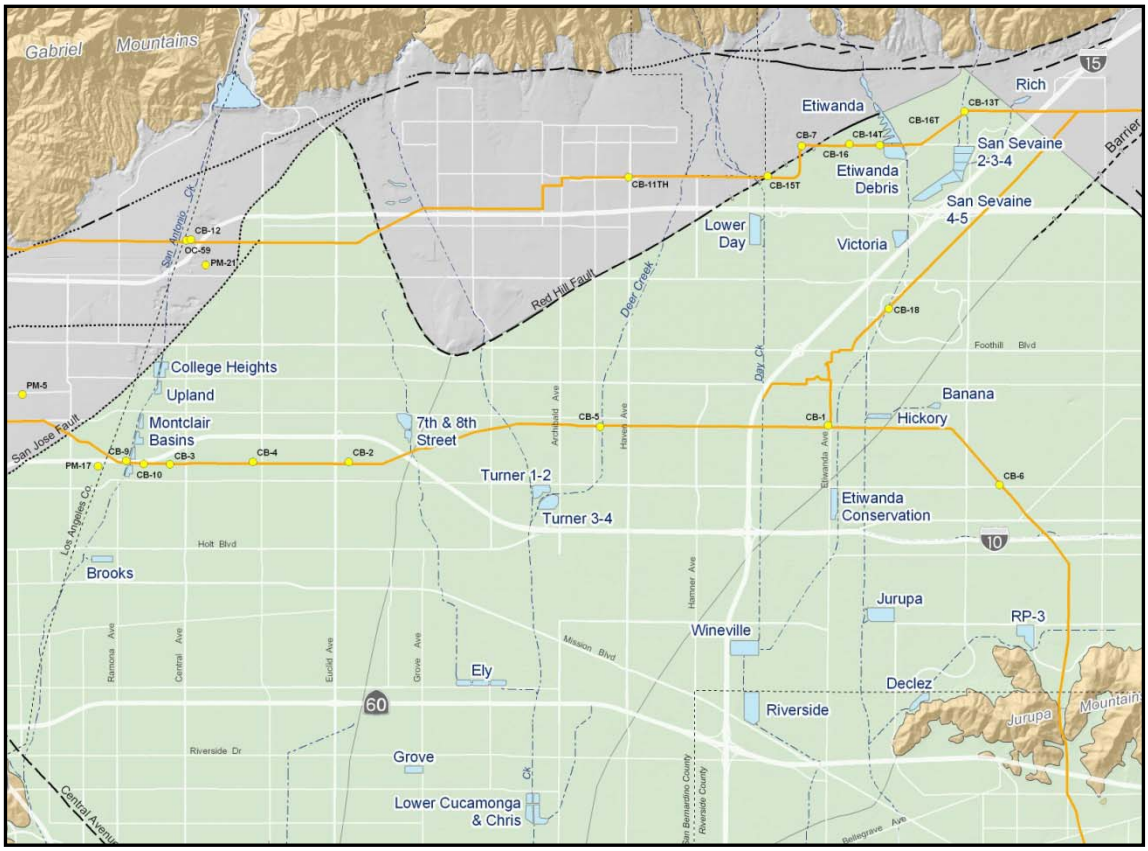
Chino Basin Recycled Water Groundwater Recharge Program

Annual Report

2008



May 1, 2009

Inland Empire
UTILITIES AGENCY*

Patrick O. Sheilds
Executive Manager of Operations

May 1, 2009

Regional Water Quality Control Board, Santa Ana Region
Attention: Mr. Gerard Thibeault
3737 Main Street, Suite 500
Riverside, California 92501-3348

Subject: Transmittal of the Annual Report for 2008
Chino Basin Recycled Water Groundwater Recharge Program

Dear Mr. Thibeault,

The Inland Empire Utilities Agency (IEUA) hereby submits the *Annual Report 2008* regarding the *Recycled Water Groundwater Recharge Program* being implemented by IEUA and Chino Basin Watermaster. This document is submitted pursuant to requirements in Order No.R8-2007-0039 and Monitoring and Reporting Program No. R8-2007-0039:

- 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. 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.

ACTIVITIES, FINDINGS, AND CONCLUSIONS

The following bullets summarize the principal activities, findings, and conclusions of the *Recycled Water Groundwater Recharge Program* for 2008:

- Highlights during the 2008 calendar year include completion of the Turner Basins Start-Up Period report, initiation of the Brooks Street Basin start up period, the end of the 8th Street Basins start-up period, and total program recharge of 13,344 acre-feet (AF) including 2,781 AF of recycled water.

- During 2008, recycled water monitoring was conducted in accordance with MRP No. R8-2007-0039. No Turbidity, Coliform, TN, TOC, DO limits were exceeded during 2008. No Regulated and Unregulated Contaminants limits were exceeded during 2008.

- No operational problems were encountered during the 2008 calendar year; therefore no corrective actions were necessary for RP-1, RP-4, recharge operations, and well sampling. No violations or suspensions of recharge operations occurred. No unit process changes occurred during 2008, therefore there was no impact on water quality. The Ely Basin compliance lysimeter failed in 2008 and an alternative monitoring plan is proposed in this annual report.

- In-aquifer blending of recycled water, diluent water, and native groundwater was evidenced at monitoring wells in the vicinity of Banana, Hickory, Brooks, and Turner basins. For Banana and Hickory Basins, blending was observed to be occurring both in the area of the groundwater mound and downgradient. Recharge using recycled water has occurred at Ely basin since 1999, thus no significant changes in water chemistry were observed nor are anticipated.

- At the end of 2008, the volume-based RWCs by basin were 8th Street 28%, Banana 36%, Brooks 8%, Ely 18%, Hickory 33%, Turner Basin Cells 1&2 12%, and Turner Basin Cells 3&4 20%. With initial maximum RWC limits (determined from their start-up periods) of Banana 36%, Ely 29%, and Hickory 36%, Turner Cells 1&2 24%, and Turner Cells 3&4 45%, these recharge sites are in compliance with maximum RWC limits.

- CBWM has certified that there was no reported pumping of groundwater in 2008 for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the 8th, Banana, Brooks, Ely, Hickory, and Turner Basins.

- Sufficient data exist to estimate arrival times of recycled water at monitoring wells BRK-1/1 (7 days) for Brooks, BH-1 (59 to 106 days) for Hickory Basin, California Speedway Infield well (198 days) for Banana Basin, and monitoring wells TRN-1 (97 days) and TRN-2 (285 days) for Turner Cell 1 and Cell 4, respectively. Other program monitoring wells have yet to indicate arrival of recycled water.

- Comparison of the pre-recharge elevation contours (2003) with the post-program start-up contours (2006) indicates the recharge program has not changed the overall groundwater flow path directions. With the exception of local recharge mounds at basins, 2008 groundwater elevations in the program monitoring wells have changed less than the contour interval (25 feet)

used in the 2006 groundwater elevation map. A new groundwater elevation contour map (2009) will be available for the 2009 Annual Report and will be used to identify potential regional changes in groundwater flow patterns since 2006.

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 fine and imprisonment.

Executed on the 1st day of May 2009 in the City of Chino.

Patrick O. Sheilds

Executive Manager of Operations

Chino Basin Recycled Water Groundwater Recharge Program

Annual Report 2008

Prepared by:

Inland Empire Utilities Agency

Andrew Campbell

Groundwater Recharge Coordinator

Bonita Fan

Sr. Environmental Compliance Officer

Reviewed and Approved by:

Chris Berch, P.E.

Manager of Operations

Inland Empire Utilities Agency

May 1, 2009

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

1 INTRODUCTION

This document is the Annual Report for Chino Basin Recycled Water Groundwater Recharge Program for the 2008 calendar year. 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 operation and maintenance of the Chino Basin Recycled Water Groundwater Recharge Program. This is a comprehensive water supply 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. The annual report summarizes recycled water quality monitoring and the affects of the recharge program on the groundwater basin. The 2008 recharge operations have previously been summarized in the four 2008 quarterly reports, which documents the recharge activities for the basins having already begun recharge with recycled water, namely 8th Street, Banana, Brooks, Ely, Hickory, and Turner Basins. Highlights during the 2008 calendar year include completion of the Turner basins start-up period report, initiation of the Brooks Street Basin start up period, the end of the 8th Street basins start-up period, and total program recharge of 13,344 acre-feet (AF) including 2,781 AF of recycled 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, June 29, 2007, and

- 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.

The Monitoring and Reporting Program (M&RP) describes the requirements for the Annual Reports. The following is an excerpt from Section VI of the M&RP:

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 down gradient 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: Chapter 2: Recycled Water Quality Monitoring and Chapter 3: Groundwater Recharge Monitoring. Supporting documents for these sections are included in the 2008 quarterly reports or are provided as appendices to this report. Chapter 2 discusses compliance with recycled water production specifications and other water quality requirements. Chapter 3 discusses the blending and movement of recycled water in the groundwater basin.

2 RECYCLED WATER QUALITY MONITORING

2.1 Water Quality Specifications

During 2008, recycled water monitoring was conducted in accordance to 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 reports submitted to the Regional Board (IEUA, 2008a, 2008b, & 2008c; and IEUA, 2009).

2.1.1 Detections and Compliance with Turbidity, Coliform, TN, TOC, DO

Recycled Water Specifications A.5 though A.9 are narrative limits in the permit with the exception of that for dissolved oxygen. The monitoring and compliance for these parameters is based on the analysis of the two separate recycled water sources, Regional Plant No. 1 and Regional Plant No. 4. Dissolved oxygen is a narrative limit in the RP-1/RP-4 NPDES permit; the limit specifies that the there should be no DO depletion in the receiving water below 5.0 mg/L. None of these limits were exceeded during 2008.

2.1.2 Detections and Compliance with Regulated and Unregulated Contaminants

Recycled Water Specifications A.1 through A.3 (Tables I, II, and III in the Order) specifies constituents with maximum contaminant levels (MCLs) and secondary MCLs. Compliance determination for these constituents are based on 4-quarter running averages. During 2008, the 4-quarter running averages were met for all MCLs and secondary MCLs, with the exception of odor (a secondary MCL).

The monitoring and compliance for 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 Reliant Energy as it represents a mixture of water from both RP1 and RP4. The exception is the sample site used to collect samples for Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5). For TTHMs and HAA5, samples collected at a recharge basin are more consistent and representative of the recycled water prior to reaching the groundwater table. Compliance is selected at a point prior to the groundwater table and has in previous quarters been selected at a lysimeter actively receiving recycled water recharge during the defined sampling time.

2.2 Title 22 Results from Nearest Potable Wells

Table 2-1 contains Title 22 drinking water quality data for the nearest potable water supply well located down gradient of recharge sites that have initiated recharge using recycled water. The Title 22 parameters included in this table are the same as those parameters tested for recycled water.

2.3 Laboratory Certifications and Test Methods

The IEUA and MWH Laboratories were utilized for the analytical testing required during the recycled water recharge program. Both of the laboratories are California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) certified, pursuant to the California Environmental Laboratory Improvement Act. The IEUA laboratory certification is valid through October 2010 and the MWH Laboratories laboratory certification is valid through January 2010.

To ensure the quality and reliability of test measurements and results, specific programs and procedures have been developed by both the IEUA and MWH Laboratories. The 2005 Annual Report contained an electronic copy the QA/QC manual from each laboratory, including analytical methodologies; this information has not changed since last reported. The 2008 Annual Laboratory QA/QC Data Summary Report was also submitted on March 30, 2009 to the Regional Board as an attachment to the RP-1/RP-4 2008 Annual NPDES Report.

2.4 Calibration Summary

The field instruments used during the recycled water field sampling included the following:

- Myron L Ultrameter II
- QED MP20 Multiparameter Meter with flow cell.

Field parameters, temperature, pH, conductivity, and total dissolved solids, were recorded during surface water sampling from recharge basins using the Myron L Ultrameter. Additionally, field parameters were collected from basin monitoring wells using a QED MP20 Multiparameter Meter. This instrument utilizes a flow-cell to allow purge water to flow through the meter chamber without exposure to the atmosphere. The QED meter monitors temperature, pH, conductivity, dissolved oxygen, and oxidation/reduction potential (ORP).

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. Meters were calibrated for instrument appropriate parameters including pH, dissolved oxygen, and conductivity. Calibration logs indicating the meter readings before and after calibration are stored in our field office for review and confirmation.

2.5 Violations, Suspensions, and Corrective Actions

No operational problems were encountered during the 2008 calendar year, therefore no corrective actions were necessary for the following: RP-1, RP-4, recharge operations, lysimeter and monitoring well sampling. No violations or suspensions of recharge operations occurred during the 2008 calendar year.

2.6 Unit Process Changes and Anticipated Impact on Water Quality

In late July 2008, RP-4 began receiving influent flows of greater than 7 MGD. Operating the facility at the upgraded capacity did not have an impact on water quality. RP-4 experienced shutdowns throughout the year due to the expansion project to treat a maximum of 14 MGD, which is currently still in progress. The shutdowns at RP-4 had no impact on water quality, as RP-1 recycled water was able to supplement flows when RP-4 recycled water was reduced or not available.

2.7 Summary of Chemical Usage

The summary of treatment chemicals used on a monthly basis at RP-1 and RP-4 during the 2008 calendar year is presented in Table No. 2-2.

3 GROUNDWATER RECHARGE MONITORING

3.1 Summary of Recharge Operations

Groundwater recharge using recycled water has been initiated in 8th, Banana, Brooks, Ely, Hickory, and Turner Basins. During 2008, 2,781 AF of recycled water was recharged using these basins. Of this volume, the majority was recharged in basins undergoing their start-up periods (8th Street and Brooks) and less was recharged in basins with established recycled water contribution (RWC) limits. A discussion of basin RWC limits is included in this chapter. The start-up period for 8th Street Basin which began in September 2007 ended in August 2008. Recharge volumes, including diluent and recycled water volumes, are presented in the quarterly reports (IEUA, 2008a, 2008b, 2008c, and 2009), but are repeated in this chapter's discussion of RWC management plans. Appendix A of this report contains the monthly groundwater recharge summaries for all sites in the recycled water groundwater recharge program.

3.2 In-Aquifer Blending of Recycled Water

Section 4.B.3.b of the M&RP 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 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 groundwater and the recycled water used for recharge, such as EC (electrical conductivity), TDS (total dissolved solids), and chloride (Cl).

While 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 beneath a recharge site. In-aquifer blending occurs as the accumulating water sources comprising the mound dissipate away from the basin. As discussed in the following subsections, blending is evidenced by concentration changes in the monitoring wells located downgradient from the recharge sites. The volume-based percentage expresses a reasonably anticipated blending as recharge moves towards distant monitoring wells. Blending however, will likely be greater as recharge also blends with groundwater in storage.

3.2.1 Evidence of Blending Based on Volume

The 2008 recharge volumes by water type are presented in Appendix A and in the historical recharge portion of the RWC Management Plans (Appendix C). 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 of diluent water and recycled water batches do support a level of blending approaching that of the RWC maximum without applying any beneficial credit for additional blending with water already in groundwater storage. At the end of December 2008, the volume based RWC for basins having initiated recharge using recycled water were as follows:

Basin	60-month Running Average RWC
8th Street	28%
Brooks	8%
Banana	36%
Ely	18%
Hickory	33%
Turner 1&2	12%
Turner 3&4	20%

Maximum RWC and RWC management are discussed in more detail later in this chapter. These volume-based percentages express reasonably anticipated blending as recharge moves towards distant monitoring wells.

3.2.2 Evidence of Blending Based on Water Quality

Time series graphs of EC, TDS, and Cl were prepared for monitoring wells adjacent the recharge sites to help identify if blending is occurring within the aquifer. The graphs depicting trends in EC, TDS, and Cl are presented in Appendix B. In general, background groundwater concentrations of EC, TDS, and Cl 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 concentration changes persist. The degree of blending can be estimated based on the proportional relationship of EC given the general EC of recycled water and the background groundwater EC. For wells having EC increases associated with recycled water recharge, Table 3-1 provides estimates of the maximum percent of recycled water observed at a given well in the past year.

For the 8th Street basin area, the monitoring wells at the basin (8TH-1/1 and 8TH-1/2) have yet to show variations in EC, TDS, or Cl that can be attributed to recharge using recycled water. They show generally decreases in EC and TDS which is likely related to up gradient recharge of lower EC and TDS water. The 8th Street basin began recharge using recycled water in its northern half of its northernmost basin (8th Street Basin 1) in September 2007 and fairly continuously through 2008 with interrupts for storm water capture. Recycled water may not occur at the monitoring well 8TH-1 unless recharge with recycled water takes place in the southernmost 8th Street basin (8th Street Basin 2). Monitoring well 8TH-2, located

approximately 2,500 feet farther downgradient from 8TH-1 shows a 200-mg/L rise and fall of TDS, but the fluctuation began prior to recycled water recharge and may represent a seasonal fluctuation. The deep monitoring well 8TH-2/2 also shows seasonal fluctuations. Additional monitoring is required to identify arrival of recycled water at the 8th Street Basin monitoring wells.

In the Banana and Hickory basins area, monitoring well BH-1 casing 2 (BH-1/2) adjacent to Hickory basin has noticeable variations in EC, TDS, and Cl (100 to 150-mg/L TDS difference) that appear to be attributed to cycles of recycled water recharge at Hickory basin. These concentrations return to background levels following periods of recycled water recharge, which is an indication of groundwater flow moving the recycled water recharge away from the site. The California Speedway Infield well south of Banana basin shows a gradual concentration increase (100-mg/L TDS difference) since the initiation of recycled water recharge, indicating gradual blending as groundwater moves away from the basin (compare with the 150 to 200-mg/L variation at the basin). As presented in Table 3-1, the groundwater mound at BH-1/2 during 2008 reached a high of approximately 31% recycled water and groundwater at the California Speedway Infield well located downgradient of Banana and Hickory reached a high of approximately 34% recycled water. The data show that blending is occurring in the aquifer downgradient of the Banana and Hickory Basins.

For the Brooks Street 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 Cl concentrations at BRK-1/1 were observed, showing an increase of 100 mg/L TDS through 2008. No significant concentration changes were observed in the deeper casing at BRK-1 (BRK-1/2) nor at well BRK-2. As presented in Table 3-1, the groundwater mound at the recharge basin (BRK-1/1) during 2008 reached a high of approximately 59% recycled water. The data show that blending is occurring in the aquifer beneath Brooks Street Basin.

For the Ely basin area, monitoring wells are located at the basin (Philadelphia well) and downgradient (Walnut well and the Riverside well). Recycled water has been recharged at Ely basin since 1999. TDS of groundwater at the Philadelphia and Riverside wells were relatively constant at 200 and 300 mg/L, respectively. EC, TDS, and Cl at the Walnut well fluctuate at higher concentrations (TDS just below 600 mg/L), but does not appear to be linked to recycled water recharge activities at Ely Basin. Groundwater in the area directly south of Ely basin (south of the 60 freeway) lies on the northern perimeter of the Chino Basin area having high TDS-high nitrate concentrations. Groundwater in this immediate area has historically had TDS concentrations between 500 and 1,000 mg/L as is typical of lands in the Chino Basin with irrigation history (CBWM, 2003).

For the Turner basin area, the monitoring well TRN-1 at the basin (Turner cell 1) has noticeable variations in EC, TDS, and Cl (100 to 200 mg/L for TDS) that can be attributed to cycles of recycled water recharge. These concentrations decrease towards background levels following periods of recycled water recharge, which indicates groundwater blending and movement away from Turner Basin. Monitoring well TRN-2 (adjacent Turner cell 4) shows a gradual and steady increase in concentration of

about 125 mg/L for TDS through 2007 and stabilized in 2008. This steady trend and small difference in concentration change at TRN-2 indicates that recharge from cell 4 is more regionally distributed when it reaches the groundwater table. This is consistent with the slower recharge rates observed at cell 4, and supports more immediately aquifer blending occurring beneath Turner cell 4 in comparison to Turner cell 1. As presented in Table 3-1, the groundwater mound within the recharge site at TRN-1/2 and TRN-2/2 reached a high of approximately 57% and 51% recycled water respectively. The data show blending is occurring in the aquifer beneath the Turner Basins. Additional data for future monitoring are required to assess the degree of blending downgradient from Turner Basins. Downgradient Ontario wells 25 and 29 do not show significant changes in EC, TDS, and Cl correlatable with groundwater recharge using recycled water

3.3 RWC Management Plan

The RWC Management Plan is a necessary tool to demonstrate how IEUA and CBWM will meet a recharge site's maximum RWC following a site's startup period. Small excursions above the initial RWC limit can occasionally occur in the 60-months following the start-up period process for basins with limited diluent water availability or basins with limited historical diluent water recharge. Each recharge site's RWC Management Plan is updated and presented annually to reflect the past year's operations. Appendix C contains the RWC Management Plans for Banana, Ely, and Hickory basins, as well as Turner Basin Cells 1&2 and Turner Basins Cells3&4. Appendix C does include a RWC history of the 8th Street and Brooks Street basins, but without a maximum RWC limit. Until the RWC limit is determined for these basins, the RWC projections are shown maintained below 25%. The 8th Street Basin and Brooks Street Basin Start-Up data evaluation are in progress.

Each basin's plan was developed from historical recharge of diluent water (imported and storm water) and recycled water, and projections of diluent water and recycled water. Diluent water projections are based on the historical averages of diluent recharge for the months January through December. There is no attempt to adjust the projections to forecast storm and imported water availability. With each subsequent year, diluent projections will be modified by averaging in the past year's data. Within these limits of historical recharge and diluent projections, planned recycled water deliveries are forecasted to maintain the volume-based RWC with the maximum RWC limit. The RWC management plans contain the previous 60 months of recharge and projections for the next 60 months. The volume-based RWC is a calculation of the percent recycled water infiltrated based on a 60-month rolling average.

At the end of 2008, the volume-based RWC were 8th Street 28%, Banana 36%, Brooks 8%, Ely 18%, Hickory 33%, Turner Basins Cells 1&2 12%, and Turner Basin Cells 3&4 20%. With initial maximum RWC limits (determined from their start-up periods) of Banana 36%, Ely 29%, and Hickory 36%, Turner Cells 1&2 24%, and Turner Cells 3&4 45%, these recharge sites are in compliance with maximum RWC limits. Based on future projections of diluent recharge and RWC Management Plans, recycled water deliveries for each basins can be made and continue to be within RWC limit compliance.

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 2008 quarterly reports, CBWM has certified that there was no reported pumping of groundwater in 2008 for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the Brooks, Hickory, Banana, Turner, 8th Street, and Ely Basins. In fact, there are no production wells within the buffer zones of these aforementioned recharge sites. The California Speedway Infield Well (not a potable use well) is located at about the 6 month travel time from Banana Basin (see Section 3.4.1).

3.4.1 Recharge Water Arrival Times

As documented in the 2007 Annual Report (IEUA, 2008d), sufficient data exist to estimate arrival times of recycled water at monitoring wells 8TH-2/2 for 8th Street Basin, BH-1 for Hickory Basin, California Speedway Infield well for Banana basin, and monitoring wells TRN-1 and TRN-2 for Turner cell 1 and cell 4 respectively.

Travel time from 8th Street Basin through the vadose zone and along groundwater flow paths to monitoring well 8TH-2/2 is preliminarily estimated to be approximately 402 days based on a stepped increase in TDS observed in early October 2008. Recharge began at 8th Street Basin on November 7, 2007. Continued observation of EC, TDS, and Cl will be used to verify this preliminary assessment.

Travel time from Hickory Basin through the vadose zone and along groundwater flow paths to monitoring well BH-1 were documented at approximately 59 days, while travel time from Banana Basin to California Speedway Infield Well was estimated at approximately two years (2008d). An additional year of data collection in 2008 were used refined this travel time to approximately 2.3 years (848 days) based on a stepped increase in EC, TDS, and Cl concentrations beginning between October 9, 2007 and January 7, 2008. The modeled travel time to the California Infield well was 682 days (CH2MHill). Other Banana-Hickory monitoring wells have not yet shown variations in EC, TDS, and Cl that could signal arrival of recycled water at these well sites.

Travel time from Brooks Basin through the vadose zone to the shallow casing of mound monitoring well BRK-1 located at the basin was observable from EC changes to be approximately 7 days. Recharge began on August 6, 2008 and a 200 µmhos increase was observed in this mound monitoring well by August 13. Recycled water had not been observed at the deeper casing of BRK-1, nor at downstream monitoring well BRK-2.

Travel time from Turner Basins through the vadose zone to groundwater was documented at 97 days and 285 days to monitoring wells TRN-1 and TRN-2, respectively (IEUA, 2008d). Original modeling (CH2MHill, 2003) for the Turner recharge site predict a 109-day travel time to these two wells. Recycled water continues to be detected at TRN-2 (as elevated EC) through the end of 2008 despite the end of the intense start-up recharge in June 2007. This highlights the slow migration of recharge water from Turner Basins 3&4. At TRN-1, start-up recycled water recharge had migrated away from this location by July 2008. Other Turner Basin monitoring wells have not yet shown variations in EC, TDS, and Cl that could signal arrival of recycled water at these well sites.

3.4.2 Leading Edge of Recycled Water in Aquifer

Using groundwater elevations and EC data, the leading edge of groundwater containing a component of recycled water is past the first monitoring wells located downgradient of Banana, Brooks, Hickory, and Turner Basins. There is a tentative observation of recycled water at the downgradient monitoring well 8TH-2/2 associated with 8th Street Basin. Production wells used for monitoring near these basins do not show any increases in EC above the background concentrations that could be associated with recycled water recharge.

3.4.3 Tracer Test Results

The Brooks Basin tracer test was initiated in 2008 and continues in 2009 using protocols approved by CDPH. The tracer includes sulfur hexafluoride and enriched borate and is being coordinated with the assistance of UC Santa Barbara professor Dr. Jordan Clark. Results should be available for the 2009 Annual Report.

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 fall 2000, 2003, and 2006, and are presented in Appendix D. The next scheduled regional contour map will be prepared by CBWM in 2009. Comparison of the pre-recharge elevation contours with the post-program start-up contours and

hydrographs (discussed in the following section) indicate the recharge program (initiated in 2005) has not changed the overall groundwater flow directions. With the exception of local recharge mounds at basins, 2008 groundwater elevations in the program monitoring wells have changed less than the contour interval (25 feet) used in the historical groundwater elevation map. 2008 and older water level data from non-program wells were reviewed from the CBWM water level database for select wells in the vicinity of the active basins. Review of these data verify relative annual changes in water levels are less than 25 feet. The largest non-mound well multiyear water level change was observed for a well in Montclair downgradient of Brooks Basin, and was approximately 25 feet.

A new groundwater elevation contour map (2009) will be available for the 2009 Annual Report and will be used to identify potential regional changes in groundwater flow patterns since 2006. Groundwater flow directions have not changed significantly as the recharge program has not reached the maximum annual recharge volumes modeled and not all permitted recharge sites are operational. A contour map of the modeled depth to groundwater is also included in Appendix D.

3.5.2 Water Level Trends in Monitoring Wells

Appendix E contains hydrographs of groundwater elevations from the monitoring wells constructed for the recharge program. Plotted on the hydrographs is the daily recharge for the nearest recharge site(s). These hydrographs can be used to identify local increases water elevations and their correlation with local recharge. Generally these wells are mound (near basin monitoring wells) or the next monitoring well downgradient of the recharge site.

The 2008 hydrographs for the 8th Street Basin mound well (8TH-1) and downgradient well (8TH-2) show relatively stabile water levels throughout the year with little seasonal variation. This is a change from late 2007 when these wells both rose sharply 7 feet with the initiation of recycled water and winter storm recharge

The 2008 hydrographs for the Brooks Street Basin mound well (BRK-1) shows a decline of about 8 feet despite initiation of recycled water recharge and the rapid arrival (7days) for water to pass through the vadose zone. The hydrograph of the deeper casing of BRK-1 and the downgradient monitoring well (BRK-2) show groundwater elevations to trend downward 15 to 25 foot through 2008. Intermittent weekly fluctuations of water elevations in these wells suggest groundwater pumping is the predominant influence on water elevation in the area and not Brooks Basin recharge.

The 2008 hydrographs for the mound monitoring well (BH-1) in the vicinity of Banana and Hickory Basins show a generally decreasing water elevation trend of 3 to 5 feet per year with 5 to 7 foot seasonal fluctuations 3 to 4 months out of phase with recharge. Impacts on water elevations due to Banana-Hickory basins' recharge is more likely muted and delayed due to the over 400-foot depth to the water table at this location. The decreasing water elevations suggest recharge in this location is less than groundwater extraction.

The 2008 hydrographs for the two Turner Basin mound monitoring wells show 20 feet seasonal increase associated with yet delayed about 3 months from peaks in recharge. The annual low water elevations in September of 2007 to September 2008 show only a slight increase of approximately 3 feet, suggesting recharge and extraction in the immediate vicinity of this well are approximately in balance.

3.6 Alternate Monitoring Plan for Ely Basin

The Ely Basin 3 east lysimeter cluster 15-foot lysimeter was recommended as the compliance monitoring point for recharge with recycled water in the Ely Basin Start-Up Report (IEUA and CBWM, 2006). During the first quarter of 2008, the 15-foot deep compliance lysimeter at Ely Basin failed. With its failure, IEUA began monitoring and reporting the 10- and 25-foot deep lysimeters at Ely Basin in order to develop an alternative monitoring plan. As documented in the Ely Basin start-up report, the TOC removal efficiencies were 75%, 76%, and 49% for the 10, 15, and 25-foot lysimeters respectively. Also documented were TN removal efficiencies of 59%, 52%, and 50% for the 10, 15, and 25-foot lysimeters respectively.

Table 3-2 lists the TOC and TN data from Ely Basin surface water and the 10-foot and 25 foot lysimeters collected during 2008. These data were collected only during and for two weeks following recycled delivery to Ely Basin. During 2008, Ely Basin recharge totaled 2,970 AF and consisted of 759 AF of recycled water, 1,572 AF of storm water, and 639 AF of treated groundwater. Continuous blending of these three sources and the generally low Ely Basin infiltration rates makes it impractical to use an EC signature to track recycled water flow to the target lysimeters. Thus for comparison purposes, the 2008 values were averaged rather than paired to evaluate TOC and TN removal efficiencies. These averages provide a useful benchmark for comparison with the data presented in the 2006 Ely Start-up Report.

The average 2008 TOC concentrations show TOC removal efficiencies of 73% and 68% for the 10 and 15-foot lysimeters, respectively. These values are very similar to the TOC removals reported in 2006, but with an increase in TOC removal efficiency at the 25-foot lysimeter. The averaged 2008-sampled TN concentrations provide TN removal efficiencies of 33% and 86% for the 10 and 15-foot lysimeters respectively. These values are much lower for the 10-foot and much higher for the 25-foot lysimeters than reported in 2006. The reason for the lower TN removal differences at 10 feet is the anomalously high TN in the basin and lysimeters in October 2008. As indicated by the graphs at the bottom of Table -2, the higher TN was not sourced from the RP-1 recycled water discharge to the basin as it remained relatively consistent though the year and was less than the observed surface water values. Although treated groundwater was also discharged to the basin in October, it did not occur until one week after the first detection of the anomalously higher TN. Of note, the 25-foot lysimeter did not provide sufficient sample during this period. Removal of the October values from the TN averages provides TN removal efficiencies of 59% for the 10-foot lysimeter, which is consistent with the 2006 results.

Due to the failed 15-foot compliance lysimeter and demonstration of sustained TOC and TN removal efficiencies, an alternate monitoring program is proposed here for Ely basin. Similar to the alternative

monitoring plan approved for Turner Basin, IEUA proposes to monitor recycled water from the distribution system and apply a correction factor for TOC and TN compliance. The correction factors proposed are those demonstrated in 2006 for the 15-foot lysimeter: 76% for TOC and 52% for TN. The alternative sampling location is the RP-1 recycled water effluent sampling location used for NPDES compliance.

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.

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.

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, 2008a, Chino Basin Recycled Water Groundwater Recharge Program Quarterly Monitoring Report January through March 2008.

Inland Empire Utilities Agency, 2008b. Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report April through June 2008.

Inland Empire Utilities Agency, 2008c, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report July through September 2008.

Inland Empire Utilities Agency, 2008d, Chino Basin Recycled Water Groundwater Recharge Program, 2007 Annual Report.

Inland Empire Utilities Agency, 2009, Chino Basin Recycled Water Groundwater Recharge Program. Quarterly Monitoring Report October through December 2008.

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.

TABLES

Table 2-1
Title 22 Results for Nearest Potable Wells

	Sample Location	Date	TOC (mg/L)	Total Coliform (MPN/100mL)	pH	EC (µmho/cm)	TDS (mg/L)	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)	Cl (mg/L)	Hardness (mg $CaCO_3$/L)	Na (mg/L)	SO_4 (mg/L)	NH_3-N (mg/L)	NO_2-N (mg/L)	NO_3-N (mg/L)	Nitrogen, Total (mg/L)	TKN (mg/L)	Alkalinity (mg $CaCO_3$/L)	Dissolved Oxygen (mg/L)
Banana & Hickory	City of Ontario Well No. 20	4/3/08	0.5	<1.1	7.90	330	204	<25	<3	3.7	0.4	<0.05	3	<1	<0.5	2	<0.25	<0.2	0.36	3	5	167	14	6	<0.1	0.19	1.6	1.8	<0.5	162	7.3
		7/17/08	<0.1	<1.1	6.98	340	230	<25	<3	3	0.5	<0.05	8	<1	<0.5	1	<0.25	<0.2	0.31	1	7	165	14	6	<0.1	<0.01	1.8	2.2	<0.5	160	7.8
		10/22/08	0.2	<1.1	7.29	350	206	41	<3	24.4	0.4	<0.05	<15	8	<0.5	1	<0.25	<0.2	0.11	8	5	164	13	5	<0.1	<0.01	1.8	1.8	<0.5	157	8.9
7th & 8th Street	City of Ontario Well No. 4	5/20/04						84	<3	150000		<0.05	3600	300		1	<0.25		20	41						<0.01					
		6/7/04														2											12.2				
		6/8/04														1											12.0				
		6/9/04														1											11.7				
		6/10/04														1											12.0				
		6/11/04														1											11.5				
		7/14/04			7.50	400	340	780	<3	<0.5		0.1	<15	<1		1	<0.25		0.82	<1	25	190	19	28		<0.01	12.0			130	
		8/27/04			7.40	460	320														10	180	18				12.4				
Turner	City of Ontario Well No. 29	1/3/08	0.1	<1.1	9.12	360	234	<25	<3	2.4	0.3	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.11	2	10	151	22	17	<0.1	0.13	3.8	3.9	<0.5	148	8.7
		4/3/08	0.5	<1.1	7.52	355	230	<25	<3	3.7	0.3	<0.05	1	<1	<0.5	2	<0.25	<0.2	0.26	2	12	159	24	16	<0.1	0.17	3.4	3.5	<0.5	153	8.9
		7/17/08	<0.1	<1.1	7.71	355	236	<25	<3	2.6	0.4	0.1	5	<1	<0.5	1	<0.25	<0.2	0.12	3	8	147	23	17	<0.1	<0.01	2.9	3.2	<0.5	151	8.6
		10/22/08	0.4	<1.1	6.49	370	223	<25	<3	2.1	0.2	0.1	<15	<1	<0.5	3	<0.25	<0.2	0.29	2	9	149	23	16	<0.1	<0.01	2.6	3.4	0.8	150	9.0
Ely	Bishop Of San Bernardino Corp. Sole - Domest	7/23/08	0.7	<1.1	7.39	820	510	<25	<3	3.0	0.6	<0.05	11	<1	<0.5	1	<0.25	<0.2	0.15	22	39	408	27	70	<0.1	<0.01	20.7	22.6	1.9	231	7.2
Brooks	Pomona Well No. 10		Inactive in 2008, thus no data are available																												

Blank cells indicate that analysis was not run for a constituent on that particular date

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

	RP-1 (Flow)								RP-1 (Tertiary)						RP-4					
	Ferric Cloride		HW Polymer		Sodium Hypoclorite-Odor Scrub		Sodium Hydroxide 50%		Aluminum Sulfate		Sodium Bisulfite		Sodium Hypoclorite		Ferric Cloride		Aluminium Sulfate		Sodium Hypoclorite	
Month	Gal.	lbs.	Gal.	lbs.	Gal.	lbs.	Gal.	lbs.		lbs.	Gal.	lbs.	Gal.	lbs.	Gal.	lbs.	Gal.	lbs.	Gal.	lbs.
Jan-08	22,700	110,776	465	4,095	8,385	10,481	20	128		26,040	49,340	123,350	146,700	183,375	2,487	12,139	14	74	13,740	17,175
Feb-08	22,850	111,508	462	4,069	6,670	8,338	110	702		25,320	36,023	90,058	127,300	159,125	297	1,450	0	0	6,740	8,425
Mar-08	21,860	106,677	462	4,069	4,145	5,181	90	574		24,960	32,113	80,283	132,100	165,125	1,532	7,478	0	0	11,865	14,831
Apr-08	29,450	143,716	405	3,561	5,130	6,413	100	638		22,560	27,790	69,475	117,000	146,250	8,668	42,300	193	1,021	9,680	12,100
May-08	29,450	143,716	416	3,657	5,445	6,806	65	415		24,840	22,862	57,154	128,100	160,125	4,765	23,253	494	2,609	15,250	19,063
Jun-08	26,300	128,344	408	3,587	7,520	9,400	115	734		21,672	21,230	53,075	107,500	134,375	7,161	34,948	295	1,555	12,921	16,151
Jul-08	27,700	135,176	392	3,450	660	825	85	542		21,480	23,584	58,960	127,800	159,750	8,396	40,973	576	3,039	13,003	16,254
Aug-08	26,700	130,296	414	3,641	8,305	10,381	120	766		21,960	21,139	52,848	124,800	156,000	10,378	50,643	348	1,838	15,927	19,909
Sep-08	25,200	122,976	405	3,566	11,100	13,875	140	893		21,840	22,694	56,735	127,900	159,875	7,446	36,338	209	1,102	16,589	20,736
Oct-08	26,200	127,856	405	3,560	4,030	5,038	20	128		9,168	19,136	47,840	119,530	149,413	12,069	58,898	668	3,527	16,286	20,358
Nov-08	24,950	121,756	419	3,685	14,430	18,038	45	287		4,824	24,464	61,160	127,050	158,813	4,797	23,409	241	1,271	13,372	16,715
Dec-08	30,950	151,036	424	3,733	13,375	16,719	95	606		3,936	38,012	95,030	124,650	155,813	6,767	33,025	280	1,479	12,958	16,198
Total	314,310	1,533,833	5,076	44,673	89,195	111,494	1,005	6,412		228,600	338,387	845,966	1,510,430	1,888,038	74,765	364,853	3,317	17,516	158,331	197,914

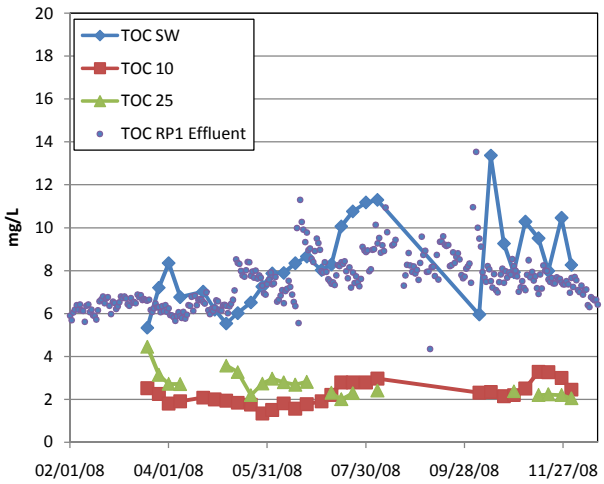
Table 3-1
Evidence of Blending Based on Water Quality
Mass Balance based on EC

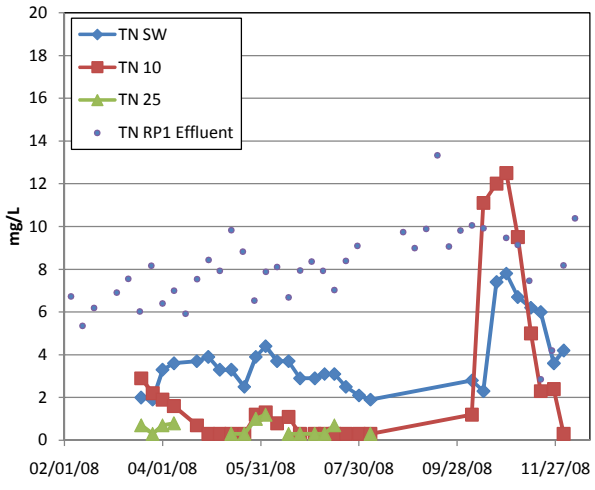
Basin	Well	Well Position	Recycled Water EC (µmhos/cm)	Groundwater Background EC (µmhos/cm)	Peak EC at Well (µmhos/cm)	Mass-Balance Blend (max) (% Recycled Water)
8th Street	8th-1/1	Down gradient	No evidence of recycled water			
	8th-1/2	Down gradient	No evidence of recycled water			
	8th-2/1	Down gradient	No evidence of recycled water			
	8th-2/2	Down gradient	No evidence of recycled water			
Banana & Hickory	BH-1/2	Mound	750	360	480	31%
	California Speedway Infield	Down gradient	750	400	520	34%
	California Speedway No. 2		No evidence of recycled water			
	Reliant East Well		No evidence of recycled water			
	Fontana Water Co. 37A		No evidence of recycled water			
	Ontario No. 20		No evidence of recycled water			
Brooks	BRK-1/1		750	380	600	59%
	BRK-1/2		No evidence of recycled water			
	BRK-2/1		No evidence of recycled water			
	BRK-2/2		No evidence of recycled water			
Ely	Philadelphia Well	Mound	No EC fluctuation correlatable with recharge			
	Walnut Well	Down gradient	Well impacted by regionally high TDS concentration			
	Riverside Well	Down gradient	No EC fluctuation correlatable with recharge			
Turner	TRN-1/2	Mound	750	400	600	57%
	TRN-2/2	Mound	750	280	520	51%
	Ontario No. 25	Down gradient	No evidence of recycled water			
	Ontario No. 29	Down gradient	No evidence of recycled water			

Table 3-2
Alternate Monitoring Plan Analysis - Ely Basin

Date	TOC (mg/L)			TN (mg/L)		
	SW	Lys-10	Lys-25	SW	Lys-10	Lys-25
03/19/08	5.33	2.52	4.45	2.0	2.9	0.7
03/26/08	7.20	2.25	3.14	1.9	2.2	<0.6
04/01/08	8.35	1.80	2.72	3.3	1.9	0.7
04/08/08	6.76	1.91	2.71	3.6	1.6	0.8
04/22/08	7.02	2.08		3.7	0.7	
04/29/08	6.17	2.00		3.9	<0.6	
05/06/08	5.53	1.94	3.57	3.3	<0.6	
05/13/08	6.01	1.84	3.27	3.3	<0.6	<0.6
05/21/08	6.51	1.75	2.19	2.5	<0.6	<0.6
05/28/08	7.25	1.34	2.73	3.9	1.2	1
06/03/08	7.87	1.51	2.96	4.4	1.3	1.2
06/10/08	7.89	1.81	2.79	3.7	0.8	
06/17/08	8.34	1.57	2.68	3.7	1.1	<0.6
06/24/08	8.65	1.77	2.81	2.9	<0.6	<0.6
07/03/08	8.02	1.91		2.9	<0.6	<0.6
07/09/08	8.28	2.21	2.30	3.1	<0.6	<0.6
07/15/08	10.06	2.79	2.00	3.1	<0.6	0.7
07/22/08	10.76	2.79	2.28	2.5	<0.6	
07/30/08	11.18	2.79		2.1	<0.6	
08/06/08	11.30	2.97	2.40	1.9	<0.6	<0.6
10/07/08	5.95	2.31		2.8	1.2	
10/14/08	13.37	2.34		2.3	11.1	
10/22/08	9.26	2.15		7.4	12.0	
10/28/08	7.92	2.20	2.37	7.8	12.5	
11/04/08	10.28	2.50		6.7	9.5	
11/12/08	9.51	3.28	2.20	6.2	5.0	
11/18/08	7.98	3.26	2.23	6.0	2.3	
11/26/08	10.46	3.00	2.20	3.6	2.4	
12/02/08	8.26	2.45	2.04	4.2	<0.6	
Average (all 2008)	8.3	2.2	2.7	3.7	2.5	0.5
Average (excluding October)				3.5	1.5	0.5
Removal (all 2008)		73%	68%		33%	86%
Removal (excluding October)					59%	

Greyed cells indicate insufficient lysimeter sample volume to run analyses





APPENDIX A

MONTHLY GROUNDWATER RECHARGE SUMMARIES

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS January 2008				
Drainage System	**Recharge Volume (AF)***			**Management**
Basin	**SW/LR**	**MW**	**RW**	**Zone Subtotals**
San Antonio Channel Drainage System				
College Heights East	**67**	-	N	
College Heights West	-	-	N	MZ-1
Upland	**285**	-	N	**1,522**
Montclair 1, 2, 3 & 4	**597**	-	N	AF
Brooks	**301**	-	X	
Non-replenishment** (MVWD-Montclair 3)	**(64)**	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**335**	X	**1**	
Ely 1, 2, & 3	**793**	-	-	
Non-replenishment** (GE)	-	N	N	
Minor Drainage				
Grove	**168**	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**311**	-	-	
Turner 3 & 4	**143**	-	-	MZ-2
Day Creek Channel Drainage System				**2,486**
Lower Day	**212**	-	X	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**180**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	**553**	-	X	
West Fontana Channel System				
Hickory	**126**	-	-	
Banana	**130**	-	-	
Declez Channel Drainage System				MZ-3
RP3	**165**	X	X	**551**
Declez	**256**	X	X	AF
Month Total = 4,559 AF	**4,558**	**0**	**1**	
Fiscal Year to Date Total Since July 1, 2007 = 8,689 AF	**7,795**	**0**	**894**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: May. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS
February 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights East	**99**	-	N	
College Heights West	-	-	N	MZ-1
Upland	**4**	-	N	**460**
Montclair 1, 2, 3 & 4	**126**	-	N	AF
Brooks	**50**	-	X	
Non-replenishment** (MVWD-Montclair 3)	**(74)**	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**98**	X	**157**	
Ely 1, 2, & 3	**233**	-	-	
Non-replenishment** (GE)	-	N	N	
Minor Drainage				
Grove	**64**	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**251**	-	-	
Turner 3 & 4	**9**	-	-	MZ-2
Day Creek Channel Drainage System				**806**
Lower Day	**23**	-	X	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**61**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	**29**	-	X	
West Fontana Channel System				
Hickory	**97**	-	**39**	
Banana	**75**	-	-	
Declez Channel Drainage System				MZ-3
RP3	**130**	X	X	**357**
Declez	**152**	X	X	AF
Month Total = 1,623 AF	**1,427**	**0**	**196**	
Fiscal Year to Date Total Since July 1, 2007 = 10,312 AF	**9,222**	**0**	**1,090**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: May. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS
March 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	Recycled	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights East	**5**	-	N	
College Heights West	-	-	N	MZ-1
Upland	-	-	N	**202**
Montclair 1, 2, 3 & 4	**3**	-	N	AF
Brooks	**9**	-	-	
Non-replenishment** (MVWD)	**-**	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**21**	X	**164**	
Ely 1, 2, & 3	**82**	-	**116**	
Non-replenishment** (GE)	**(62)**	N	N	
Minor Drainage				
Grove	-	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**17**	-	-	
Turner 3 & 4	-	-	-	
Day Creek Channel Drainage System				
Lower Day	**2**	-	X	MZ-2
Etiwanda Channel Drainage System				**281**
Etiwanda Debris	-	-	X	AF
Victoria	**2**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	-	-	X	
West Fontana Channel System				
Hickory	**44**	-	**80**	
Banana	-	-	-	
Declez Channel Drainage System				MZ-3
RP3	**5**	X	X	**32**
Declez	**27**	X	X	AF
Month Total = 515 AF	**155**	**0**	**360**	
Fiscal Year to Date Total Since July 1, 2007 = 10,827 AF	**9,377**	**0**	**1,450**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: May. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS April 2008				
Drainage System	**Recharge Volume (AF)***			**Management**
Basin	**SW/LR**	**MW**	**Recycled**	**Zone Subtotals**
San Antonio Channel Drainage System				
College Heights East	-	-	N	
College Heights West	-	-	N	MZ-1
Upland	-	-	N	**105**
Montclair 1, 2, 3 & 4	-	-	N	AF
Brooks	**4**	-	X	
Non-replenishment** (MVWD)	**-**	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**11**	X	**90**	
Ely 1, 2, & 3	**170**	-	**116**	
Non-replenishment** (GE)	**(140)**	N	N	
Minor Drainage				
Grove	-	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**14**	-	-	
Turner 3 & 4	**4**	-	-	MZ-2
Day Creek Channel Drainage System				**242**
Lower Day	-	-	X	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**7**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	-	-	X	
West Fontana Channel System				
Hickory	**64**	-	**7**	
Banana	-	-	**47**	
Declez Channel Drainage System				MZ-3
RP3	**3**	X	X	**134**
Declez	**13**	X	X	AF
Month Total = 410 AF	**150**	**0**	**260**	
Fiscal Year to Date Total Since July 1, 2007 = 11,237 AF	**9,527**	**0**	**1,710**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: May. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

May 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MWD	Recycled	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights East	-	-	N	
College Heights West	**1**	-	N	MZ-1
Upland	**15**	-	N	**316**
Montclair 1, 2, 3 & 4	**9**	-	N	AF
Brooks	**43**	-	X	
Non-replenishment** (MVWD)	**-**	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**90**	X	**158**	
Ely 1, 2, & 3	**137**	X	**87**	
Non-replenishment** (GE)	**(107)**	N	N	
Minor Drainage				
Grove	**4**	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**143**	-	-	
Turner 3 & 4	**38**	-	-	
Day Creek Channel Drainage System				
Lower Day	**9**	-	X	MZ-2
Etiwanda Channel Drainage System				**530**
Etiwanda Debris	**1**	-	X	AF
Victoria	**46**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	**47**	-	X	
West Fontana Channel System				
Hickory	**39**	-	**86**	
Banana	**3**	-	**38**	
Declez Channel Drainage System				MZ-3
RP3	**34**	X	X	**111**
Declez	**36**	X	X	AF
Month Total = 957 AF	**588**	**0**	**369**	
Fiscal Year to Date Total Since July 1, 2007 = 12,194 AF	**10,115**	**0**	**2,079**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: Jun. 02, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS
June 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MWD	Recycled	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights East	-	-	N	
College Heights West	-	-	N	MZ-1
Upland	-	-	N	**104**
Montclair 1, 2, 3 & 4	-	-	N	AF
Brooks	**3**	-	X	
Non-replenishment** (MVWD)	-	N	N	
West Cucamonga Channel Drainage System				
7th & 8th Street	**15**	X	**86**	
Ely 1, 2, & 3	**123**	-	**103**	
Non-replenishment** (GE)	**(105)**	N	N	
Minor Drainage				
Grove	**-**	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**11**	-	-	MZ-2
Turner 3 & 4	**28**	-	-	**187**
Day Creek Channel Drainage System				AF
Lower Day	**-**	-	X	
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**3**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, 4, & 5	**-**	-	X	
West Fontana Channel System				
Hickory	**24**	-	-	
Banana	**8**	-	**72**	
Declez Channel Drainage System				MZ-3
RP3	**4**	X	X	**98**
Declez	**14**	X	X	AF
Month Total = 389 AF	**128**	**0**	**261**	
Fiscal Year to Date Total Since July 1, 2007 = 12,583 AF	**10,243**	**0**	**2,340**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: Jul. 10, 08

SUMMARY OF GROUNDWATER RECHARGE OPERATIONS
July 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	Recycled	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	
Upland	-	-	N	MZ-1
Montclair 1, 2, 3 & 4	**6**	-	N	**262**
Brooks	**3**	-	-	AF
West Cucamonga Channel Drainage System				
8th Street	**26**	-	**201**	
7th Street	**3**	-	**23**	
Ely 1, 2, & 3	**91**	-	**67**	
Minor Drainage				
Grove	-	-	-	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**7**	-	-	
Turner 3 & 4	**4**	-	-	MZ-2
Day Creek Channel Drainage System				**190**
Lower Day	-	-	-	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	-	
Victoria	**3**	-	-	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, & 4	-	-	-	
San Sevaine 5	-	-	-	
West Fontana Channel System				
Hickory	**18**	-	-	
Banana	**31**	-	-	
Declez Channel Drainage System				MZ-3
RP3 Cells 1,3, & 4	**0**	-	-	**59**
RP3 Cell 2	**9**	-	-	
Declez	**19**	-	-	AF
Non-Replenishment Recharge**				
Brooks (MVWD)	-	N	N	
Montclair (MVWD)	-	N	N	
Turner (SAWCO)	-	N	N	
Ely (GE)	**(74)**	N	N	
Month Total = 437 AF	**146**	**0**	**291**	
Fiscal Year to Date Total Since July 1, 2008 = 437 AF	**146**	**0**	**291**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: Oct. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

August 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	MZ-1
Upland	-	-	N	**285**
Montclair 1, 2, 3 & 4	**9**	-	N	AF
Brooks	**16**	-	**117**	
West Cucamonga Channel Drainage System				
8th Street	**12**	X	**93**	
7th Street	**3**	X	**35**	
Ely 1, 2, & 3	**8**	N	-	
Minor Drainage				
Grove	-	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**3**	-	-	
Turner 3 & 4	**5**	-	-	MZ-2
Day Creek Channel Drainage System				**28**
Lower Day	**3**	-	X	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**3**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, & 4	-	-	X	
San Sevaine 5	-	-	X	
West Fontana Channel System				
Hickory	**6**	-	-	
Banana	**45**	-	-	
Declez Channel Drainage System				MZ-3
RP-3 Cells 1,3, & 4	-	-	-	
RP-3 Cell 2	**16**	-	-	**65**
Declez	**4**	X	X	AF
Non-Replenishment Recharge**				
Brooks (MVWD)	**(13)**	N	N	
Montclair (MVWD)	**(9)**	N	N	
Turner (SAWCO)	-	N	N	
Ely (GE)	-	N	N	
Month Total = 356 AF	**111**	**0**	**245**	
Fiscal Year to Date Total Since July 1, 2008 = 793 AF	**257**	**0**	**536**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: Oct. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS
September 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	MZ-1
Upland	-	-	N	**101**
Montclair 1, 2, 3 and 4	-	-	N	AF
Brooks	-	-	**86**	
West Cucamonga Channel Drainage System				
8th Street	**15**	X	-	
7th Street	-	X	-	
Ely 1, 2, & 3	**5**	N	-	
Minor Drainage				
Grove	-	X	X	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**127**	-	-	
Turner 3 & 4	**14**	-	-	MZ-2
Day Creek Channel Drainage System				**153**
Lower Day	**2**	-	X	AF
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**2**	X	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3,& 4	-	-	X	
San Sevaine 5	-	-	X	
West Fontana Channel System				
Hickory	**3**	-	-	
Banana	**34**	-	-	
Declez Channel Drainage System				MZ-3
RP3 Cells 1,3, & 4	-	-	-	
RP3 Cell 2	**16**	-	-	**57**
Declez	**7**	X	X	AF
Non-Replenishment Recharge**				
Brooks (MVWD)	-	N	N	
Montclair (MVWD)	-	N	N	
Turner (SAWCO)	**(126)**	N	N	
Ely (GE)	-	N	N	
Month Total = 185 AF	**99**	**0**	**86**	
Fiscal Year to Date Total Since July 1, 2008 = 978 AF	**356**	**0**	**622**	

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 within future projects.

N : No turnout planned for installation.

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

** : Non-Replenishment (deduct) is groundwater pumped from Chino Basin and recharged back into the basin.

Printed: Oct. 22, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

October 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	MZ-1
Upland	**3**	-	N	**186**
Montclair 1, 2, 3 and 4	**1**	-	N	AF**
Brooks	-	-	**166**	
West Cucamonga Channel Drainage System				
8th Street	**16**	X	-	
7th Street	-	X	-	
Ely 1, 2, & 3	**85**	X	**135**	
Minor Drainage				
Grove	-	N	N	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**80**	-	**28**	
Turner 3 & 4	**37**	-	**66**	MZ-2
Day Creek Channel Drainage System				**307**
Lower Day	**2**	-	X	AF**
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**4**	-	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, & 4	-	-	N	
San Sevaine 5	-	N	X	
West Fontana Channel System				
Hickory	**3**	-	-	
Banana	**36**	-	-	
Declez Channel Drainage System				MZ-3
RP3 Cells 1,3, & 4	-	-	-	**63**
RP3 Cell 2	**13**	-	-	AF**
Declez	**14**	-	-	
Non-Replenishment Recharge Deduct **				
Brooks (MVWD) MZ-1	-			
Montclair (MVWD) MZ-1	-			
Turner (SAWCO) MZ-2	**(65)**			
Ely (GE) MZ-2	**(68)**			
Month Total = 556 AF	**161**	**0**	**395**	
Fiscal Year to Date Total Since July 1, 2008 = 1,534 AF	**517**	**0**	**1,017**	

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.

Printed: Dec. 09, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS
November 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	MZ-1
Upland	**16**	-	N	**332**
Montclair 1, 2, 3 and 4	**53**	-	N	AF**
Brooks	**23**	-	**103**	
West Cucamonga Channel Drainage System				
8th Street	**137**	X	-	
7th Street	-	X	-	
Ely 1, 2, & 3	**198**	-	**88**	
Minor Drainage				
Grove	**13**	N	N	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**81**	-	**30**	
Turner 3 & 4	**36**	-	**8**	MZ-2
Day Creek Channel Drainage System				**424**
Lower Day	**8**	-	X	AF**
Etiwanda Channel Drainage System				
Etiwanda Debris	-	-	X	
Victoria	**35**	-	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, & 4	**1**	-	N	
San Sevaine 5	**7**	N	X	
West Fontana Channel System				
Hickory	**3**	-	-	
Banana	**50**	-	-	
Declez Channel Drainage System				MZ-3
RP3 Cells 1,3, & 4	**7**	-	-	**150**
RP3 Cell 2	**20**	-	-	AF**
Declez	**73**	-	-	
Non-Replentishment Recharge**				
Brooks (MVWD) MZ-1	**0**			
Montclair (MVWD) MZ-1	**0**			
Turner (SAWCO) MZ-2	**0**			
Ely (GE) MZ-2	**(84)**			
Month Total = 906 AF	**677**	**0**	**229**	
Fiscal Year to Date Total Since July 1, 2008 = 2,435 AF	**1,194**	**0**	**1,241**	

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.

Printed: Dec. 08, 08

SUMMARY OF CHINO BASIN GROUNDWATER RECHARGE OPERATIONS

December 2008

Drainage System / Basin	Recharge Volume (AF)* SW/LR	MW	RW	Management Zone Subtotals
San Antonio Channel Drainage System				
College Heights	-	-	N	MZ-1
Upland	**102**	-	N	**904**
Montclair 1, 2, 3 & 4	**200**	-	N	AF**
Brooks	**162**	-	**88**	
West Cucamonga Channel Drainage System				
8th Street	**253**	X	-	
7th Street	**99**	X	-	
Ely 1, 2, & 3	**287**	X	**-**	
Minor Drainage				
Grove	**160**	N	N	
Cucamonga and Deer Creek Channel Drainage Systems				
Turner 1 & 2	**344**	-	-	
Turner 3 & 4	**50**	-	-	MZ-2
Day Creek Channel Drainage System				**1,114**
Lower Day	**66**	-	X	AF**
Etiwanda Channel Drainage System				
Etiwanda Debris	**12**	-	X	
Victoria	**74**	-	X	
San Sevaine Channel Drainage System				
San Sevaine 1, 2, 3, & 4	**48**	-	N	
San Sevaine 5	**38**	N	X	
West Fontana Channel System				
Hickory	**35**	-	-	
Banana	**87**	-	-	
Declez Channel Drainage System				MZ-3
RP3 Cells 1,3, & 4	**122**	-	-	**450**
RP3 Cell 2	**34**	-	-	AF**
Declez	**207**	-	-	
Non-Replentishment Recharge**				
Brooks (MVWD) MZ-1	-			
Montclair (MVWD) MZ-1	-			
Turner (SAWCO) MZ-2	-			
Ely (GE) MZ-2	-			
Month Total = 2,468 AF	**2,380**	**0**	**88**	
Fiscal Year to Date Total Since July 1, 2008 = 4,908 AF	**3,574**	**0**	**1,334**	

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

\- : 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.

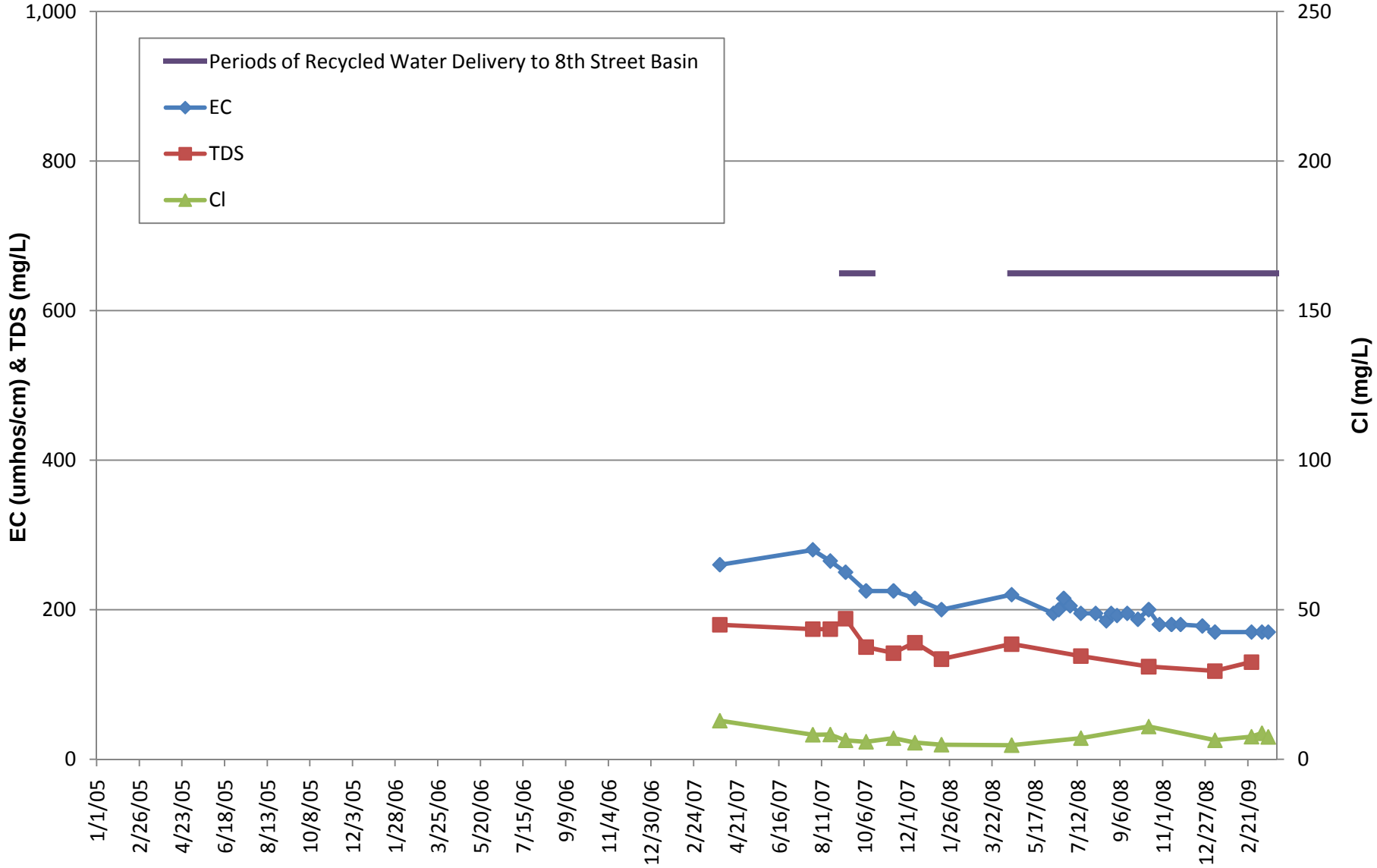
** : Management Zone Subtotals have deducted from them any Non-Replenishment Recharge, which is recharge originating from pumped groundwater and is not new water.

Printed: Jan. 06, 09

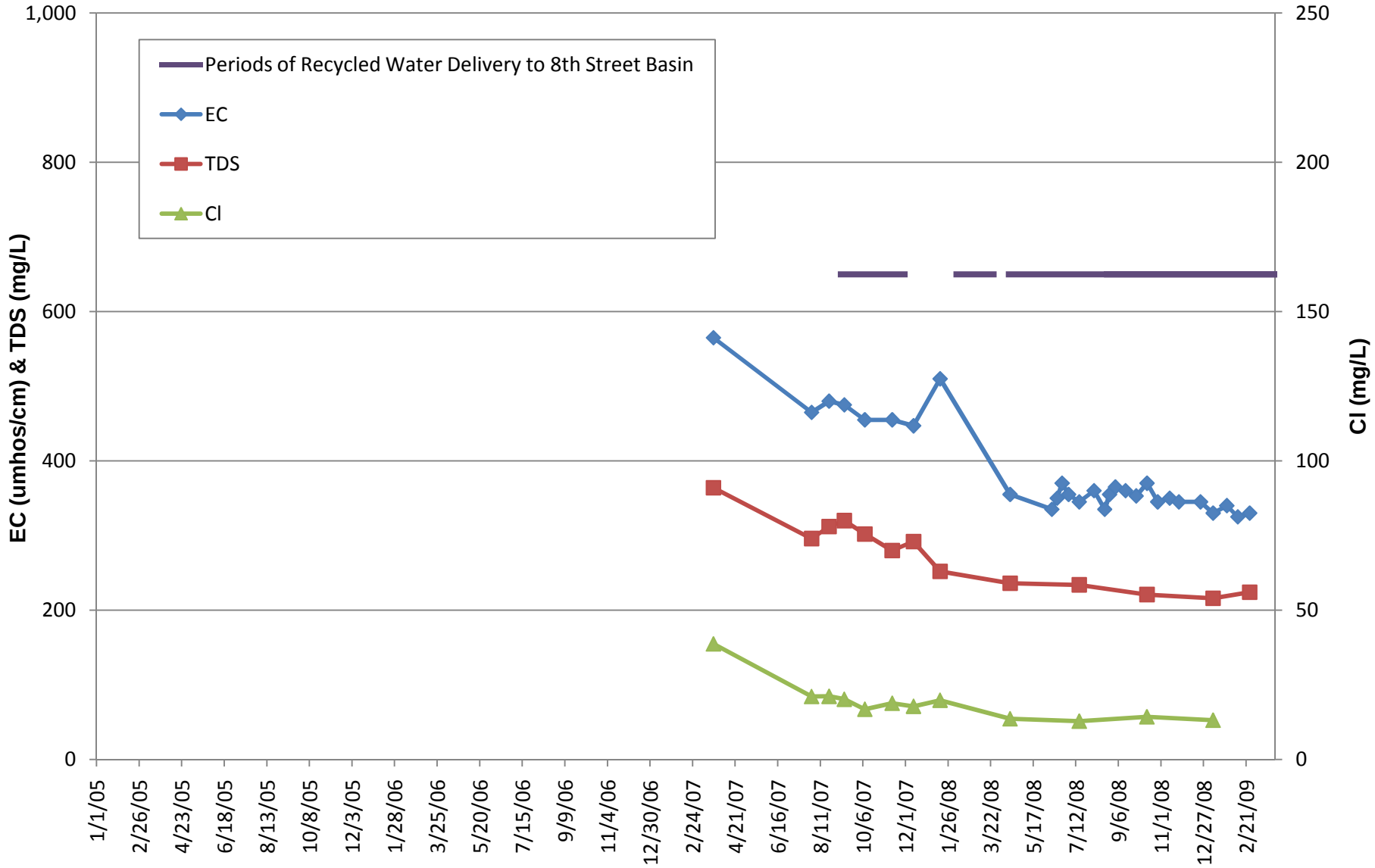
APPENDIX B

EVIDENCE FOR BLENDING:

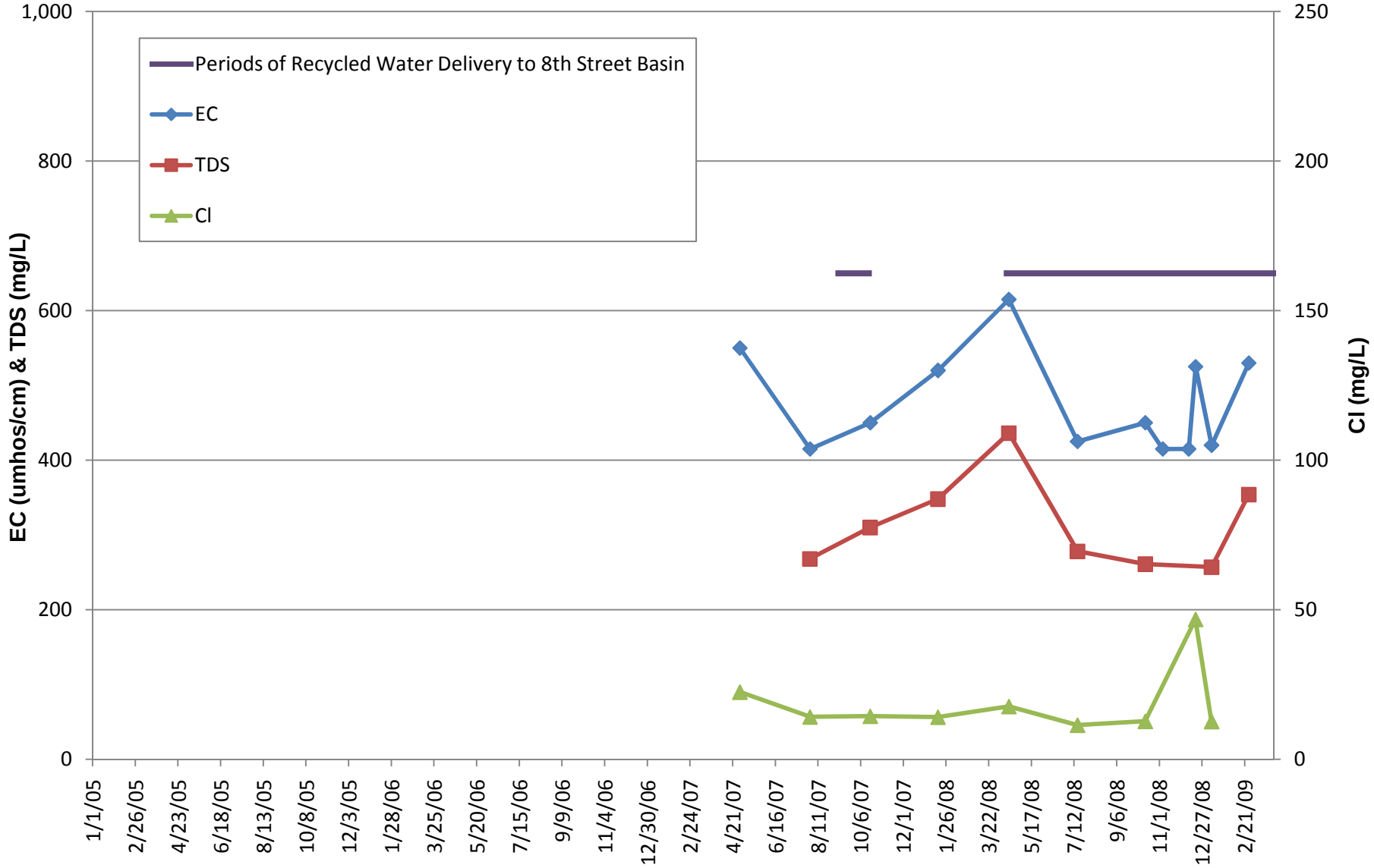
EC, TDS, CHLORIDE TIME-SERIES GRAPHS



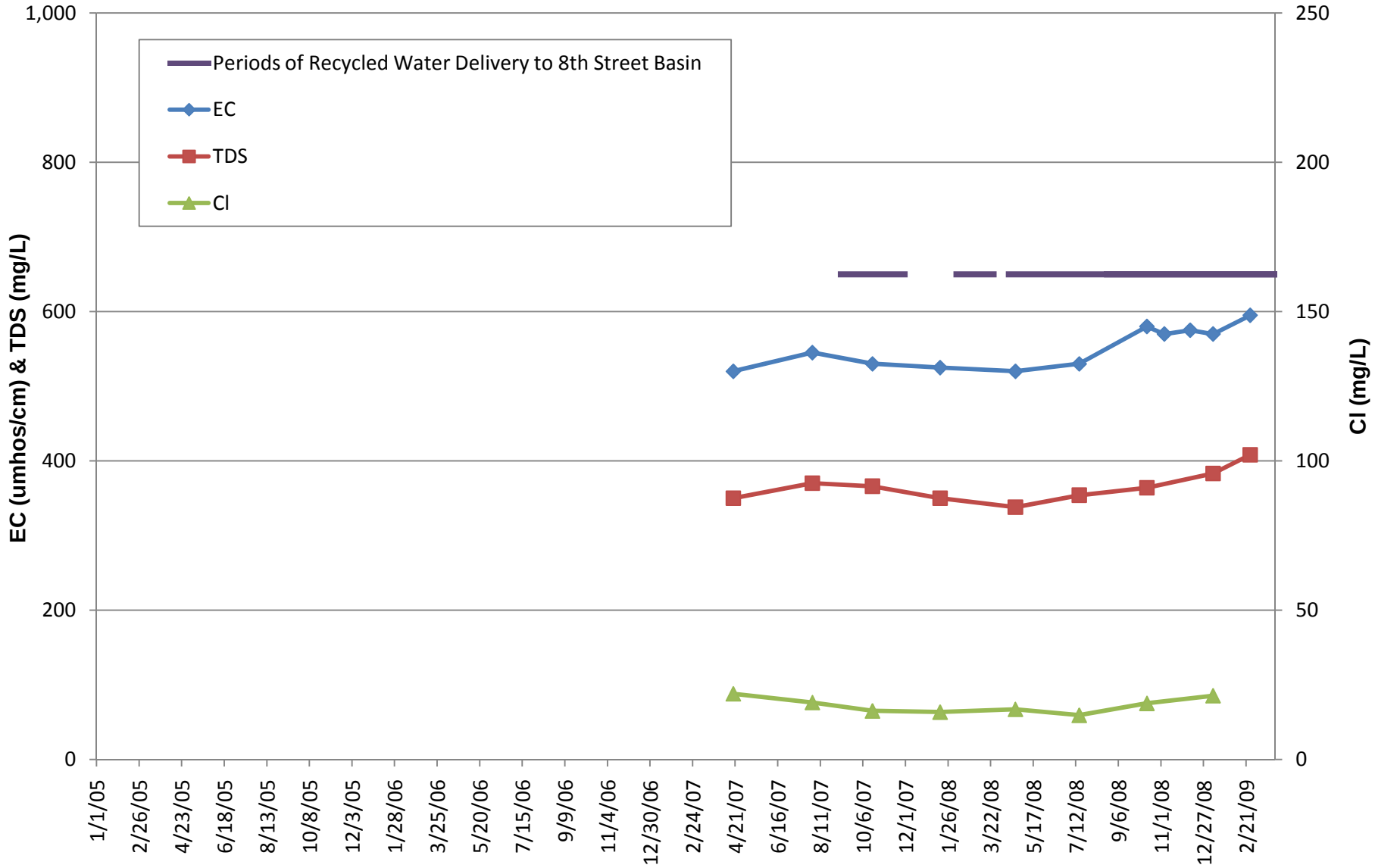
EC, TDS, CL TRENDS
8TH STREET BASIN
MW 8TH-1/1



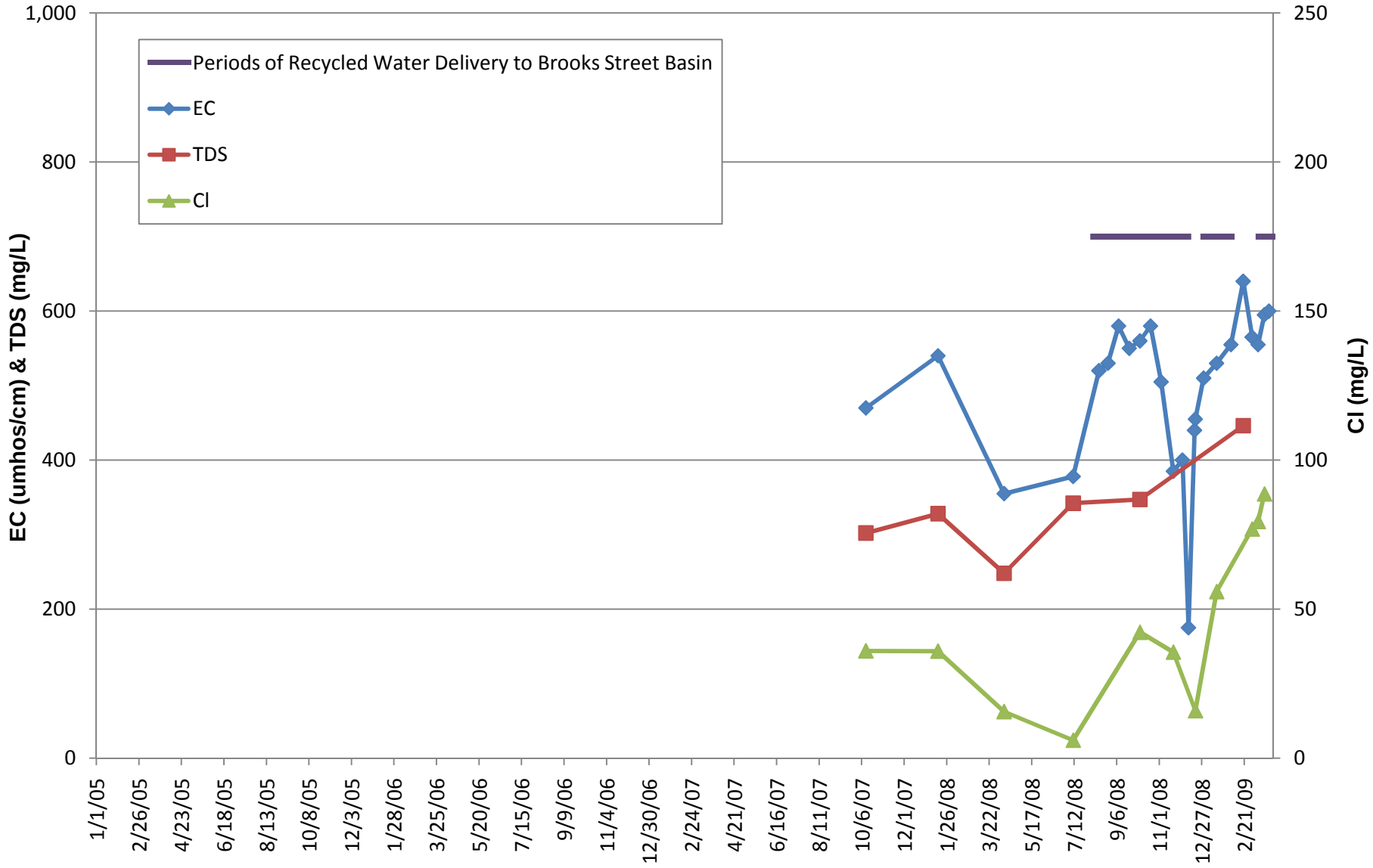
EC, TDS, CL TRENDS
8TH STREET BASIN
MW 8TH-1/2



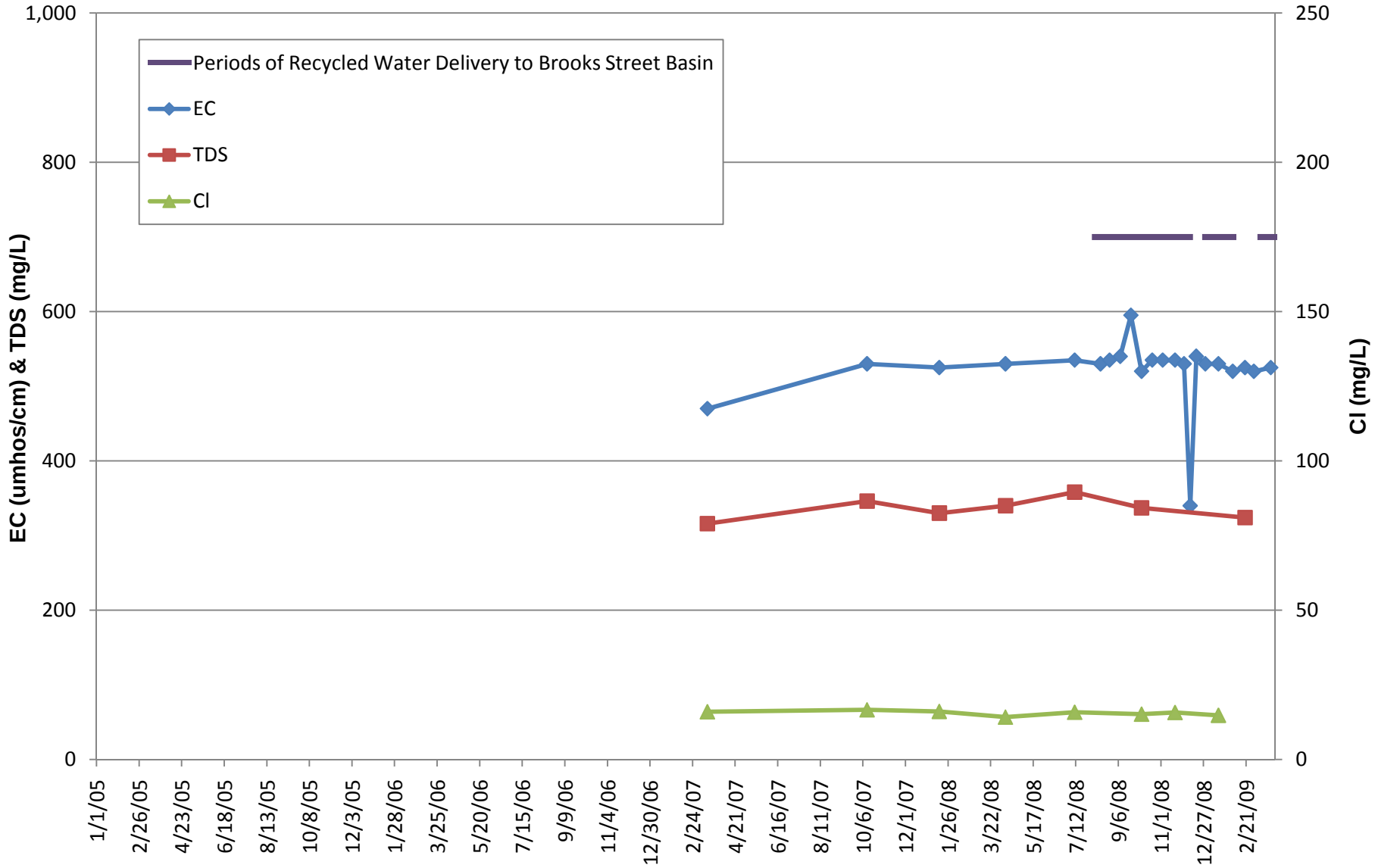
EC, TDS, CL TRENDS
8TH STREET BASIN
MW 8TH-2/1



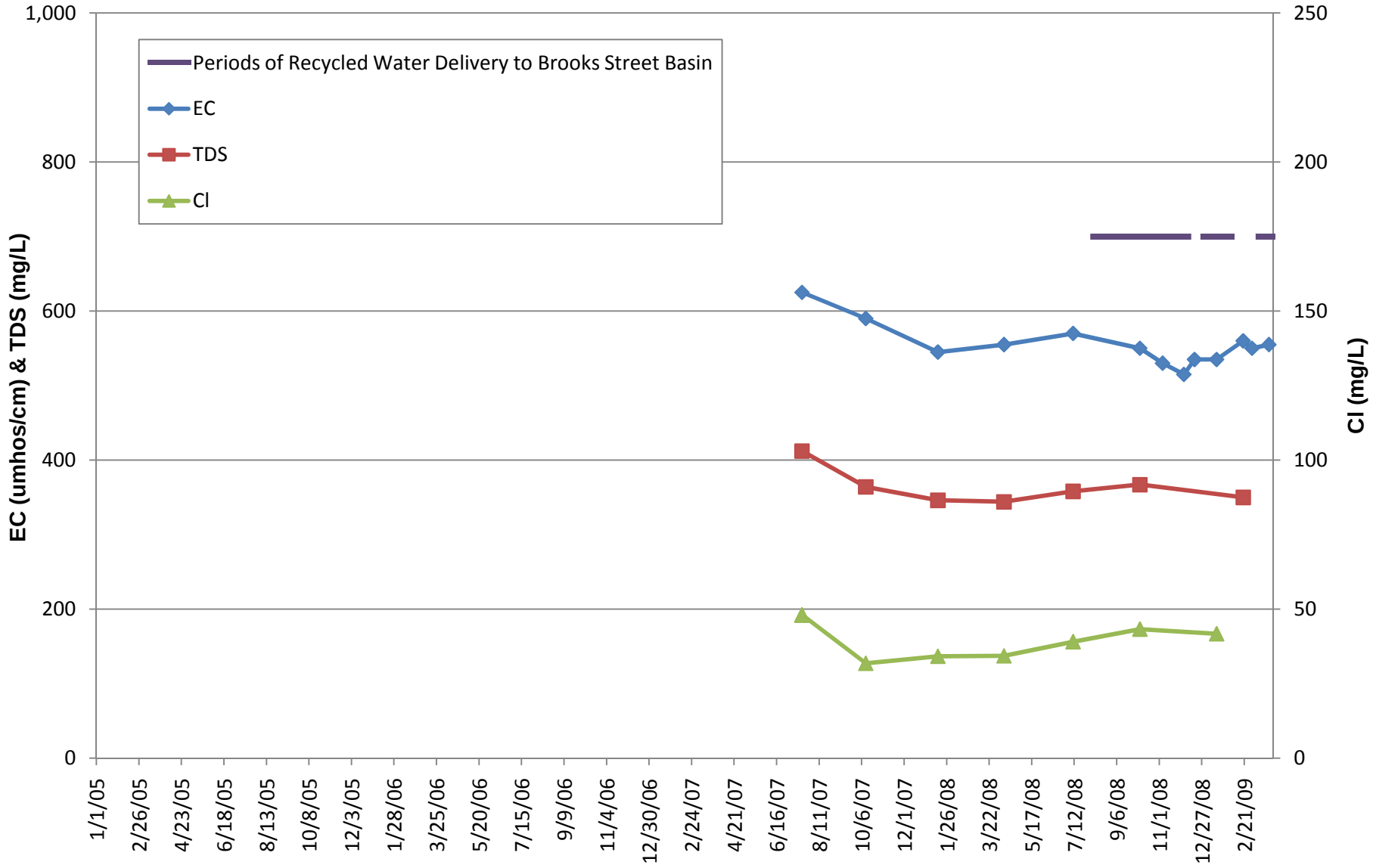
EC, TDS, CL TRENDS
8TH STREET BASIN
MW 8TH-2/2



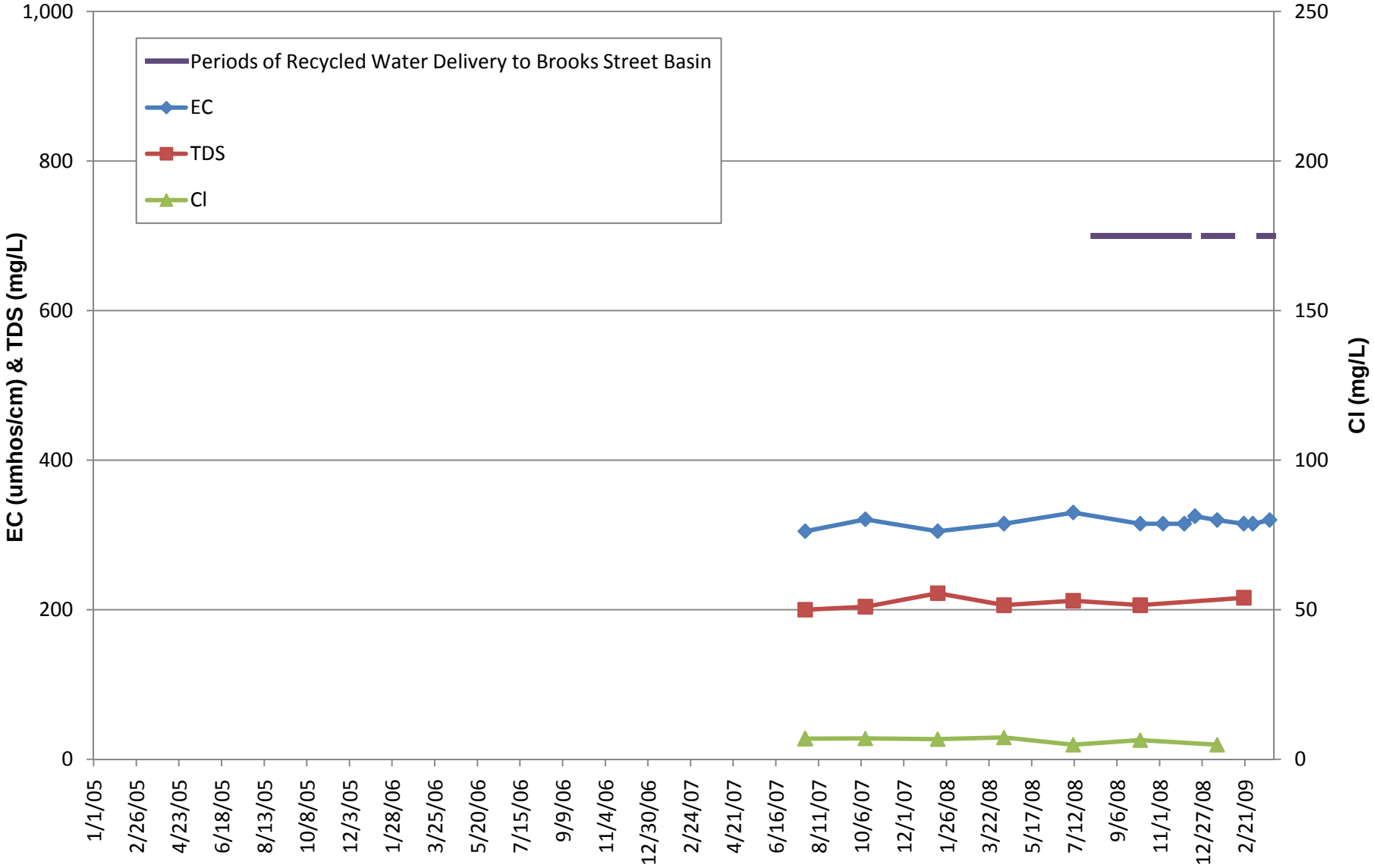
EC, TDS, CL TRENDS
BROOKS STREET BASIN
MW BRK-1/1



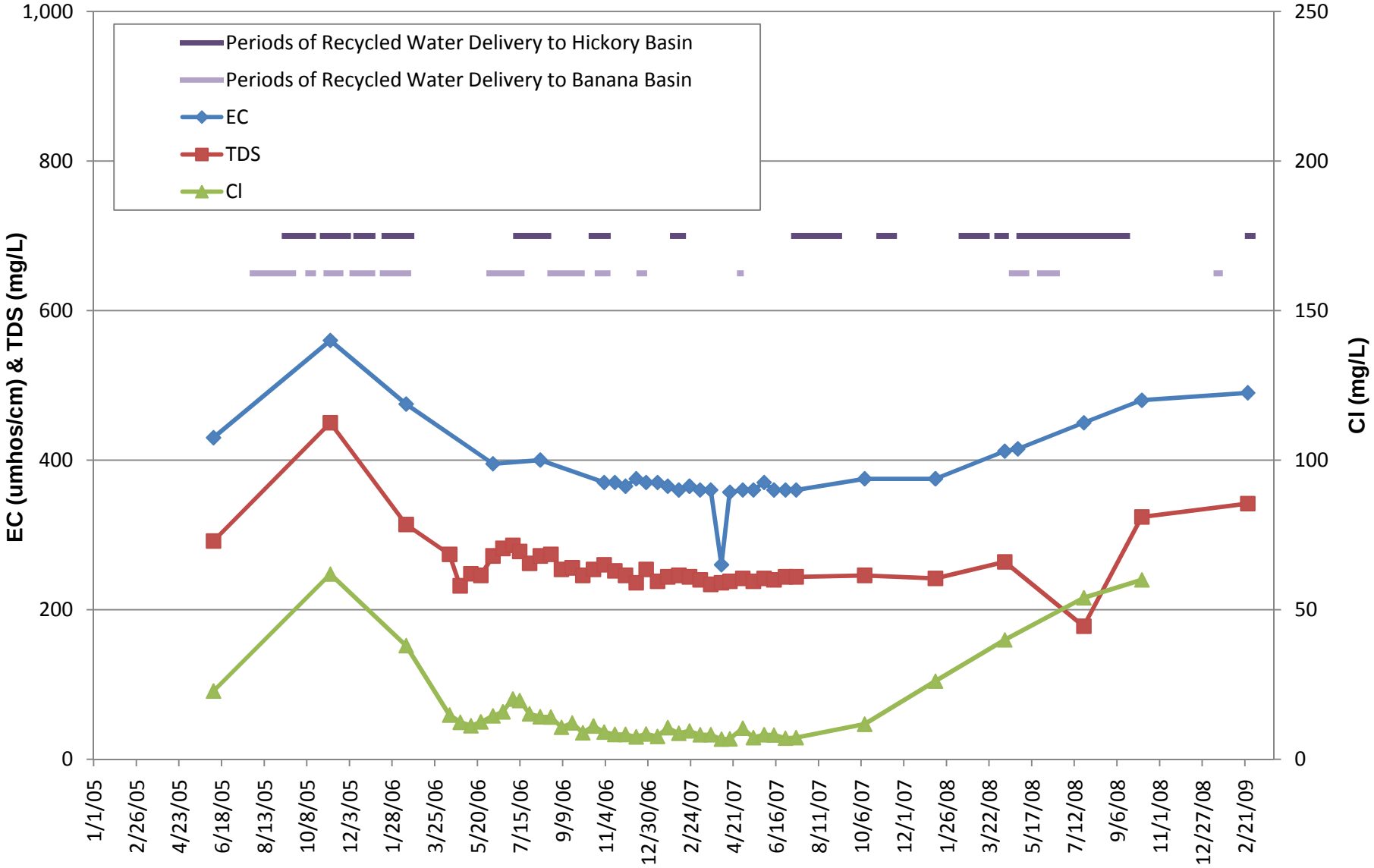
EC, TDS, CL TRENDS
BROOKS STREET BASIN
MW BRK-1/2



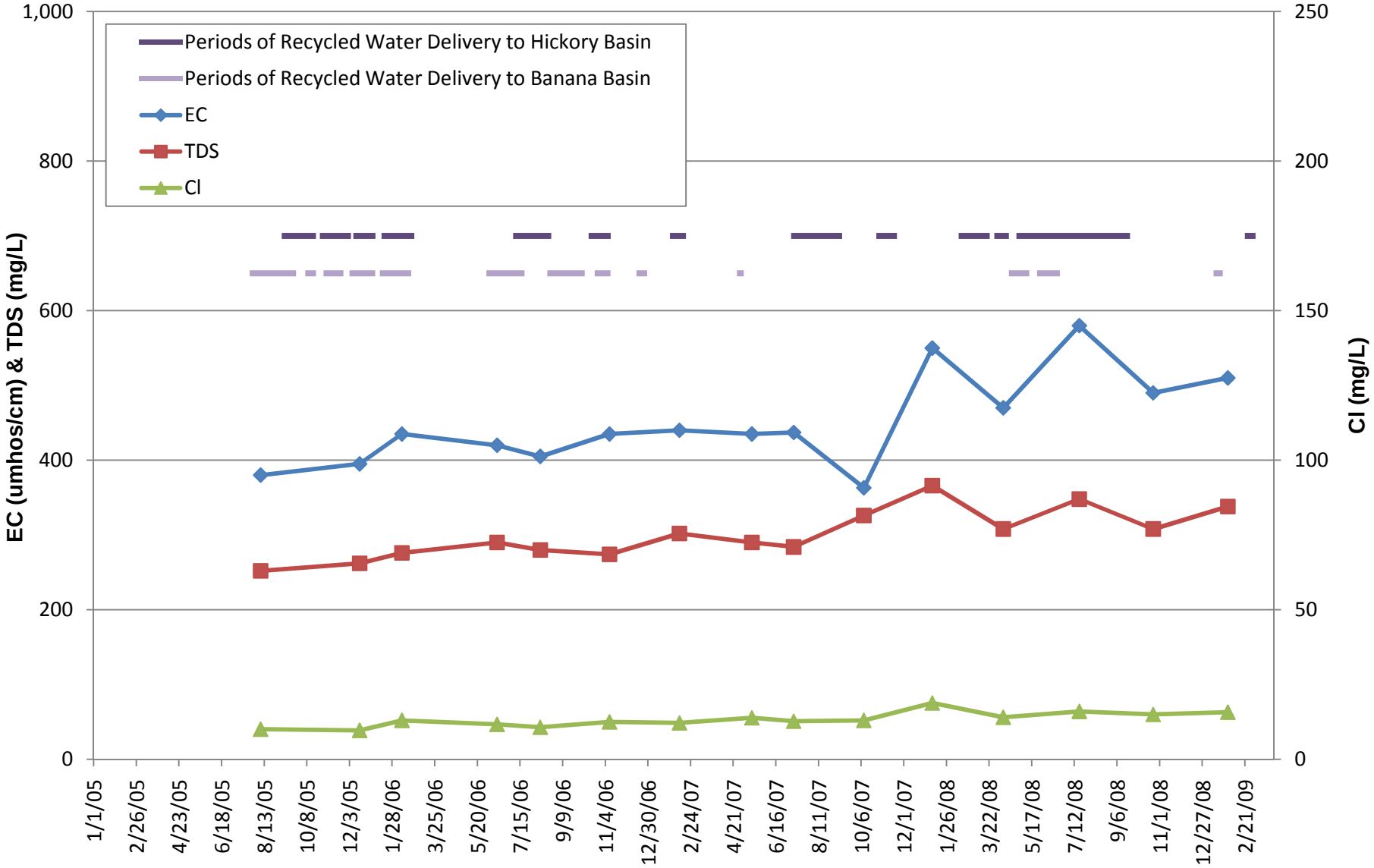
EC, TDS, CL TRENDS
BROOKS STREET BASIN
MW BRK-2/1



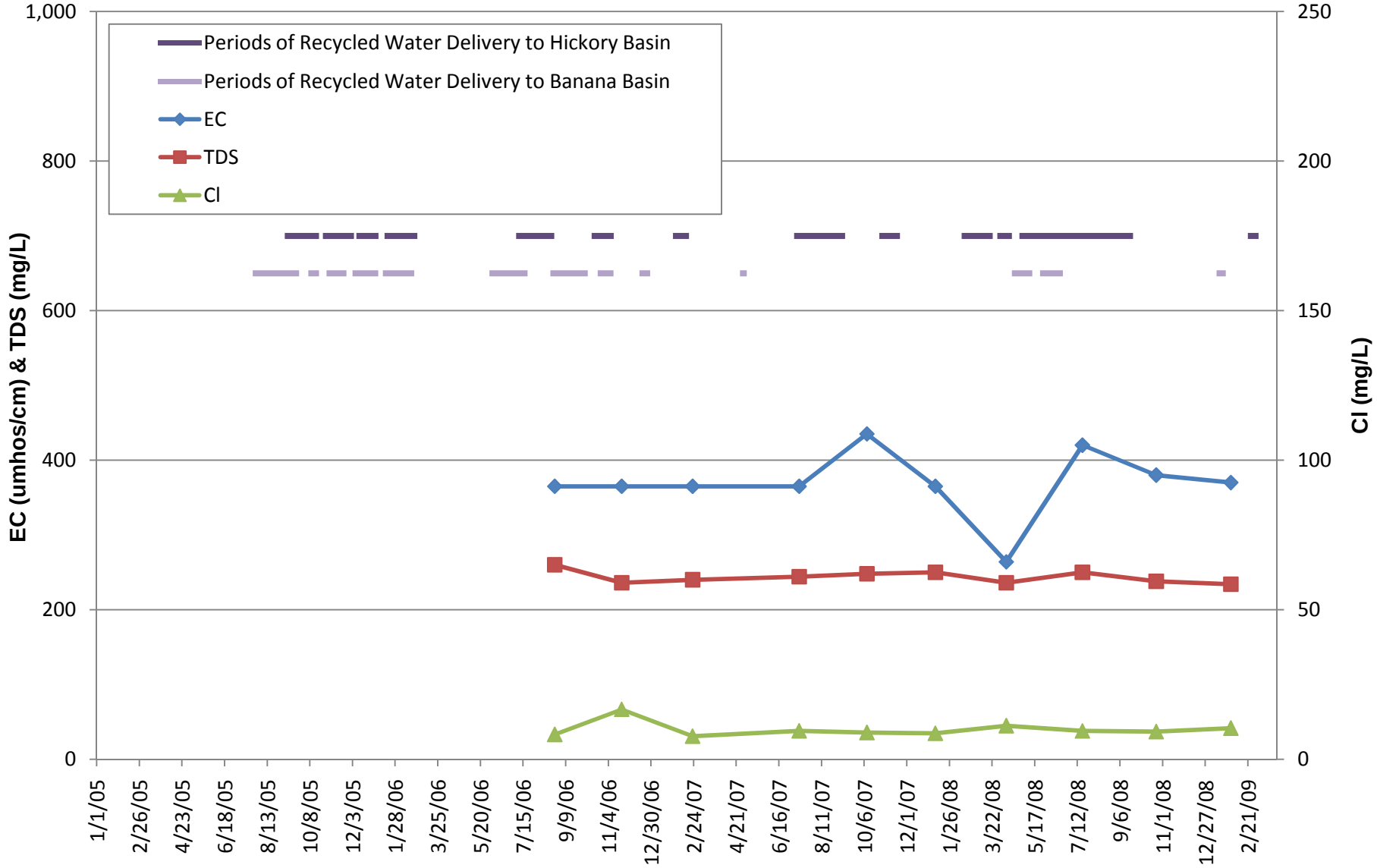
EC, TDS, CL TRENDS
BROOKS STREET BASIN
MW BRK-2/1



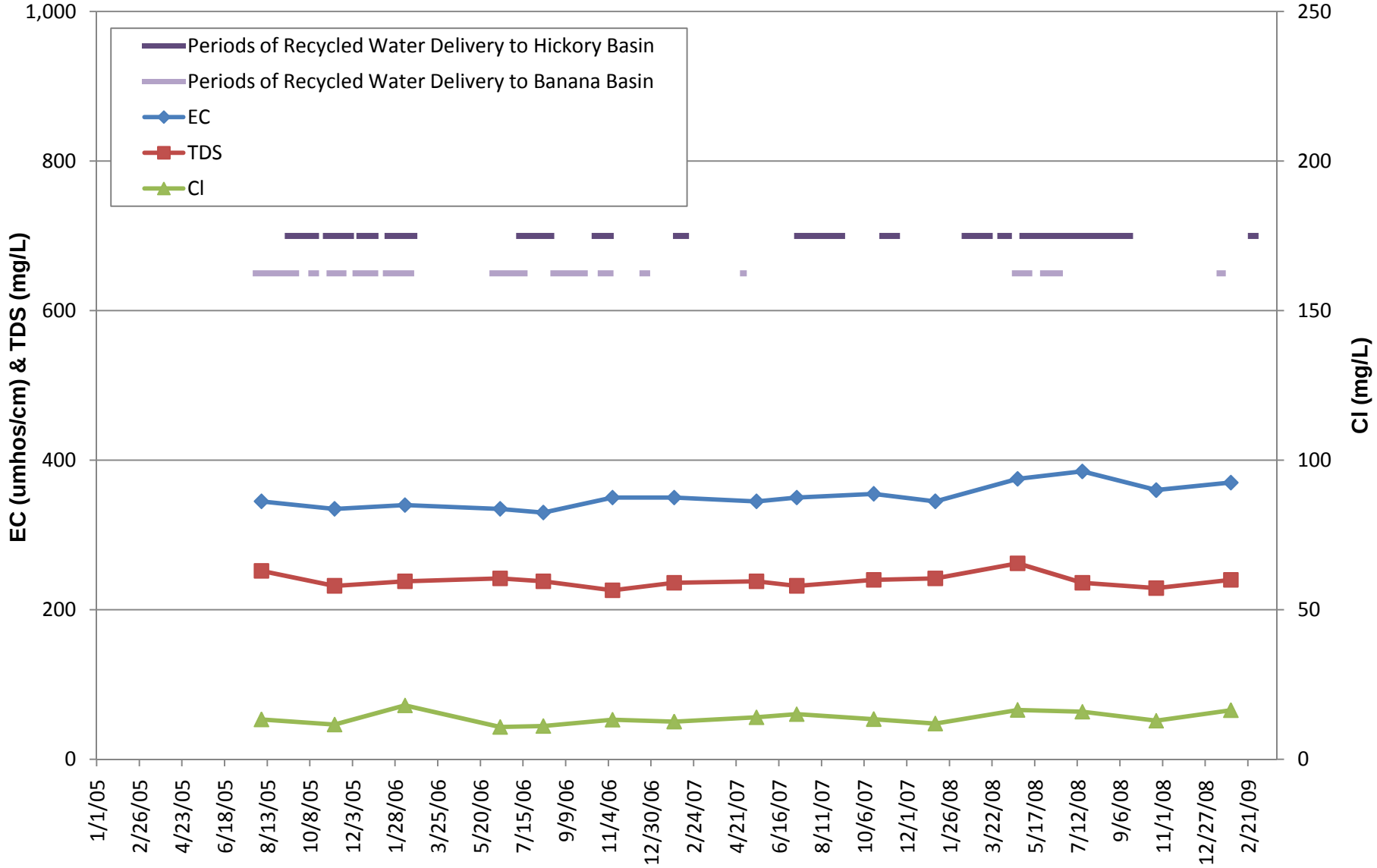
EC, TDS, CL TRENDS
HICKORY BANANA BASINS
MW BH-1/2



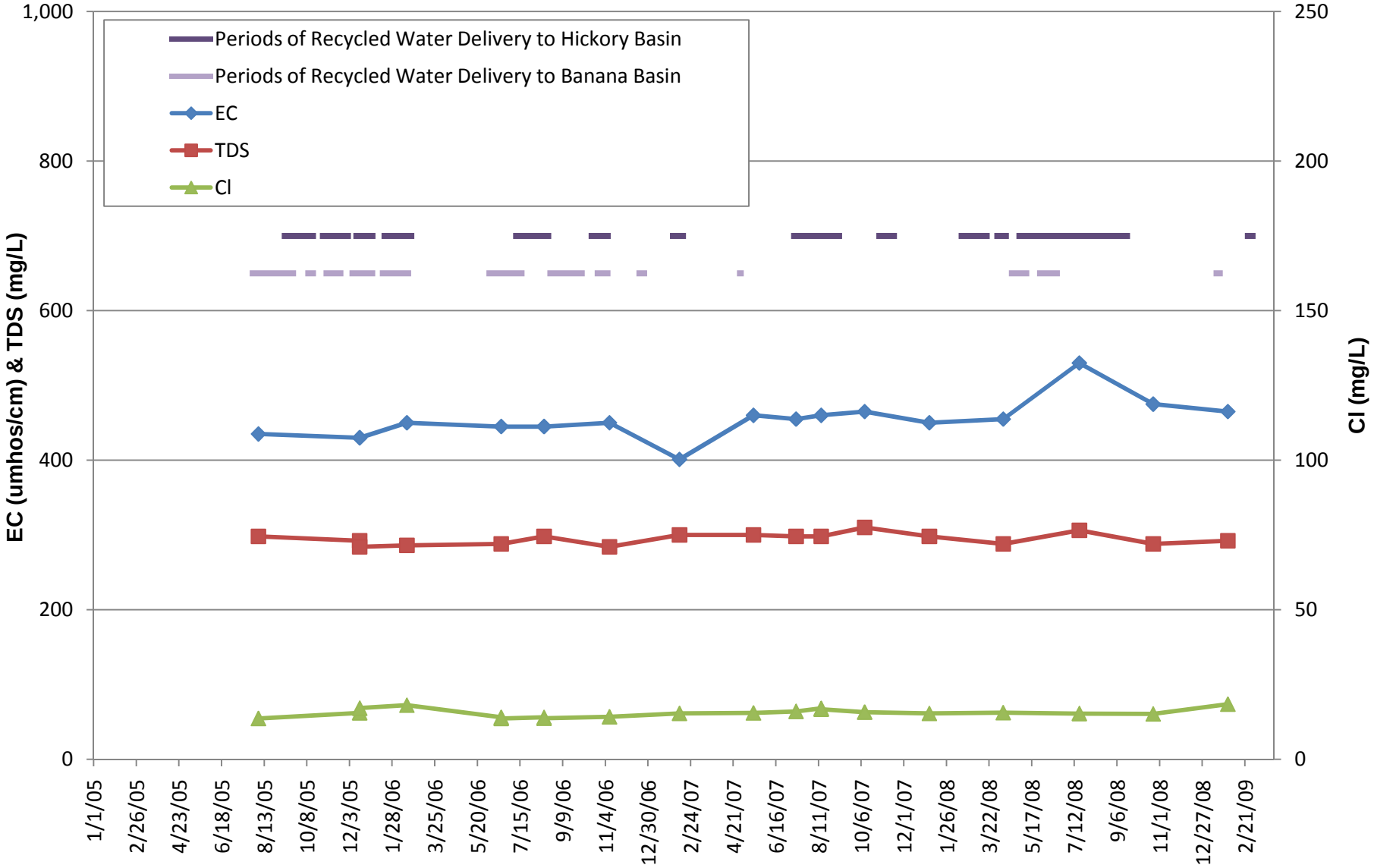
EC, TDS, CL TRENDS
BANANA-HICKORY BASINS
CALIFORNIA SPEEDWAY INFIELD WELL



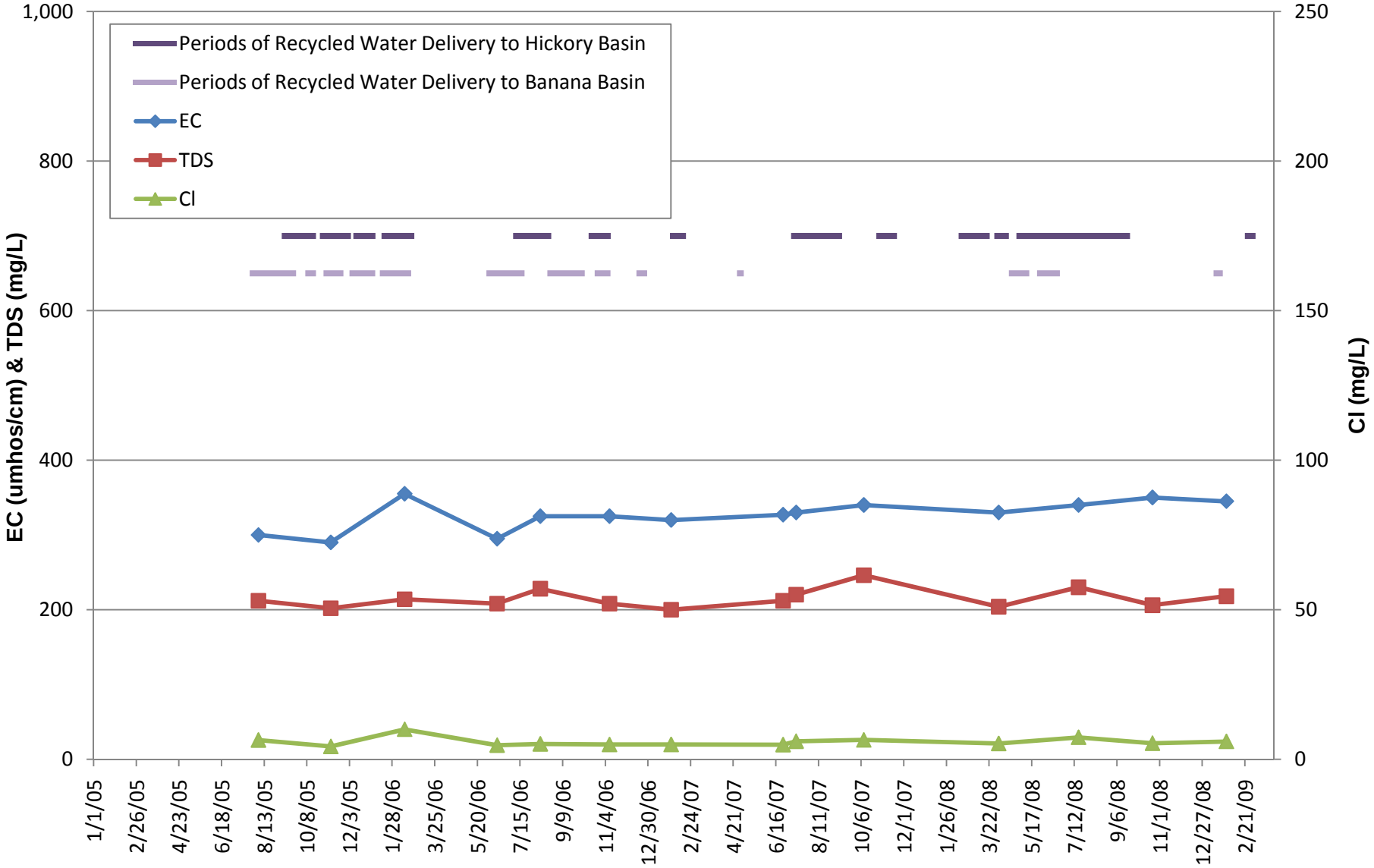
EC, TDS, CL TRENDS
BANANA-HICKORY BASINS
CALIFORNIA SPEEDWAY NO. 2



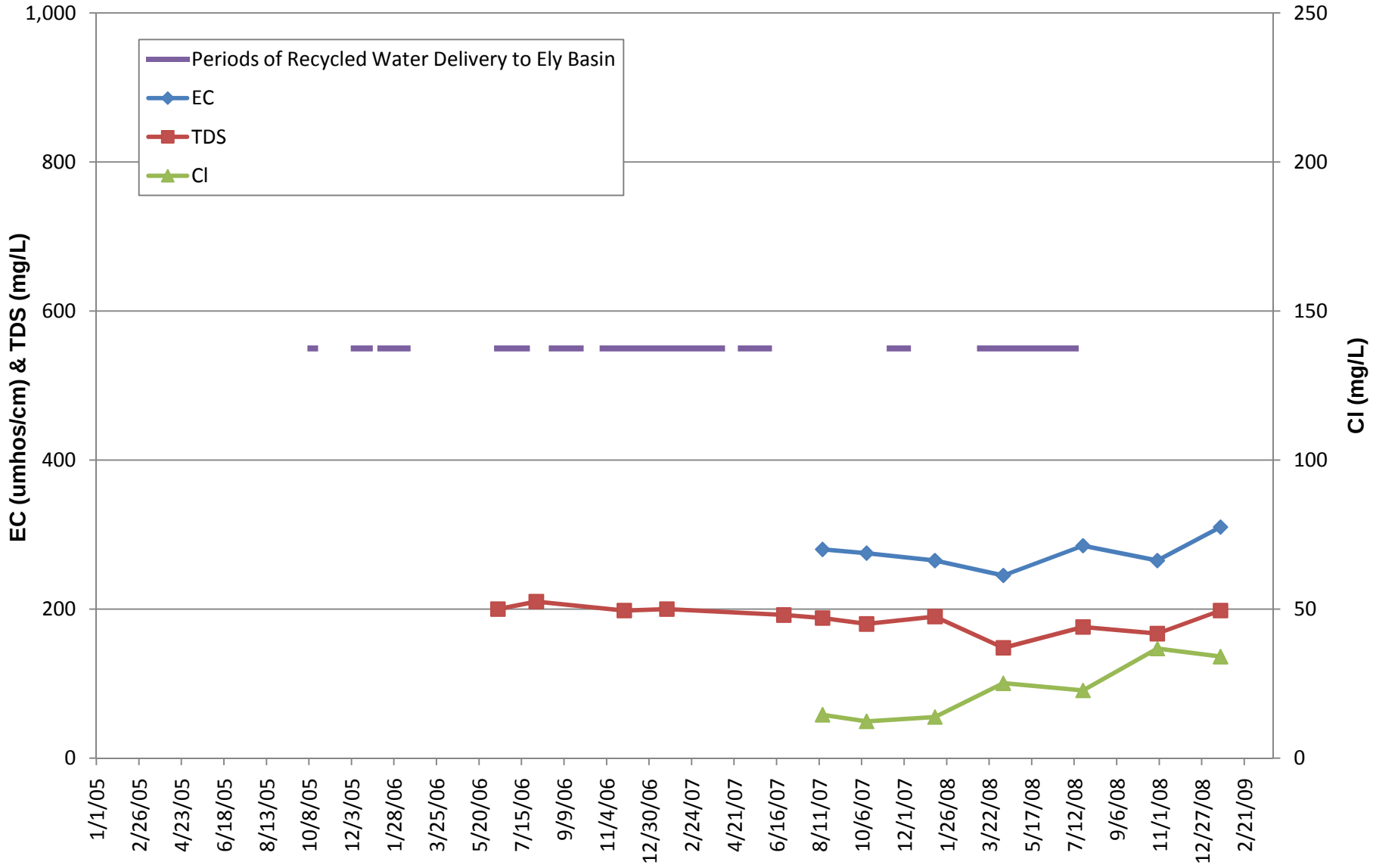
EC, TDS, CL TRENDS
BANANA-HICKORY BASINS
RELIANT EAST WELL



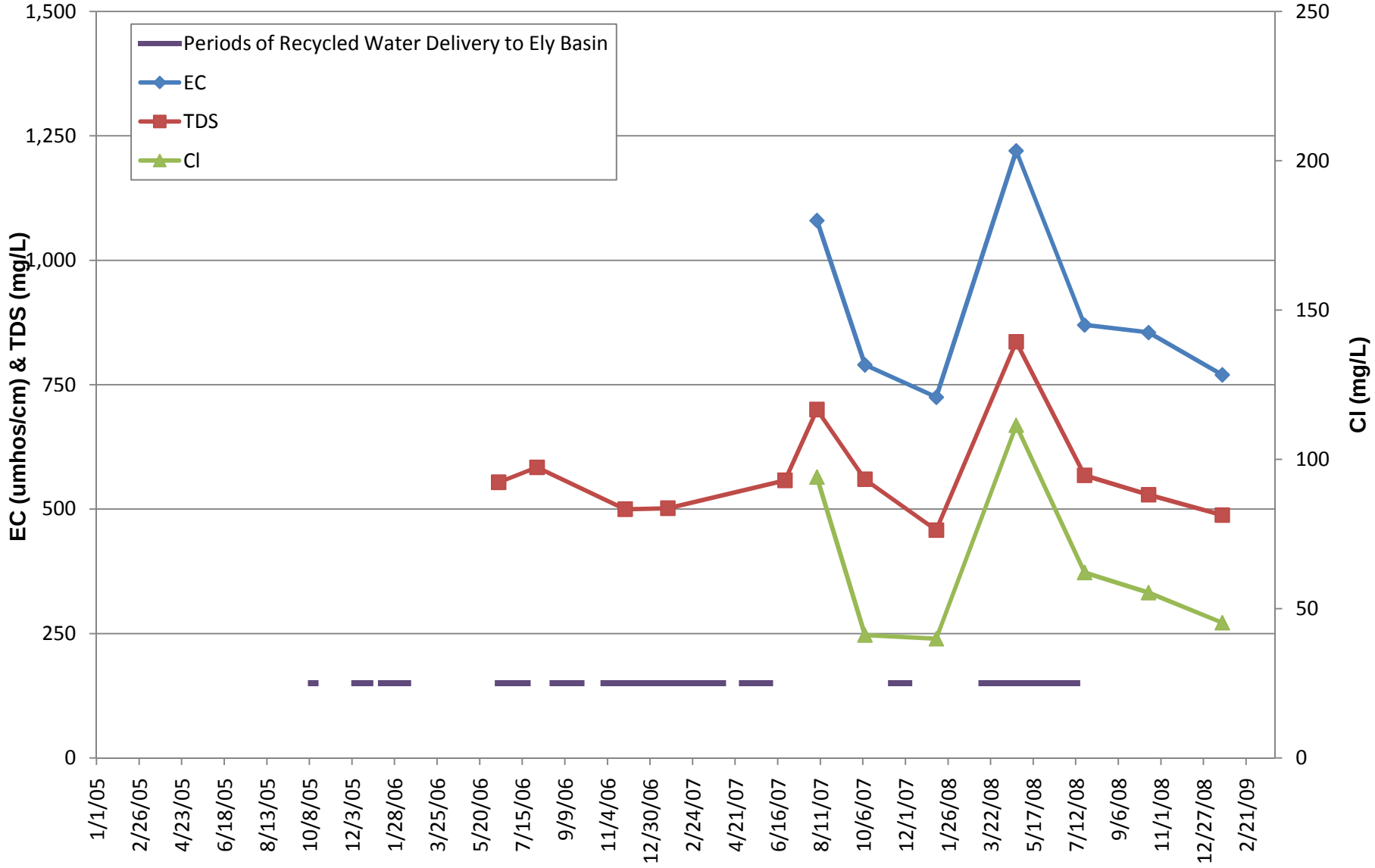
EC, TDS, CL TRENDS
BANANA-HICKORY BASINS
FONTANA WATER CO. 37A



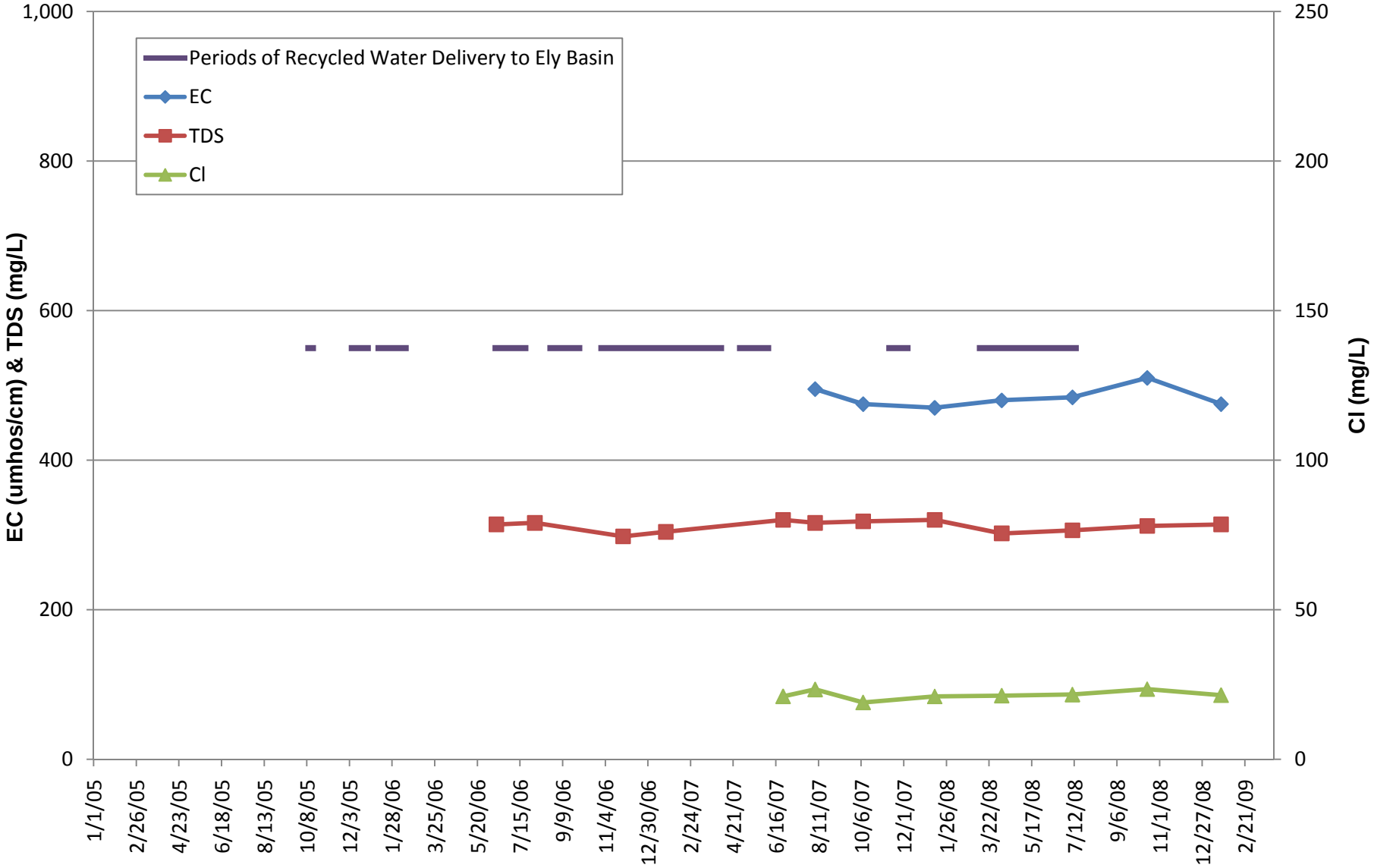
EC, TDS, CL TRENDS
BANANA-HICKORY BASINS
ONTARIO NO. 20



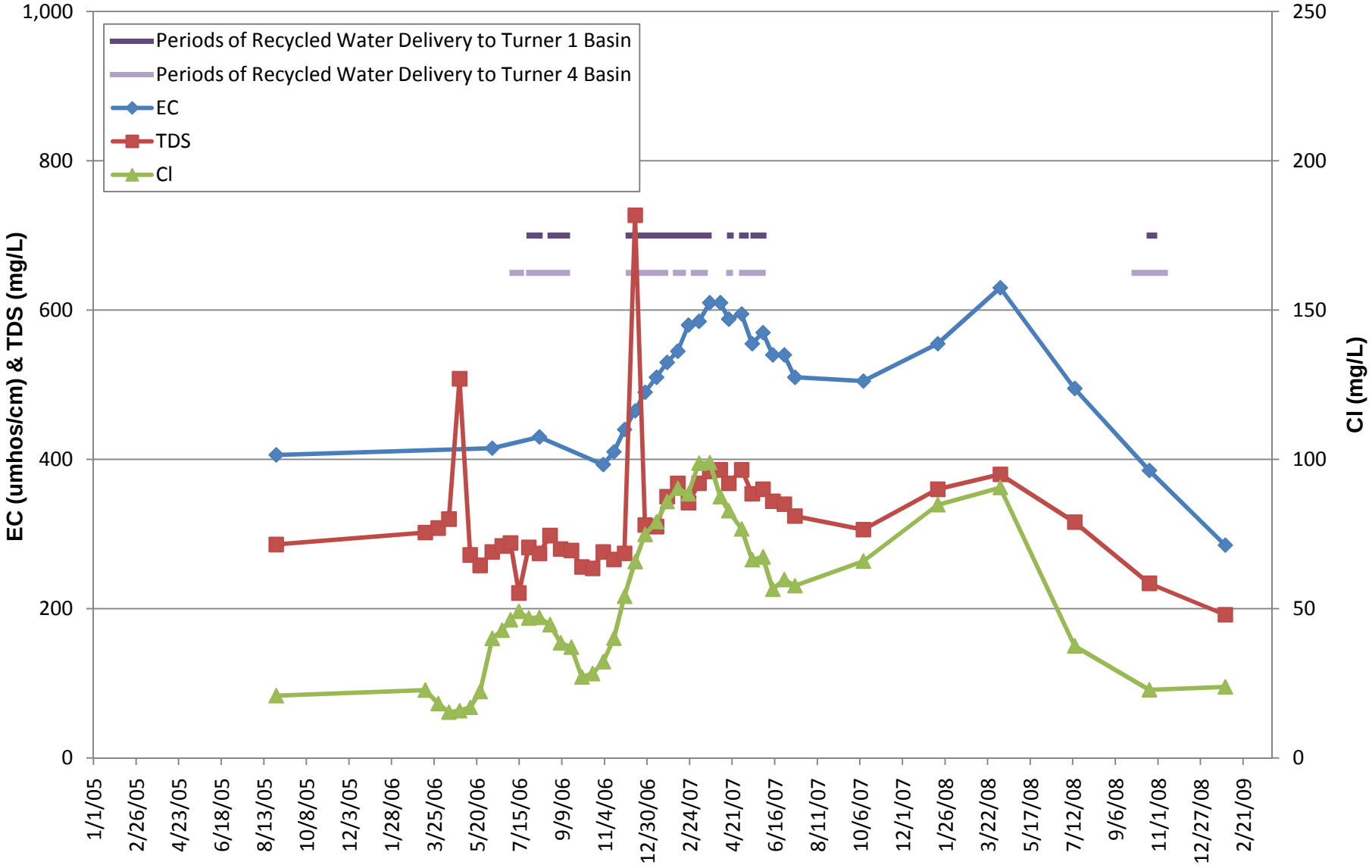
EC, TDS, CL TRENDS
ELY BASIN
PHILADELPHIA WELL



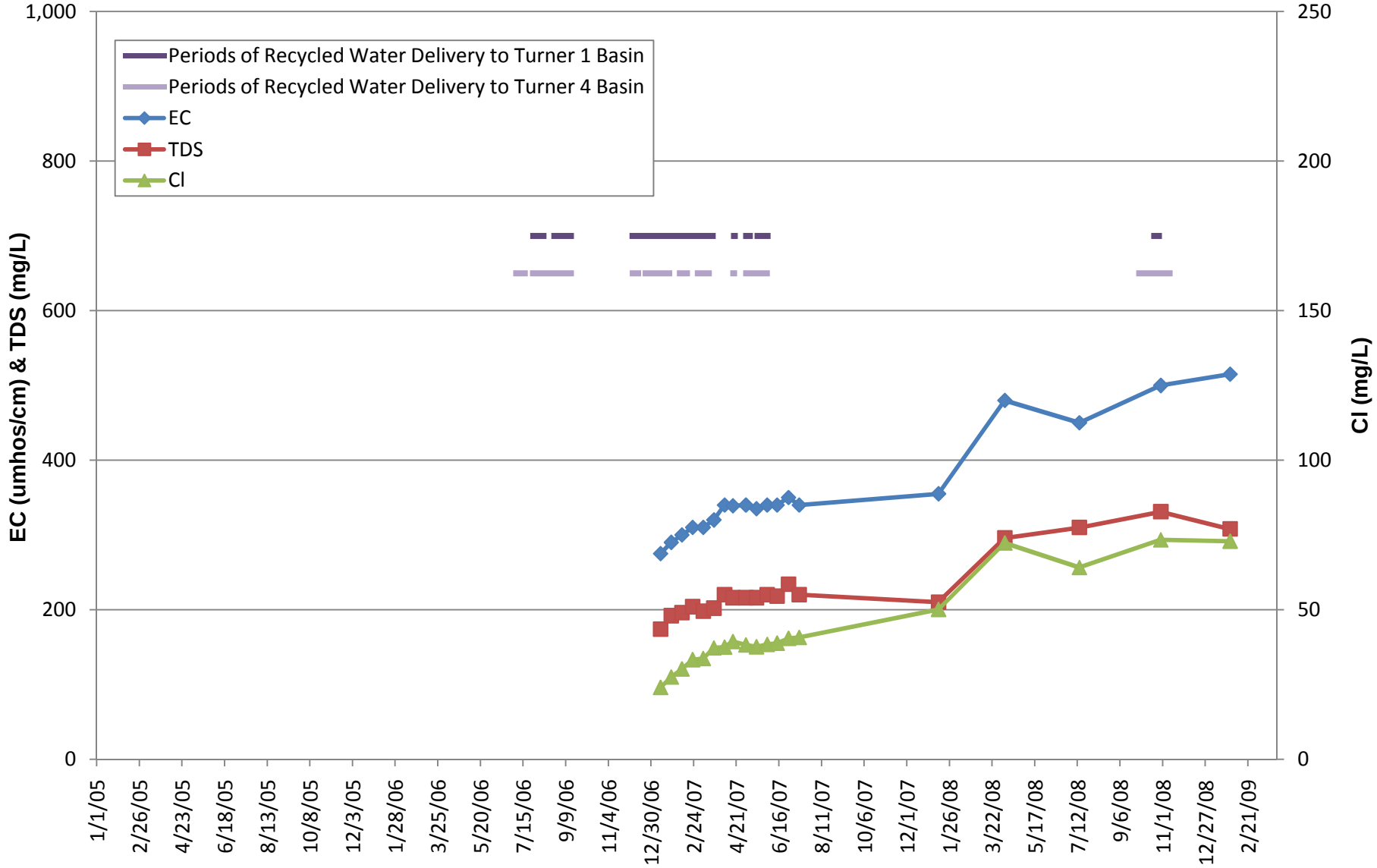
EC, TDS, CL TRENDS
ELY BASIN
WALNUT WELL



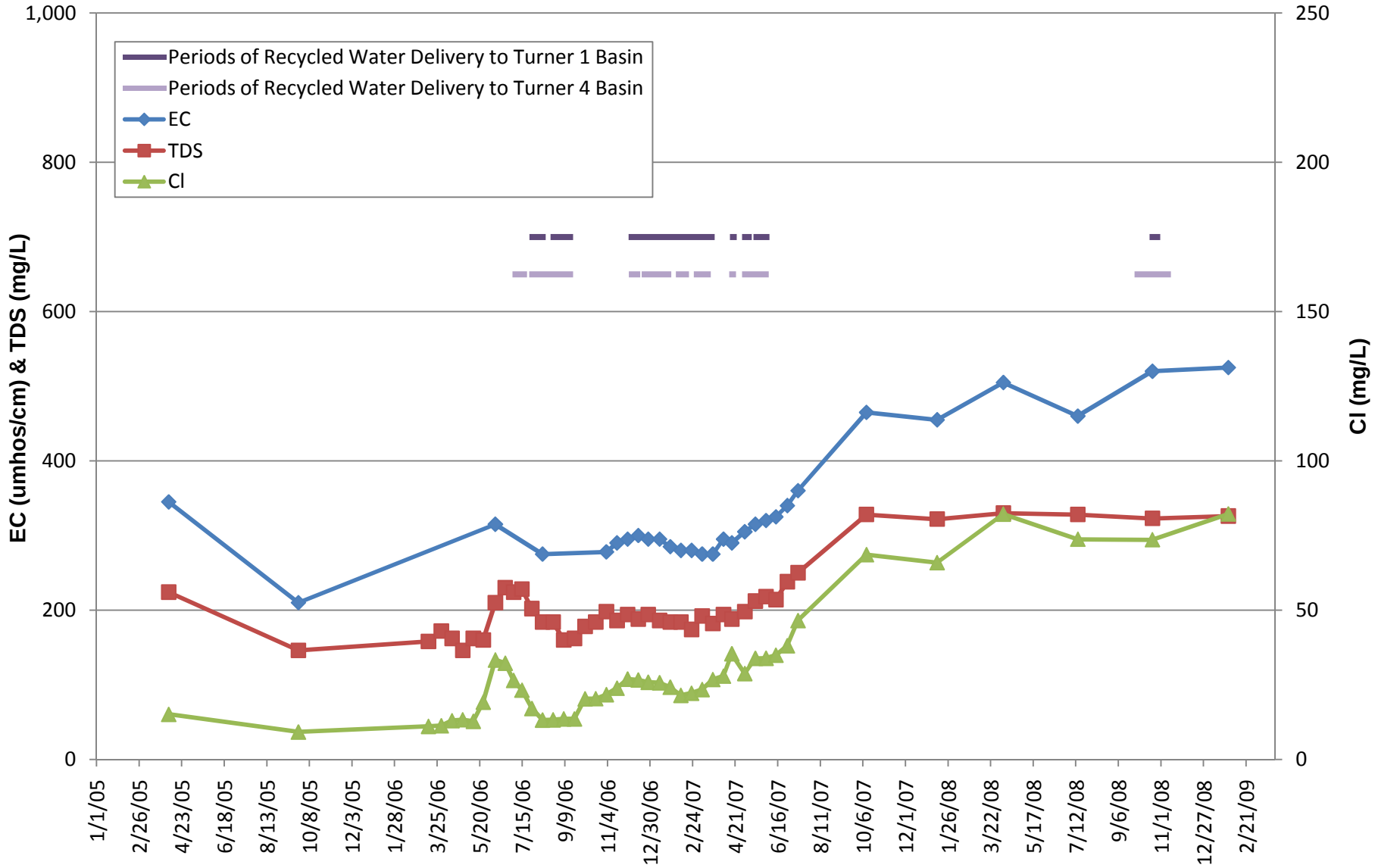
EC, TDS, CL TRENDS
ELY BASIN
RIVERSIDE WELL



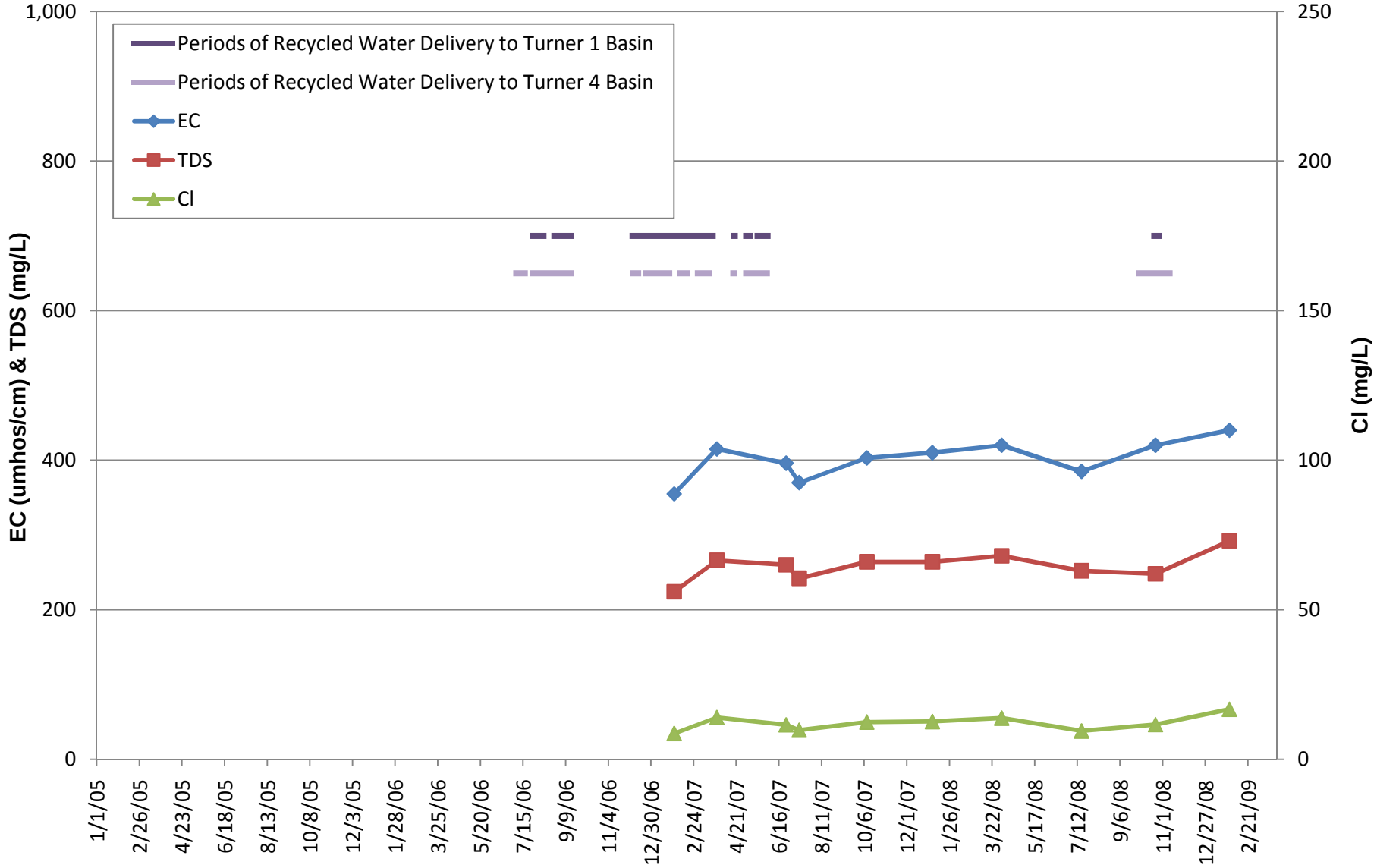
EC, TDS, CL TRENDS
TURNER BASINS
MW TRN-1/2



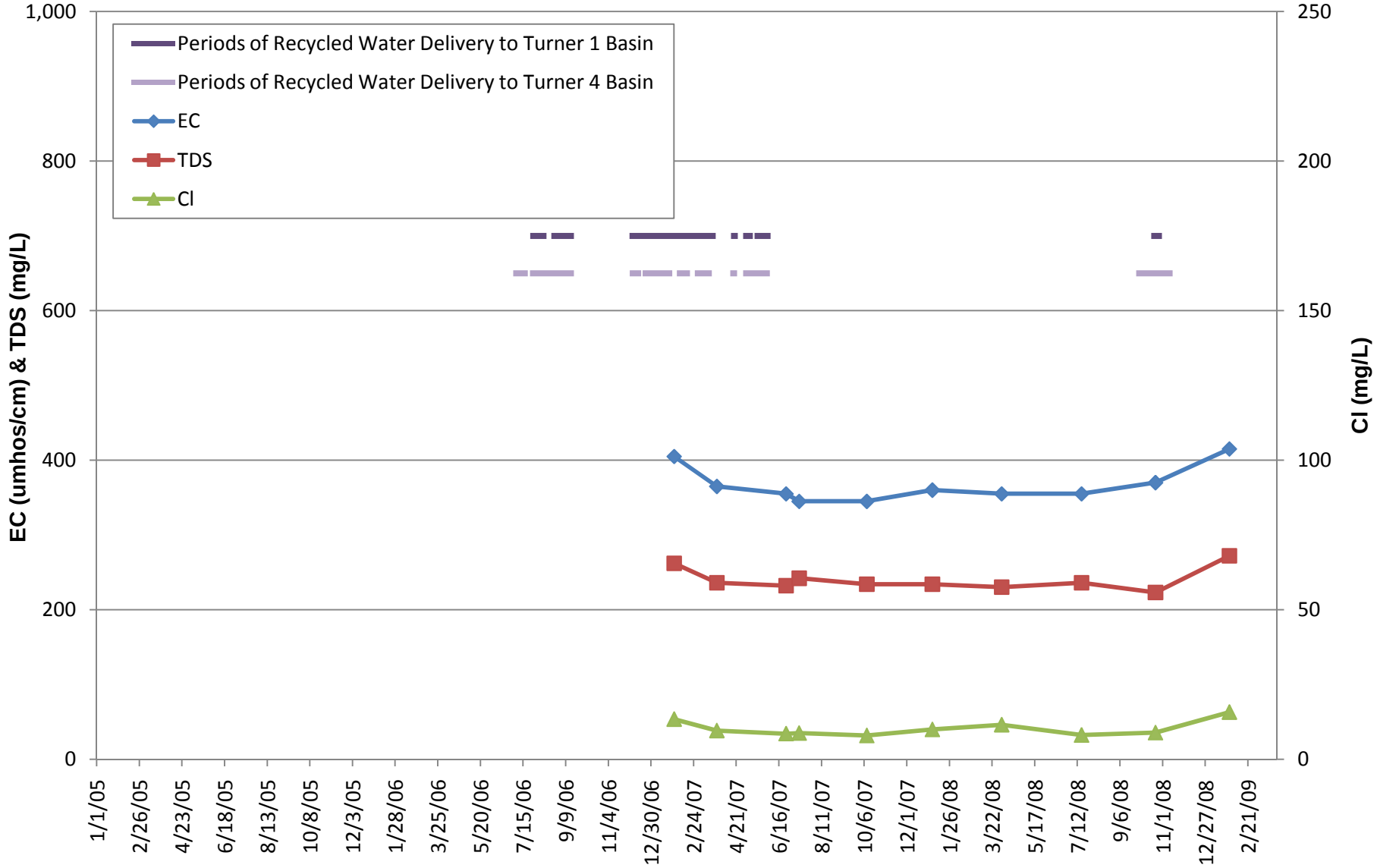
EC, TDS, CL TRENDS
TURNER BASINS
MW TRN-2/1



EC, TDS, CL TRENDS
TURNER BASINS
MW TRN-2/2



EC, TDS, CL TRENDS
TURNER BASINS
ONTARIO NO. 25



EC, TDS, CL TRENDS
TURNER BASINS
ONTARIO NO. 29

APPENDIX C

RWC MANAGEMENT PLANS

RWC Management Plan for 8th Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-49	1		0.				MODELED
	Aug '03	-48	0		0.				
	Sep '03	-47	5		0.				
	Oct '03	-46	11		0.				
	Nov '03	-45	6		0.				
	Dec '03	-44	9		0.				
	Jan '04	-43	11		0.				
	Feb '04	-42	25		0.				
	Mar '04	-41	22		0.				
	Apr '04	-40	20		0.				
	May '04	-39	6		0.				
	Jun '04	-38	4		0.				
2004/05	Jul '04	-37	1		0.				HISTORICAL
	Aug '04	-36	0		0.				
	Sep '04	-35	5		0.				
	Oct '04	-34	11		0.				
	Nov '04	-33	6		0.				
	Dec '04	-32	9		0.				
	Jan '05	-31	11		0.				
	Feb '05	-30	25		0.				
	Mar '05	-29	22		0.				
	Apr '05	-28	20		0.				
	May '05	-27	6		0.				
	Jun '05	-26	4		0.				
2005/06	Jul '05	-25	0.		0.				MEASURED
	Aug '05	-24	0.		0.				
	Sep '05	-23	60.		0.				
	Oct '05	-22	132.6		0.				
	Nov '05	-21	60.		0.				
	Dec '05	-20	60.		0.				
	Jan '06	-19	116.		0.				
	Feb '06	-18	242.4		0.				
	Mar '06	-17	325.9		0.				
	Apr '06	-16	229.5		0.				
	May '06	-15	50.2		0.				
	Jun '06	-14	15.		0.				
2006/07	Jul '06	-13	11.9	1664	0.				HISTORICAL
	Aug '06	-12	6.2	1670	0.				
	Sep '06	-11	22.	1692	0.				
	Oct '06	-10	40.3	1732	0.				
	Nov '06	-9	42.	1774	0.				
	Dec '06	-8	79.8	1854	0.				
	Jan '07	-7	58.8	1913	0.				
	Feb '07	-6	167.4	2080	0.				
	Mar '07	-5	38.3	2118	0.				
	Apr '07	-4	89.	2207	0.				
	May '07	-3	42.	2249	0.				
	Jun '07	-2	42.	2291	0.				

RWC Management Plan for 8th Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	-1	16.	2306	0.				
	Aug '07	0	16.	2322	0.	0	2322	0%	
	Sep '07	1	17.	2334	128.1	128	2462	5%	START-UP
	Oct '07	2	42.	2365	109.	237	2602	9%	
	Nov '07	3	81.	2440	161.	398	2838	14%	
	Dec '07	4	224.	2655	0.	398	3053	13%	
	Jan '08	5	328.	2972	1.	399	3371	12%	
	Feb '08	6	98.	3045	157.	556	3601	15%	
	Mar '08	7	21.	3044	164.	720	3764	19%	
	Apr '08	8	11.	3035	90.	810	3845	21%	
	May '08	9	90.	3119	158.	968	4087	24%	
	Jun '08	10	15.	3130	86.	1054	4184	25%	
2008/09	Jul '08	11	*29.*	3158	*224.*	1278	4436	29%	HIST.
	Aug '08	12	*15.*	3173	*128.*	1406	4579	31%	
	Sep '08	13	*15.*	3183	*0.*	1406	4589	31%	
	Oct '08	14	*16.*	3188	*0.*	1406	4594	31%	
	Nov '08	15	*137.*	3319	*0.*	1406	4725	30%	
	Dec '08	16	*352.*	3662	*0.*	1406	5068	28%	
	Jan '09	*17*	*35.*	*3686*	*0.*	*1406*	*5092*	*28%*	
	Feb '09	*18*	*458.*	*4119*	*0.*	*1406*	*5525*	*25%*	
	Mar '09	*19*	*128.*	*4225*	0.	*1406*	*5631*	*25%*	PROJECTED
	Apr '09	*20*	*110.*	*4315*	*0.*	*1406*	*5721*	*25%*	
	May '09	*21*	*61.*	*4370*	*0.*	*1406*	*5776*	*24%*	
	Jun '09	*22*	*24.*	*4390*	*0.*	*1406*	*5796*	*24%*	
2009/10	Jul '09	*23*	*14.*	*4403*	*0.*	*1406*	*5809*	*24%*	
	Aug '09	*24*	*9.*	*4412*	*0.*	*1406*	*5818*	*24%*	
	Sep '09	*25*	*29.*	*4436*	*0.*	*1406*	*5842*	*24%*	
	Oct '09	*26*	*58.*	*4483*	*0.*	*1406*	*5889*	*24%*	
	Nov '09	*27*	*80.*	*4557*	*0.*	*1406*	*5963*	*24%*	
	Dec '09	*28*	*179.*	*4727*	*0.*	*1406*	*6133*	*23%*	
	Jan '10	*29*	*134.*	*4850*	*0.*	*1406*	*6256*	*22%*	
	Feb '10	*30*	*241.*	*5066*	*0.*	*1406*	*6472*	*22%*	
	Mar '10	*31*	*128.*	*5172*	*75.*	*1481*	*6653*	*22%*	
	Apr '10	*32*	*110.*	*5262*	*75.*	*1556*	*6818*	*23%*	
	May '10	*33*	*61.*	*5317*	*0.*	*1556*	*6873*	*23%*	
	Jun '10	*34*	*24.*	*5337*	*0.*	*1556*	*6893*	*23%*	
2010/11	Jul '10	*35*	*14.*	*5351*	*0.*	*1556*	*6907*	*23%*	
	Aug '10	*36*	*9.*	*5360*	*0.*	*1556*	*6916*	*22%*	
	Sep '10	*37*	*29.*	*5329*	*0.*	*1556*	*6885*	*23%*	
	Oct '10	*38*	*58.*	*5255*	*0.*	*1556*	*6811*	*23%*	
	Nov '10	*39*	*80.*	*5275*	*0.*	*1556*	*6831*	*23%*	
	Dec '10	*40*	*179.*	*5394*	*0.*	*1556*	*6950*	*22%*	
	Jan '11	*41*	*134.*	*5412*	*0.*	*1556*	*6968*	*22%*	
	Feb '11	*42*	*241.*	*5410*	*0.*	*1556*	*6966*	*22%*	
	Mar '11	*43*	*128.*	*5212*	*75.*	*1631*	*6844*	*24%*	
	Apr '11	*44*	*110.*	*5093*	*75.*	*1706*	*6799*	*25%*	
	May '11	*45*	*61.*	*5104*	*0.*	*1706*	*6810*	*25%*	
	Jun '11	*46*	*24.*	*5113*	*0.*	*1706*	*6819*	*25%*	

RWC Management Plan for 8th Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	Jul '11	47	14.	5115	0.	1706	6821	25%	PROJECTED
	Aug '11	48	9.	5118	0.	1706	6824	25%	
	Sep '11	49	29.	5125	0.	1706	6831	25%	
	Oct '11	50	58.	5142	0.	1706	6848	25%	
	Nov '11	51	80.	5180	0.	1706	6886	25%	
	Dec '11	52	179.	5280	0.	1706	6986	24%	
	Jan '12	53	134.	5355	0.	1706	7061	24%	
	Feb '12	54	241.	5428	0.	1706	7134	24%	
	Mar '12	55	128.	5518	75.	1781	7299	24%	
	Apr '12	56	110.	5539	75.	1856	7395	25%	
	May '12	57	61.	5558	0.	1856	7414	25%	
	Jun '12	58	24.	5540	0.	1856	7396	25%	
2012/13	Jul '12	59	14.	5538	0.	1856	7394	25%	POST 60 MOS
	Aug '12	60	9.	5531	0.	1856	7387	25%	
	Sep '12	61	29.	5543	0.	1728	7271	24%	
	Oct '12	62	58.	5559	100.	1719	7278	24%	
	Nov '12	63	80.	5558	100.	1658	7216	23%	
	Dec '12	64	179.	5513	0.	1658	7171	23%	
	Jan '13	65	134.	5319	0.	1657	6976	24%	
	Feb '13	66	241.	5462	0.	1500	6962	22%	
	Mar '13	67	128.	5569	0.	1336	6905	19%	
	Apr '13	68	110.	5668	100.	1346	7014	19%	
	May '13	69	61.	5639	100.	1288	6927	19%	
	Jun '13	70	24.	5648	0.	1202	6850	18%	
2013/14	Jul '13	71	14.	5633	0.	978	6611	15%	
	Aug '13	72	9.	5627	0.	850	6477	13%	
	Sep '13	73	29.	5641	0.	850	6491	13%	
	Oct '13	74	58.	5683	100.	950	6633	14%	
	Nov '13	75	80.	5626	100.	1050	6676	16%	
	Dec '13	76	179.	5453	0.	1050	6503	16%	
	Jan '14	77	134.	5552	0.	1050	6602	16%	
	Feb '14	78	241.	5335	0.	1050	6385	16%	
	Mar '14	79	128.	5335	0.	1050	6385	16%	
	Apr '14	80	110.	5335	75.	1125	6460	17%	
	May '14	81	61.	5335	75.	1200	6535	18%	
	Jun '14	82	24.	5335	0.	1200	6535	18%	

Notes:

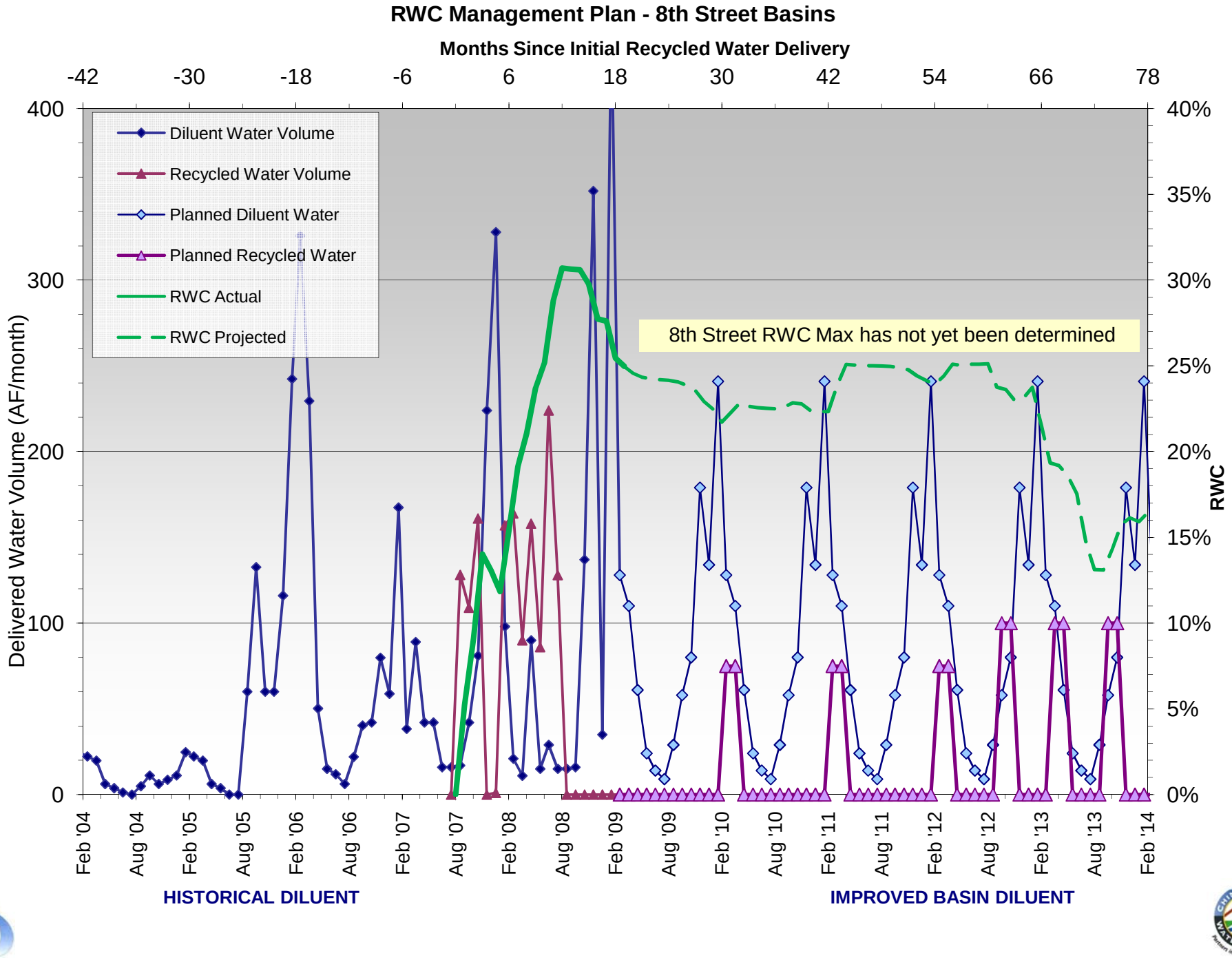
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan - 8th Street Basins
Months Since Initial Recycled Water Delivery
-42
-30
-18
-6
6
18
30
42
54
66
78
400
300
200
100
0
40%
35%
30%
25%
20%
15%
10%
5%
0%
Delivered Water Volume (AF/month)
RWC
Diluent Water Volume
Recycled Water Volume
Planned Diluent Water
Planned Recycled Water
RWC Actual
RWC Projected
8th Street RWC Max has not yet been determined
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL DILUENT
IMPROVED BASIN DILUENT

RWC Management Plan for Banana Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-23	0.		0.				MODELED
	Aug '03	-22	0.		0.				
	Sep '03	-21	0.		0.				
	Oct '03	-20	0.		0.				
	Nov '03	-19	34.2		0.				
	Dec '03	-18	37.1		0.				
	Jan '04	-17	4.5		0.				
	Feb '04	-16	83.5		0.				
	Mar '04	-15	28.2		0.				
	Apr '04	-14	0.3		0.				
	May '04	-13	0.		0.				
	Jun '04	-12	0.		0.				
2004/05	Jul '04	-11	0.		0.				HISTORICAL
	Aug '04	-10	0.		0.				
	Sep '04	-9	0.		0.				
	Oct '04	-8	62.8		0.				
	Nov '04	-7	17.		0.				
	Dec '04	-6	25.3		0.				
	Jan '05	-5	93.6		0.				
	Feb '05	-4	110.8		0.				
	Mar '05	-3	24.9		0.				
	Apr '05	-2	19.3		0.				
	May '05	-1	14.6		0.				
	Jun '05	0	0.	1,496.1	0.	0.	1496	0%	
2005/06	Jul '05	1	192.3	1,688.4	19.8	19.8	1708	1%	START-UP
	Aug '05	2	0.	1,688.4	253.9	273.7	1962	14%	
	Sep '05	3	0.	1,688.4	128.7	402.4	2091	19%	
	Oct '05	4	28.8	1,688.9	25.3	427.7	2117	20%	
	Nov '05	5	0.	1,676.2	8.	435.7	2112	21%	
	Dec '05	6	19.	1,695.2	10.2	445.9	2141	21%	
	Jan '06	7	6.	1,614.3	50.3	496.2	2111	24%	
	Feb '06	8	22.3	1,514.4	55.2	551.4	2066	27%	
	Mar '06	9	55.1	1,491.	0.	551.4	2042	27%	HIST. MEASURED
	Apr '06	10	35.7	1,465.6	0.	551.4	2017	27%	
	May '06	11	57.	1,522.6	0.	551.4	2074	27%	
	Jun '06	12	0.	1,522.6	47.	598.4	2121	28%	
2006/07	Jul '06	13	0.	1,510.4	64.2	662.6	2173	30%	
	Aug '06	14	0.	1,510.4	85.	747.6	2258	33%	
	Sep '06	15	0.	1,510.4	378.3	1,125.8	2636	43%	
	Oct '06	16	74.1	1,584.5	49.4	1,175.3	2760	43%	
	Nov '06	17	234.6	1,779.8	7.2	1,182.5	2962	40%	
	Dec '06	18	201.2	1,964.3	49.6	1,232.1	3196	39%	
	Jan '07	19	331.5	2,245.7	0.	1,232.1	3478	35%	
	Feb '07	20	73.7	2,298.5	0.	1,232.1	3531	35%	
	Mar '07	21	53.1	2,320.6	0.	1,232.1	3553	35%	
	Apr '07	22	29.	2,336.5	4.	1,236.1	3573	35%	
	May '07	23	37.	2,372.7	6.	1,242.1	3615	34%	
	Jun '07	24	0.	2,372.7	0.	1,242.1	3615	34%	

RWC Management Plan for Banana Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	25	0.	2,372.7	0.	1,242.1	3615	34%	HISTORICAL
	Aug '07	26	0.	2,372.7	0.	1,242.1	3615	34%	
	Sep '07	27	3.	2,375.7	0.	1,242.1	3618	34%	
	Oct '07	28	2.	2,377.7	0.	1,242.1	3620	34%	
	Nov '07	29	35.	2,373.8	0.	1,242.1	3616	34%	
	Dec '07	30	22.	2,336.5	0.	1,242.1	3579	35%	
	Jan '08	31	130.	2,466.5	0.	1,242.1	3709	33%	
	Feb '08	32	75.	2,461.	0.	1,242.1	3703	34%	
	Mar '08	33	0.	2,422.1	0.	1,242.1	3664	34%	
	Apr '08	34	0.	2,335.2	47.	1,289.1	3624	36%	
	May '08	35	3.	2,276.5	38.	1,327.1	3604	37%	
	Jun '08	36	8.	2,284.5	72.	1,399.1	3684	38%	
2008/09	Jul '08	37	31.	2,315.5	0.	1,399.1	3715	38%	
	Aug '08	38	45.	2,360.5	0.	1,399.1	3760	37%	
	Sep '08	39	34.	2,394.5	0.	1,399.1	3794	37%	
	Oct '08	40	36.	2,430.5	0.	1,399.1	3830	37%	
	Nov '08	41	50.	2,446.3	0.	1,399.1	3845	36%	
	Dec '08	42	87.	2,496.2	0.	1,399.1	3895	36%	
	Jan '09	*43*	5.	*2,496.7*	40.	*1,439.1*	*3936*	*37%*	
	Feb '09	*44*	95.	*2,508.2*	0.	*1,439.1*	*3947*	*36%*	
	Mar '09	*45*	5.	*2,485.*	0.	*1,439.1*	*3924*	*37%*	PLANNED
	Apr '09	*46*	*30.*	*2,514.7*	*0.*	*1,439.1*	*3954*	*36%*	
	May '09	*47*	*30.*	*2,544.7*	*0.*	*1,439.1*	*3984*	*36%*	
	Jun '09	*48*	*0.*	*2,544.7*	*0.*	*1,439.1*	*3984*	*36%*	
2009/10	*Jul '09*	*49*	*30.*	*2,574.7*	*0.*	*1,439.1*	*4014*	*36%*	
	Aug '09	*50*	*10.*	*2,584.7*	*0.*	*1,439.1*	*4024*	*36%*	
	Sep '09	*51*	*10.*	*2,594.7*	*0.*	*1,439.1*	*4034*	*36%*	
	Oct '09	*52*	*30.*	*2,561.9*	*0.*	*1,439.1*	*4001*	*36%*	
	Nov '09	*53*	*60.*	*2,604.9*	*0.*	*1,439.1*	*4044*	*36%*	
	Dec '09	*54*	*60.*	*2,639.6*	*0.*	*1,439.1*	*4079*	*35%*	
	Jan '10	*55*	*80.*	*2,626.*	*0.*	*1,439.1*	*4065*	*35%*	
	Feb '10	*56*	*80.*	*2,595.2*	*0.*	*1,439.1*	*4034*	*36%*	
	Mar '10	*57*	*30.*	*2,600.3*	*0.*	*1,439.1*	*4039*	*36%*	
	Apr '10	*58*	*30.*	*2,611.*	*0.*	*1,439.1*	*4050*	*36%*	
	May '10	*59*	*30.*	*2,626.4*	*0.*	*1,439.1*	*4065*	*35%*	
	Jun '10	*60*	*0.*	*2,626.4*	*0.*	*1,439.1*	*4065*	*35%*	
2010/11	*Jul '10*	*61*	*30.*	*2,464.1*	*0.*	*1,419.2*	*3883*	*37%*	POST 60 MOS
	Aug '10	*62*	*10.*	*2,474.1*	*0.*	*1,165.4*	*3639*	*32%*	
	Sep '10	*63*	*10.*	*2,484.1*	*100.*	*1,136.6*	*3621*	*31%*	
	Oct '10	*64*	*30.*	*2,485.3*	*100.*	*1,211.3*	*3697*	*33%*	
	Nov '10	*65*	*60.*	*2,545.3*	*0.*	*1,203.3*	*3749*	*32%*	
	Dec '10	*66*	*60.*	*2,586.3*	*0.*	*1,193.1*	*3779*	*32%*	
	Jan '11	*67*	*80.*	*2,660.3*	*0.*	*1,142.8*	*3803*	*30%*	
	Feb '11	*68*	*80.*	*2,718.*	*0.*	*1,087.6*	*3806*	*29%*	
	Mar '11	*69*	*30.*	*2,692.9*	*100.*	*1,187.6*	*3881*	*31%*	
	Apr '11	*70*	*30.*	*2,687.2*	*100.*	*1,287.6*	*3975*	*32%*	
	May '11	*71*	*30.*	*2,660.2*	*0.*	*1,287.6*	*3948*	*33%*	
	Jun '11	*72*	*0.*	*2,660.2*	*0.*	*1,240.6*	*3901*	*32%*	

RWC Management Plan for Banana Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	*Jul '11*	*73*	*30.*	*2,690.2*	*0.*	*1,176.5*	*3867*	*30%*	PLANNED
	Aug '11	*74*	*10.*	*2,700.2*	*0.*	*1,091.5*	*3792*	*29%*	
	Sep '11	*75*	*10.*	*2,710.2*	*0.*	*713.2*	*3423*	*21%*	
	Oct '11	*76*	*30.*	*2,666.1*	*100.*	*763.8*	*3430*	*22%*	
	Nov '11	*77*	*60.*	*2,491.5*	*100.*	*856.6*	*3348*	*26%*	
	Dec '11	*78*	*60.*	*2,350.2*	*0.*	*807.*	*3157*	*26%*	
	Jan '12	*79*	*80.*	*2,098.8*	*0.*	*807.*	*2906*	*28%*	
	Feb '12	*80*	*80.*	*2,105.1*	*0.*	*807.*	*2912*	*28%*	
	Mar '12	*81*	*30.*	*2,082.*	*0.*	*807.*	*2889*	*28%*	
	Apr '12	*82*	*30.*	*2,083.*	*0.*	*803.*	*2886*	*28%*	
	May '12	*83*	*30.*	*2,076.*	*0.*	*797.*	*2873*	*28%*	
	Jun '12	*84*	*0.*	*2,076.*	*0.*	*797.*	*2873*	*28%*	
2012/13	*Jul '12*	*85*	*30*	*2,106*	*0*	*797*	*2,903*	*27%*	
	Aug '12	*86*	*10*	*2,116*	*0*	*797*	*2,913*	*27%*	
	Sep '12	*87*	*10*	*2,123*	*0*	*797*	*2,920*	*27%*	
	Oct '12	*88*	*30*	*2,151*	*100*	*897*	*3,048*	*29%*	
	Nov '12	*89*	*60*	*2,176*	*100*	*997*	*3,173*	*31%*	
	Dec '12	*90*	*60*	*2,214*	*0*	*997*	*3,211*	*31%*	
	Jan '13	*91*	*80*	*2,164*	*0*	*997*	*3,161*	*32%*	
	Feb '13	*92*	*80*	*2,169*	*0*	*997*	*3,166*	*31%*	
	Mar '13	*93*	*30*	*2,199*	*0*	*997*	*3,196*	*31%*	
	Apr '13	*94*	*30*	*2,229*	*0*	*950*	*3,179*	*30%*	
	May '13	*95*	*30*	*2,256*	*0*	*912*	*3,168*	*29%*	
	Jun '13	*96*	*0*	*2,248*	*0*	*840*	*3,088*	*27%*	
2013/14	Jul '13	*97*	*30*	*2,247*	*0*	*840*	*3,087*	*27%*	
	Aug '13	*98*	*10*	*2,212*	*0*	*840*	*3,052*	*28%*	
	Sep '13	*99*	*10*	*2,188*	*0*	*840*	*3,028*	*28%*	
	Oct '13	*100*	*30*	*2,182*	*100*	*940*	*3,122*	*30%*	
	Nov '13	*101*	*60*	*2,192*	*100*	*1,040*	*3,232*	*32%*	
	Dec '13	*102*	*60*	*2,165*	*0*	*1,040*	*3,205*	*32%*	
	Jan '14	*103*	*80*	*2,240*	*0*	*1,000*	*3,240*	*31%*	
	Feb '14	*104*	*80*	*2,225*	*0*	*1,000*	*3,225*	*31%*	
	Mar '14	*105*	*30*	*2,250*	*0*	*1,000*	*3,250*	*31%*	
	Apr '14	*106*	*30*	*2,250*	*0*	*1,000*	*3,250*	*31%*	
	May '14	*107*	*30*	*2,250*	*0*	*1,000*	*3,250*	*31%*	
	Jun '14	*108*	*0*	*2,250*	*0*	*1,000*	*3,250*	*31%*	

Notes:

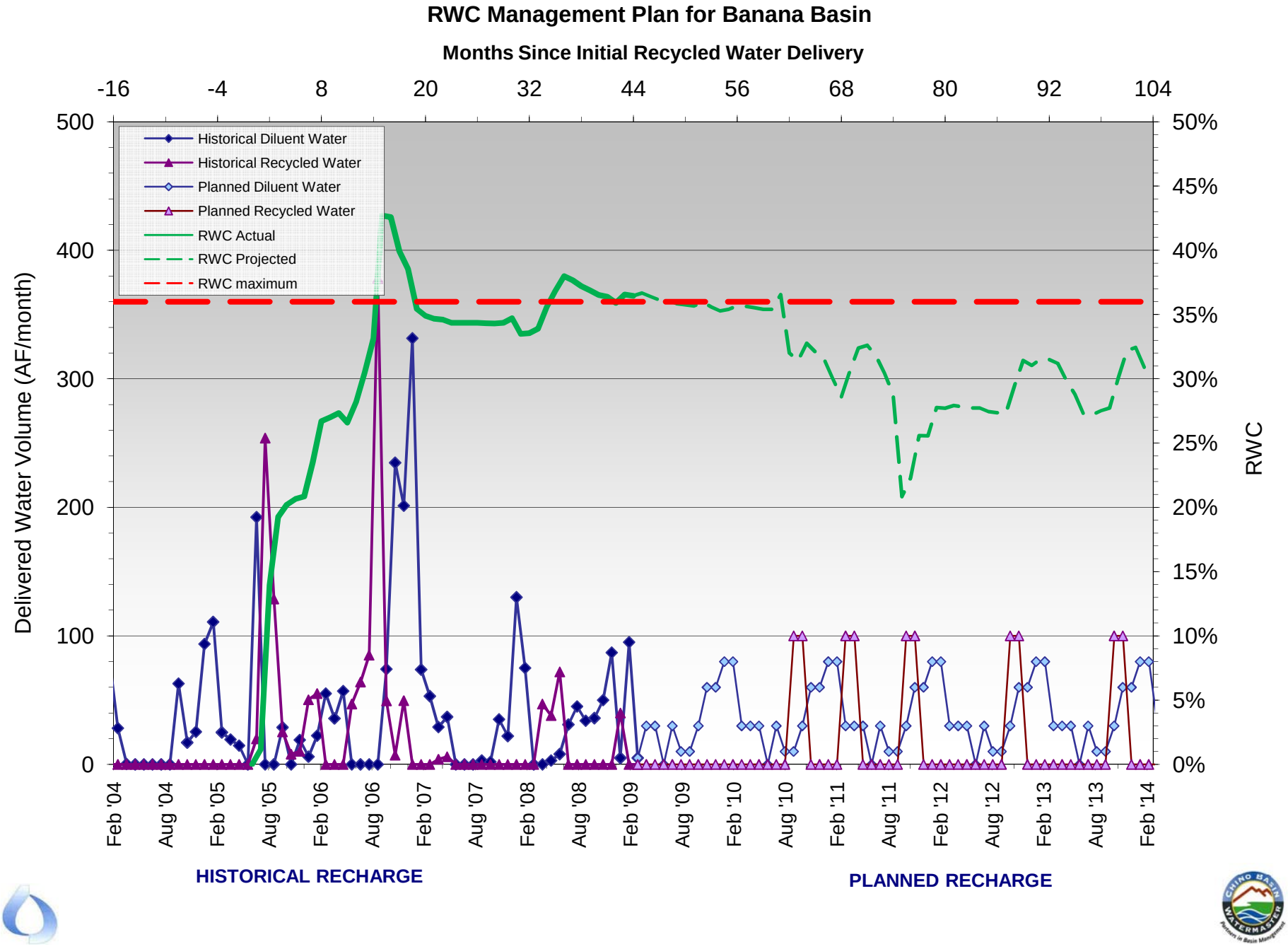
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan for Banana Basin
Months Since Initial Recycled Water Delivery
-16
-4
8
20
32
44
56
68
80
92
104
Historical Diluent Water
Historical Recycled Water
Planned Diluent Water
Planned Recycled Water
RWC Actual
RWC Projected
RWC maximum
Delivered Water Volume (AF/month)
RWC
500
400
300
200
100
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL RECHARGE
PLANNED RECHARGE

RWC Management Plan for Brooks Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-60							HISTORICAL MODELED
	Aug '03	-59							
	Sep '03	-58							
	Oct '03	-57							
	Nov '03	-56							
	Dec '03	-55							
	Jan '04	-54							
	Feb '04	-53							
	Mar '04	-52							
	Apr '04	-51							
	May '04	-50							
	Jun '04	-49							
2004/05	Jul '04	-48							
	Aug '04	-47							
	Sep '04	-46							
	Oct '04	-45							
	Nov '04	-44							
	Dec '04	-43							
	Jan '05	-42							
	Feb '05	-41							
	Mar '05	-40							
	Apr '05	-39							
	May '05	-38							
	Jun '05	-37							
2005/06	Jul '05	-36	32.7						HISTORICAL MEASURED
	Aug '05	-35	175.3						
	Sep '05	-34	684.2						
	Oct '05	-33	127.4						
	Nov '05	-32	389.5						
	Dec '05	-31	363.						
	Jan '06	-30	257.1						
	Feb '06	-29	392.6						
	Mar '06	-28	214.9						
	Apr '06	-27	261.3						
	May '06	-26	300.7						
	Jun '06	-25	371.						
2006/07	Jul '06	-24	206.4	3776		0	3776	0%	
	Aug '06	-23	151.	3927		0	3927	0%	
	Sep '06	-22	342.5	4270		0	4270	0%	
	Oct '06	-21	306.9	4577		0	4577	0%	
	Nov '06	-20	287.7	4864		0	4864	0%	
	Dec '06	-19	261.8	5126		0	5126	0%	
	Jan '07	-18	112.5	5239		0	5239	0%	
	Feb '07	-17	129.1	5368		0	5368	0%	
	Mar '07	-16	3.5	5371		0	5371	0%	
	Apr '07	-15	102.	5473		0	5473	0%	
	May '07	-14	4.	5477		0	5477	0%	
	Jun '07	-13	2.	5479		0	5479	0%	

RWC Management Plan for Brooks Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	-12	0.	5479		0	5479	0%	HISTORICAL
	Aug '07	-11	0.	5479		0	5479	0%	
	Sep '07	-10	25.	5504		0	5504	0%	
	Oct '07	-9	35.	5539		0	5539	0%	
	Nov '07	-8	24.	5563		0	5563	0%	
	Dec '07	-7	42.	5605		0	5605	0%	
	Jan '08	-6	282.	5887		0	5887	0%	
	Feb '08	-5	50.	5937		0	5937	0%	
	Mar '08	-4	9.	5946		0	5946	0%	
	Apr '08	-3	4.	5950		0	5950	0%	
	May '08	-2	43.	5993		0	5993	0%	
	Jun '08	-1	3.	5996		0	5996	0%	
2008/09	Jul '08	0	*3.*	5999	*0.*	0	5999	0%	START-UP
	Aug '08	1	*16.*	6015	*117.*	117	6132	2%	
	Sep '08	2	*0.*	6015	*86.*	203	6218	3%	
	Oct '08	3	*0.*	6015	*166.*	369	6384	6%	
	Nov '08	4	*23.*	6038	*103.*	472	6510	7%	
	Dec '08	5	*162.*	6200	*88.*	560	6760	8%	
	Jan '09	*6*	*25.*	*6225*	*277.*	*837*	*7062*	*12%*	
	Feb '09	*7*	*208.*	*6433*	*20.*	*857*	*7290*	*12%*	
	Mar '09	*8*	76.	*6509*	150.	*1007*	*7516*	*13%*	PROJECTED
	Apr '09	*9*	*122.*	*6631*	*150.*	*1157*	*7788*	*15%*	
	May '09	*10*	*116.*	*6747*	*150.*	*1307*	*8054*	*16%*	
	Jun '09	*11*	*125.*	*6872*	*0.*	*1307*	*8179*	*16%*	
2009/10	Jul '09	*12*	*61.*	*6933*	*0.*	*1307*	*8240*	*16%*	
	Aug '09	*13*	*86.*	*7019*	*0.*	*1307*	*8326*	*16%*	
	Sep '09	*14*	*263.*	*7282*	*0.*	*1307*	*8589*	*15%*	
	Oct '09	*15*	*117.*	*7399*	*120.*	*1427*	*8826*	*16%*	
	Nov '09	*16*	*181.*	*7580*	*120.*	*1547*	*9127*	*17%*	
	Dec '09	*17*	*207.*	*7787*	*0.*	*1547*	*9334*	*17%*	
	Jan '10	*18*	*169.*	*7956*	*0.*	*1547*	*9503*	*16%*	
	Feb '10	*19*	*195.*	*8151*	*0.*	*1547*	*9698*	*16%*	
	Mar '10	*20*	*76.*	*8227*	*0.*	*1547*	*9774*	*16%*	
	Apr '10	*21*	*122.*	*8349*	*0.*	*1547*	*9896*	*16%*	
	May '10	*22*	*116.*	*8465*	*0.*	*1547*	*10012*	*15%*	
	Jun '10	*23*	*125.*	*8590*	*0.*	*1547*	*10137*	*15%*	
2010/11	Jul '10	*24*	*61.*	*8618*	*0.*	*1547*	*10165*	*15%*	
	Aug '10	*25*	*86.*	*8529*	*0.*	*1547*	*10076*	*15%*	
	Sep '10	*26*	*263.*	*8108*	*0.*	*1547*	*9655*	*16%*	
	Oct '10	*27*	*117.*	*8098*	*120.*	*1667*	*9765*	*17%*	
	Nov '10	*28*	*181.*	*7889*	*120.*	*1787*	*9676*	*18%*	
	Dec '10	*29*	*207.*	*7733*	*0.*	*1787*	*9520*	*19%*	
	Jan '11	*30*	*169.*	*7645*	*0.*	*1787*	*9432*	*19%*	
	Feb '11	*31*	*195.*	*7447*	*0.*	*1787*	*9234*	*19%*	
	Mar '11	*32*	*76.*	*7309*	*0.*	*1787*	*9096*	*20%*	
	Apr '11	*33*	*122.*	*7169*	*0.*	*1787*	*8956*	*20%*	
	May '11	*34*	*116.*	*6985*	*0.*	*1787*	*8772*	*20%*	
	Jun '11	*35*	*125.*	*6739*	*0.*	*1787*	*8526*	*21%*	

RWC Management Plan for Brooks Street Basins

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	Jul '11	36	61.	6593	0.	1787	8380	21%	PROJECTED
	Aug '11	37	86.	6528	0.	1787	8315	21%	
	Sep '11	38	263.	6449	0.	1787	8236	22%	
	Oct '11	39	117.	6259	120.	1907	8166	23%	
	Nov '11	40	181.	6152	120.	2027	8179	25%	
	Dec '11	41	207.	6097	0.	2027	8124	25%	
	Jan '12	42	169.	6154	0.	2027	8181	25%	
	Feb '12	43	195.	6220	0.	2027	8247	25%	
	Mar '12	44	76.	6292	0.	2027	8319	24%	
	Apr '12	45	122.	6312	0.	2027	8339	24%	
	May '12	46	116.	6424	0.	2027	8451	24%	
	Jun '12	47	125.	6547	0.	2027	8574	24%	
2012/13	Jul '12	48	61.	6608	0.	2027	8635	23%	
	Aug '12	49	86.	6694	0.	2027	8721	23%	
	Sep '12	50	263.	6932	0.	2027	8959	23%	
	Oct '12	51	117.	7014	120.	2147	9161	23%	
	Nov '12	52	181.	7171	120.	2267	9438	24%	
	Dec '12	53	207.	7336	0.	2267	9603	24%	
	Jan '13	54	169.	7223	0.	2267	9490	24%	
	Feb '13	55	195.	7368	0.	2267	9635	24%	
	Mar '13	56	76.	7435	0.	2267	9702	23%	
	Apr '13	57	122.	7553	0.	2267	9820	23%	
	May '13	58	116.	7626	0.	2267	9893	23%	
	Jun '13	59	125.	7748	0.	2267	10015	23%	
2013/14	Jul '13	60	61.	7806	0.	2267	10073	23%	POST 60 MOS
	Aug '13	61	86.	7876	0.	2150	10026	21%	
	Sep '13	62	263.	8139	0.	2064	10203	20%	
	Oct '13	63	117.	8256	120.	2018	10274	20%	
	Nov '13	64	181.	8414	120.	2035	10449	19%	
	Dec '13	65	207.	8459	0.	1947	10406	19%	
	Jan '14	66	169.	8603	0.	1670	10273	16%	
	Feb '14	67	195.	8590	0.	1650	10240	16%	
	Mar '14	68	76.	8590	150.	1650	10240	16%	
	Apr '14	69	122.	8590	150.	1650	10240	16%	
	May '14	70	116.	8590	0.	1500	10090	15%	
	Jun '14	71	125.	8590	0.	1500	10090	15%	

Notes:

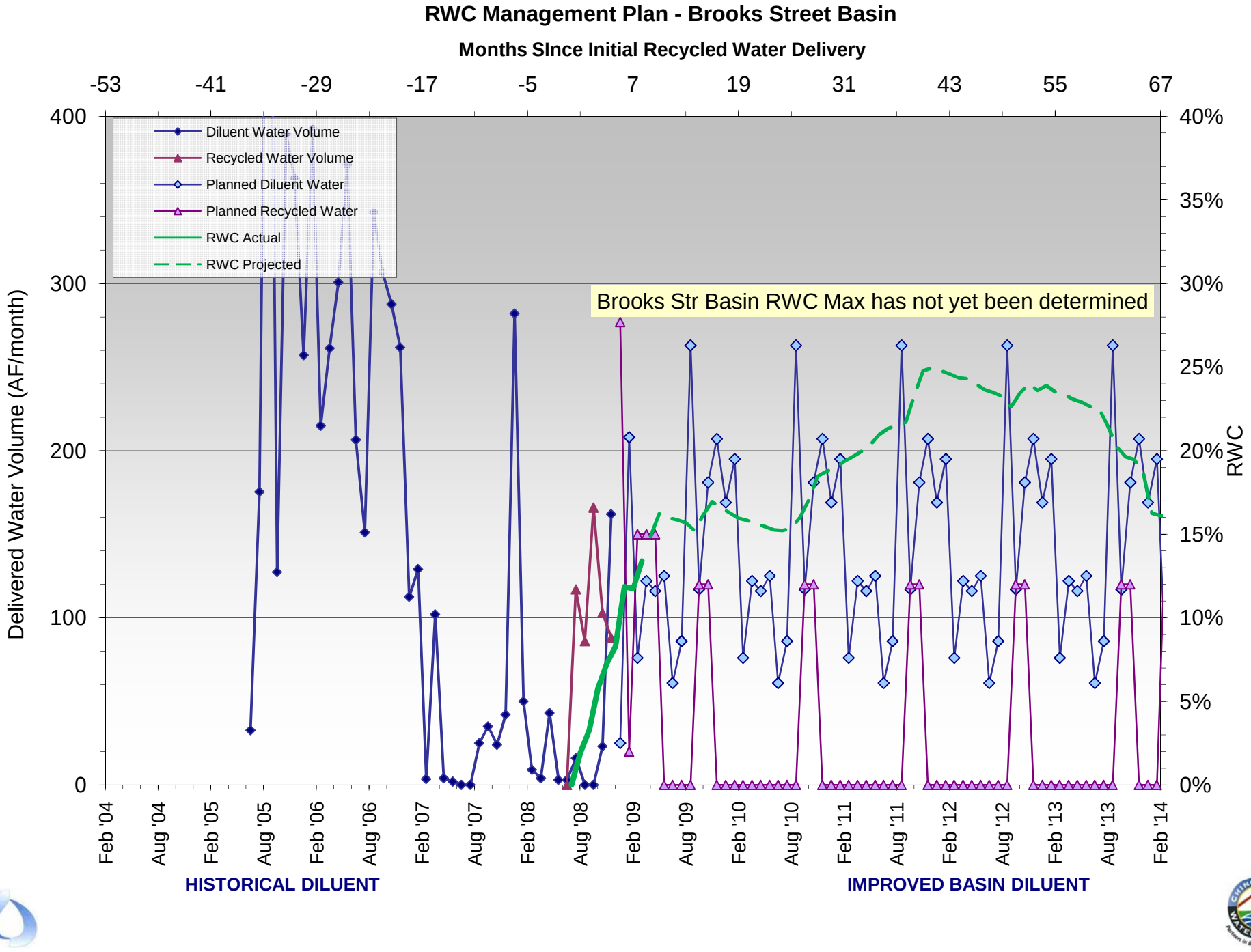
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan - Brooks Street Basin
Months SInce Initial Recycled Water Delivery
-53
-41
-29
-17
-5
7
19
31
43
55
67
Diluent Water Volume
Recycled Water Volume
Planned Diluent Water
Planned Recycled Water
RWC Actual
RWC Projected
Brooks Str Basin RWC Max has not yet been determined
Delivered Water Volume (AF/month)
RWC
400
300
200
100
0
40%
35%
30%
25%
20%
15%
10%
5%
0%
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL DILUENT
IMPROVED BASIN DILUENT

RWC Management Plan for Ely Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/2004	Jul '03	47	105	8,830	0	1,696	10,526	16%	HISTORICAL
	Aug '03	48	32	8,753	0	1,696	10,449	16%	
	Sep '03	49	11	8,636	0	1,696	10,332	16%	
	Oct '03	50	11	8,586	0	1,696	10,282	16%	
	Nov '03	51	105	8,605	0	1,696	10,301	16%	
	Dec '03	52	193	8,686	0	1,696	10,382	16%	
	Jan '04	53	33	8,508	0	1,696	10,204	17%	
	Feb '04	54	330	8,700	0	1,696	10,396	16%	
	Mar '04	55	174	8,712	0	1,696	10,408	16%	
	Apr '04	56	69	8,466	0	1,696	10,162	17%	
	May '04	57	17	8,385	5	1,701	10,085	17%	
	Jun '04	58	13	8,360	44	1,745	10,104	17%	
2004/2005	Jul '04	59	14	8,360	46	1,791	10,151	18%	
	Aug '04	60	94	8,380	48	1,839	10,219	18%	
	Sep '04	61	179	8,484	41	1,793	10,277	17%	
	Oct '04	62	330	8,751	23	1,652	10,403	16%	
	Nov '04	63	330	9,075	0	1,536	10,611	14%	
	Dec '04	64	330	9,368	0	1,423	10,791	13%	
	Jan '05	65	330	9,578	0	1,396	10,975	13%	
	Feb '05	66	330	9,578	0	1,396	10,975	13%	
	Mar '05	67	238	9,497	0	1,396	10,893	13%	
	Apr '05	68	176	9,367	0	1,396	10,763	13%	
	May '05	69	140	9,375	0	1,396	10,772	13%	
	Jun '05	70	3	9,262	0	1,396	10,658	13%	
2005/2006	Jul '05	71	0	9,203	0	1,331	10,534	13%	
	Aug '05	72	0	9,197	0	1,186	10,382	11%	
	Sep '05	73	0	9,187	0	1,051	10,238	10%	
	Oct '05	74	198	9,236	32	957	10,193	9%	
	Nov '05	75	15	9,165	0	957	10,122	9%	
	Dec '05	76	107	9,157	35	992	10,149	10%	
	Jan '06	77	190	9,017	21	1,013	10,030	10%	
	Feb '06	78	268	8,955	74	1,087	10,041	11%	
	Mar '06	79	338	9,183	0	1,087	10,270	11%	
	Apr '06	80	362	9,271	0	1,087	10,357	10%	
	May '06	81	35	9,203	0	1,087	10,289	11%	
	Jun '06	82	26	9,215	26	1,084	10,299	11%	
2006/2007	Jul '06	83	33	9,235	41	1,125	10,360	11%	
	Aug '06	84	10	9,234	6	1,100	10,334	11%	
	Sep '06	85	40	9,248	83	1,005	10,253	10%	
	Oct '06	86	54	9,226	31	850	10,076	8%	
	Nov '06	87	63	8,960	50	791	9,751	8%	
	Dec '06	88	86	8,933	41	832	9,765	9%	
	Jan '07	89	95	8,850	58	890	9,740	9%	
	Feb '07	90	150	8,894	23	913	9,807	9%	
	Mar '07	91	17	8,692	45	957	9,650	10%	
	Apr '07	92	59	8,630	41	998	9,629	10%	
	May '07	93	14	8,558	40	1,038	9,597	11%	
	Jun '07	94	18	8,561	7	1,045	9,606	11%	

RWC Management Plan for Ely Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/2008	Jul '07	95	26	8,471	0	1,045	9,516	11%	HISTORICAL
	Aug '07	96	29	8,364	0	1,045	9,410	11%	
	Sep '07	97	34	8,301	0	1,045	9,346	11%	
	Oct '07	*98*	34	*8,156*	0	*1,045*	*9,201*	*11%*	
	Nov '07	*99*	166	*7,992*	87	*1,132*	*9,124*	*12%*	
	Dec '07	*100*	257	*7,919*	53	*1,185*	*9,104*	*13%*	
	Jan '08	*101*	793	*8,535*	0	*1,185*	*9,721*	*12%*	
	Feb '08	*102*	233	*8,438*	0	*1,185*	*9,624*	*12%*	
	Mar '08	*103*	20	*8,128*	116	*1,301*	*9,430*	*14%*	
	Apr '08	*104*	30	*7,828*	116	*1,417*	*9,246*	*15%*	
	May '08	*105*	30	*7,528*	87	*1,474*	*9,002*	*16%*	
	Jun '08	*106*	*18*	*7,434*	*0*	*1,320*	*8,754*	*15%*	
2008/2009	Jul '08	*107*	*17*	*7,346*	*67*	*1,387*	*8,733*	*16%*	
	Aug '08	*108*	*8*	*7,322*	*0*	*1,387*	*8,709*	*16%*	
	Sep '08	*109*	*5*	*7,316*	*0*	*1,387*	*8,703*	*16%*	
	Oct '08	*110*	*17*	*7,322*	*135*	*1,522*	*8,844*	*17%*	
	Nov '08	*111*	*114*	*7,331*	*88*	*1,610*	*8,941*	*18%*	
	Dec '08	*112*	*287*	*7,425*	*0*	*1,610*	*9,035*	*18%*	
	Jan '09	*113*	*38*	*7,430*	*39*	*1,649*	*9,079*	*18%*	
	Feb '09	*114*	*399*	*7,499*	*9*	*1,658*	*9,157*	*18%*	
	Mar '09	*115*	*210*	*7,535*	*75*	*1,733*	*9,268*	*19%*	PROJECTED
	Apr '09	*116*	*210*	*7,677*	*0*	*1,733*	*9,410*	*18%*	
	May '09	*117*	*120*	*7,780*	*0*	*1,728*	*9,508*	*18%*	
	Jun '09	*118*	*50*	*7,816*	*0*	*1,684*	*9,501*	*18%*	
2009/2010	Jul '09	*119*	*50*	*7,853*	*75*	*1,713*	*9,566*	*18%*	
	Aug '09	*120*	*40*	*7,798*	*0*	*1,665*	*9,464*	*18%*	
	Sep '09	*121*	*60*	*7,680*	*0*	*1,624*	*9,304*	*17%*	
	Oct '09	*122*	*110*	*7,460*	*100*	*1,701*	*9,161*	*19%*	
	Nov '09	*123*	*160*	*7,290*	*100*	*1,801*	*9,091*	*20%*	
	Dec '09	*124*	*190*	*7,150*	*60*	*1,861*	*9,011*	*21%*	
	Jan '10	*125*	*240*	*7,060*	*0*	*1,861*	*8,921*	*21%*	
	Feb '10	*126*	*270*	*7,000*	*50*	*1,911*	*8,911*	*21%*	
	Mar '10	*127*	*210*	*6,972*	*80*	*1,991*	*8,963*	*22%*	
	Apr '10	*128*	*210*	*7,007*	*100*	*2,091*	*9,098*	*23%*	
	May '10	*129*	*120*	*6,987*	*90*	*2,181*	*9,168*	*24%*	
	Jun '10	*130*	*50*	*7,034*	*0*	*2,181*	*9,215*	*24%*	
2010/2011	Jul '10	*131*	*50*	*7,084*	*75*	*2,256*	*9,340*	*24%*	
	Aug '10	*132*	*40*	*7,124*	*0*	*2,256*	*9,380*	*24%*	
	Sep '10	*133*	*60*	*7,184*	*0*	*2,256*	*9,440*	*24%*	
	Oct '10	*134*	*110*	*7,096*	*100*	*2,324*	*9,420*	*25%*	
	Nov '10	*135*	*160*	*7,241*	*100*	*2,424*	*9,665*	*25%*	
	Dec '10	*136*	*190*	*7,324*	*60*	*2,449*	*9,773*	*25%*	
	Jan '11	*137*	*240*	*7,374*	*0*	*2,429*	*9,802*	*25%*	
	Feb '11	*138*	*270*	*7,376*	*50*	*2,404*	*9,780*	*25%*	
	Mar '11	*139*	*210*	*7,248*	*80*	*2,484*	*9,732*	*26%*	
	Apr '11	*140*	*210*	*7,095*	*100*	*2,584*	*9,680*	*27%*	
	May '11	*141*	*120*	*7,180*	*90*	*2,674*	*9,854*	*27%*	
	Jun '11	*142*	*50*	*7,204*	*0*	*2,648*	*9,852*	*27%*	

RWC Management Plan for Ely Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/2012	Jul '11	*143*	*50*	*7,221*	*75*	*2,682*	*9,903*	*27%*	
	Aug '11	*144*	*40*	*7,251*	*0*	*2,676*	*9,927*	*27%*	
	Sep '11	*145*	*60*	*7,271*	*0*	*2,593*	*9,864*	*26%*	
	Oct '11	*146*	*110*	*7,327*	*100*	*2,662*	*9,989*	*27%*	
	Nov '11	*147*	*160*	*7,424*	*100*	*2,712*	*10,135*	*27%*	
	Dec '11	*148*	*190*	*7,528*	*60*	*2,730*	*10,258*	*27%*	
	Jan '12	*149*	*240*	*7,673*	*0*	*2,673*	*10,345*	*26%*	
	Feb '12	*150*	*270*	*7,793*	*50*	*2,700*	*10,493*	*26%*	
	Mar '12	*151*	*210*	*7,986*	*80*	*2,735*	*10,721*	*26%*	
	Apr '12	*152*	*210*	*8,137*	*100*	*2,794*	*10,931*	*26%*	
	May '12	*153*	*120*	*8,243*	*90*	*2,844*	*11,087*	*26%*	
	Jun '12	*154*	*50*	*8,275*	*0*	*2,837*	*11,112*	*26%*	
2012/2013	Jul '12	*155*	*50*	*8,299*	*75*	*2,912*	*11,211*	*26%*	PROJECTED
	Aug '12	*156*	*40*	*8,310*	*0*	*2,912*	*11,222*	*26%*	
	Sep '12	*157*	*60*	*8,336*	*0*	*2,912*	*11,248*	*26%*	
	Oct '12	*158*	*110*	*8,412*	*100*	*3,012*	*11,424*	*26%*	
	Nov '12	*159*	*160*	*8,406*	*100*	*3,025*	*11,431*	*26%*	
	Dec '12	*160*	*190*	*8,339*	*60*	*3,032*	*11,371*	*27%*	
	Jan '13	*161*	*240*	*7,786*	*0*	*3,032*	*10,818*	*28%*	
	Feb '13	*162*	*270*	*7,823*	*50*	*3,082*	*10,905*	*28%*	
	Mar '13	*163*	*210*	*8,013*	*80*	*3,046*	*11,059*	*28%*	
	Apr '13	*164*	*210*	*8,193*	*100*	*3,030*	*11,223*	*27%*	
	May '13	*165*	*120*	*8,283*	*90*	*3,033*	*11,316*	*27%*	
	Jun '13	*166*	*50*	*8,315*	*0*	*3,033*	*11,348*	*27%*	
2013/2014	Jul '13	*167*	*50*	*8,348*	*75*	*3,041*	*11,389*	*27%*	
	Aug '13	*168*	*40*	*8,380*	*0*	*3,041*	*11,421*	*27%*	
	Sep '13	*169*	*60*	*8,435*	*0*	*3,041*	*11,476*	*26%*	
	Oct '13	*170*	*110*	*8,528*	*100*	*3,006*	*11,534*	*26%*	
	Nov '13	*171*	*160*	*8,574*	*100*	*3,018*	*11,592*	*26%*	
	Dec '13	*172*	*190*	*8,477*	*60*	*3,078*	*11,555*	*27%*	
	Jan '14	*173*	*240*	*8,679*	*0*	*3,039*	*11,718*	*26%*	
	Feb '14	*174*	*270*	*8,550*	*50*	*3,080*	*11,630*	*26%*	
	Mar '14	*175*	*210*	*8,550*	*80*	*3,085*	*11,635*	*27%*	
	Apr '14	*176*	*210*	*8,550*	*100*	*3,185*	*11,735*	*27%*	
	May '14	*177*	*120*	*8,550*	*90*	*3,275*	*11,825*	*28%*	
	Jun '14	*178*	*50*	*8,550*	*0*	*3,275*	*11,825*	*28%*	

Notes:

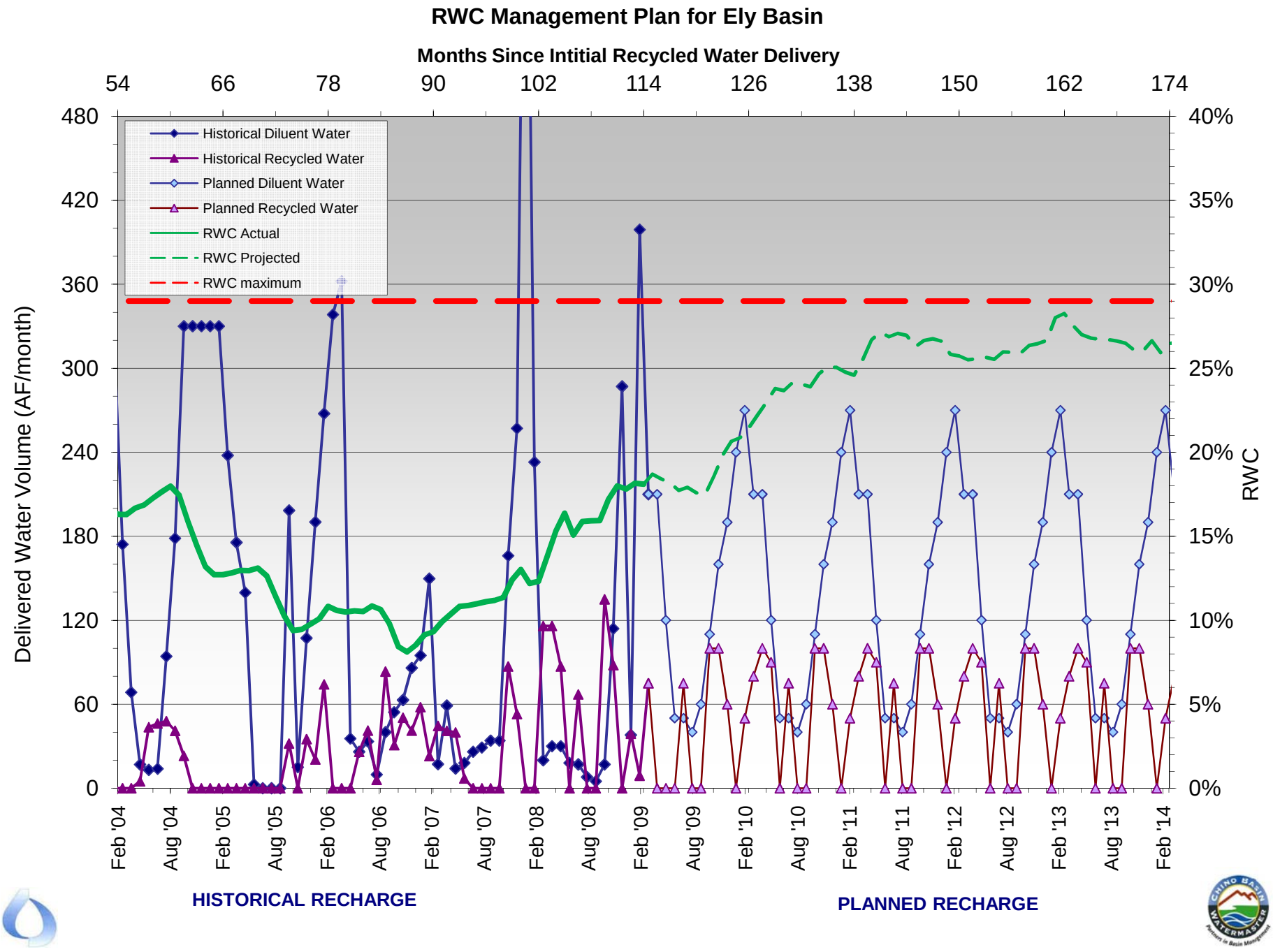
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan for Ely Basin
Months Since Intitial Recycled Water Delivery
54
66
78
90
102
114
126
138
150
162
174
Historical Diluent Water
Historical Recycled Water
Planned Diluent Water
Planned Recycled Water
RWC Actual
RWC Projected
RWC maximum
Delivered Water Volume (AF/month)
480
420
360
300
240
180
120
60
0
40%
35%
30%
25%
20%
15%
10%
5%
0%
RWC
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL RECHARGE
PLANNED RECHARGE

RWC Management Plan for Hickory Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-25	0.						HISTORICAL MODELED
	Aug '03	-24	0.						
	Sep '03	-23	0.						
	Oct '03	-22	0.						
	Nov '03	-21	4.5						
	Dec '03	-20	35.2						
	Jan '04	-19	0.5						
	Feb '04	-18	128.8						
	Mar '04	-17	54.9						
	Apr '04	-16	0.						
	May '04	-15	0.						
	Jun '04	-14	0.						
2004/05	Jul '04	-13	0.						
	Aug '04	-12	0.						
	Sep '04	-11	0.						
	Oct '04	-10	117.6						
	Nov '04	-9	2.						
	Dec '04	-8	39.						
	Jan '05	-7	149.8						
	Feb '05	-6	127.5						
	Mar '05	-5	27.						
	Apr '05	-4	4.1						MEAS
	May '05	-3	0.						
	Jun '05	-2	0.						
2005/06	Jul '05	-1	265.3						
	Aug '05	0	487.1	2137	0.	0.	2137	0%	
	Sep '05	1	130.4	2267	138.8	138.8	2406	6%	START-UP
	Oct '05	2	21.8	2287	92.7	231.6	2519	9%	
	Nov '05	3	0.	2287	92.2	323.8	2611	12%	
	Dec '05	4	7.8	2295	31.6	355.4	2650	13%	
	Jan '06	*5*	12.6	2297	82.9	438.3	2735	16%	
	Feb '06	*6*	34.6	2319	79.2	517.5	2837	18%	
	Mar '06	*7*	26.7	2340	0.	517.5	2857	18%	
	Apr '06	*8*	43.5	2377	0.	517.5	2895	18%	
	May '06	*9*	83.2	2460	0.	517.5	2978	17%	HISTORICAL
	Jun '06	*10*	30.	2490	0.	517.5	3008	17%	
2006/07	Jul '06	*11*	129.1	2618	182.8	700.3	3318	21%	
	Aug '06	*12*	47.	2665	180.	880.3	3545	25%	
	Sep '06	*13*	89.	2754	0.	880.3	3634	24%	
	Oct '06	*14*	43.2	2797	143.6	1023.9	3821	27%	
	Nov '06	*15*	58.5	2795	35.4	1059.3	3854	27%	
	Dec '06	*16*	84.4	2877	0.	1059.3	3936	27%	
	Jan '07	*17*	16.3	2858	0.	1059.3	3917	27%	
	Feb '07	*18*	40.3	2898	42.	1101.3	3999	28%	
	Mar '07	*19*	34.6	2929	0.	1101.3	4030	27%	
	Apr '07	*20*	50.	2978	63.	1164.3	4142	28%	
	May '07	*21*	58.	3035	0.	1164.3	4200	28%	
	Jun '07	*22*	90.	3125	0.	1164.3	4290	27%	

RWC Management Plan for Hickory Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	*23*	93.	3218	141.	1305.3	4524	29%	HISTORICAL MEASURED
	Aug '07	*24*	93.	3311	78.	1383.3	4695	29%	
	Sep '07	*25*	92.	3403	15.	1398.3	4802	29%	
	Oct '07	*26*	73.	3476	22.8	1421.1	4898	29%	
	Nov '07	*27*	102.	3497	98.	1519.1	5016	30%	
	Dec '07	*28*	102.	*3477*	0.	*1519.1*	*4996*	*30%*	
	Jan '08	*29*	126.	*3603*	0.	*1519.1*	*5122*	*30%*	
	Feb '08	*30*	97.	*3554*	39.	*1558.1*	*5112*	*30%*	
	Mar '08	*31*	44.	*3492*	80.	*1638.1*	*5130*	*32%*	
	Apr '08	*32*	64.	*3467*	7.	*1645.1*	*5112*	*32%*	
	May '08	*33*	39.	*3499*	86.	*1731.1*	*5230*	*33%*	
	Jun '08	*34*	*24.*	*3523*	*0.*	*1731.1*	*5254*	*33%*	
2008/09	Jul '08	*35*	*18.*	*3541*	*0.*	*1731.1*	*5272*	*33%*	
	Aug '08	*36*	*6.*	*3547*	*0.*	*1731.1*	*5278*	*33%*	
	Sep '08	*37*	*3.*	*3550*	*0.*	*1731.1*	*5281*	*33%*	
	Oct '08	*38*	*3.*	*3553*	*0.*	*1731.1*	*5284*	*33%*	
	Nov '08	*39*	*3.*	*3552*	*0.*	*1731.1*	*5283*	*33%*	
	Dec '08	*40*	*35.*	*3552*	*0.*	*1731.1*	*5283*	*33%*	
	Jan '09	*41*	*0.*	*3551*	*0.*	*1731.1*	*5282*	*33%*	
	Feb '09	*42*	*63.*	*3485*	*23.*	*1754.1*	*5239*	*33%*	
	Mar '09	*43*	*50.*	*3480*	*23.*	*1777.1*	*5258*	*34%*	PLANNED
	Apr '09	*44*	*30.*	*3510*	*0.*	*1777.1*	*5288*	*34%*	
	May '09	*45*	*50.*	*3560*	*0.*	*1777.1*	*5338*	*33%*	
	Jun '09	*46*	*40.*	*3600*	*0.*	*1777.1*	*5378*	*33%*	
2009/10	Jul '09	*47*	*70.*	*3670*	*0.*	*1777.1*	*5448*	*33%*	
	Aug '09	*48*	*90.*	*3760*	*0.*	*1777.1*	*5538*	*32%*	
	Sep '09	*49*	*40.*	*3800*	*0.*	*1777.1*	*5578*	*32%*	
	Oct '09	*50*	*40.*	*3723*	*0.*	*1777.1*	*5500*	*32%*	
	Nov '09	*51*	*40.*	*3761*	*0.*	*1777.1*	*5538*	*32%*	
	Dec '09	*52*	*60.*	*3782*	*0.*	*1777.1*	*5559*	*32%*	
	Jan '10	*53*	*40.*	*3672*	*0.*	*1777.1*	*5449*	*33%*	
	Feb '10	*54*	*90.*	*3635*	*0.*	*1777.1*	*5412*	*33%*	
	Mar '10	*55*	*50.*	*3658*	*0.*	*1777.1*	*5435*	*33%*	
	Apr '10	*56*	*40.*	*3693*	*0.*	*1777.1*	*5471*	*32%*	
	May '10	*57*	*30.*	*3723*	*0.*	*1777.1*	*5501*	*32%*	
	Jun '10	*58*	*20.*	*3743*	*0.*	*1777.1*	*5521*	*32%*	
2010/11	Jul '10	*59*	*70.*	*3548*	*0.*	*1777.1*	*5325*	*33%*	POST 60 MOS
	Aug '10	*60*	*90.*	*3151*	*0.*	*1777.1*	*4928*	*36%*	
	Sep '10	*61*	*40.*	*3061*	*0.*	*1638.3*	*4699*	*35%*	
	Oct '10	*62*	*40.*	*3079*	*80.*	*1625.6*	*4704*	*35%*	
	Nov '10	*63*	*40.*	*3119*	*0.*	*1533.3*	*4652*	*33%*	
	Dec '10	*64*	*60.*	*3171*	*0.*	*1501.7*	*4673*	*32%*	
	Jan '11	*65*	*40.*	*3198*	*0.*	*1418.8*	*4617*	*31%*	
	Feb '11	*66*	*90.*	*3254*	*0.*	*1339.6*	*4593*	*29%*	
	Mar '11	*67*	*50.*	*3277*	*100.*	*1439.6*	*4717*	*31%*	
	Apr '11	*68*	*40.*	*3274*	*100.*	*1539.6*	*4813*	*32%*	
	May '11	*69*	*30.*	*3220*	*0.*	*1539.6*	*4760*	*32%*	
	Jun '11	*70*	*20.*	*3210*	*0.*	*1539.6*	*4750*	*32%*	

RWC Management Plan for Hickory Basin

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	Jul '11	71	70.	3151	0.	1356.9	4508	30%	PLANNED
	Aug '11	72	90.	3194	0.	1176.9	4371	27%	
	Sep '11	73	40.	3145	0.	1176.9	4322	27%	
	Oct '11	74	40.	3142	80.	1113.2	4255	26%	
	Nov '11	75	40.	3124	50.	1127.8	4251	27%	
	Dec '11	76	60.	3099	0.	1127.8	4227	27%	
	Jan '12	77	40.	3123	0.	1127.8	4251	27%	
	Feb '12	78	90.	3173	0.	1085.8	4258	25%	
	Mar '12	79	50.	3188	100.	1185.8	4374	27%	
	Apr '12	80	40.	3178	100.	1222.8	4401	28%	
	May '12	81	30.	3150	0.	1222.8	4373	28%	
	Jun '12	82	20.	3080	0.	1222.8	4303	28%	
2012/13	Jul '12	83	70.	3057	0.	1081.8	4139	26%	
	Aug '12	84	90.	3054	0.	1003.8	4058	25%	
	Sep '12	85	40.	3002	0.	988.8	3991	25%	
	Oct '12	86	40.	2969	80.	1046.	4015	26%	
	Nov '12	87	40.	2907	50.	998.	3905	26%	
	Dec '12	88	60.	2865	0.	998.	3863	26%	
	Jan '13	89	40.	2779	0.	998.	3777	26%	
	Feb '13	90	90.	2772	0.	959.	3731	26%	
	Mar '13	91	50.	2778	100.	979.	3757	26%	
	Apr '13	92	40.	2754	100.	1072.	3826	28%	
	May '13	93	30.	2745	0.	986.	3731	26%	
	Jun '13	94	20.	2741	0.	986.	3727	26%	
2013/14	Jul '13	95	70.	2793	0.	986.	3779	26%	
	Aug '13	96	90.	2877	0.	986.	3863	26%	
	Sep '13	97	40.	2914	0.	986.	3900	25%	
	Oct '13	98	40.	2951	80.	1066.	4017	27%	
	Nov '13	99	40.	2988	50.	1116.	4104	27%	
	Dec '13	100	60.	3013	0.	1116.	4129	27%	
	Jan '14	101	40.	3053	0.	1116.	4169	27%	
	Feb '14	102	90.	3080	0.	1093.	4173	26%	
	Mar '14	103	50.	3080	100.	1170.	4250	28%	
	Apr '14	104	40.	3090	100.	1270.	4360	29%	
	May '14	105	30.	3070	0.	1270.	4340	29%	
	Jun '14	106	20.	3050	0.	1270.	4320	29%	

Notes:

DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

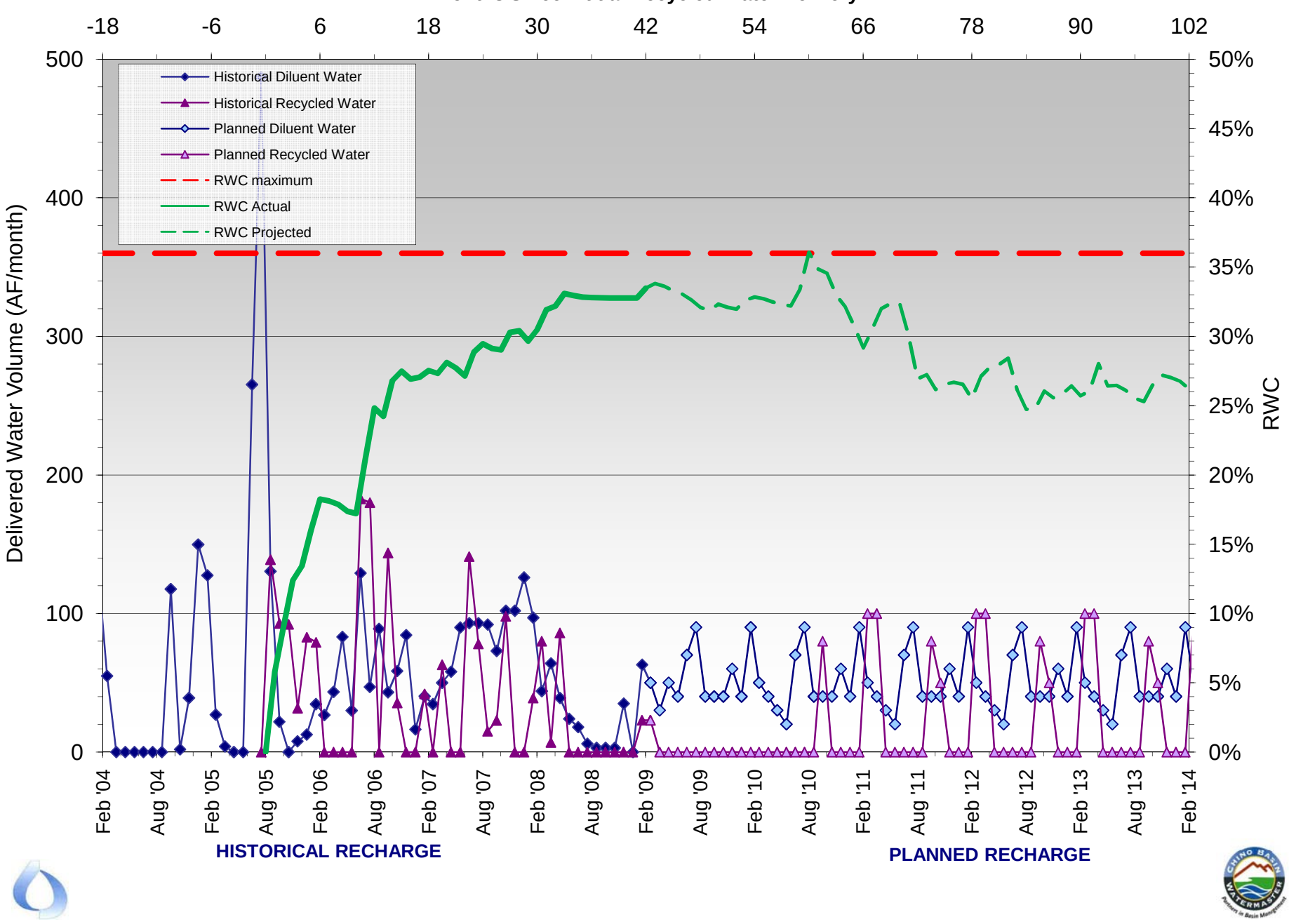
RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.

RWC Management Plan for Hickory Basin



RWC Management Plan for Turner Basin Cells 1 & 2

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-35	0.						HISTORICAL
	Aug '03	-34	0.						
	Sep '03	-33	0.						
	Oct '03	-32	0.						
	Nov '03	-31	0.						
	Dec '03	-30	0.						
	Jan '04	-29	0.						
	Feb '04	-28	0.						
	Mar '04	-27	0.						
	Apr '04	-26	0.						
	May '04	-25	0.						
	Jun '04	-24	0.						
2004/05	Jul '04	-23	0.						
	Aug '04	-22	0.						
	Sep '04	-21	0.						
	Oct '04	-20	60.5						
	Nov '04	-19	131.						
	Dec '04	-18	165.5						
	Jan '05	-17	96.4						
	Feb '05	-16	87.7						
	Mar '05	-15	65.5						
	Apr '05	-14	0.						
	May '05	-13	0.5						
	Jun '05	-12	0.						
2005/06	Jul '05	-11	0.		0.				
	Aug '05	-10	0.		0.				
	Sep '05	-9	89.3		0.				
	Oct '05	-8	95.2		0.				
	Nov '05	-7	178.5		0.				
	Dec '05	-6	359.		0.				
	Jan '06	-5	261.9		0.				
	Feb '06	-4	152.		0.				
	Mar '06	-3	426.5		0.				
	Apr '06	-2	389.8		0.				
	May '06	-1	97.1		0.				
	Jun '06	0	11.		0.	0.		0%	
2006/07	Jul '06	1	63.	3023	22.3	22	3045	1%	START-UP
	Aug '06	2	20.8	3043	113.	135	3179	4%	
	Sep '06	3	106.7	3150	114.4	250	3400	7%	
	Oct '06	4	164.4	3315	0.	250	3564	7%	
	Nov '06	5	29.	3324	0.	250	3573	7%	
	Dec '06	6	30.3	3335	103.2	353	3688	10%	
	Jan '07	7	27.1	3343	70.6	424	3766	11%	
	Feb '07	8	11.7	3330	44.	468	3798	12%	
	Mar '07	9	25.7	3343	56.8	524	3867	14%	
	Apr '07	10	5.	3345	14.	538	3883	14%	
	May '07	11	12.	3355	79.	617	3973	16%	
	Jun '07	12	1.	3356	3.	620	3977	16%	

RWC Management Plan for Turner Basin Cells 1 & 2

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	13	4.	3360	0.	620	3981	16%	
	Aug '07	14	38.	3398	0.	620	4019	15%	HISTORICAL
	Sep '07	15	4.	3402	0.	620	4023	15%	
	Oct '07	16	62.	3464	0.	620	4085	15%	
	Nov '07	17	96.	3550	0.	620	4171	15%	
	Dec '07	18	215.	3735	0.	620	4355	14%	
	Jan '08	19	311.	4046	0.	620	4666	13%	
	Feb '08	20	251.	4267	0.	620	4888	13%	
	Mar '08	21	17.	4252	0.	620	4873	13%	
	Apr '08	22	14.	4229	0.	620	4849	13%	
	May '08	23	143.	4319	0.	620	4940	13%	
	Jun '08	24	11.	4330	0.	620	4951	13%	
2008/09	Jul '08	25	*7.*	4337	*0.*	620	4958	13%	
	Aug '08	26	*3.*	4340	*0.*	620	4961	13%	
	Sep '08	27	*127.*	4467	*0.*	620	5088	12%	
	Oct '08	*28*	*80.*	*4547*	*28.*	*648*	*5196*	*12%*	
	Nov '08	*29*	*81.*	*4628*	*30.*	*678*	*5307*	*13%*	
	Dec '08	*30*	*344.*	*4972*	*0.*	*678*	*5651*	*12%*	
	Jan '09	*31*	*29.*	*5001*	*0.*	*678*	*5680*	*12%*	
	Feb '09	*32*	*345.*	*5346*	*0.*	*678*	*6025*	*11%*	
	Mar '09	*33*	*83.*	*5429*	0.	*678*	*6108*	*11%*	PLANNED
	Apr '09	*34*	*64.*	*5493*	*45.*	*723*	*6217*	*12%*	
	May '09	*35*	*44.*	*5537*	*45.*	*768*	*6306*	*12%*	
	Jun '09	*36*	*3.*	*5540*	*0.*	*768*	*6309*	*12%*	
2009/10	*Jul '09*	*37*	*10.*	*5550*	*0.*	*768*	*6319*	*12%*	
	Aug '09	*38*	*8.*	*5558*	*0.*	*768*	*6327*	*12%*	
	Sep '09	*39*	*29.*	*5587*	*0.*	*768*	*6356*	*12%*	
	Oct '09	*40*	*55.*	*5582*	*45.*	*813*	*6395*	*13%*	
	Nov '09	*41*	*66.*	*5517*	*45.*	*858*	*6375*	*13%*	
	Dec '09	*42*	*117.*	*5468*	*0.*	*858*	*6327*	*14%*	
	Jan '10	*43*	*102.*	*5474*	*0.*	*858*	*6332*	*14%*	
	Feb '10	*44*	*113.*	*5499*	*0.*	*858*	*6357*	*14%*	
	Mar '10	*45*	*83.*	*5517*	*0.*	*858*	*6375*	*13%*	
	Apr '10	*46*	*64.*	*5581*	*45.*	*903*	*6484*	*14%*	
	May '10	*47*	*44.*	*5624*	*45.*	*948*	*6572*	*14%*	
	Jun '10	*48*	*3.*	*5627*	*0.*	*948*	*6575*	*14%*	
2010/11	*Jul '10*	*49*	*10.*	*5637*	*0.*	*948*	*6585*	*14%*	
	Aug '10	*50*	*8.*	*5645*	*0.*	*948*	*6593*	*14%*	
	Sep '10	*51*	*29.*	*5585*	*0.*	*948*	*6533*	*15%*	
	Oct '10	*52*	*55.*	*5545*	*45.*	*993*	*6538*	*15%*	
	Nov '10	*53*	*66.*	*5432*	*45.*	*1038*	*6470*	*16%*	
	Dec '10	*54*	*117.*	*5190*	*0.*	*1038*	*6228*	*17%*	
	Jan '11	*55*	*102.*	*5030*	*0.*	*1038*	*6068*	*17%*	
	Feb '11	*56*	*113.*	*4991*	*0.*	*1038*	*6029*	*17%*	
	Mar '11	*57*	*83.*	*4648*	*0.*	*1038*	*5686*	*18%*	
	Apr '11	*58*	*64.*	*4322*	*0.*	*1038*	*5360*	*19%*	
	May '11	*59*	*44.*	*4269*	*0.*	*1038*	*5307*	*20%*	
	Jun '11	*60*	*3.*	*4261*	*0.*	*1038*	*5299*	*20%*	

RWC Management Plan for Turner Basin Cells 1 & 2

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	*Jul '11*	*61*	*10.*	*4208*	*0.*	*1016*	*5224*	*19%*	POST 60 MOS
	Aug '11	*62*	*8.*	*4195*	*0.*	*903*	*5098*	*18%*	
	Sep '11	*63*	*29.*	*4117*	*50.*	*839*	*4956*	*17%*	
	Oct '11	*64*	*55.*	*4008*	*50.*	*889*	*4896*	*18%*	
	Nov '11	*65*	*66.*	*4045*	*0.*	*889*	*4933*	*18%*	
	Dec '11	*66*	*117.*	*4132*	*0.*	*785*	*4917*	*16%*	
	Jan '12	*67*	*102.*	*4206*	*0.*	*715*	*4921*	*15%*	
	Feb '12	*68*	*113.*	*4308*	*0.*	*671*	*4979*	*13%*	
	Mar '12	*69*	*83.*	*4365*	*0.*	*614*	*4979*	*12%*	
	Apr '12	*70*	*64.*	*4424*	*50.*	*650*	*5074*	*13%*	
	May '12	*71*	*44.*	*4456*	*50.*	*621*	*5077*	*12%*	
	Jun '12	*72*	*3.*	*4458*	*0.*	*618*	*5076*	*12%*	
2012/13	Jul '12	73	10.	4464	0.	618	5082	12%	PLANED
	Aug '12	74	8.	4434	0.	618	5052	12%	
	Sep '12	75	29.	4459	50.	668	5127	13%	
	Oct '12	76	55.	4452	50.	718	5170	14%	
	Nov '12	77	66.	4422	50.	768	5190	15%	
	Dec '12	78	117.	4324	0.	768	5092	15%	
	Jan '13	79	102.	4115	0.	768	4883	16%	
	Feb '13	80	113.	3977	0.	768	4745	16%	
	Mar '13	81	83.	4043	50.	818	4861	17%	
	Apr '13	82	64.	4093	0.	818	4911	17%	
	May '13	83	44.	3994	0.	818	4812	17%	
	Jun '13	84	3.	3986	0.	818	4804	17%	
2013/14	Jul '13	85	10.	3989	0.	818.	4807	17%	
	Aug '13	86	8.	3994	0.	818.	4812	17%	
	Sep '13	87	29.	3896	50.	868.	4764	18%	
	Oct '13	88	55.	3871	50.	890.	4761	19%	
	Nov '13	89	66.	3856	50.	910.	4766	19%	
	Dec '13	90	117.	3629	0.	910.	4539	20%	
	Jan '14	91	102.	3702	0.	910.	4612	20%	
	Feb '14	92	113.	3470	0.	910.	4380	21%	
	Mar '14	93	83.	3470	50.	960.	4430	22%	
	Apr '14	94	64.	3470	0.	915.	4385	21%	
	May '14	95	44.	3470	0.	870.	4340	20%	
	Jun '14	96	3.	3470	0.	870.	4340	20%	

Notes:

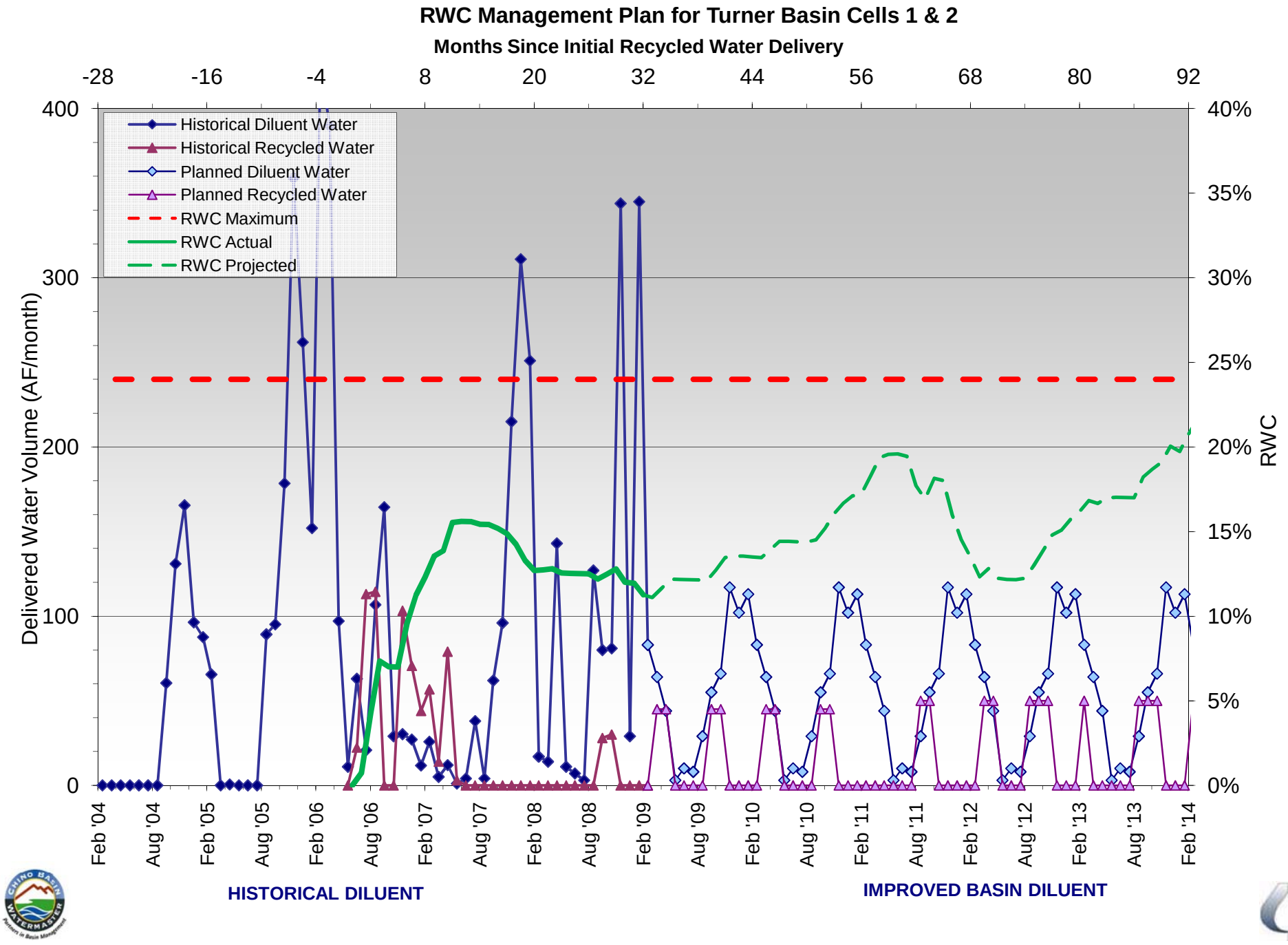
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan for Turner Basin Cells 1 & 2
Months Since Initial Recycled Water Delivery
-28
-16
-4
8
20
32
44
56
68
80
92
Historical Diluent Water
Historical Recycled Water
Planned Diluent Water
Planned Recycled Water
RWC Maximum
RWC Actual
RWC Projected
Delivered Water Volume (AF/month)
RWC
400
300
200
100
0
40%
35%
30%
25%
20%
15%
10%
5%
0%
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL DILUENT
IMPROVED BASIN DILUENT

RWC Management Plan for Truner Basin Cells 3 & 4

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2003/04	Jul '03	-35	0.						HISTORICAL
	Aug '03	-34	0.						
	Sep '03	-33	0.						
	Oct '03	-32	0.						
	Nov '03	-31	0.						
	Dec '03	-30	0.						
	Jan '04	-29	0.						
	Feb '04	-28	0.						
	Mar '04	-27	0.						
	Apr '04	-26	0.						
	May '04	-25	0.						
	Jun '04	-24	0.						
2004/05	Jul '04	-23	0.						
	Aug '04	-22	0.						
	Sep '04	-21	0.						
	Oct '04	-20	120.8						
	Nov '04	-19	128.2						
	Dec '04	-18	217.9						
	Jan '05	-17	257.4						
	Feb '05	-16	232.						
	Mar '05	-15	174.4						
	Apr '05	-14	0.						
	May '05	-13	0.5						
	Jun '05	-12	0.						
2005/06	Jul '05	-11	0.		0.				
	Aug '05	-10	0.		0.				
	Sep '05	-9	0.		0.				
	Oct '05	-8	0.		0.				
	Nov '05	-7	0.		0.				
	Dec '05	-6	124.		0.				
	Jan '06	-5	74.9		0.				
	Feb '06	-4	71.		0.				
	Mar '06	-3	171.3		0.				
	Apr '06	-2	260.4		0.				
	May '06	-1	72.1		0.				
	Jun '06	0	87.		0.	0.		0%	
2006/07	Jul '06	1	30.3	2022	22.3	22	2044	1%	START-UP
	Aug '06	2	33.4	2056	113.	135	2191	6%	
	Sep '06	3	22.1	2078	114.4	250	2327	11%	
	Oct '06	4	64.9	2143	0.	250	2392	10%	
	Nov '06	5	16.	2159	0.	250	2408	10%	
	Dec '06	6	13.6	2172	103.2	353	2525	14%	
	Jan '07	7	10.	2182	70.6	424	2606	16%	
	Feb '07	8	9.	2191	44.	468	2659	18%	
	Mar '07	9	4.	2195	56.8	524	2719	19%	
	Apr '07	10	3.	2198	14.	538	2736	20%	
	May '07	11	7.9	2206	79.	617	2823	22%	
	Jun '07	12	10.	2216	3.	620	2836	22%	

RWC Management Plan for Truner Basin Cells 3 & 4

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2007/08	Jul '07	13	1.	2217	0.	620	2837	22%	HISTORICAL
	Aug '07	14	10.	2227	0.	620	2847	22%	
	Sep '07	15	12.	2239	0.	620	2859	22%	
	Oct '07	16	3.	2242	0.	620	2862	22%	
	Nov '07	17	66.	2308	0.	620	2928	21%	
	Dec '07	18	62.	2370	0.	620	2990	21%	
	Jan '08	19	143.	2513	0.	620	3133	20%	
	Feb '08	20	9.	2522	0.	620	3142	20%	
	Mar '08	21	0.	2522	0.	620	3142	20%	
	Apr '08	22	4.	2526	0.	620	3146	20%	
	May '08	23	38.	2564	0.	620	3184	19%	
	Jun '08	24	28.	2592	0.	620	3212	19%	
2008/09	Jul '08	25	*4.*	2596	*0.*	620	3216	19%	
	Aug '08	26	*5.*	2601	*0.*	620	3221	19%	
	Sep '08	27	*14.*	2615	*0.*	620	3235	19%	
	Oct '08	28	*37.*	2652	*66.*	686	3338	21%	
	Nov '08	29	*36.*	2688	*8.*	694	3382	21%	
	Dec '08	30	*50.*	2738	*0.*	694	3432	20%	
	Jan '09	*31*	*10.*	*2748*	*0.*	*694*	*3442*	*20%*	
	Feb '09	*32*	*68.*	*2816*	*0.*	*694*	*3510*	*20%*	
	Mar '09	*33*	*87.*	*2903*	0.	*694*	*3597*	*19%*	PLANNED
	Apr '09	*34*	*67.*	*2970*	*70.*	*764*	*3734*	*20%*	
	May '09	*35*	*30.*	*3000*	*70.*	*834*	*3834*	*22%*	
	Jun '09	*36*	*31.*	*3031*	*0.*	*834*	*3865*	*22%*	
2009/10	*Jul '09*	*37*	*8.*	*3039*	*0.*	*834*	*3873*	*22%*	
	Aug '09	*38*	*11.*	*3050*	*0.*	*834*	*3884*	*21%*	
	Sep '09	*39*	*9.*	*3059*	*0.*	*834*	*3893*	*21%*	
	Oct '09	*40*	*47.*	*2985*	*70.*	*904*	*3890*	*23%*	
	Nov '09	*41*	*53.*	*2910*	*70.*	*974*	*3884*	*25%*	
	Dec '09	*42*	*104.*	*2796*	*0.*	*974*	*3770*	*26%*	
	Jan '10	*43*	*121.*	*2660*	*0.*	*974*	*3634*	*27%*	
	Feb '10	*44*	*80.*	*2508*	*0.*	*974*	*3482*	*28%*	
	Mar '10	*45*	*87.*	*2420*	*0.*	*974*	*3395*	*29%*	
	Apr '10	*46*	*67.*	*2487*	*70.*	*1044*	*3532*	*30%*	
	May '10	*47*	*30.*	*2517*	*70.*	*1114*	*3631*	*31%*	
	Jun '10	*48*	*31.*	*2548*	*0.*	*1114*	*3662*	*30%*	
2010/11	*Jul '10*	*49*	*8.*	*2556*	*0.*	*1114*	*3670*	*30%*	
	Aug '10	*50*	*11.*	*2567*	*0.*	*1114*	*3681*	*30%*	
	Sep '10	*51*	*9.*	*2576*	*0.*	*1114*	*3690*	*30%*	
	Oct '10	*52*	*47.*	*2623*	*70.*	*1184*	*3807*	*31%*	
	Nov '10	*53*	*53.*	*2676*	*70.*	*1254*	*3930*	*32%*	
	Dec '10	*54*	*104.*	*2656*	*0.*	*1254*	*3910*	*32%*	
	Jan '11	*55*	*121.*	*2702*	*0.*	*1254*	*3956*	*32%*	
	Feb '11	*56*	*80.*	*2711*	*0.*	*1254*	*3965*	*32%*	
	Mar '11	*57*	*87.*	*2627*	*0.*	*1254*	*3881*	*32%*	
	Apr '11	*58*	*67.*	*2433*	*70.*	*1324*	*3758*	*35%*	
	May '11	*59*	*30.*	*2391*	*70.*	*1394*	*3785*	*37%*	
	Jun '11	*60*	*31.*	*2335*	*0.*	*1394*	*3729*	*37%*	

RWC Management Plan for Truner Basin Cells 3 & 4

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

Date		No. Mos. Since Initial RW Delivery	DW (AF)	DW 60-Month Total (AF)	RW (AF)	RW 60-Month Total (AF)	DW + RW 60-Month Total (AF)	RWC	Source
2011/12	*Jul '11*	*61*	*8.*	*2313*	*0.*	*1372*	*3685*	*37%*	POST 60 MOS
	Aug '11	*62*	*11.*	*2290*	*0.*	*1259*	*3549*	*35%*	
	Sep '11	*63*	*9.*	*2277*	*120.*	*1265*	*3542*	*36%*	
	Oct '11	*64*	*47.*	*2259*	*90.*	*1355*	*3614*	*37%*	
	Nov '11	*65*	*53.*	*2296*	*90.*	*1445*	*3741*	*39%*	
	Dec '11	*66*	*104.*	*2387*	*0.*	*1341*	*3728*	*36%*	
	Jan '12	*67*	*121.*	*2498*	*0.*	*1271*	*3769*	*34%*	
	Feb '12	*68*	*80.*	*2569*	*0.*	*1227*	*3796*	*32%*	
	Mar '12	*69*	*87.*	*2652*	*90.*	*1260*	*3912*	*32%*	
	Apr '12	*70*	*67.*	*2716*	*120.*	*1366*	*4082*	*33%*	
	May '12	*71*	*30.*	*2738*	*90.*	*1377*	*4115*	*33%*	
	Jun '12	*72*	*31.*	*2759*	*0.*	*1374*	*4133*	*33%*	
2012/13	Jul '12	73	8.	2766	0.	1374	4140	33%	PLANED
	Aug '12	74	11.	2767	0.	1374	4141	33%	
	Sep '12	75	9.	2764	90.	1464	4228	35%	
	Oct '12	76	47.	2808	80.	1544	4352	35%	
	Nov '12	77	53.	2795	80.	1624	4419	37%	
	Dec '12	78	104.	2837	0.	1624	4461	36%	
	Jan '13	79	121.	2815	0.	1624	4439	37%	
	Feb '13	80	80.	2886	0.	1624	4510	36%	
	Mar '13	81	87.	2973	90.	1714	4687	37%	
	Apr '13	82	67.	3036	80.	1794	4830	37%	
	May '13	83	30.	3028	80.	1874	4902	38%	
	Jun '13	84	31.	3031	0.	1874	4905	38%	
2013/14	Jul '13	85	8.	3035	0.	1874.	4909	38%	
	Aug '13	86	11.	3041	0.	1874.	4915	38%	
	Sep '13	87	9.	3036	90.	1964.	5000	39%	
	Oct '13	88	47.	3046	80.	1978.	5024	39%	
	Nov '13	89	53.	3063	80.	2050.	5113	40%	
	Dec '13	90	104.	3117	0.	2050.	5167	40%	
	Jan '14	91	121.	3228	0.	2050.	5278	39%	
	Feb '14	92	80.	3240	0.	2050.	5290	39%	
	Mar '14	93	87.	3240	90.	2140.	5380	40%	
	Apr '14	94	67.	3240	80.	2150.	5390	40%	
	May '14	95	30.	3240	80.	2160.	5400	40%	
	Jun '14	96	31.	3240	0.	2160.	5400	40%	

Notes:

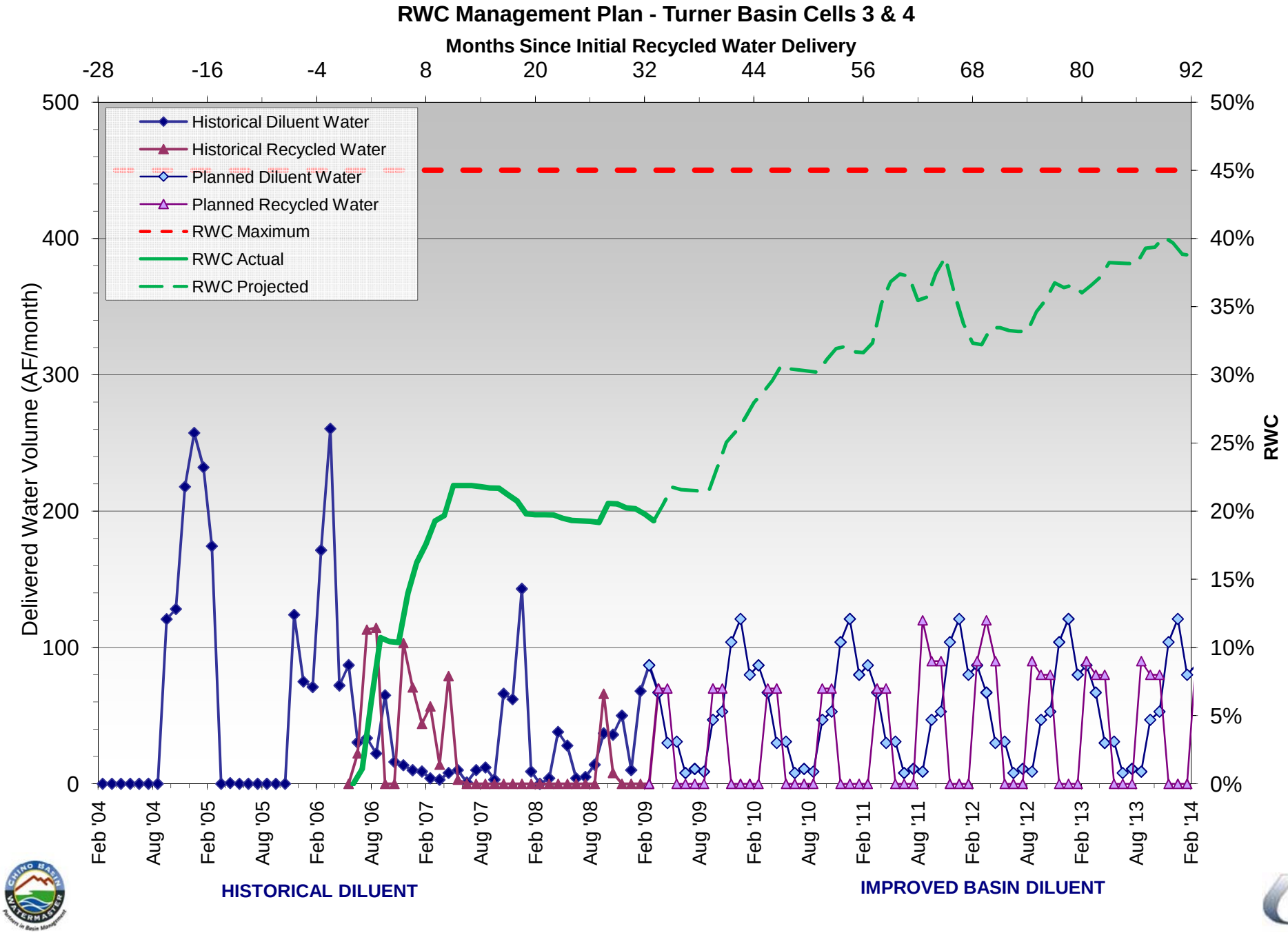
DW = Diluent Water (Storm Water, Local Runoff, and Imported Water from State Water Project)

RW = Recycled Water

RWC = 60-month running total of recycled water / 60-month running total of all recharged water.

RWC Limit = 0.5 mg/L / the Running Average of Total Organic Carbon (TOC)

RWC max is determined from the basin's start-up period.


RWC Management Plan - Turner Basin Cells 3 & 4
Months Since Initial Recycled Water Delivery
-28
-16
-4
8
20
32
44
56
68
80
92
Historical Diluent Water
Historical Recycled Water
Planned Diluent Water
Planned Recycled Water
RWC Maximum
RWC Actual
RWC Projected
Delivered Water Volume (AF/month)
RWC
500
400
300
200
100
0
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Feb '04
Aug '04
Feb '05
Aug '05
Feb '06
Aug '06
Feb '07
Aug '07
Feb '08
Aug '08
Feb '09
Aug '09
Feb '10
Aug '10
Feb '11
Aug '11
Feb '12
Aug '12
Feb '13
Aug '13
Feb '14
HISTORICAL DILUENT
IMPROVED BASIN DILUENT

APPENDIX D

GROUNDWATER ELEVATION CONTOUR MAPS

117°40'0"W

117°20'0"W

34°0'0"N

San Gabriel Mountains

Fault Zone

Cucamonga Basin

Claremont Basin

Pomona Basin

Rialto-Colton Basin

Puente Hills

Chino Hills

Prado Flood Control Basin

La Sierra Hills

Arlington Basin

Temescal Basin

El Sobrante de San Jacinto

Riverside Basins

Jurupa Mountains

San Bernardino County

Riverside County

Orange County

Los Angeles Co

Cucamonga

San Antonio Ck

Red Hill Fault

Indian Hill Fault

San Jose Fault

Chino Fault

Barrier J

Lytle Ck

Loma Linda Fault

Rialto-Colton Fault

San Jacinto Fault

Day Ck

Etiwanda Ave

Euclid Ave

Central Ave

Holt Blvd

Foothill Blvd

Riverside Dr

Mission Blvd

Cucamonga Ck

Chino Ck

Limonite Ave

Bellegrave Ave

Van Buren Blvd

Victoria Ave

Santa Ana River

15

210

215

10

60

71

91

1100

1000

800

775

725

700

650

625

600

575

550

525

500

Groundwater Elevation Contours
(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

Produced by:

WILDERMUTH ENVIRONMENTAL INC.

23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
www.wildermuthenvironmental.com

Author: ETL

Date: 20070511

File: Figure_3-18.mxd

0 1 2 3 4 5 Miles

0 2 4 6 8 KM

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

117°40'0"W

117°20'0"W

34°0'0"N

San Gabriel Mountains

Cucamonga Fault Zone

Red Hill Fault

Indian Hill Fault

San Jose Fault

Central Ave

Euclid Ave

Haven Ave

Etiwanda Ave

Foothill Blvd

Holt Blvd

Mission Blvd

Riverside Dr

Bellegrave Ave

Limonite Ave

Puente Hills

LA County

Chino Fault

Chino Hills

San Bernardino County
Orange County

Prado Flood Control Basin

La Sierra Hills

Main St

6th St

Van Buren Blvd

Victoria Ave

El Sobrante de San Jacinto

Barrier J

Sierra Ave

Barrier H

Riverside Ave

Lona Linda Fault

Barrier G

San Andreas Fault

Waterman Ave

San Jacinto Fault

Rialto-Colton Fault

Jurupa Mountains

San Bernardino County
Riverside County

Box Springs Mtns

Mission Blvd

1000
800
775
750
725
700
675
650
625
600
575
550
540
530
525
500
590
560

15
10
60
215
91

Main Features

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

Chino-I Desalter Well

Chino Basin Hydrologic Boundary

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

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

Faults & Groundwater Divides

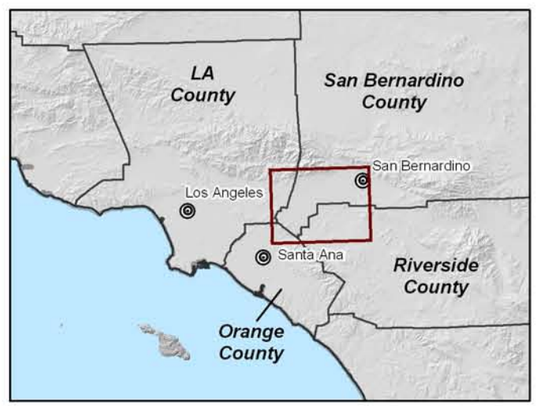
Location Certain

Location Approximate

Location Concealed

Location Uncertain

Groundwater Divide



Produced by:

WILDERMUTH ENVIRONMENTAL INC.

23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
www.wildermuthenvironmental.com

Author: KD
Date: 20050627
File: Figure_3-6.mxd

0 1 2 3 4 Miles

0 2 4 6 KM

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

Groundwater Elevation Contours

Fall 2003 -- Chino Basin

Figure 3-6

117°40'0"W

117°20'0"W

34°0'0"N

San Gabriel Mountains

Fault Zone

Cucamonga

San Antonio Ck

Indian Hill Fault

San Jose Fault

Red Hill Fault

Barrier J

Sierra Ave

Lytle Ck

Loma Linda Fault

Riverside Ave

Waterman Ave

Foothill Blvd

Haven Ave

Day Ck

Etiwanda Ave

Euclid Ave

Central Ave

Holt Blvd

Mission Blvd

Riverside Dr

Cucamonga Ck

Bellegrave Ave

Limonite Ave

Chino Ck

Chino Fault

Central Avenue Fault

Rialto-Colton Fault

San Jacinto Fault

Shallow Aquifer-System unsaturated north of this line during Fall 2000

MZ-1

MZ-2

MZ-3

MZ-4

MZ-5

1000

800

775

750

725

700

675

650

625

600

575

550

525

500

585

565

Puente Hills

Los Angeles Co.

Chino Hills

San Bernardino County
Orange County

Prado Flood Control Basin

La Sierra Hills

Jurupa Mountains

San Bernardino County
Riverside County

Santa Ana River

Box Springs Mtns

Van Buren Blvd

Victoria Ave

El Sobrante de San Jacinto

15

10

60

71

91

215

Main Features

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

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Plio-Pleistocene Sedimentary Rocks
- Cretaceous to Miocene Sedimentary Rocks
- Pre-Tertiary Igneous and Metamorphic Rocks

Faults

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

Other Features

- Flood Control and Conservation Basins

Produced by:

WILDERMUTH ENVIRONMENTAL INC.

23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
http://www.wildermuthenvironmental.com

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

0 1 2 3 4 Miles

0 2 4 6 KM

Inland Empire Utilities Agency

Phase II Recycled Water Groundwater Recharge Project

Groundwater Elevation Map Fall 2000

Figure 8-3

117°40'0"W

34°0'0"N

Recharge Basins (Symbolized by Improvements)

- Chino Basin Facilities Improvement Program
- Improvement By Others
- No Improvements

Main Features

- Water Supply Well
- Depth to Water (ft)

Other Features

- Rivers, Creeks, and Flood Control Channels
- Chino Basin

Geology

- Unconsolidated Water-Bearing Sediments
- Consolidated Bedrock

Faults

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

Produced by:

WILDERMUTH ENVIRONMENTAL INC.
23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
www.wildermuthenvironmental.com

Author: AEM, WW
Date: 20050706
File: DTW2005.mxd

0 1 2 3 Miles
0 2 4 KM

Inland Empire Utilities Agency

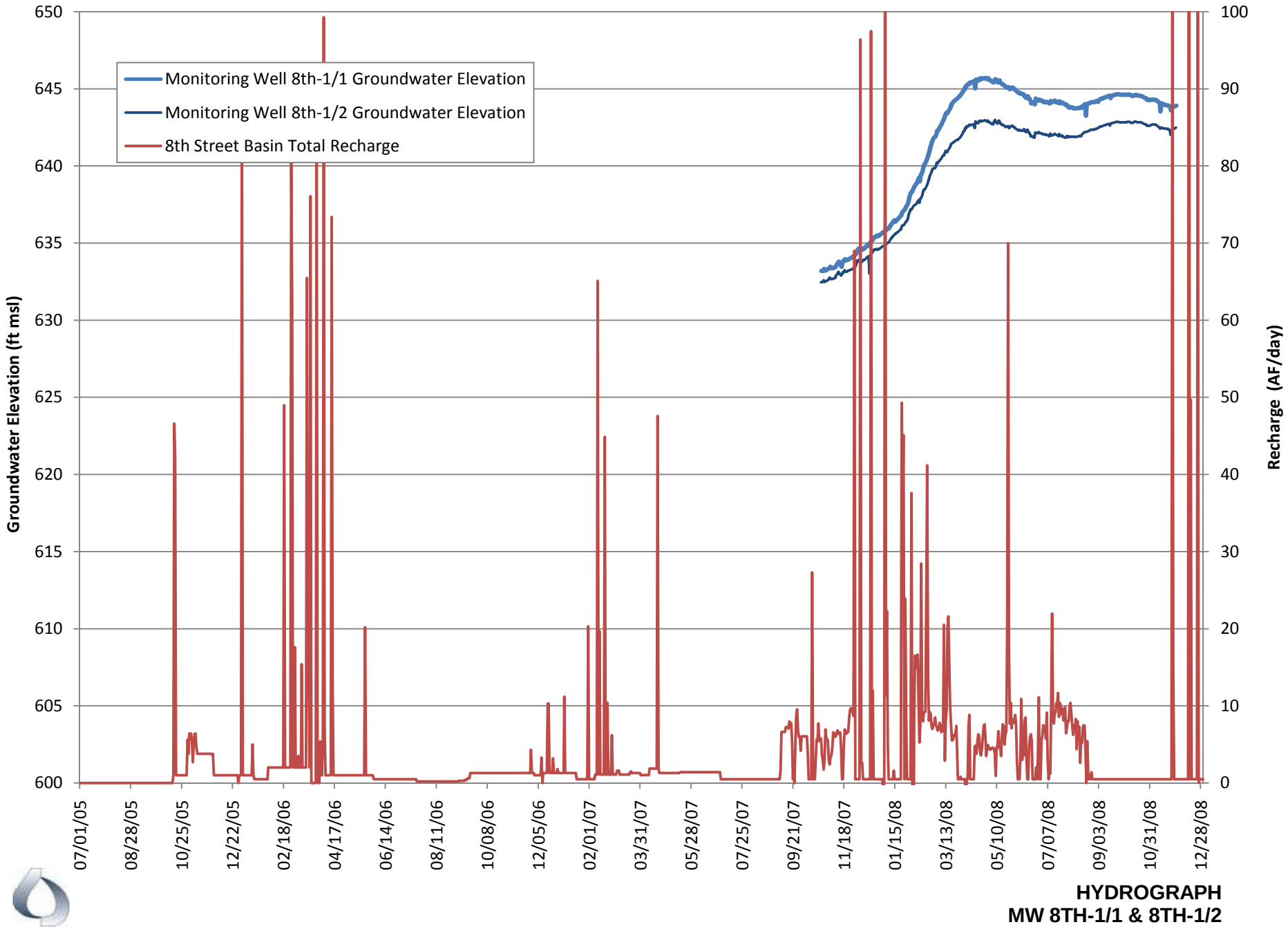
Phase II Recycled Water Groundwater Recharge Project

Projected Depth to Water Five Years After Phase II Recharge Starts

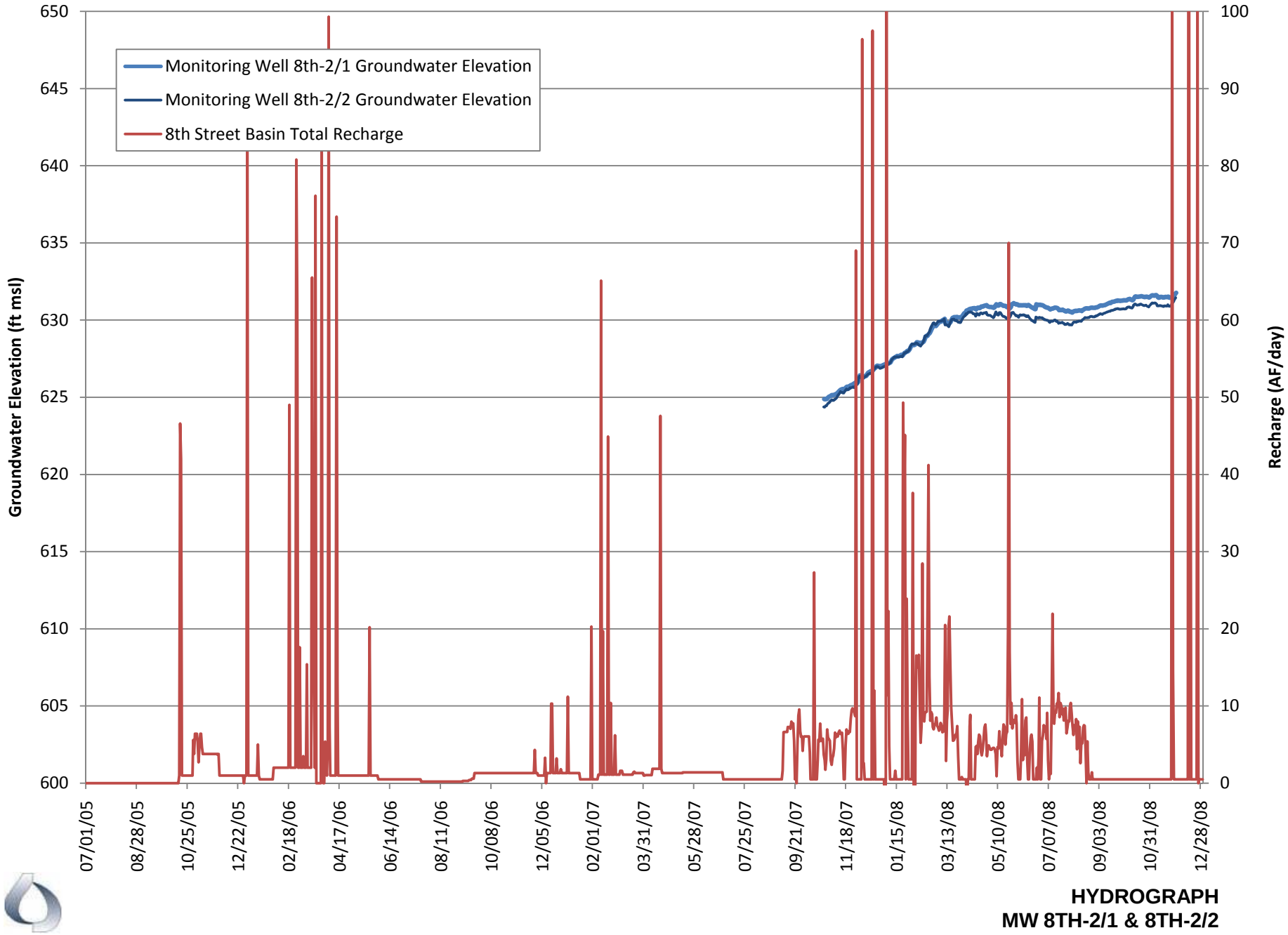
Figure 8-19

APPENDIX E

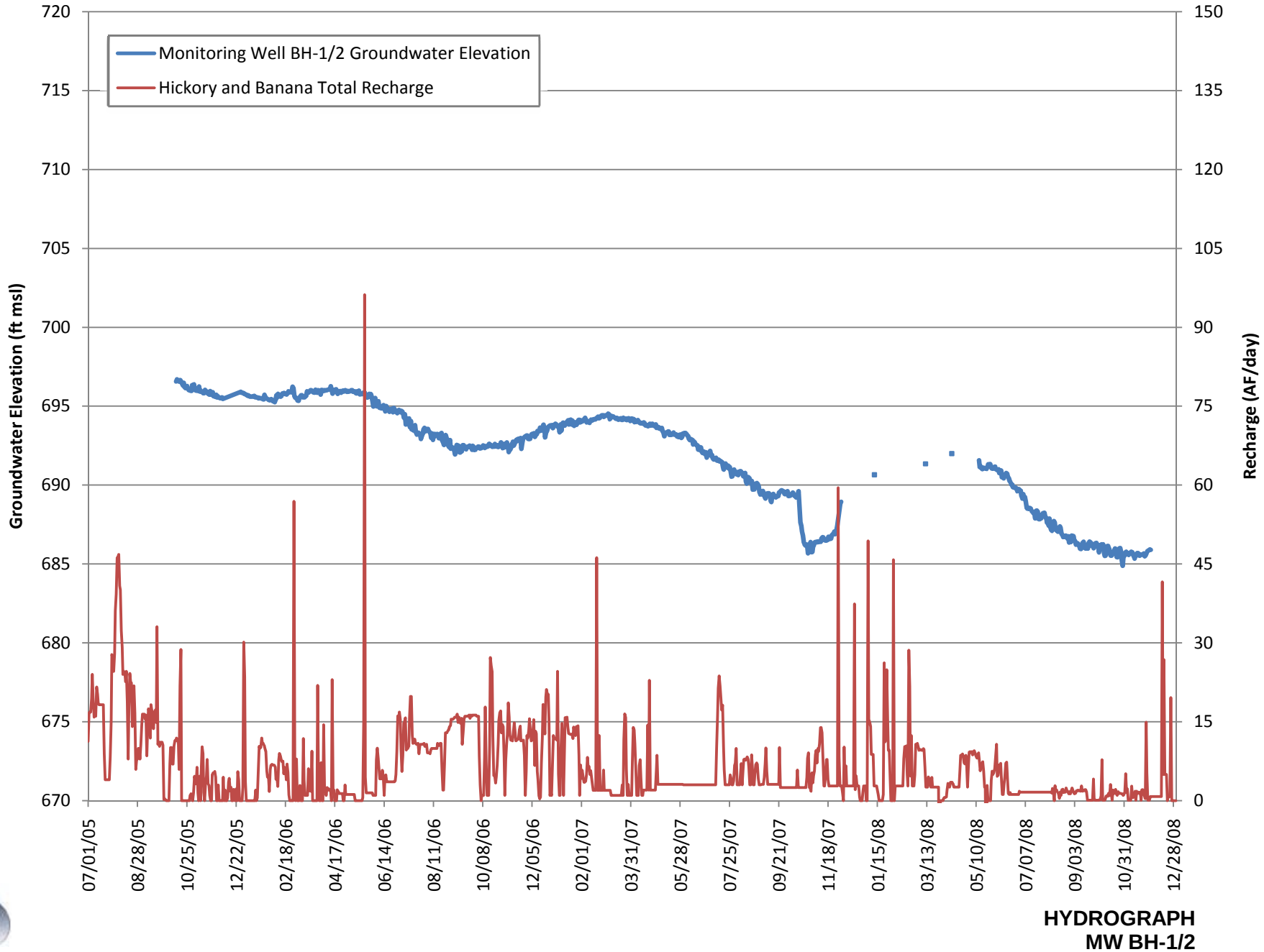
MONITORING WELL HYDROGRAPHS



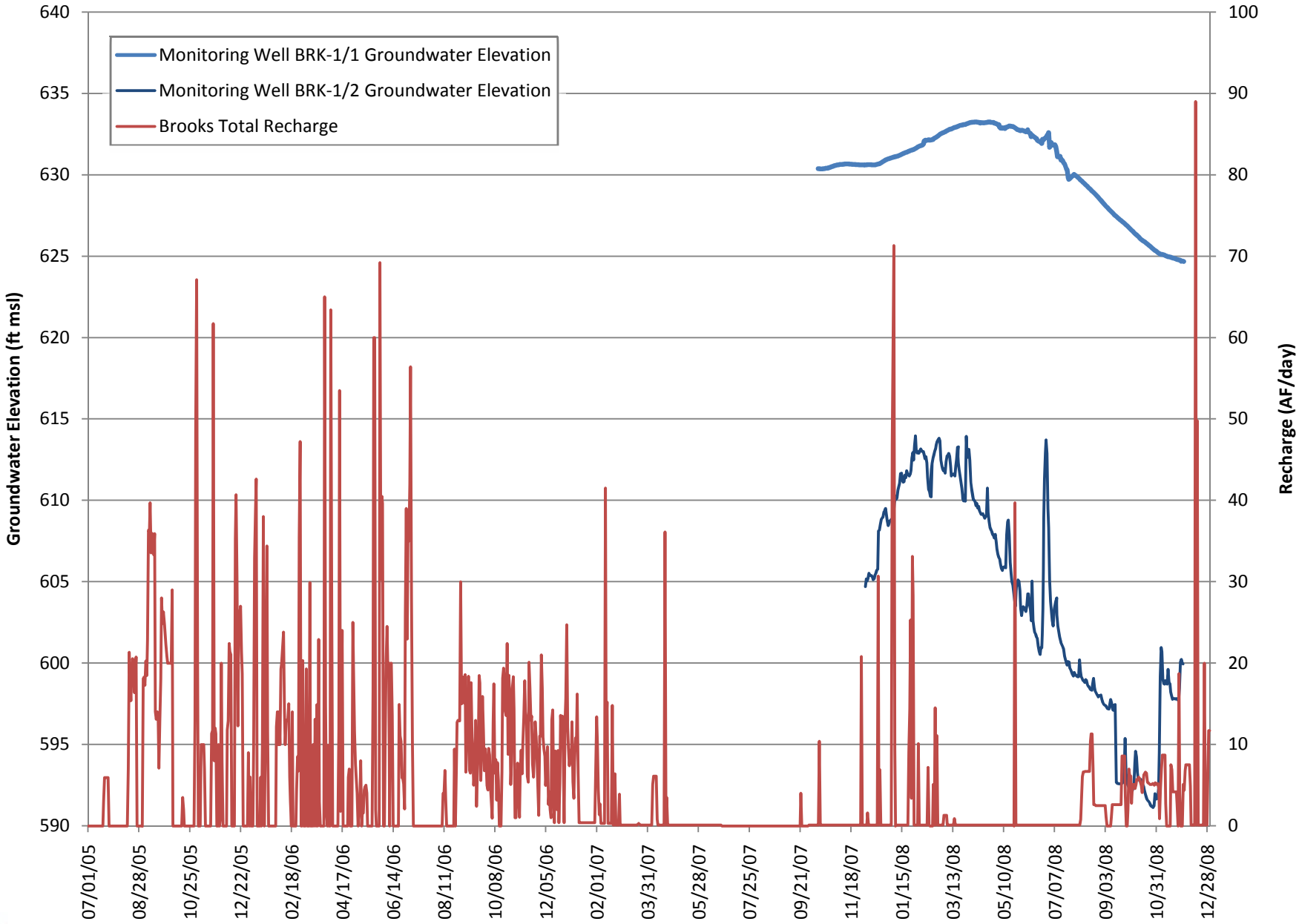
HYDROGRAPH
MW 8TH-1/1 & 8TH-1/2



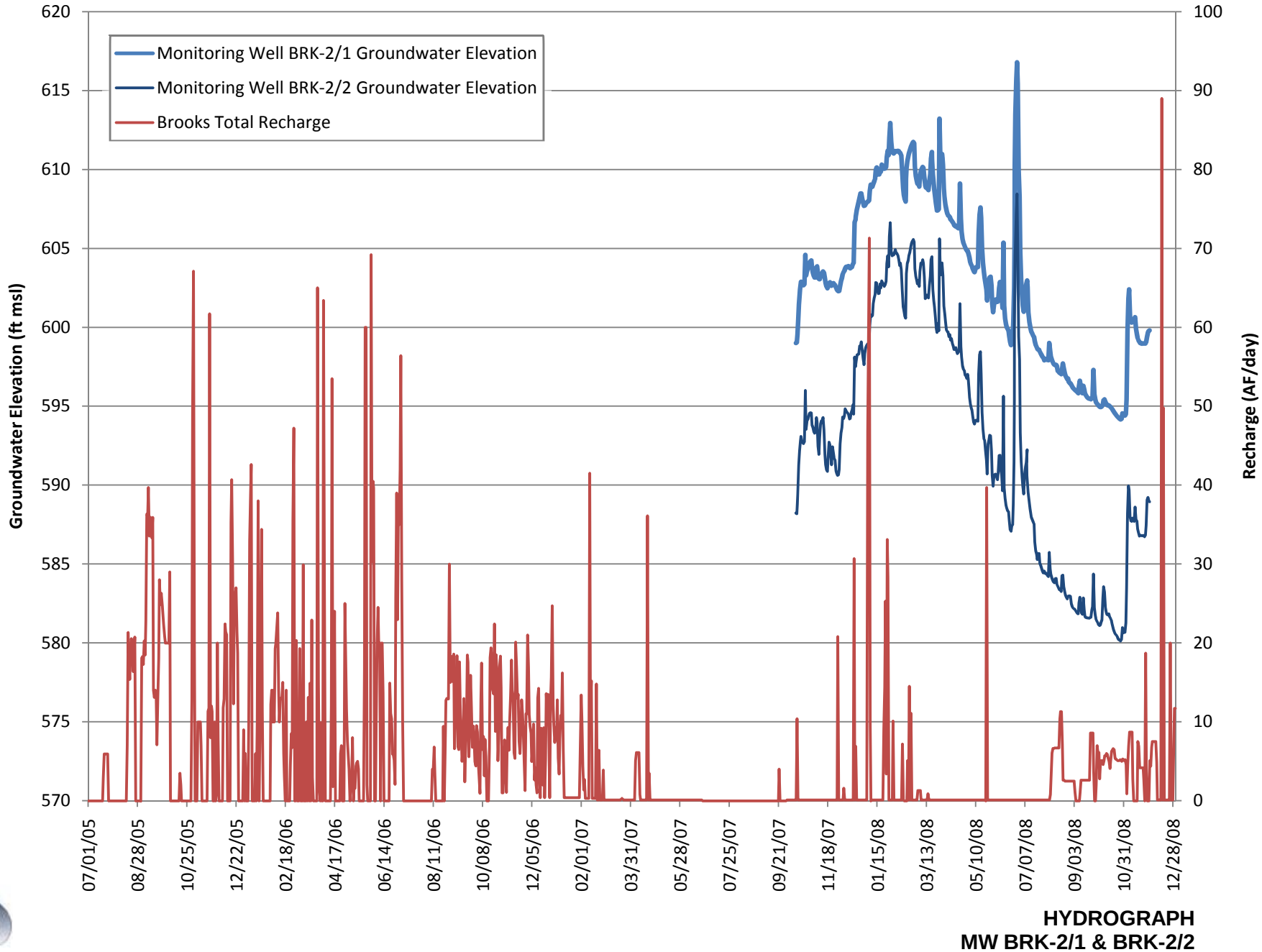
HYDROGRAPH
MW 8TH-2/1 & 8TH-2/2



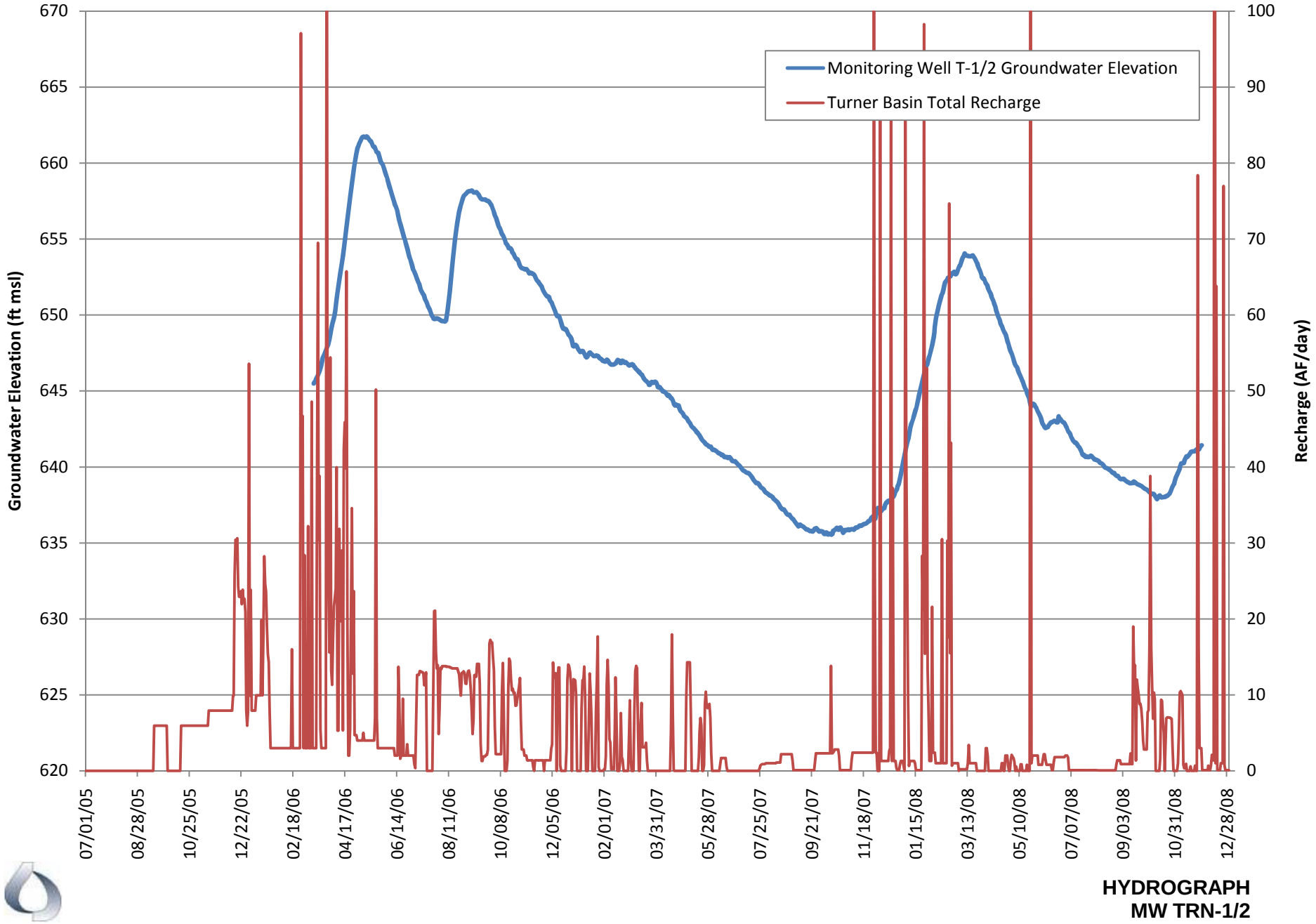
HYDROGRAPH
MW BH-1/2



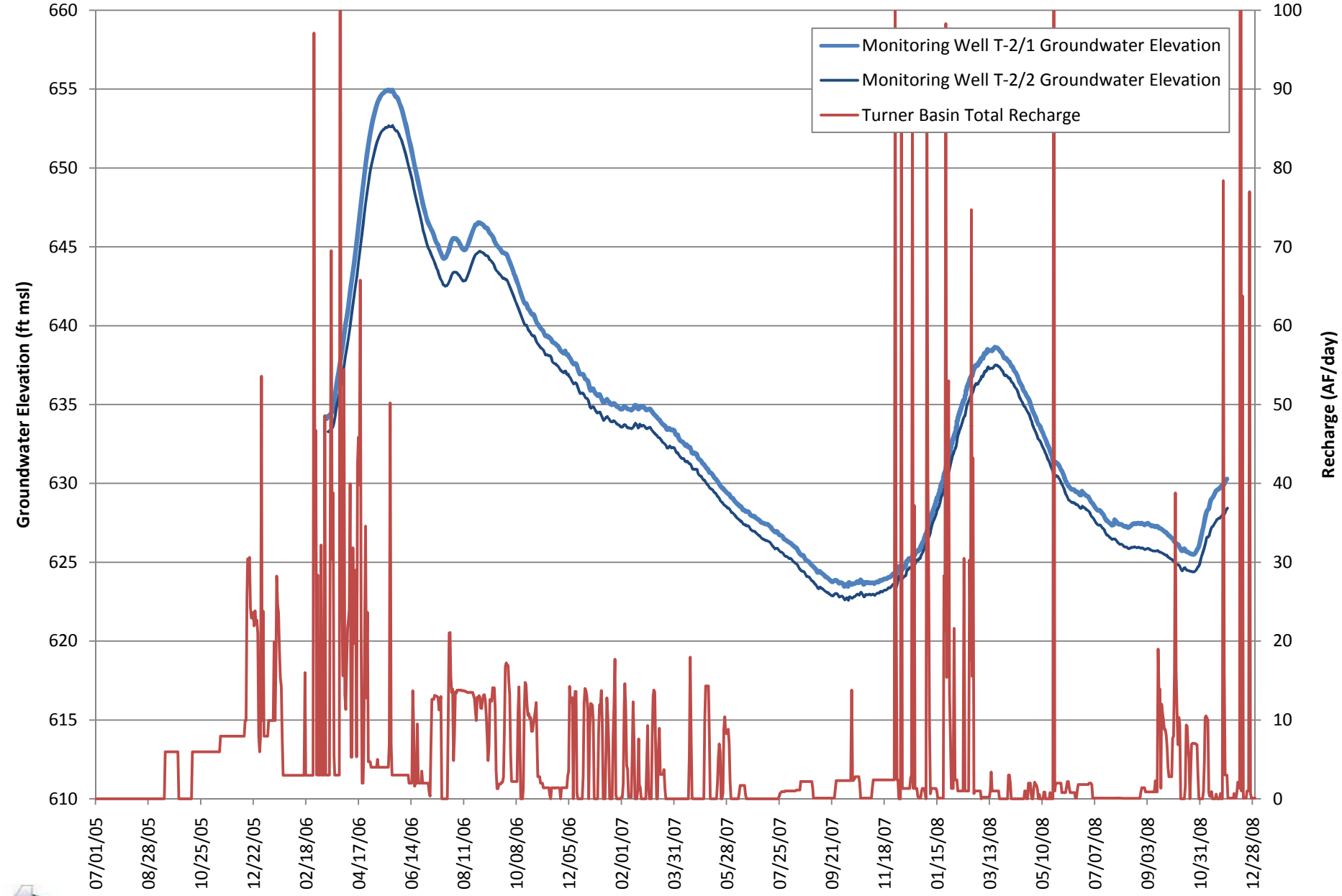
HYDROGRAPH
MW BRK-1/1 & BRK-1/2



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



HYDROGRAPH
MW TRN-1/2



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