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May 15, 2013

Regional Water Quality Control Board, Santa Ana Region

Attention: Mr. Kurt Berchtold

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

**Subject: Chino Basin Recycled Water Groundwater Recharge Program
Quarterly Monitoring Report for January through March 2013**

Dear Mr. Berchtold,

Inland Empire Utilities Agency and Chino Basin Watermaster hereby submit the *Quarterly Monitoring Report* for the first quarter of 2013 (1Q13), January 1 through March 31, 2013, for the *Chino Basin Recycled Water Groundwater Recharge Program*. This document is submitted pursuant to requirements in Order No. R8-2007-0039. All required monitoring and reporting for the quarter are presented in the attached report. During 1Q13, the Groundwater Recharge Program was in compliance with all monitoring and reporting requirements as specified in the Order, with the exception of an exceedance of a total nitrogen (TN) two-sample average at the Hickory Basin East 25-foot depth lysimeter and an exceedance of the 4-quarter running average for odor (secondary MCL). The TN exceedance at Hickory Basin is discussed in more detail within the report.

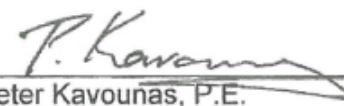
Chino Basin Watermaster hereby certifies that, during the period of January 1 through March 31, 2013, there was no reported pumping for drinking water purposes in the buffer zones extending 500 feet laterally and 6 months underground travel time from each of the recharge sites using recycled water, namely 8th Street, Banana, Brooks, Ely, Hickory, RP3, San Sevaine, Turner, and Victoria Basins. In point of fact, there are no domestic or municipal production wells in the buffer zones of the aforementioned recharge sites.

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.

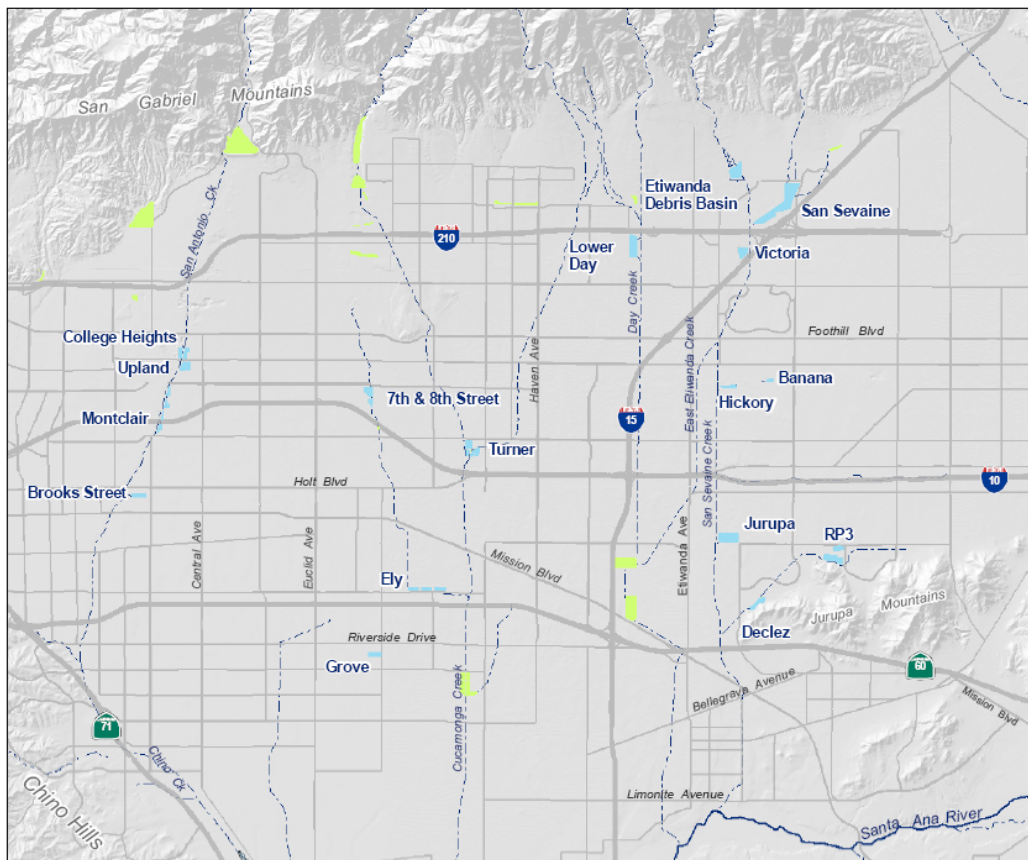
Executed on the 15th day of May 2013 in the Cities of Chino and Rancho Cucamonga.


Chris Berch, P.E.
Manager of Planning &
Environmental Compliance


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General Manager

Chino Basin Recycled Water Groundwater Recharge Program

Quarterly Monitoring Report January 1 through March 31, 2013



Prepared by:



May 15, 2013

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1. Introduction

Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (Watermaster), Chino Basin Water Conservation District, and San Bernardino County Flood Control District are partners in the implementation of the Chino Basin Recycled Water Groundwater Recharge Program. This is part of 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 stormwater, imported water and recycled water. This program is an integral part of Watermaster's Optimum Basin Management Plan (OBMP).

A. Order No. R8-2007-0039

On June 29, 2007, the Santa Ana Regional Water Quality Control Board (Regional Board) adopted Order No. R8-2007-0039 (Order) which prescribes the requirements for recycled water use for groundwater recharge in 13 recharge sites within the Chino North Management Zone. Chino Basin Groundwater Recharge Program Basins are presented in Figure 1-1. As a provision of this Order, IEUA and Watermaster must also comply with Monitoring and Reporting Program No. R8-2007-0039 (MRP).

The MRP includes the water quality monitoring requirements of the Chino Basin Recycled Water Groundwater Recharge Program and the requirement for the submittal of quarterly and annual reports. This document is the quarterly report for the first quarter of 2013 (1Q13).

The quarterly report includes the following elements as prescribed in the MRP:

- Monitoring results for recycled water (including lysimeter monitoring), diluent water, and groundwater.
- Recycled water and diluent water volumes recharged at each basin.
- Reporting of any non-compliance events due to water quality, including records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any diversion(s) of off-specification recycled water and the location(s) of final disposal. All corrective or preventive action(s) taken.
- Certification that no groundwater has been pumped for domestic water supply use from the buffer zone that extends 500 feet and 6-months underground travel time from the recharge basin(s) where recycled water is applied.

B. Order No. R8-2009-0057

On October 23, 2009, the Regional Board adopted Order No. R8-2009-0057, which amended the recharge permit (Order No. R8-2007-0039) by extending the previously 60-month averaging period to 120 months for determining a recharge site's recycled water contribution (RWC). The Order No. R8-2009-0057 also allowed a fraction of the groundwater underflow of the Chino Basin aquifers to be used as a source of diluent water when calculating the running average RWC.

C. Revised Monitoring & Reporting Program No. R8-2007-0039

On October 27, 2010, the Regional Board revised Monitoring and Reporting Program No. R8-2007-0039 (MRP) based on requests for modifications from IEUA and approved by the CDPH. The following changes were made to the MRP:

- 1) Sampling Requirements A.3, A.4, and A.5 were modified by specifying that samples shall be collected on a representative day instead of the 10th day.

- 2) Groundwater Monitoring Program Requirement V.1. was modified by adding a sentence to the paragraph that allows IEUA to analyze the groundwater samples collected on a quarterly basis from non-active municipal drinking water wells for dissolved metals, instead of total recoverable metals.
- 3) Reporting Requirement VI.B.3.b. has been modified and footnote No. 18 has been added to reflect that IEUA uses groundwater monitoring information contained in the *State of the Basin* report prepared on a biennial basis by the Chino Basin Watermaster, amongst other sources, for the annual determination of the recycled water groundwater flow path.

D. Outline of the Quarterly Report

Section 2 of this quarterly report discusses the water quality monitoring results for recycled water recharge (water recycling plant effluent, distribution system, basin surface water, and lysimeter data), diluent water, and groundwater. Section 3 provides an overview of recharge operations including the volume of diluent water and recycled water recharged. Section 4 describes any operational problems and preventive and/or corrective actions taken. Section 5 contains the certification of non-pumping in the 500-foot buffer zones around each basin. Section 6 is a brief overview of the Monte Vista Water District (MVWD) Aquifer Storage and Recovery (ASR) project.

2. Monitoring Results

A. Recycled Water: RP-1 and RP-4

The requirements for recycled water monitoring are presented in the MRP. Tables 2-1 through 2-4 include all of the requisite 1Q13 data.

Recycled Water Specifications A.5 through A.9 are the narrative limits established in the permit. Corresponding monitoring data are presented in Tables 2-1 and 2-2. Recycled water compliance for the total nitrogen (TN) limit of 5 mg/L is met at the lysimeters.

In March 2013, the average of two consecutive TN sample results for the Hickory Basin compliance lysimeter exceeded the 5 mg/L limit. The CDPH and the Regional Board were both notified via e-mail regarding the exceedance. IEUA staff originally speculated that the elevated TN was attributed to the paucity of water recharged to this basin during a lengthy construction project at this basin (a culvert crossing for the San Bernardino County Flood Control District). However, TN concentration between 5 and 10 mg/L continue to be evaluated at Hickory Basin during 2Q13. A letter was sent to the CDPH and the Regional Board on April 11, 2013 requesting the relocation of the TN compliance point to the groundwater mound monitoring well, namely BH-1/2. A follow-up e-mail, which included information requested by the CDPH, has been sent to the Regional Board to assist in their assessment of concurrence that BH-1/2 is an acceptable compliance monitoring location.

In the Order, compliance for constituents with maximum contaminant levels (MCLs) and secondary MCLs are based on 4-quarter running averages. These constituents are listed in Recycled Water Specifications A.1 through A.3 (Tables I, II, and III in the Order). The 4-quarter running average concentration data for 2Q12 through 1Q13 are summarized in Table 2-3. The table includes the 4-quarter running average for each parameter and the corresponding limits for compliance. Of the Recycled Water Quality Specifications with limitations, only oil & grease does not require the 4-quarter running average for compliance determination. During 1Q13, there were no exceedances in the following categories: primary MCLs for inorganic chemicals, volatile organic compounds (VOCs), non-volatile synthetic organic chemicals (SOCs), radionuclides, and disinfection byproducts; action levels for lead and copper; secondary MCLs for required constituents, with the exception of odor; and oil and grease.

Odor has a secondary MCL of 3 Units in Recycled Water Specification A.3. During 1Q13, an odor of 40 Units was detected, which produced a 4-quarter running average value of 13 Units, causing threshold odor to exceed the secondary MCL.

Due to the volume of sample required for analyses, IEUA has selected, and CDPH has approved, a recycled water sampling point along the distribution pipeline. IEUA selected the turnout to GenOn Energy (formerly Reliant Energy) to be representative of the system blend of recycled water used for recharge. Although this sampling location is suitable for most constituents, it is not appropriate for disinfection byproducts (DBPs), more specifically, Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5). Compliance samples for these DBPs are taken from lysimeters at basins actively receiving recycled water. At these locations, the samples better represent the DBPs present in the recycled water prior to reaching the groundwater table. Once a quarter, a single representative sample is collected from a selected compliance lysimeter and analyzed for DBPs. For the 1Q13 sampling for DBPs, IEUA chose the 25-foot below ground surface lysimeter at the Banana Basin as the compliance point. The Banana Basin lysimeter was selected as the compliance point because the basin received consistent recycled water recharge and recycled water was present at the 25-foot depth based on electrical conductivity (EC) measurements.

For constituents with no specified limits, quarterly monitoring data are summarized in Table 2-4.

B. Recycled Water: Basin and Lysimeter Samples

Total organic carbon (TOC) and nitrogen species sampling and analysis are performed weekly during periods when recycled water is delivered to recharge sites. EC is also measured and reported to assist in identifying the presence of recycled water at various depths in the vadose zone. All basin and lysimeter water quality results from 1Q13 are summarized in Table 2-5a. The table includes lysimeter data for 8th Street, Banana, Brooks, Hickory, RP3, San Sevaine, and Victoria Basins.

The Turner, Ely, 8th Street, San Sevaine, and Victoria Basins have implemented alternative monitoring plans which include the sampling of recycled water at the GenOn Energy turnout and the application of TOC and TN correction factors for SAT at the basins. The following correction factors were determined from each basin's start-up period findings:

- Turner 1 & 2: TOC reduction of 70 percent and TN reduction of 87 percent
- Turner 3 & 4: TOC reduction of 85 percent and TN reduction of 87 percent
- Ely Basins: TOC reduction of 76 percent and TN reduction of 52 percent
- 8th Street Basin: TOC reduction of 59 percent and TN reduction of 75 percent
- San Sevaine 5: TOC reduction of 78 percent and TN reduction of 69 percent
- Victoria: TOC reduction of 78 percent and TN reduction of 82 percent

The TOC and TN values calculated based on the correction factors provided above are summarized in Table 2-5b.

The Brooks and RP3 Basins have also implemented alternative monitoring plans based on start-up period findings. The Brooks Basin alternative monitoring plan includes monthly sampling of the Brooks Basin surface water, 25-foot lysimeter, and monitoring well BRK-1/1 for EC, TOC, and TN to be conducted as long as recycled water has been recharged in the prior 180 days. Additionally, chloride will be analyzed for BRK-1/1 and used to verify the presence of recycled water. The 25-foot lysimeter will be the compliance point for TN and the monitoring well will be the compliance point for TOC. The RP3 alternative monitoring plan includes monthly sampling of the 35-foot deep lysimeter for EC, TOC, and TN. The monitoring schedule would be conducted during the initial year of recycled water recharge

at the RP3 Basin. If sufficient SAT is demonstrated in this initial year, the alternative monitoring plan proposes compliance monitoring from samples collected from the recycled water distribution pipeline and applying a performance-based TOC correction factor determined from past lysimeter monitoring. Brooks and RP3 Basins alternative monitoring data are summarized in Table 2-5b.

C. Diluent Water

For 1Q13, diluent water quality sampling of stormwater was conducted in January 2013 at Declez Basin, February 2013 at San Sevaine and Banana Basins, and March 2013 at Etiwanda Debris Basin. Table 2-6 lists the results of the stormwater sampling and analyses. Details on the methods used to measure daily diluent water flow and diluent water monitoring schedule can be found in the CDPH-approved Diluent Water Monitoring Plan. The quarterly sampling schedule for stormwater and local runoff is presented in Table 4-2 of the plan. Stormwater is sampled during the rainy season (1st and 4th quarters) and local runoff is sampled during the dry season (2nd and 3rd quarters). Samples are collected at about half the locations during each seasonal quarter, alternating between even and odd years. Table 5-2 of the plan summarizes the sample type and reporting frequency for the parameters listed in Tables I, II, III, and IV of the Diluent Water Monitoring requirement III.3 of the MRP.

D. Groundwater Monitoring Wells

During 1Q13, groundwater quality within the vicinity of Banana and Hickory Basins was monitored by sampling a network of six wells. The groundwater quality within the vicinity of Turner Basin was monitored by sampling a network of six wells. The groundwater quality within the vicinity of the RP3 Basin was monitored by sampling a network of five wells. The groundwater quality within the vicinity of the 8th Street Basin was monitored by sampling a network of four wells. The groundwater quality within the vicinity of the Brooks Basin was monitored by sampling a network of seven wells. The groundwater quality within the vicinity of the Ely Basin was monitored by sampling a network of four wells. The groundwater quality within the vicinity of the San Sevaine and Victoria Basins were monitored by sampling a network of six wells. The wells in the monitoring well networks for Hickory and Banana, Turner, 8th Street, Ely, Brooks, RP3, and San Sevaine and Victoria Basins are summarized in Table 2-7, and presented on Figures 2-1 through 2-7, respectively. The groundwater constituents analyzed from the monitoring wells during quarterly is presented in Table 2-8.

Groundwater monitoring is conducted to evaluate water quality conditions in the vicinity of the recharge basins utilizing recycled water. Groundwater monitoring results can be used to assess background conditions, time the arrival of recharge waters, and the impact recharged water has on downgradient water supplies. Any 1Q13 analyses results which exceeded primary or secondary MCLs are shown in the tables in bold italic font. Of note are the analyses for the following wells and constituents:

Turbidity exceeding the secondary MCL of 5 NTU was observed in several monitoring wells, namely: BH-1/2, BRK-2/1, Bishop of San Bernardino Corporation (Ely), T-2/1, and VCT-1/1. Monitoring well 8TH-1/1 was not sampled in 1Q13 due to visibly turbid water resulting from a rising water table. 8TH-1/1 has been scheduled for redevelopment in 2Q13.

TDS and EC were higher than their secondary MCLs of 500 mg/L and 900 µmhos/cm, respectively, in the RP3 basin area wells (Alcoa MW3 and Southridge JHS) and Ely MW2 (Walnut). The wells south of Ely and near RP3 are located in an area with historically high EC levels (>1,000 µmhos/cm).

Color exceeded the secondary MCL of 15 units in monitoring wells BH-1/2 and BRK-2/1. Total recoverable iron was above the secondary MCL of 300 µg/L at the Bishop of San Bernardino Corporation and may be related to high turbidity observed following the recent replacement of the failed pump column. The iron concentration should decrease with continued use of the well following the replacement. Total recoverable manganese was above the secondary MCL of 50 µg/L at RP3-1/2.

Some monitoring wells in the Banana & Hickory, RP3, Brooks, and Ely monitoring networks also have NO₃-N concentrations above the primary MCL of 10 mg/L. These higher levels are characteristic of groundwater quality in the local area where historically the NO₃-N concentrations ranges from 10-30 mg/L. TDS and NO₃-N concentrations in the area of the RP3 monitoring well network are documented in the CBWM 2010 State of the Basin report.

3. Recharge Operations

IEUA's Groundwater Recharge Coordinator recorded the daily volumes of water routed to all basins. The 8th Street, Banana, Brooks, Hickory, RP3, San Sevaire, Turner, and Victoria Basins received recycled water this quarter. Table 3-1 lists the volumes of recycled water and diluent water (local runoff, stormwater, and/or imported water) captured during 1Q13 at the basins that have initiated recharge using recycled water.

4. Operational Problems & Preventive or Corrective Actions

No operational problems were encountered this quarter, therefore no corrective actions were necessary for the following: Regional Water Recycling Facilities - RP-1 & RP-4 and recharge operations.

The 8TH-1/1 monitoring well was experiencing high turbidity during 1Q13 sampling. It was determined that the well needed to be redeveloped. No sample was analyzed during 1Q13. The 8TH-1/1 monitoring well will be sampled following redevelopment activities slated during 2Q13.

5. Certification of Non-Pumping in the Buffer Zones

Watermaster has certified that there was no reported pumping of groundwater in 1Q13 for domestic or municipal use from the buffer zones that extend 500 feet and 6 months underground travel time from the 8th Street, Banana, Brooks, Ely, Hickory, RP3, San Sevaire, Turner, and Victoria Basins. In fact, there are no domestic or municipal production wells within the buffer zones of these aforementioned recharge sites.

IEUA continues to work with the San Bernardino County Department of Environmental Health Services (SBCDEHS) to prevent the drilling and construction of new drinking water wells within the buffer zones. SBCDEHS has initiated control over production well permitting within the buffer zones of all recharge sites through the use of buffer zone maps that utilize the same land coordinate system (Township/Range/Section/40-acre Parcel) that is used in the permitting process. SBCDEHS reviews new well permit applications, in part, by checking the proposed location of a new drinking water well against recharge basin location maps and parcel lists, both provided by IEUA. The maps and lists show township/range/section parcels (40-acre parcels) that abut recharge basins and their 500-foot buffers.

If a proposed well falls within an abutting parcel, SBCDEHS will review the well location using maps of the basins and buffer zones. If the well falls too near the buffer zone boundary for SBCDEHS to determine the relationship of the proposed well location to the buffer boundary, SBCDEHS will defer to IEUA for a prompt field review of the proposed well location. The field review may include contacting and having the well applicant identify the exact location of the proposed well casing. To conduct a detailed field review, SBCDEHS will contact and provide IEUA Groundwater Recharge Coordinator with a copy of the well permit application and a timeline for the completion of IEUA's review. Following the review, IEUA will notify SBCDEHS of its findings in writing. IEUA will also notify the California Department of Public Health and the Regional Board of well permit applications that it recommends be declined due to well locations determined to fall within a 500-foot buffer zone.

6. MVWD ASR Project

Reporting for the Monte Vista Water District (MVWD) Aquifer Storage and Recovery (ASR) project was allowed by the RWQCB to be included under IEUA/CBWM Phase I Groundwater Recharge Order No. R8-2005-0033 and subsequent permit updates. In April 2007, MVWD, Watermaster, and IEUA entered into an agreement to report the MVWD ASR project groundwater injection/recovery volumes and TIN/TDS mass balance in the recharge program quarterly reports. Initial injection began in June 2007. In May 2008, MVWD discontinued groundwater injection at the ASR wells for an extended period of time. In June 2011, MVWD groundwater injection activities resumed at four ASR wells. MVWD continued injection of imported water through September 2011. No injection has occurred since September 2011. Table 6-1 summarizes the monthly volumes and TIN/TDS of injected and recovered water. The table also includes the mass balance of TIN/TDS from the injection-recovery cycles.

Table 2-1a
Recycled Water Monitoring: RP-1 & RP-4 Effluent Water Quality for January 2013
(Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent										RP-4 Effluent									
	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC ⁷	TDS ³	Hardness	Coliform ^{1,2,4}	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC	TDS ³	Hardness	Coliform ^{1,2,4}
	NTU	mg/L	mg/L	mg/L	mg/L	unit	µmho/cm	mg/L	mg/L	mpn/100mL	NTU	mg/L	mg/L	mg/L	mg/L	unit	µmho/cm	mg/L	mg/L	mpn/100mL
Limits	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240
01/01/13	0.9	6.2	7.0		7.0	7.0	808			<2	0.4	3.5	4.2		4.3	7.0	750			<2
01/02/13	0.8	6.3	7.5		7.5	6.9	819			<2	0.4	3.6	4.9		4.9	7.1	750			<2
01/03/13	0.8	6.4				7.0	822			<2	0.4	3.5				7.0	764			<2
01/04/13	0.8	5.8				7.0	801			2	0.4	3.4				7.0	755			<2
01/05/13	0.7	5.8				7.0	808			<2	0.4	3.3				7.0	745			<2
01/06/13	0.7	5.9	7.0	7.0	7.0	7.0	798	478	144	<2	0.4	3.5	5.3	6.3	5.3	7.0	750	464	145	<2
01/07/13	0.7	6.0	7.2		7.2	7.0	800			<2	0.5	3.6	5.1		5.1	7.0	740			<2
01/08/13	0.8	6.0	7.4		7.4	7.0	811			<2	0.5	3.6	5.3		5.3	7.0	740			<2
01/09/13	0.8	6.1	7.2		7.2	7.0	803			2	0.5	3.6	5.5		5.5	7.0	740			<2
01/10/13	0.7	5.9				7.1	822			2	0.4	3.6				7.0	735			<2
01/11/13	0.7	5.7				7.0	805			<2	0.4	3.5				7.0	730			<2
01/12/13	0.7	5.7				7.0	807			<2	0.5	3.6				7.0	740			<2
01/13/13	0.7	6.0	7.8	7.8	7.8	7.0	699	472		2	0.5	3.8	6.7	6.7	6.7	7.0	740	446		<2
01/14/13	0.7	5.9	7.5		7.5	7.1	785			<2	0.6	3.9	6.2		6.2	7.1	745			<2
01/15/13	0.6	6.0	4.4		4.4	7.0	775			<2	0.7	3.8	7.3		7.3	7.0	740			<2
01/16/13	0.7	6.1	6.2		6.2	7.0	795			<2	0.5	3.7	7.1		7.1	7.0	745			<2
01/17/13	0.8	6.1				7.0	817			2	0.6	3.7				7.0	729			<2
01/18/13	0.8	6.0				7.0	846			2	0.5	3.5				7.0	750			<2
01/19/13	0.8	6.0				7.0	870			2	0.5	3.6				7.0	745			<2
01/20/13	0.8	6.2	5.2	5.2	5.2	7.0	847	472		2	0.5	3.7	6.6	7.8	6.6	7.0	740	444		<2
01/21/13	0.8	6.0	4.8		4.8	7.0	836			<2	0.5	3.6	6.2		6.2	7.0	735			<2
01/22/13	0.8	6.1	4.8		4.8	7.0	851			<2	0.5	3.7	5.1		5.1	6.9	745			<2
01/23/13	0.8	5.4	6.2		6.3	7.0	855			<2	0.6	3.2	5.2		5.3	6.9	735			<2
01/24/13	0.8	4.9				7.0	834			<2	0.5	3.0				6.9	730			<2
01/25/13	0.7	5.1				6.9	811			<2	0.5	3.3				6.9	720			<2
01/26/13	0.6	5.1				6.9	826			<2	0.5	3.3				6.9	715			<2
01/27/13	0.6	5.4	6.9	6.9	6.9	7.0	815	480		<2	0.5	3.5	6.7	7.7	6.7	7.0	725	456		<2
01/28/13	0.6	5.4	6.8		6.8	7.0	812			<2	0.6	3.6	6.6		6.6	6.9	735			<2
01/29/13	0.6	5.4	7.1		7.1	7.0	821			<2	0.5	3.6	6.9		6.9	6.9	740			<2
01/30/13	0.6	5.6				7.0	814			2	0.5	3.6	7.3		7.3	6.9	730			<2
01/31/13	0.6	5.6				7.0	817			<2	0.6	3.6				7.0	720			<2
Avg	0.7	5.8	6.5	6.7	6.5	7.0	814	476	144	<2	0.5	3.5	6.0	7.1	6.0	7.0	739	453	145	<2
Min	0.6	4.9	4.4	5.2	4.4	6.9	699	472	144	<2	0.4	3.0	4.2	6.3	4.3	6.9	715	444	145	<2
Max	0.9	6.4	7.8	7.8	7.8	7.1	870	480	144	2	0.7	3.9	7.3	7.8	7.3	7.1	764	464	145	<2

Note:

Bolded characters signify an exceedance of a permit limitation

Blank cells indicate that analysis was not run for a constituent on that particular date. The data presented meets/exceeds the frequency of analysis specified under the discharge permit for these facilities.

¹ Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA8000409, Order No. R8-2009-0021.

² Turbidity limits: 2 NTU average daily; 5 NTU no more than 5% of day; 10 NTU at any time. Coliform limits: 2.2 MPN/100mL 7-day median; 23 MPN/100mL in no more than 1 sample per month; 240 MPN/100mL at any time.

³ TDS and TIN limits are based on a 12-month running average values which are presented in Table 2-2

⁴ Monthly average for coliform is based on "non-detect" values equal to 2. Determination of "less than" is dependent on the number of "non-detect" occurrences more than half the days in the month.

⁵ TOC shall not exceed 16 mg/L for more than two consecutive samples and an average of the last 4 sample results.

⁶ TN compliance can be met at a point prior to the regional groundwater, including lysimeters.

⁷ These values based on continuous monitoring data generated by the Supervisory Control and Data Acquisition (SCADA) system.

Table 2-1b
Recycled Water Monitoring: RP-1 & RP-4 Effluent Water Quality for February 2013
(Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent										RP-4 Effluent									
	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC ⁷	TDS ³	Hardness	Coliform ^{1,2,4}	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC	TDS ³	Hardness	Coliform ^{1,2,4}
	NTU	mg/L	mg/L	mg/L	mg/L	unit	µhmo/cm	mg/L	mg/L	mpn/100mL	NTU	mg/L	mg/L	mg/L	mg/L	unit	µhmo/cm	mg/L	mg/L	mpn/100mL
Limits	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240
02/01/13	0.7	5.3				7.0	830			<2	0.6	3.4				6.9	725			<2
02/02/13	0.7	5.4				7.0	848			<2	0.6	3.4				6.9	725			<2
02/03/13	0.6	5.7	6.8	6.8	6.8	7.0	833	478	149	<2	0.5	3.6	6.9	7.6	6.9	6.9	715	446	157	<2
02/04/13	0.7	5.8	6.3		6.3	7.0	814			2	0.5	3.7	6.8		6.8	6.9	715			<2
02/05/13	0.8	5.7	6.2		6.2	7.0	825			<2	0.5	3.8	5.4		5.4	7.0	705			<2
02/06/13	0.6	5.7	7.8		8.0	7.0	812			<2	0.5	3.8	6.0		6.0	7.0	700			<2
02/07/13	0.6	5.5				7.0	808			2	0.5	4.7				7.0	695			<2
02/08/13	0.6	5.1				7.1	797			<2	0.4	3.4				7.0	680			<2
02/09/13	0.5	4.9				7.0	785			<2	0.5	3.4				7.1	685			<2
02/10/13	0.5	5.3	8.5	8.5	8.5	7.0	771	472		<2	0.5	3.5	6.8	8.2	6.8	7.1	685	416		<2
02/11/13	0.5	5.4	8.2		8.2	7.0	597			2	0.5	3.6	7.2		7.2	7.1	685			<2
02/12/13	0.5	5.4	7.7		7.7	7.1	866			<2	0.5	3.5	6.6		6.6	7.1	680			<2
02/13/13	0.5	5.4	8.1		8.1	7.1	830			<2	0.5	3.5	6.9		6.9	7.1	670			<2
02/14/13	0.6	5.4				7.1	782			<2	0.5	3.6				7.1	654			<2
02/15/13	0.5	5.2				7.1	789			<2	0.5	3.3				7.1	660			<2
02/16/13	0.5	5.7				7.1	788			<2	0.4	3.6				7.0	665			<2
02/17/13	0.5	5.7				7.1	787			<2	0.4	3.7				7.1	670			<2
02/18/13	0.5	6.0	6.3		6.3	7.1	781			<2	0.4	4.0	4.3		4.3	7.1	690			<2
02/19/13	0.5	6.0	6.1		6.1	7.0	810			2	0.5	3.8	4.4		4.4	7.1	705			<2
02/20/13	0.5	6.5	7.4	7.4	7.4	6.9	828	494		<2	0.4	3.8	5.8	6.7	5.8	7.0	715	434		<2
02/21/13	0.5	6.3				6.9	807			2	0.3	3.8				7.0	715			<2
02/22/13	0.5	6.1				6.9	842			<2	0.3	3.6				7.0	710			<2
02/23/13	0.5	5.9				6.9	847			<2	0.4	3.8				7.0	710			<2
02/24/13	0.4	5.9	6.7	6.7	6.7	6.9	830	478		<2	0.4	4.1	5.1	6.6	5.1	7.2	720	416		<2
02/25/13	0.5	6.0	7.1		7.1	6.9	813			<2	0.4	4.1	5.2		5.2	7.1	730			<2
02/26/13	0.5	6.4	7.1		7.1	6.9	835			2	0.5	4.1	5.3		5.3	7.0	735			<2
02/27/13	0.5	6.8	7.0		7.0	6.8	834			<2	0.6	4.0	4.7		4.7	7.0	730			<2
02/28/13	0.5	6.6				6.8	845			<2	0.6	3.9				7.0	750			<2
Avg	0.5	5.7	7.2	7.4	7.2	7.0	808	481	149	<2	0.5	3.7	5.8	7.3	5.8	7.0	701	428	157	<2
Min	0.4	4.9	6.1	6.7	6.1	6.8	597	472	149	<2	0.3	3.3	4.3	6.6	4.3	6.9	654	416	157	<2
Max	0.8	6.8	8.5	8.5	8.5	7.1	866	494	149	2	0.6	4.7	7.2	8.2	7.2	7.2	750	446	157	<2

Note: **Bolded characters signify an exceedance of a permit limitation**

Blank cells indicate that analysis was not run for a constituent on that particular date. The data presented meets/exceeds the frequency of analysis specified under the discharge permit for these facilities.

¹ Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA8000409, Order No. R8-2009-0021.

² Turbidity limits: 2 NTU average daily; 5 NTU no more than 5% of day; 10 NTU at any time. Coliform limits: 2.2 MPN/100mL 7-day median; 23 MPN/100mL in no more than 1 sample per month; 240 MPN/100mL at any time.

³ TDS and TIN limits are based on a 12-month running average values which are presented in Table 2-2

⁴ Monthly average for coliform is based on "non-detect" values equal to 2. Determination of "less than" is dependent on the number of "non-detect" occurrences more than half the days in the month.

⁵ TOC shall not exceed 16 mg/L for more than two consecutive samples and an average of the last 4 sample results. TOC compliance can be met at a point prior to the regional groundwater, including lysimeters.

⁶ TN compliance can be met at a point prior to the regional groundwater, including lysimeters.

⁷ These values based on continuous monitoring data generated by the Supervisory Control and Data Acquisition (SCADA) system.

Table 2-1c
Recycled Water Monitoring: RP-1 & RP-4 Effluent Water Quality for March 2013
(Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent										RP-4 Effluent									
	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC ⁷	TDS ³	Hardness	Coliform ^{1,2,4}	Turbidity ^{1,2,7}	TOC	NO ₃ -N	TN	TIN ³	pH ⁷	EC	TDS ³	Hardness	Coliform ^{1,2,4}
	NTU	mg/L	mg/L	mg/L	mg/L	unit	µmho/cm	mg/L	mg/L	mpn/100mL	NTU	mg/L	mg/L	mg/L	mg/L	unit	µmho/cm	mg/L	mg/L	mpn/100mL
Limits	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240	2;5;10	16 ⁵		5 ⁶		6<pH<9				2.2;23;240
03/01/13	0.5	6.1				6.8	846			<2	0.6	3.9				7.0	750			<2
03/02/13	0.5	5.9				6.8	851			<2	0.5	3.8				6.9	750			<2
03/03/13	0.5	5.9	7.3	7.3	7.3	6.8	846	478	151	<2	0.5	4.1	4.1	5.2	4.1	7.0	760	456	149	<2
03/04/13	0.5	6.0	7.3		7.3	6.8	843			<2	0.6	4.3	4.0		4.0	7.0	775			<2
03/05/13	0.5	6.0	6.7		6.7	6.8	853			<2	0.5	4.3	4.4		4.4	7.0	775			<2
03/06/13	0.5	5.9	7.4		7.4	6.8	851			<2	0.5	4.2	5.2		5.2	7.0	770			<2
03/07/13	0.5	5.7				6.8	836			<2	0.5	4.2				7.0	765			<2
03/08/13	0.5	5.4				6.8	850			<2	0.6	3.9				7.0	765			<2
03/09/13	0.5	5.5				6.8	836			<2	0.5	4.0				7.0	755			<2
03/10/13	0.5	6.0	6.7	6.7	6.7	6.9	839	492		<2	0.5	4.2	5.3	5.3	6.0	7.0	760	478		<2
03/11/13	0.7	6.2	7.0		7.0	6.8	837			<2	0.6	4.2	4.4		4.4	7.0	755			<2
03/12/13	0.7	6.2	7.4		7.4	6.9	844			<2	0.6	4.2	5.2		5.2	7.0	755			<2
03/13/13	0.6	6.1	6.9		6.9	6.8	860			<2	0.5	4.1	5.0		5.0	7.0	760			<2
03/14/13	0.6	6.0				6.9	843			<2	0.6	4.0				6.9	750			<2
03/15/13	0.6	5.6				6.9	839			2	0.6	3.9				7.0	750			<2
03/16/13	0.6	5.6				6.8	843			<2	0.6	4.0				7.0	755			<2
03/17/13	0.6	5.8	8.2	8.2	8.2	6.9	834	470		<2	0.6	4.2	5.2	5.9	5.2	7.0	760	462		<2
03/18/13	0.6	5.7	7.3		7.3	6.9	844			<2	0.7	4.2	5.0		5.0	7.0	760			<2
03/19/13	0.6	5.8	7.4		7.4	6.9	865			<2	0.6	4.0	5.0		5.0	7.0	765			<2
03/20/13	0.6	6.0	7.6		7.6	6.9	874			2	0.7	4.1	4.4		4.4	7.0	760			<2
03/21/13	0.6	5.7				6.9	891			<2	0.7	3.9				7.0	735			<2
03/22/13	0.6	5.6				6.9	909			<2	0.6	3.9				7.0	745			<2
03/23/13	0.6	5.5				6.9	900			<2	0.6	3.9				7.0	745			<2
03/24/13	0.6	5.8	7.2	7.2	7.2	6.9	882	478		<2	0.6	4.0	4.1	5.4	4.1	7.0	745	462		<2
03/25/13	0.6	5.9	7.9		7.9	6.9	731			<2	0.6	4.0	4.0		4.0	7.0	760			<2
03/26/13	0.6	5.8	8.1		8.1	6.9	865			<2	0.6	3.9	4.8		4.8	7.0	765			<2
03/27/13	0.5	5.5	7.8		7.8	6.9	867			<2	0.6	3.7	4.2		4.2	7.1	755			<2
03/28/13	0.6	5.8				6.9	880			<2	0.6	3.8				7.1	752			<2
03/29/13	0.6	5.9				7.0	876			<2	0.6	3.8				7.1	760			<2
03/30/13	0.6	5.8				7.0	866			<2	0.5	3.7				7.1	750			<2
03/31/13	0.6	5.7	7.1	7.1	7.1	7.0	864	482		<2	0.6	4.0	4.3	4.7	4.3	7.1	745	456		<2
Avg	0.6	5.8	7.4	7.3	7.4	6.9	854	480	151	<2	0.6	4.0	4.6	5.3	4.7	7.0	757	463	149	<2
Min	0.5	5.4	6.7	6.7	6.7	6.8	731	470	151	<2	0.5	3.7	4.0	4.7	4.0	6.9	735	456	149	<2
Max	0.7	6.2	8.2	8.2	8.2	7.0	909	492	151	2	0.7	4.3	5.3	5.9	6.0	7.1	775	478	149	<2

Note: **Bolded characters signify an exceedance of a permit limitation**

Blank cells indicate that analysis was not run for a constituent on that particular date. The data presented meets/exceeds the frequency of analysis specified under the discharge permit for these facilities.

¹ Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA8000409, Order No. R8-2009-0021.

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³ TDS and TIN limits are based on a 12-month running average values which are presented in Table 2-2

⁴ Monthly average for coliform is based on "non-detected" values equal to 2. Determination of "less than" is dependent on the number of "non-detected" occurrences more than half the days in the month.

⁵ TOC shall not exceed 16 mg/L for more than two consecutive samples and an average of the last 4 sample results. TOC compliance can be met at a point prior to the regional groundwater, including lysimeters.

⁶ TN compliance can be met at a point prior to the regional groundwater, including lysimeters.

⁷ These values based on continuous monitoring data generated by the Supervisory Control and Data Acquisition (SCADA) system.

Table 2-2
Recycled Water Monitoring: Agency-Wide Flow-Weighted TIN & TDS (mg/L)
(Recycled Water Quality Specifications A.6)

	TIN		TDS	
Date	Monthly	12-Mo. Run Avg.	Monthly	12-Mo. Run Avg.
Apr-12	7.4	5.9	496	466
May-12	6.4	5.9	493	469
Jun-12	5.8	5.9	482	470
Jul-12	5.4	6.0	477	472
Aug-12	4.8	6.1	463	473
Sep-12	5.1	6.0	472	474
Oct-12	4.9	6.0	486	476
Nov-12	6.1	6.0	485	479
Dec-12	6.0	6.0	492	482
Jan-13	6.1	5.9	495	484
Feb-13	6.8	5.9	490	486
Mar-13	6.1	5.9	493	485
Avg	5.9	6.0	485	476
Min	4.8	5.9	463	466
Max	7.4	6.1	496	486
Limit		8.0		550

Date source: IEUA NPDES monthly self-monitoring report (MRP No. R8-2009-0021)

The data reported above will supersede any information submitted for previous quarters. Agency-wide TIN & TDS were in compliance with permit limits at all times.

Table 2-3
Recycled Water Monitoring: Primary & Secondary Maximum Contaminant Levels
(Recycled Water Quality Specifications A.1, A.2, A.3, & A.15)

Constituent	2Q12	3Q12	4Q12	1Q13	4Q Run. Avg. ¹	Limit	Unit	Method
Inorganic Chemicals								
Aluminum	62	39	28	29	39	1000	µg/L	EPA 200.8
Antimony	<1	<1	<1	<1	<1	6	µg/L	EPA 200.8
Arsenic	<2	<2	<2	<2	<2	10	µg/L	EPA 200.8
Asbestos	<6.7	<0.8	<0.4	<0.7	<6.7	7	MFL	EPA 100.2
Barium	7	4	6	8	6	1000	µg/L	EPA 200.8
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	4	µg/L	EPA 200.8
Cadmium	<0.25	<0.25	<0.25	<0.25	<0.25	5	µg/L	EPA 200.8
Chromium	2.6	0.8	1.5	0.7	1.4	50	µg/L	EPA 200.8
Cyanide	<5	<5	<5	6	<5	150	µg/L	SM 4500-CN E
Fluoride	0.4	0.2	0.2	0.2	0.3	2	mg/L	SM 4500-F C
Mercury	<0.05	<0.05	<0.05	<0.05	<0.05	2	µg/L	EPA 245.2
Nickel	3	2	2	2	3	100	µg/L	EPA 200.8
Perchlorate	<4	<4	<4	<2	<4	6	µg/L	EPA 314
Selenium	2	<2	<2	<2	<2	50	µg/L	EPA 200.8
Thallium	<1	<1	<1	<1	<1	2	µg/L	EPA 200.8
Volatile Organic Chemicals (VOCs)								
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	1	µg/L	EPA 524.2
Carbon Tetrachloride	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	µg/L	EPA 524.2
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	600	µg/L	EPA 524.2
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	µg/L	EPA 524.2
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	6	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	6	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	10	µg/L	EPA 524.2
Dichloromethane	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
1,3-Dichloropropene	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	µg/L	EPA 524.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	300	µg/L	EPA 524.2
Monochlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	70	µg/L	EPA 524.2
Methyl-tert-butyl ether	<0.5	<0.5	<0.5	<0.5	<0.5	13	µg/L	EPA 524.2
Styrene	<0.5	<0.5	<0.5	<0.5	<0.5	100	µg/L	EPA 524.2
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	1	µg/L	EPA 524.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
Toluene	<0.5	<0.5	<0.5	<0.5	<0.5	150	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	200	µg/L	EPA 524.2
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
Trichlorofluoromethane	<0.5	<0.5	<0.5	<0.5	<0.5	150	µg/L	EPA 524.2
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.5	<0.5	<0.5	<0.5	<0.5	1200	µg/L	EPA 524.2
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	µg/L	EPA 524.2
m,p-Xylene	<0.5	<0.5	<0.5	<0.5	<0.5	1750 ²	µg/L	EPA 524.2
o-Xylene	<0.5	<0.5	<0.5	<0.5	<0.5		µg/L	EPA 524.2
Non-Volatile Synthetic Organic Chemicals (SOCs)								
Alachlor (Alanex)	<0.1	<0.1	<0.1	<0.1	<0.1	2	µg/L	EPA 505
Atrazine	<0.05	<0.05	<0.05	<0.05	<0.05	1	µg/L	EPA 525.2
Bentazon	<0.5	<0.5	<0.5	<0.5	<0.5	18	µg/L	EPA 515.4
Benzo(a)pyrene	<0.02	<0.02	<0.02	<0.02	<0.02	0.2	µg/L	EPA 525.2
Carbofuran	<0.5	<0.5	<0.5	<0.5	<0.5	18	µg/L	EPA 531.2
Chlordane	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	µg/L	EPA 505
2,4-D	<0.1	<0.1	<0.1	<0.1	<0.1	70	µg/L	EPA 515.4
Dalapon	4	3	3	3	3	200	µg/L	EPA 515.4
Dibromochloropropane	<0.01	<0.01	<0.01	<0.01	<0.01	0.2	µg/L	EPA 504.1
Di(2-ethylhexyl)adipate	<0.6	<0.6	<0.6	<0.6	<0.6	400	µg/L	EPA 525.2
Di(2-ethylhexyl)phthalate	<0.6	<0.6	<0.6	<0.6	<0.6	4	µg/L	EPA 525.2
Dinoseb	<0.2	<0.2	<0.2	<0.2	<0.2	7	µg/L	EPA 515.4
Diquat	<0.4	<0.4	<0.4	<0.4	<0.4	20	µg/L	EPA 549.2
Endothall	<5	<5	<5	<5	<5	100	µg/L	EPA 548.1
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	2	µg/L	EPA 505

Table 2-3
Recycled Water Monitoring: Primary & Secondary Maximum Contaminant Levels
(Recycled Water Quality Specifications A.1, A.2, A.3, & A.15)

Constituent	2Q12	3Q12	4Q12	1Q13	4Q Run. Avg. ¹	Limit	Unit	Method
Ethylene Dibromide	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	µg/L	EPA 504.1
Glyphosate	<6	<25	<6	<6	<25	700	µg/L	EPA 547
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	µg/L	EPA 505
Heptachlor Epoxide	<0.010	<0.01	<0.01	<0.01	<0.01	0.01	µg/L	EPA 505
Hexachlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	1	µg/L	EPA 525.2
Hexachlorocyclopentadiene	<0.05	<0.05	<0.05	<0.05	<0.05	50	µg/L	EPA 525.2
Lindane	<0.01	<0.01	<0.01	<0.01	<0.01	0.2	µg/L	EPA 505
Methoxychlor	<0.05	<0.05	<0.05	<0.05	<0.05	30	µg/L	EPA 505
Molinate	<0.1	<0.1	<0.1	<0.1	<0.1	20	µg/L	EPA 525.2
Oxamyl	<0.5	<0.5	<0.5	<0.5	<0.5	50	µg/L	EPA 531.2
Pentachlorophenol	<0.04	<0.04	<0.04	<0.04	<0.04	1	µg/L	EPA 515.4
Picloram	<0.1	<0.1	<0.1	<0.1	<0.1	500	µg/L	EPA 515.4
PCB 1016	<0.08	<0.08	<0.08	<0.08	<0.08	0.5	µg/L	EPA 505
PCB 1221	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
PCB 1232	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
PCB 1242	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
PCB 1248	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
PCB 1254	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
PCB 1260	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	µg/L	EPA 505
Simazine	<0.05	<0.05	<0.05	<0.05	<0.05	4	µg/L	EPA 525.2
Thiobencarb	<0.2	<0.2	<0.2	<0.2	<0.2	70	µg/L	EPA 525.2
Toxaphene	<0.5	<0.5	<0.5	<0.5	<0.5	3	µg/L	EPA 505
2,3,7,8-TCDD (Dioxin)	<5	<5	<5	<5	<5	30	pg/L	EPA 1613
2,4,5-TP (Silvex)	<0.2	<0.2	<0.2	<0.2	<0.2	50	µg/L	EPA 515.4
Action Level Chemicals								
Copper	3.3	3.4	2.8	2.6	3.0	1300	µg/L	EPA 200.8
Lead	<0.5	<0.5	<0.5	<0.5	<0.5	15	µg/L	EPA 200.8
Radionuclides								
Combined Radium-226 and Radium 228	<0.58	<0.43	<0.27	<0.23	<0.58	5	pCi/L	EPA 903.0
Gross Alpha Particle Activity	<1.7	<2.9	<3	<3	<3	15	pCi/L	EPA 900.0/SM7110C
Tritium	<220	<241	<250	<264	<264	20,000	pCi/L	EPA 906
Strontium-90	<0.81	<0.64	<0.50	<0.55	<0.81	8	pCi/L	EPA 905
Gross Beta Particle Activity	9	9	11	10	10	50	pCi/L	EPA 900.0
Uranium	<0.7	<0.7	<0.7	<0.7	<0.7	20	pCi/L	EPA 200.8
Secondary Maximum Contaminant Level Chemicals								
Aluminum	62	39	28	29	26	200	µg/L	EPA 200.8
Copper	3.3	3.4	2.8	2.6	3.0	1000	µg/L	EPA 200.8
Corrosivity ³	-0.3 (Non-Cor.)	NR	NR	NR	Non-Cor.	Non-Cor.	SI	SM 2330B
Foaming Agents (MBAS) ³	0.08	0.05	0.07	0.11	0.08	0.5	mg/L	S5540C/EPA 425.1
Iron ³	300	NR	NR	NR	109	300	µg/L	EPA 200.7
Manganese	148	4	18	16	46	50	µg/L	EPA 200.8
Methyl-tert-butyl ether (MTBE) ³	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
Odor--Threshold ³	4	3	3	40	13	3	TON	SM 2150B
Silver	<0.27	<0.25	<0.25	<0.25	<0.25	100	µg/L	EPA 200.8
Thiobencarb	<0.2	<0.2	<0.2	<0.2	<0.2	1	µg/L	EPA 525.2
Zinc	35	23	26	27	28	5000	µg/L	EPA 200.8
Miscellaneous Regulated Constituents								
Oil & Grease ⁴	<1	<1	<1	<1	<1	1	mg/L	EPA 1664
Disinfection Byproducts								
Bromate	<5	<5	<5	<5	<5	10	µg/L	EPA 300.1
Chlorite	<0.01	<0.01	<0.01	<0.01	<0.01	1	mg/L	EPA 300.0
BRK-LYS-25 BRK-LYS-25 BNA-LYS-25 BNA-LYS-25								
Lysimeter Compliance Point Data	2Q12	3Q12	4Q12	1Q13				
Total Trihalomethanes (TTHMs)	<2	<4	<4	<4	<4	80	µg/L	EPA 524.2/624
Total Haloacetic Acids (HAA5)	<2	<2	<2	<2	<2	60	µg/L	S6251B

NR: Not required this quarter

¹ 4-quarter running average is calculated based on ND values equal to half the detection limit. The reported 4-quarter running average value, if less than DL, will be based on highest DL found in the data set.

² The sum of m,p-Xylene and o-Xylene is used to calculate compliance for the Total Xylenes limit

³ 4-quarter running average is calculated based on the four most recent results. Monitoring is required annually. However, if monitoring takes place more frequently than required, those results will be reported.

⁴ Oil & Grease compliance determination not based on 4-quarter running average

Bold signifies an exceedance of a limit in the Order. Explained in further detail in the report text.

Table 2-4
Recycled Water Monitoring: Remaining Priority Pollutants, EDCs & Pharmaceuticals, and Unregulated Chemicals
(Monitoring & Reporting Program)

Constituent	1Q13	Unit	Method	Constituent	1Q13	Unit	Method
Metals				Pesticides			
Chromium (III) ¹	0.7	µg/L	EPA 200.8	Aldrin	NR	µg/L	EPA 608
Volatile Organic Chemicals (VOCs)				BHC, alpha isomer	NR	µg/L	EPA 608
Acrolein	NR	µg/L	EPA 624	BHC, beta isomer	NR	µg/L	EPA 608
Acrylonitrile	NR	µg/L	EPA 624	BHC, delta isomer	NR	µg/L	EPA 608
Bromoform	<0.5	µg/L	EPA 524.2	4,4'-DDT	NR	µg/L	EPA 608
Chlorodibromomethane	4.5	µg/L	EPA 524.2	4,4'-DDE	NR	µg/L	EPA 608
Chloroethane	<0.5	µg/L	EPA 524.2	4,4'-DDD	NR	µg/L	EPA 608
2-Chloroethylvinylether	NR	µg/L	EPA 624	Dieldrin	NR	µg/L	EPA 608
Chloroform	51.8	µg/L	EPA 524.2	Endosulfan I	NR	µg/L	EPA 608
Dichlorobromomethane	20.1	µg/L	EPA 524.2	Endosulfan II	NR	µg/L	EPA 608
Methyl Bromide	<1	µg/L	EPA 524.2	Endosulfan Sulfate	NR	µg/L	EPA 608
Methyl Chloride	<0.5	µg/L	EPA 524.2	Unregulated Chemicals			
Acid Extractables				Endrin Aldehyde	NR	µg/L	EPA 608
2-Chlorophenol	NR	µg/L	EPA 625	Chromium VI	0.17	µg/L	EPA 218.6
2,4-Dichlorophenol	NR	µg/L	EPA 625	Ethyl tertiary butyl ether	<0.5	µg/L	EPA 524.2
2,4-Dimethylphenol	NR	µg/L	EPA 625	Tertiary amyl methyl ether	<0.5	µg/L	EPA 524.2
2-Methyl-4,6-dinitrophenol	NR	µg/L	EPA 625	Chemicals w/ State Notification Levels ²			
2,4-Dinitrophenol	NR	µg/L	EPA 625	Boron	0.2	mg/L	EPA 200.7
2-Nitrophenol	NR	µg/L	EPA 625	n-butylbenzene	<0.5	µg/L	EPA 524.2
4-Nitrophenol	NR	µg/L	EPA 625	sec-butylbenzene	<0.5	µg/L	EPA 524.2
4-Chloro-3-methylphenol	NR	µg/L	EPA 625	tert-butylbenzene	<0.5	µg/L	EPA 524.2
Phenol	NR	µg/L	EPA 625	Carbon disulfide	<0.5	µg/L	EPA 524.2
2,4,6-Trichlorophenol	NR	µg/L	EPA 625	Chlorate	NR	µg/L	EPA 300.0
Base/Neutral Extractables				2-Chlorotoluene	<0.5	µg/L	EPA 524.2
Acenaphthene	NR	µg/L	EPA 625	4-Chlorotoluene	<0.5	µg/L	EPA 524.2
Acenaphthylene	NR	µg/L	EPA 625	Diazinon	NR	µg/L	EPA 525.2
Anthracene	NR	µg/L	EPA 625	Dichlorodifluoromethane (Freon 12)	<0.5	µg/L	EPA 524.2
Benzidine	NR	µg/L	EPA 625	1,4 - Dioxane	<1	µg/L	EPA 522
Benzo(a)anthracene	NR	µg/L	EPA 625	Ethylene glycol	NR	mg/L	EPA 8015B
Benzo(b)fluoranthene	NR	µg/L	EPA 625	Formaldehyde	NR	µg/L	EPA 556
Benzo(g,h,i)perylene	NR	µg/L	EPA 625	HMX	NR	µg/L	EPA 8330B
Benzo(k)fluoranthene	NR	µg/L	EPA 625	Isopropylbenzene	<0.5	µg/L	EPA 524.2
Bis(2-chloroethoxy)methane	NR	µg/L	EPA 625	Methyl isobutyl ketone (MIBK)	<2	µg/L	EPA 524.2
Bis(2-chloroethyl)ether	NR	µg/L	EPA 625	N-Nitrosodiethylamine (NDEA)	NR	ng/L	EPA 521
Bis(2-chloroisopropyl)ether	NR	µg/L	EPA 625	N-nitrosodimethylamine (NDMA)	2.6	ng/L	EPA 521
4-Bromophenyl phenyl ether	NR	µg/L	EPA 625	Propachlor	NR	µg/L	EPA 525.2
Butyl benzyl phthalate	NR	µg/L	EPA 625	N-propylbenzene	<0.5	µg/L	EPA 524.2
2-Chloronaphthalene	NR	µg/L	EPA 625	RDX	NR	µg/L	EPA 8330B
4-Chlorophenyl phenyl ether	NR	µg/L	EPA 625	Tertiary butyl alcohol	<2	µg/L	EPA 524.2
Chrysene	NR	µg/L	EPA 625	1,2,3-Trichloropropane (1,2,3-TCP)	<0.5	µg/L	EPA 524.2
Dibenzo(a,h)anthracene	NR	µg/L	EPA 625	1,2,4-trimethylbenzene	<0.5	µg/L	EPA 524.2
1,3-Dichlorobenzene	NR	µg/L	EPA 625	1,3,5-trimethylbenzene	<0.5	µg/L	EPA 524.2
3,3-Dichlorobenzidine	NR	µg/L	EPA 625	2,4,6-Trinitrotoluene	NR	µg/L	EPA 8330B
Diethyl phthalate	NR	µg/L	EPA 625	Vanadium	2	µg/L	EPA 200.8
Dimethyl phthalate	NR	µg/L	EPA 625	Endocrine Disrupting Chemicals, Pharmaceuticals and Other Chemicals ²			
Di-n-butyl phthalate	NR	µg/L	EPA 625	Acetaminophen	NR	ng/L	LC-MS-MS
2,4-Dinitrotoluene	NR	µg/L	EPA 625	Bis Phenol A (BPA)	NR	ng/L	LC-MS-MS
2,6-Dinitrotoluene	NR	µg/L	EPA 625	Caffeine	NR	ng/L	LC-MS-MS
Di-n-octyl phthalate	NR	µg/L	EPA 625	Carbamazepine	NR	ng/L	LC-MS-MS
Azobenzene	NR	µg/L	EPA 625	DEET	NR	ng/L	LC-MS-MS
Fluoranthene	NR	µg/L	EPA 625	Estradiol	NR	ng/L	LC-MS-MS
Fluorene	NR	µg/L	EPA 625	Estrone	NR	ng/L	LC-MS-MS
Hexachlorobutadiene	NR	µg/L	EPA 625	Ethinyl Estradiol - 17 alpha	NR	ng/L	LC-MS-MS
Hexachlorocyclopentadiene	NR	µg/L	EPA 625	Fluoxetine	NR	ng/L	LC-MS-MS
Hexachloroethane	NR	µg/L	EPA 625	Gemfibrozil	NR	ng/L	LC-MS-MS
Indeno(1,2,3-cd)pyrene	NR	µg/L	EPA 625	Ibuprofen	NR	ng/L	LC-MS-MS
Isophorone	NR	µg/L	EPA 625	Iopromide	NR	ng/L	LC-MS-MS
Naphthalene	NR	µg/L	EPA 625	Progesterone	NR	ng/L	LC-MS-MS
Nitrobenzene	NR	µg/L	EPA 625	Testosterone	NR	ng/L	LC-MS-MS
N-Nitroso-di-n-propylamine	NR	µg/L	EPA 625	Sucralose	NR	ng/L	LC-MS-MS
N-Nitrosodiphenylamine	NR	µg/L	EPA 625	Sulfamethoxazole	NR	ng/L	LC-MS-MS
Phenanthrene	NR	µg/L	EPA 625	Trimethoprim	NR	ng/L	LC-MS-MS
Pyrene	NR	µg/L	EPA 625	Triclosan	NR	ng/L	LC-MS-MS

¹ Trivalent chromium is measured as total chromium

² Chemicals with State Notification Levels, Nitrosamines, and EDC, Pharmaceuticals & Other Chemicals

NR: Not Required (Annual Requirement)

Table 2-5a
Lysimeter and Surface Water Monitoring: TOC, Nitrogen Species, and EC

8th Street Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
8TH-LYS-00	0	01/22/13	4.54	6.8	5.3	5.3	1.5	<0.01	650
8TH-LYS-00	0	02/21/13	6.15	3.9	2.8	2.7	1.2	0.08	350
8TH-LYS-00	0	03/19/13	4.93	4.7	3.8	3.6	1.1	0.03	690
8TH-LYS-35	35	01/22/13	2.60	0.6	0.6	0.6	<0.5	<0.01	505
8TH-LYS-35	35	02/21/13	2.23	1.9	0.3	0.3	1.6	<0.01	485
8TH-LYS-35	35	03/19/13	2.11	<0.6	0.3	0.3	<0.5	<0.01	515

Banana Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
BNA-LYS-00	0	01/02/13	4.52	5.7	4.7	1.5	4.2	0.32	295
BNA-LYS-00	0	01/10/13	4.68	6.6	4.8	2.6	4.0	0.29	430
BNA-LYS-00	0	01/17/13	4.59	6.9	5.9	4.3	2.6	0.29	525
BNA-LYS-00	0	01/22/13	4.47	6.9	5.4	3.9	3.0	0.30	520
BNA-LYS-00	0	01/31/13	5.22	7.9	6.7	3.1	4.8	0.25	425
BNA-LYS-00	0	02/05/13	5.03	7.0	5.9	3.0	4.0	0.26	395
BNA-LYS-00	0	02/12/13	6.22	6.7	4.6	2.8	3.9	0.24	355
BNA-LYS-00	0	02/21/13	6.66	5.3	3.1	2.5	2.8	0.18	245
BNA-LYS-00	0	02/27/13	6.48	4.4	3.3	2.6	1.8	0.18	300
BNA-LYS-00	0	03/05/13	5.86	5.9	4.3	3.9	2.0	0.08	480
BNA-LYS-00	0	03/14/13	6.56	3.0	1.4	1.3	1.7	0.08	335
BNA-LYS-00	0	03/19/13	7.89	3.7	<0.2	0.1	3.6	0.03	390
BNA-LYS-00	0	03/26/13	5.81	4.8	0.5	0.5	4.3	<0.01	565
BNA-LYS-25	25	01/02/13	0.71	1.2	0.7	0.7	0.5	<0.01	680
BNA-LYS-25	25	01/10/13	0.66	1.4	0.8	0.8	0.6	0.03	700
BNA-LYS-25	25	01/17/13	0.65	1.3	1.3	1.3	<0.5	<0.01	695
BNA-LYS-25	25	01/22/13	0.69	2.9	1.6	1.6	1.3	<0.01	675
BNA-LYS-25	25	01/31/13	0.73	2.7	2.0	1.7	1.0	<0.01	745
BNA-LYS-25	25	02/05/13	0.80	1.8	1.8	1.8	<0.5	<0.01	610
BNA-LYS-25	25	02/12/13	0.72	2.4	1.7	1.7	0.7	<0.01	605
BNA-LYS-25	25	02/21/13	0.79	3.7	1.9	1.9	1.8	<0.01	545
BNA-LYS-25	25	02/27/13	0.78	2.3	1.8	1.8	0.5	<0.01	515
BNA-LYS-25	25	03/05/13	0.72	1.8	1.8	1.8	<0.5	<0.01	510
BNA-LYS-25	25	03/14/13	1.03	2.5	1.5	1.5	1.0	<0.01	510
BNA-LYS-25	25	03/19/13	1.14	2.6	1.4	1.4	1.2	<0.01	510
BNA-LYS-25	25	03/26/13	0.64	4.1	1.6	1.6	2.5	<0.01	505

Brooks Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
BRK-LYS-00	0	01/22/13	4.64	7.4	6.4	6.4	1.0	<0.01	740
BRK-LYS-00	0	02/21/13	4.54	6.7	4.7	4.7	2.0	0.02	630
BRK-LYS-00	0	03/19/13	4.50	6.2	4.6	4.5	1.7	0.03	680
BRK-LYS-25	25	01/22/13	2.62	0.9	1.1	0.9	<0.5	<0.01	805
BRK-LYS-25	25	02/21/13	3.27	1.9	0.7	0.7	1.2	0.02	810
BRK-LYS-25	25	03/19/13	3.24	1.5	0.7	0.7	0.8	<0.01	795

Hickory East Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
HKEYE-LYS-00	0	01/02/13	4.51	6.8	6.8	6.8	<0.5	<0.01	770
HKEYE-LYS-00	0	01/10/13	4.31	7.0	5.9	5.8	1.2	0.05	760
HKEYE-LYS-00	0	01/17/13	4.29	8.5	7.4	7.0	1.5	<0.01	760
HKEYE-LYS-00	0	01/22/13	4.46	7.5	6.1	6.1	1.4	<0.01	760
HKEYE-LYS-00	0	01/31/13	4.30	6.8	5.5	5.5	1.3	0.03	720
HKEYE-LYS-00	0	02/05/13	5.42	5.5	3.9	3.8	1.7	0.09	695
HKEYE-LYS-00	0	02/12/13	7.07	8.5	6.0	6.0	2.5	<0.01	255
HKEYE-LYS-00	0	02/21/13	6.57	2.8	1.4	1.1	1.7	0.12	140
HKEYE-LYS-00	0	02/27/13	10.2	2.7	0.4	0.4	2.3	<0.01	210
HKEYE-LYS-00	0	03/05/13	6.64	7.3	5.3	5.3	2.0	<0.01	650
HKEYE-LYS-00	0	03/14/13	5.26	4.7	4.7	4.7	<0.5	<0.01	700
HKEYE-LYS-00	0	03/19/13	5.05	7.2	5.0	5.0	2.2	<0.01	750
HKEYE-LYS-00	0	03/26/13	5.33	7.8	3.8	3.7	4.1	<0.01	725
HKEYE-LYS-25	25	01/02/13	1.76	4.7	4.7	4.7	<0.5	<0.01	690
HKEYE-LYS-25	25	01/10/13	1.97	6.4	5.1	5.1	1.3	0.04	755
HKEYE-LYS-25	25	01/17/13	1.94	6.4	6.4	6.4	<0.5	<0.01	785
HKEYE-LYS-25	25	01/22/13	1.96	7.9	6.7	6.7	1.2	<0.01	780
HKEYE-LYS-25	25	01/31/13	1.95	7.7	6.2	6.2	1.5	<0.01	740
HKEYE-LYS-25	25	02/06/13		6.9	6.1	6.1	0.8	<0.01	745

Table 2-5a
Lysimeter and Surface Water Monitoring: TOC, Nitrogen Species, and EC

Hickory East Basin (cont'd)									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
HKYE-LYS-25	25	02/12/13		7.1	6.0	6.0	1.1	<0.01	755
HKYE-LYS-25	25	02/21/13	1.32	7.7	6.1	6.1	1.6	<0.01	760
HKYE-LYS-25	25	02/27/13	1.49	7.7	6.3	6.3	1.4	<0.01	740
HKYE-LYS-25	25	03/05/13	1.09	7.7	6.4	6.4	1.3	<0.01	755
HKYE-LYS-25	25	03/14/13	1.40	8.5	7.1	7.1	1.4	<0.01	805
HKYE-LYS-25	25	03/19/13	1.57	8.2	6.6	6.6	1.6	<0.01	765
HKYE-LYS-25	25	03/26/13	1.64	7.9	5.2	5.0	2.9	<0.01	725

Hickory West Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
HKYW-LYS-00	0	02/05/13	4.84	5.8	4.6	4.5	1.3	0.09	720
HKYW-LYS-05	5	02/05/13	3.94	2.2	1.5	1.3	0.9	<0.01	670
HKYW-LYS-10	10	02/05/13				1.0		0.09	925
HKYW-LYS-25	25	02/05/13				4.7		0.09	2020

RP3 Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
RP31-LYS-00	0	01/22/13	4.91	7.3	5.1	5.0	2.3	0.05	750
RP31-LYS-00	0	02/21/13	7.75	3.8	2.1	1.9	1.9	0.13	395
RP31-LYS-00	0	03/19/13	6.62	6.1	3.7	3.5	2.6	0.13	725
RP31-LYS-35	35	01/22/13	1.17	3.2	3.2	3.2	<0.5	<0.01	645
RP31-LYS-35	35	02/21/13	1.24	3.9	3.2	3.2	0.7	<0.01	635
RP31-LYS-35	35	03/19/13	1.18	4.4	3.3	3.3	1.1	<0.01	650

San Sevaive Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
SS5-LYS-00	0	01/22/13	5.51	5.5	3.5	3.3	2.2	0.12	585
SS5-LYS-00	0	02/21/13	5.58	4.5	2.2	2.0	2.5	0.07	510
SS5-LYS-00	0	03/19/13	6.39	3.4	1.3	1.2	2.2	0.03	550
SS5-LYS-15	15	01/22/13	1.98	1.0	<0.2	0.1	0.9	<0.01	715
SS5-LYS-15	15	02/21/13	1.81	1.2	<0.2	0.1	1.1	<0.01	575
SS5-LYS-15	15	03/19/13	1.84	0.8	<0.2	<0.1	0.8	<0.01	615
SS5-LYS-20	20	01/22/13	2.25	0.6	<0.2	<0.1	0.6	<0.01	600
SS5-LYS-20	20	02/21/13	2.07	0.8	<0.2	<0.1	0.8	<0.01	510
SS5-LYS-20	20	03/19/13	1.57	0.8	<0.2	<0.1	0.8	<0.01	560

Victoria Basin									
Site	Depth, bgs	Date	TOC	TN *	TIN	NO ₃ -N	TKN+NO ₂ -N	NO ₂ -N	EC
Unit==>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
VCT-LYS-00	0	01/22/13	4.75	5.0	3.2	2.7	2.3	0.09	635
VCT-LYS-00	0	02/21/13	4.25	4.9	3.2	3.1	1.8	0.04	560
VCT-LYS-00	0	03/19/13	5.85	4.1	2.3	2.2	1.9	0.10	650
VCT-LYS-35	35	01/22/13	1.13	1.1	1.1	1.0	<0.5	0.05	850
VCT-LYS-35	35	02/21/13	1.01	5.8	4.5	4.5	1.3	0.04	885
VCT-LYS-35	35	03/19/13	1.58	3.3	3.3	3.3	<0.5	0.04	885

Blank cells indicate that analysis was not run for a constituent on that particular date and/or depth due to insufficient volume or data was invalidated after analysis.

* If TN limit of 5 mg/L is not met prior to the RW distribution system, TN compliance can be met at a point prior to reaching the regional groundwater, including lysimeters.

Table 2-5b
Alternative Monitoring Plans

Turner Basin					
Date	RW Blend*	RW Blend*	Turner 1 & 2	Turner 3 & 4	Turner 1 & 2 Turner 3 & 4
mg/L==>	TOC	TN	TOC (70% reduction)	TOC (85% reduction)	TN (87% reduction)
01/02/13	4.51	8.2	1.35	0.68	1.1
01/10/13	3.72	8.5	1.12	0.56	1.1
01/17/13	4.75	9.1	1.43	0.71	1.2
01/22/13	4.53	7.8	1.36	0.68	1.0
01/23/13	4.42	7.3	1.33	0.66	0.9
01/31/13	4.40	8.4	1.32	0.66	1.1
02/05/13	4.68	7.9	1.40	0.70	1.0
02/21/13	3.65	6.8	1.10	0.55	0.9
02/27/13	5.00	7.2	1.50	0.75	0.9
03/05/13	4.75	8.6	1.43	0.71	1.1
03/14/13	4.61	8.2	1.38	0.69	1.1
03/19/13	4.68	8.2	1.40	0.70	1.1
03/26/13	4.50	8.1	1.35	0.68	1.1

*Recycled water blend from RP-1 & RP-4 sampled at GenOn Energy (formerly Reliant Energy)

Ely Basin				
Date	RP-1 RW	RP-1 RW	Ely 3 East	Ely 3 East
mg/L==>	TOC	TN	TOC (76% reduction)	TN (52% reduction)
01/07/13	5.93	7.8	1.42	3.7
01/14/13	5.99	7.8	1.44	3.8
01/21/13	6.24	6.3	1.50	3.0
01/28/13	5.35	8.0	1.28	3.8
02/04/13	5.67	7.9	1.36	3.8
02/11/13	5.32	10.1	1.28	4.8
02/21/13	6.46	9.0	1.55	4.3
02/25/13	5.93	7.9	1.42	3.8
03/04/13	5.90	8.6	1.42	4.1
03/11/13	6.00	7.4	1.44	3.6
03/18/13	5.82	8.8	1.40	4.2
03/25/13	5.79	8.2	1.39	3.9

Brooks Basin				
Date	BRK-LYS-00	BRK-LYS-00	BRK-LYS-00	BRK-LYS-00
mg/L==>	TOC	TN	EC	
01/22/13	4.64	7.4	740	
02/21/13	4.54	6.7	630	
03/19/13	4.50	6.2	680	
Date	BRK-LYS-25	BRK-LYS-25	BRK-LYS-25	BRK-LYS-25
mg/L==>	TOC	TN**	EC	
01/22/13	2.62	0.9	805	
02/21/13	3.27	1.9	810	
03/19/13	3.24	1.5	795	
Date	BRK-1/1	BRK-1/1	BRK-1/1	BRK-1/1
mg/L==>	TOC**	TN	EC	Cl
01/08/13	0.45	1.3	455	52
02/21/13	0.37	1.3	445	56
03/19/13	0.31	2.1	450	51

**BRK-LYS-25 is the compliance point for TN and BRK-1/1 is the compliance point for TOC.

RP3 Basin			
Date	RP3-LYS-35	RP3-LYS-35	RP3-LYS-35
mg/L==>	TOC	TN	EC
01/22/13	1.17	3.2	645
02/21/13	1.24	3.9	635
03/19/13	1.18	4.4	650

Table 2-5b
Alternative Monitoring Plans

8th Street Basin				
Date	RW Blend*	RW Blend*	8th Street	8th Street
mg/L==>	TOC	TN	TOC (59% reduction)	TN (75% reduction)
01/02/13	4.51	8.2	1.85	2.1
01/10/13	3.72	8.5	1.53	2.1
01/17/13	4.75	9.1	1.95	2.3
01/22/13	4.53	7.8	1.86	2.0
01/23/13	4.42	7.3	1.81	1.8
01/31/13	4.40	8.4	1.80	2.1
02/05/13	4.68	7.9	1.92	2.0
02/21/13	3.65	6.8	1.50	1.7
02/27/13	5.00	7.2	2.05	1.8
03/05/13	4.75	8.6	1.95	2.2
03/14/13	4.61	8.2	1.89	2.1
03/19/13	4.68	8.2	1.92	2.1
03/26/13	4.50	8.1	1.85	2.0

San Sevaine 5 Basin				
Date	RW Blend*	RW Blend*	San Sevaine 5	San Sevaine 5
mg/L==>	TOC	TN	TOC (78% reduction)	TN (69% reduction)
01/02/13	4.51	8.2	0.99	2.5
01/10/13	3.72	8.5	0.82	2.6
01/17/13	4.75	9.1	1.05	2.8
01/22/13	4.53	7.8	1.00	2.4
01/23/13	4.42	7.3	0.97	2.3
01/31/13	4.40	8.4	0.97	2.6
02/05/13	4.68	7.9	1.03	2.4
02/21/13	3.65	6.8	0.80	2.1
02/27/13	5.00	7.2	1.10	2.2
03/05/13	4.75	8.6	1.05	2.7
03/14/13	4.61	8.2	1.01	2.5
03/19/13	4.68	8.2	1.03	2.5
03/26/13	4.50	8.1	0.99	2.5

Victoria Basin				
Date	RW Blend*	RW Blend*	Victoria	Victoria
mg/L==>	TOC	TN	TOC (78% reduction)	TN (82% reduction)
01/02/13	4.51	8.2	0.99	1.5
01/10/13	3.72	8.5	0.82	1.5
01/17/13	4.75	9.1	1.05	1.6
01/22/13	4.53	7.8	1.00	1.4
01/23/13	4.42	7.3	0.97	1.3
01/31/13	4.40	8.4	0.97	1.5
02/05/13	4.68	7.9	1.03	1.4
02/21/13	3.65	6.8	0.80	1.2
02/27/13	5.00	7.2	1.10	1.3
03/05/13	4.75	8.6	1.05	1.5
03/14/13	4.61	8.2	1.01	1.5
03/19/13	4.68	8.2	1.03	1.5
03/26/13	4.50	8.1	0.99	1.5

*Recycled water blend from RP-1 & RP-4 sampled at GenOn Energy (formerly Reliant Energy)

Table 2-6
Diluent Water Monitoring*: Stormwater

Constituent	Declez Channel @ Declez Basin 01/31/13	San Sevaire Creek @ San Sevaire 1-5 Basins 02/20/13	W. Fontana Channel @ Banana Basin 02/20/13	Etiwanda Creek @ Etiwanda Debris Basin 03/08/13	Unit	Method
NO ₂ -N	0.17	0.10	0.18	0.02	mg/L	EPA 300.0
NO ₃ -N	0.6	0.6	2.2	0.1	mg/L	EPA 300.0
TDS	66	40	152	54	mg/L	SM 2540C
Total Coliform	>23	>2300	>2300	510	mpn/100ml	SM 9221B
Oil & Grease	<1	<1	<1	<1	mg/L	EPA 1664A
Inorganic Chemicals						
Aluminum	1325	878	473	4332	µg/L	EPA 200.7
Antimony	<1	<1	1	<1	µg/L	EPA 200.8
Arsenic	<2	<2	3	<2	µg/L	EPA 200.8
Asbestos	<6.77	<6.12	<6.12	<6.82	MFL	EPA 100.2
Barium	26	21	15	68	µg/L	EPA 200.7
Beryllium	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 200.7
Cadmium	<0.25	<0.25	<0.25	<0.25	µg/L	EPA 200.7
Chromium	3.8	2.6	2.1	3.7	µg/L	EPA 200.7
Cyanide	<0.005	<0.005	<0.005	<0.005	mg/L	SM 4500-CN E
Fluoride	0.1	0.1	0.1	<0.1	mg/L	SM 4500-F C
Mercury	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 245.2
Nickel	3	1	2	2	µg/L	EPA 200.7
Perchlorate	<4	<4	<4	<4	µg/L	EPA 314
Selenium	<2	<2	<2	<2	µg/L	EPA 200.8
Thallium	<1	<1	<1	<1	µg/L	EPA 200.8
Volatile Organic Chemicals (VOCs)						
Benzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Carbon Tetrachloride	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dichloromethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,3-Dichloropropene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Methyl Tert-butyl ether (MTBE)	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Styrene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Toluene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichlorofluoromethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Total Xylenes	<1	<1	<1	<1	µg/L	EPA 524.2
Non-Volatile Synthetic Organic Chemicals (SOCs)						
Alachlor (Alanex)	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Atrazine	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Bentazon	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 515.4
Benzo(a)pyrene	<0.02	<0.02	<0.02	<0.02	µg/L	EPA 525.2
Carbofuran	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 531.2
Chlordane	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
2,4-D	<0.1	0.4	<0.1	<0.1	µg/L	EPA 515.4
Dalapon	<1	<1	<1	<1	µg/L	EPA 515.4
Dibromochloropropane	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 504.1
Di(2-ethylhexyl)adipate	<0.6	<0.6	<0.6	<0.6	µg/L	EPA 525.2
Di(2-ethylhexyl)phthalate	<0.6	0.9	<0.6	<0.6	µg/L	EPA 525.2
Dinoseb	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 515.4
Diquat	<0.4	<0.4	<0.4	<0.4	µg/L	EPA 549.2
Endothall	<5	<5	<5	<5	µg/L	EPA 548.1
Endrin	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505
Ethylene Dibromide	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 504.1
Glyphosate	9	<6	<6	<6	µg/L	EPA 547
Heptachlor	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505

Table 2-6
Diluent Water Monitoring*: Stormwater

Constituent	Declez Channel @ Declez Basin 01/31/13	San Sevaire Creek @ San Sevaire 1-5 Basins 02/20/13	W. Fontana Channel @ Banana Basin 02/20/13	Etiwanda Creek @ Etiwanda Debris Basin 03/08/13	Unit	Method
Heptachlor Epoxide	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505
Hexachlorobenzene	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Hexachlorocyclopentadiene	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Lindane	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505
Methoxychlor	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 505
Molinate	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 525.2
Oxamyl	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 531.2
Pentachlorophenol	<0.04	<0.04	0.11	<0.04	µg/L	EPA 515.4
Picloram	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 515.4
PCB 1016	<0.08	<0.08	<0.08	<0.08	µg/L	EPA 505
PCB 1221	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1232	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1242	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1248	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1254	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1260	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Simazine	0.22	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Thiobencarb	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 525.2
Toxaphene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 505
2,3,7,8-TCDD (Dioxin)	<5	<5	<5	<5	pg/L	EPA 1613
2,4,5-TP (Silvex)	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 515.4
Disinfection Byproducts						
Total Trihalomethanes (TTHMs)	<2	<2	<2	<2	µg/L	EPA 524.2/624
Total Haloacetic Acids (HAA5)	<2	<2	<2	<2	µg/L	SM 6251B
Bromate	<5	<5	<5	<5	µg/L	EPA 300.1/317
Chlorite	<0.01	<0.01	<0.01	<0.01	mg/L	EPA 300.0
Action Level Chemicals						
Copper	9.6	5.0	13.7	5.9	µg/L	EPA 200.7
Lead	12.8	1.1	3.3	1.9	µg/L	EPA 200.8
Radionuclides						
Combined Radium-226 & Radium 228	0.350	0.380	<0.214	0.410	pCi/L	EPA 903.0
Gross Alpha Particle Activity	<3	<3	<2.39	<3	pCi/L	EPA 900.0/SM7110C
Tritium	<239	<240	<242	<276	pCi/L	EPA 906.0
Strontium-90	<0.609	<0.549	<0.660	<0.601	pCi/L	EPA 905.0
Gross Beta Particle Activity	<3	<3	6.6	<3	pCi/L	EPA 900.0
Uranium	<0.7	<0.7	<0.7	<0.7	pCi/L	EPA 200.8
Unregulated Chemicals						
Chromium VI	0.40	0.44	<0.02	<0.02	µg/L	EPA 218.6
Ethyl tertiary butyl ether	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Tertiary amyl methyl ether	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Chemicals w/ State Notification Levels						
Boron	<0.1	<0.1	0.7	<0.1	mg/L	EPA 200.7
n-butylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
sec-butylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
tert-butylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Carbon disulfide	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
2-Chlorotoluene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
4-Chlorotoluene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dichlorodifluoromethane (Freon 12)	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,4 - Dioxane	<1	<1	<1	<1	µg/L	EPA 522
Isopropylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Methyl isobutyl ketone (MIBK)	<2	<2	<2	<2	µg/L	EPA 524.2
N-nitrosodimethylamine (NDMA)	4	<2	<2	<2	ng/l	EPA 521
N-propylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2,3-Trichloropropane (1,2,3-TCP)	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,2,4 –trimethylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,3,5-trimethylbenzene	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Vanadium	6	3	5	12	µg/L	EPA 200.8
Secondary Maximum Contaminant Level Chemicals						
Aluminum	1325	878	473	4332	µg/L	EPA 200.7
Corrosivity	-1.2	-1.4	1.2	-2.4	SI	SM 2330B
Foaming Agents (MBAS)	0.07	<0.05	<0.05	<0.05	mg/L	SM 5540C/EPA 425.1
Iron	1844	855	615	5262	µg/L	EPA 200.7
Manganese	64	18	31	89	µg/L	EPA 200.7
Odor-- Threshold	8	67	40	3	TON	SM 2150B
Silver	<0.25	<0.25	<0.25	<0.25	µg/L	EPA 200.7
Thiobencarb	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 525.2
Zinc	85	16	37	19	µg/L	EPA 200.7

* Diluent monitoring is monitored per the schedule identified in the CDPH-approved Diluent Water Monitoring Plan

Table 2-7
Summary of Wells in Groundwater Monitoring Networks

BASIN	CBWM_ID	OWNER/LOCAL NAME	SEPARATION DISTANCE (feet)	SCREENED INTERVAL(S) (feet bgs)	CASING DIAMETER (inches)	STATUS	TYPE
Hickory and Banana Basins	3600573	Fontana Water Company - F37a	2240 upgradient	378-810	20	Active	Municipal
	600660	California Speedway - Infield Well	2070 downgradient	NA	NA	Active	Industrial
	3601365	California Speedway 2	2780 downgradient	451-455, 491-603, & 664-780	20	Active	Industrial
	3600371	Reliant Energy - East Well	4070 downgradient	434-467, 500-513, 553-580, 593-652, & 825-847	20	Active	Industrial
	3602267	City Of Ontario - 20	14500 downgradient	NA	20	Active	Municipal
	601001	Inland Empire Utilities Agency - BH-1/1	340 downgradient	365-405	4	Active	Monitoring
	601002	Inland Empire Utilities Agency - BH-1/2	340 downgradient	435-475	4	Active	Monitoring
Turner Basins	3600010	City Of Ontario - 25	2530 crossgradient	370-903	20	Inactive	Municipal
	600453	City Of Ontario - 29	2810 downgradient	400-1095	18	Active	Municipal
	600585	City of Ontario - 38*	4600 crossgradient	500-1010	16	Active	Municipal
	600997	Inland Empire Utilities Agency - TRN-1/1	50 downgradient	340-360	4	Active	Monitoring
	600998	Inland Empire Utilities Agency - TRN-1/2	50 downgradient	380-400	4	Active	Monitoring
	600999	Inland Empire Utilities Agency - TRN-2/1	50 downgradient	350-370	4	Active	Monitoring
	601000	Inland Empire Utilities Agency - TRN-2/2	50 downgradient	392-412	4	Active	Monitoring
Declez Basin	300208	Jurupa Community Services District - 19	8900 downgradient	230-390	18	Active	Municipal
	300207	Jurupa Community Services District - 17	5240 downgradient	259-290, & 300-400	NA	Active	Municipal
	300200	Jurupa Community Services District - 13	5730 downgradient	220-446	16-34	Active	Municipal
	300484	Inland Empire Utilities Agency - DCZ-1	50 downgradient	155-175	4	Active	Monitoring
	--	Inland Empire Utilities Agency - D-1/2	50 downgradient	185-205	4	NA	Monitoring
RP-3 Basins	600492	Fontana Water Company - F23a	7900 upgradient	450-740	18	Active	Municipal
	600477	Inland Empire Utilities Agency - Southridge JHS	5500 downgradient	NA	NA	Active	Monitoring
	600848	Alcoa - Offsite MW1	9480 downgradient	NA	NA	Active	Monitoring
	600850	Alcoa - Offsite MW3	4725 downgradient	NA	NA	Active	Monitoring
	601040	Inland Empire Utilities Agency - RP3-1/1	100 downgradient	215-235	4	Active	Monitoring
	601041	Inland Empire Utilities Agency - RP3-1/2	100 downgradient	265-285	4	Active	Monitoring
Jurupa Basin	Not currently planned for recharge						
7th & 8th Street Basins	3601561	San Antonio Water Company No. 12	740 downgradient	379-480, 525-563, 578-609, & 634-679	16	Inactive	Municipal
	3601772	City of Ontario No. 4	3429 downgradient	526-910	16-20	Inactive	Municipal
	--	City of Ontario No. 51	3402 downgradient	Not Yet Constructed	NA	NA	Municipal
	600493	City of Ontario No. 35	9695 downgradient	580-1020	18-36	Active	Municipal
	601036	Inland Empire Utilities Agency - 8TH-1/1	150 downgradient	495-535	4	Active	Monitoring
	601037	Inland Empire Utilities Agency - 8TH-1/2	150 downgradient	595-645	4	Active	Monitoring
	601038	Inland Empire Utilities Agency - 8TH-2/1	2460 downgradient	465-505	4	Active	Monitoring
Brooks Basins	601039	Inland Empire Utilities Agency - 8TH-2/2	2460 downgradient	576-616	4	Active	Monitoring
	1901719	City of Pomona P-10	1983 downgradient	295-784	20	Active	Municipal
	1901713	City of Pomona P-04	2620 downgradient	254-338, & 403-452	NA	Inactive	Municipal
	1903156	City of Pomona P-30	2160 crossgradient	565-875	20	Inactive	Municipal
	1903016	City of Pomona P-2	3455 downgradient	NA	NA	Active	Municipal
	1901725	City of Pomona P-17	4500 downgradient	454-536	20	Inactive	Municipal
	601050	Inland Empire Utilities Agency - BRK-1/1	144 downgradient	310-350	4	Active	Monitoring
San Seavine Basins	601051	Inland Empire Utilities Agency - BRK-1/2	144 downgradient	520-560	4	Active	Monitoring
	601048	Inland Empire Utilities Agency - BRK-2/1	1305 downgradient	320-360	4	Active	Monitoring
	601049	Inland Empire Utilities Agency - BRK-2/2	1305 downgradient	560-600	4	Active	Monitoring
	600905	Cucamonga Valley Water District No. 39	8300-13170 downgradient	750-870, 940-960, 970-1060, & 1080-1130,	20	Active	Municipal
	601115	Inland Empire Utilities Agency - SS-1/1 and 1/2	~39-116 downgradient	640-680	4	Active	Monitoring
	600462	Unitex 91090	~1601 downgradient	NA	NA	Active	Private Domestic
	600905	Cucamonga Valley Water District No. 39	4329 downgradient	750-870, 940-960, 970-1060, & 1080-1130,	20	Active	Municipal
Victoria Basin	601033	Cucamonga Valley Water District No. 43**	8300 downgradient	650-800	32-42	Active	Municipal
	601117	Inland Empire Utilities Agency - VCT-1/1 and 1/2	~39-116 downgradient	570-610	4	Active	Monitoring
	--	Inland Empire Utilities Agency - VCT-1/1 and 1/2	~ 2000 downgradient	570-610	4	Active	Monitoring
	601003	Ely Basin MW-1, Philadelphia Well (Casing 3)	100 downgradient	280 - 300	2	Active	Monitoring
Ely Basin	601004	Ely Basin MW-2, Walnut Well (Casing 2)	3050 downgradient	290 - 310	4	Active	Monitoring
	3600975	Riverside Drive Well (43840-CWW)	6046 downgradient	NA	NA	Active	Private Irrigation
	600134	Bishop Of San Bernardino Corp. - DOM	6500 downgradient	NA	NA	Active	Private Domestic

Notes:

NA = Data not available

CBWM ID = Chino Basin Water Master well identification number

bgs = below ground surface

* = Ontario Well No. 38 replaced Ontario Well No. 19, which is inactive

** = Cucamonga Valley Water District No. 43 replaced CVWD Well Nos. 35 & 36, which are inactive.

Table 2-8
Groundwater Monitoring Well Results (Quarterly)

	Sample Location	Date	TOC (mg/L)	Total Coliform (MPN/100mL)	pH	EC (umho/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)	Thiocarb (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	Fontana Water Co. - F37a	2/6/13	0.19	<1.1	7.5	480	320	<25	3	1.0	0.5	<0.05	26	<1	<0.5	<1	<0.25	<0.2	0.31	4	21	227	20	23	<0.1	<0.02	10.3	10.3	<0.5	168	6.5	
	California Speedway - Infield Well	2/6/13	0.30	<1.1	7.7	585	400	<25	3	0.8	0.4	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.10	<1	24	284	25	78	<0.1	<0.02	9.1	9.1	<0.5	163	6.3	
	California Speedway 2	2/6/13	0.17	<1.1	7.7	395	254	<25	3	1.2	0.2	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.06	<1	13	181	21	17	0.4	<0.02	5.3	5.3	<0.5	161	6.3	
	Reliant Energy - East Well	2/6/13	0.17	<1.1	7.6	365	228	<25	3	<0.5	0.1	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.08	<1	10	146	21	13	<0.1	<0.02	4.9	4.9	<0.5	136	6.1	
	Ontario Well No. 20	1/16/13	0.40	<1.1	7.7	360	240	<25		0.5	0.4	<0.05	<15	<1	<0.5		<0.25	<0.2	0.24	<1	8	177	16	6	<0.1	0.20	2.2	2.4	<0.5	173	7.5	
	Ontario Well No. 20 BH-1/2	1/23/13 1/31/13							3							<1																
Turner	Ontario Well No. 25	1/16/13	0.13	<1.1	7.7	455	298	<25	<3	<0.5	0.3	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.15	<1	23	203	26	16	0.3	0.13	3.9	4.0	<0.5	179	7.0	
	Ontario Well No. 29	1/16/13	<0.10	<1.1	7.7	355	240	<25		<0.5	0.1	<0.05	18	1	<0.5		<0.25	<0.2	0.47	<1	14	153	24	15	<0.1	0.17	2.5	2.7	<0.5	148	7.2	
	Ontario Well No. 29	1/23/13							5							1																
	Ontario Well No. 38	1/16/13	2.50	<1.1	7.6	315	208	<25	<3	<0.5	0.3	<0.05	<15	<1	<0.5	2	<0.25	<0.2	0.15	<1	10	146	21	8	<0.1	0.19	1.5	1.7	<0.5	153	7.6	
	T-1/2	1/10/13	0.59	1.1	7.9	400	264	<25	3	<0.5	0.1	<0.05	<15	1	<0.5	<1	<0.25	<0.2	0.24	<1	29	174	21	29	<0.1	0.11	0.4	<0.6	<0.5	141	4.6	
	T-2/1	1/10/13	0.62	<1.1	7.9	490	298	<25	10	0.7	0.0	<0.05	<15	2	<0.5	<1	<0.25	<0.2	7.00	<1	73	173	29	19	<0.1	0.06	0.2	<0.6	<0.5	121	5.6	
RP3	T-2/2	1/10/13	0.56	<1.1	8.0	475	302	<25	3	0.5	0.0	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.13	<1	71	175	27	19	<0.1	0.06	0.5	<0.6	<0.5	117	5.9	
	Southridge JHS	1/15/13	0.43	<1.1	7.4	945	604	<25	10	0.7	0.1	<0.05	<15	3	<0.5	<1	<0.25	<0.2	2.63	7	103	385	59	75	<0.1	<0.02	15.7	15.7	<0.5	220	11.3	
	Alcoa MW1	2/5/13	0.36	6.9	7.7	595	422	<25	3	0.6	0.3	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	1.40	3	32	259	30	42	<0.1	<0.02	15.5	15.5	<0.5	168	8.3	
	Alcoa MW3	2/5/13	0.43	<1.1	7.4	1000	710	<25	3	0.6	0.3	<0.05	<15	3	<0.5	<1	<0.25	<0.2	1.01	2	97	432	50	56	<0.1	<0.02	24.0	24.0	<0.5	241	7.7	
	RP3-1/1	1/31/13	0.97	<1.1	7.6	550	352	<25	10	1.2	-0.2	<0.05	<15	2	<0.5	1	<0.25	<0.2	4.49	1	68	170	57	32	<0.1	<0.02	2.9	2.9	<0.5	141	2.9	
	RP3-1/2	1/31/13	1.18	<1.1	7.7	573	364	<25	5	0.9	0.0	<0.05	<15	144	<0.5	1	<0.25	<0.2	1.27	1	71	180	57	34	<0.1	0.21	1.2	1.4	<0.5	151	1.3	
8th Street	Ontario Well No. 35	1/16/13	<0.10	<1.1	7.6	350	232	<25	<3	<0.5	0.1	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.16	<1	7	154	24	21	<0.1	0.20	2.8	3.0	<0.5	149	7.6	
	8TH-1/2	1/29/13	0.34	<1.1	7.6	310	208	<25	3	<0.5	-0.3	<0.05	<15	4	<0.5	<1	<0.25	<0.2	1.86	<1	33	126	15	13	<0.1	<0.02	1.7	1.7	<0.5	90	6.7	
	8TH-2/1	1/29/13	0.33	<1.1	7.6	385	268	<25	<3	<0.5	0.3	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.11	<1	11	180	15	13	<0.1	<0.02	7.1	7.1	<0.5	153	9.2	
	8TH-2/2	1/29/13	0.23	<1.1	7.7	375	262	<25	<3	<0.5	0.2	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.47	<1	16	170	16	22	<0.1	<0.02	5.3	5.3	<0.5	130	9.6	
Brooks	Pomona Well No. 10	1/9/13	0.14	<1.1	7.0	570	360	<25	<3	1.4	0.6	<0.05	<15	1	<0.5	<1	<0.25	<0.2	0.10	<1	41	272	13	51	<0.1	0.09	9.1	9.2	<0.5	157	10.2	
	Pomona Well No. 2	1/9/13	0.16	<1.1	7.0	515	322	<25	<3	2.9	0.4	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.20	11	40	247	12	39	0.4	0.09	7.4	7.5	<0.5	148	13.8	
	Pomona Well No. 34	1/9/13	0.16	<1.1	7.0	545	346	<25	<3	1.1	0.4	<0.05	<15	1	<0.5	<1	<0.25	<0.2	0.21	<1	32	267	12	41	<0.1	0.11	13.7	13.8	<0.5	152	11.1	
	BRK-1/1	1/8/13	0.45	<1.1	7.9	455	282	<25	3	<0.5	0.2	<0.05	<15	2	<0.5	<1	<0.25	<0.2	3.60	<1	52	199	17	24	0.1	0.10	1.2	1.3	<0.5	126	12.2	
	BRK-1/1	2/21/13	0.37			445																			<0.1	<0.02	1.3	1.3	<0.5			
	BRK-1/1	3/19/13	0.31			450																			<0.1	<0.02	1.5	2.1	0.6			
	BRK-1/2	1/8/13	0.16	<1.1	8.0	595	382	<25	<3	<0.5	0.5	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.16	<1	24	284	17	46	<0.1	0.14	19.6	19.7	<0.5	153	12.2	
	BRK-2/1	1/8/13	0.27	<1.1	8.0	525	342	<25	80	<0.5	0.3	<0.05	<15	8	<0.5	<1	<0.25	<0.2	30.8	<1	48	249	11	33	<0.1	0.11	6.6	6.7	<0.5	142	7.7	
Ely	BRK-2/2	1/8/13	<0.10	<1.1	8.2	335	228	<25	<3	<0.5	0.5	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.62	<1	6	105	36	18	<0.1	0.20	6.1	6.3	<0.5	127	6.8	
	Ely Basin MW1 Philadelphia St.	2/7/13	0.45	<1.1	7.8	365	230	<25	10	<0.5	0.0	<0.05	<15	24	<0.5	1	<0.25	<0.2	1.74	<1	37	140	28	16	<0.1	<0.02	0.3	<0.6	<0.5	117	1.4	
	Ely Basin MW2 Walnut St.	2/7/13	0.50	<1.1	7.7	820	510	<25	3	<0.5	0.4	<0.05	<15	<1	<0.5	1	<0.25	<0.2	0.51	<1	57	382	31	47	<0.1	<0.02	19.1	19.1	<0.5	234	5.9	
	Riverside Well (43840-CWW)	1/9/13	0.16	<1.1	7.0	535	340	<25	<3	0.5	0.4	<0.05	127	<1	<0.5	<1	<0.25	<0.2	0.78	23	27	241	22	33	<0.1	<0.02	9.9	9.9	<0.5	181	10.5	
Declez**	Bishop of SB Corp. - DOM	1/9/13	0.22	<1.1	7.0	760	488	<25	10	3.0	0.8	<0.05	1304	15	<0.5	2	<0.25	<0.2	13.3	9	39	344	23	61	<0.1	0.12	20.1	20.2	<0.5	218	11.3	
	JCSD Well No. 13	1/17/13	0.16	<1.1	7.8	760	484	<25	<3	0.7	0.6	<0.05	<15	<1	<0.5	<1	<0.25	<0.2	0.11	5	133	317	33	26	0.3	0.03	6.5	6.5	<0.5	133	7.7	
	JCSD Well No. 17	1/17/13	0.22	<1.1	8.4	605	380	<25	<3	1.0	0.4	<																				

Table 3-1
Diluent & Recycled Water Recharge Volume (Acre-Feet)

Date	Diluent Water																		Recycled Water									
	Imported Water									Local Runoff / Storm Flow																		
	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP3	San Sevaïne	Turner	Victoria	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP3	San Sevaïne	Turner	Victoria	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP3	San Sevaïne	Turner	Victoria	
Apr-12	0	0	0	0	0	0	0	0	0	223	35	64	135	30	219	75	346	96	34	51	32	0	66	147	4	15	18	
May-12	0	0	0	0	0	0	0	0	0	25	0	1	3	0	62	0	54	20	255	45	125	0	40	375	3	56	271	
Jun-12	0	0	0	0	0	0	0	0	0	21	0	0	12	2	60	0	44	3	188	79	161	0	2	181	54	65	222	
2Q12 Total	0	0	0	0	0	0	0	0	0	269	35	66	150	32	341	75	445	119	477	175	318	0	108	703	61	136	511	
Jul-12	0	0	0	0	0	0	0	0	0	20	0	1	7	22	50	0	108	3	137	41	33	0	57	12	122	51	94	
Aug-12	0	0	0	0	0	0	0	0	0	21	0	2	7	50	12	1	72	5	0	2	39	0	44	0	84	35	118	
Sep-12	0	0	0	0	0	0	0	0	0	33	0	2	5	29	4	0	62	1	124	188	51	0	0	0	39	24	55	
3Q12 Total	0	0	0	0	0	0	0	0	0	73	0	5	18	101	65	1	242	9	261	231	123	0	101	12	245	110	266	
Oct-13	0	0	0	0	0	0	0	0	0	29	11	0	5	51	18	1	83	1	309	103	0	0	0	0	63	9	131	
Nov-13	0	0	0	0	0	0	0	0	0	66	5	0	9	13	101	14	91	6	248	120	0	80	177	154	66	5	71	
Dec-13	0	0	0	0	0	0	0	0	0	278	49	0	335	6	361	79	337	19	103	15	0	67	144	220	1	5	21	
3Q12 Total	0	0	0	0	0	0	0	0	0	373	66	0	349	70	480	94	511	25	660	237	0	148	320	374	130	19	222	
Jan-13	0	0	0	0	0	0	0	0	0	69	18	35	72	0	147	21	164	35	230	28	342	145	115	353	59	0	12	
Feb-13	0	0	0	0	0	0	0	0	0	89	20	26	37	8	113	9	141	10	227	2	299	225	3	297	19	26	10	
Mar-13	0	0	0	0	0	0	0	0	0	65	8	32	63	13	78	13	62	7	240	42	238	314	147	275	53	21	57	
1Q13 Total	0	0	0	0	0	0	0	0	0	224	45	93	171	21	338	43	366	51	697	73	879	683	265	924	132	47	79	

Table 6-1
MVWD ASR Project - TIN/TDS Mass Balance

ASR Well No. 4										
	Date	Injection			Recovery			Mass Balance		
		Volume (AF)	TIN (mg/L)	TDS (mg/L)	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Storage (AF)	TIN (kg)	TDS (kg)
2Q12	Apr-12	0.0	0.40	140	2	14.0	370	(303)	(7,929)	(178,128)
	May-12	0.0	0.40	140	25	14.0	370	(328)	(8,358)	(189,489)
	Jun-12	0.0	0.40	140	0	14.0	370	(328)	(8,360)	(189,535)
3Q12	Jul-12	0.0	0.40	140	0	14.0	370	(328)	(8,362)	(189,590)
	Aug-12	0.0	0.40	140	1	14.0	370	(329)	(8,374)	(189,900)
	Sep-12	0.0	0.40	140	0	14.0	370	(329)	(8,376)	(189,941)
4Q12	Oct-12	0.0	0.40	140	33	14.0	370	(362)	(8,954)	(205,218)
	Nov-12	0.0	0.40	140	8	14.0	370	(370)	(9,087)	(208,738)
	Dec-12	0.0	0.40	140	0	14.0	370	(370)	(9,089)	(208,792)
1Q13	Jan-13	0.0	0.40	140	0	14.0	370	(370)	(9,089)	(208,792)
	Feb-13	0.0	0.40	140	8	14.0	370	(378)	(9,219)	(212,230)
	Mar-13	0.0	0.40	140	57	14.0	370	(434)	(10,195)	(238,037)

ASR Well No. 30										
	Date	Injection			Recovery			Mass Balance		
		Volume (AF)	TIN (mg/L)	TDS (mg/L)	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Storage (AF)	TIN (kg)	TDS (kg)
2Q12	Apr-12	0.0	0.40	140	0	3.5	310	750	(1,955)	166,261
	May-12	0.0	0.40	140	0	3.5	310	750	(1,955)	166,261
	Jun-12	0.0	0.40	140	1	3.5	310	749	(1,960)	165,817
3Q12	Jul-12	0.0	0.40	140	2	3.5	310	748	(1,967)	165,209
	Aug-12	0.0	0.40	140	0	3.5	310	747	(1,968)	165,091
	Sep-12	0.0	0.40	140	0	3.5	310	747	(1,968)	165,091
4Q12	Oct-12	0.0	0.40	140	14	3.5	310	733	(2,028)	159,740
	Nov-12	0.0	0.40	140	177	3.5	310	557	(2,779)	92,226
	Dec-12	0.0	0.40	140	0	3.5	310	557	(2,779)	92,226
1Q13	Jan-13	0.0	0.40	140	0	3.5	310	557	(2,779)	92,226
	Feb-13	0.0	0.40	140	0	3.5	310	557	(2,779)	92,226
	Mar-13	0.0	0.40	140	0	3.5	310	557	(2,779)	92,226

ASR Well No. 32										
	Date	Injection			Recovery			Mass Balance		
		Volume (AF)	TIN (mg/L)	TDS (mg/L)	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Storage (AF)	TIN (kg)	TDS (kg)
2Q12	Apr-12	0.0	0.40	140	30	3.5	340	(1,330)	(1,189)	(32,831)
	May-12	0.0	0.40	140	0	3.5	340	(1,330)	(1,189)	(32,831)
	Jun-12	0.0	0.40	140	0	3.5	340	(1,330)	(1,189)	(32,831)
3Q12	Jul-12	0.0	0.40	140	0	3.5	340	(1,330)	(1,190)	(32,990)
	Aug-12	0.0	0.40	140	0	3.5	340	(1,330)	(1,190)	(32,990)
	Sep-12	0.0	0.40	140	85	3.5	340	(1,416)	(1,558)	(68,743)
4Q12	Oct-12	0.0	0.40	140	0	3.5	340	(1,416)	(1,559)	(68,789)
	Nov-12	0.0	0.40	140	17	3.5	340	(1,433)	(1,632)	(75,945)
	Dec-12	0.0	0.40	140	9	3.5	340	(1,442)	(1,670)	(79,573)
1Q13	Jan-13	0.0	0.40	140	0	3.5	340	(1,442)	(1,670)	(79,573)
	Feb-13	0.0	0.40	140	0	3.5	340	(1,442)	(1,670)	(79,573)
	Mar-13	0.0	0.40	140	0	3.5	340	(1,442)	(1,670)	(79,573)

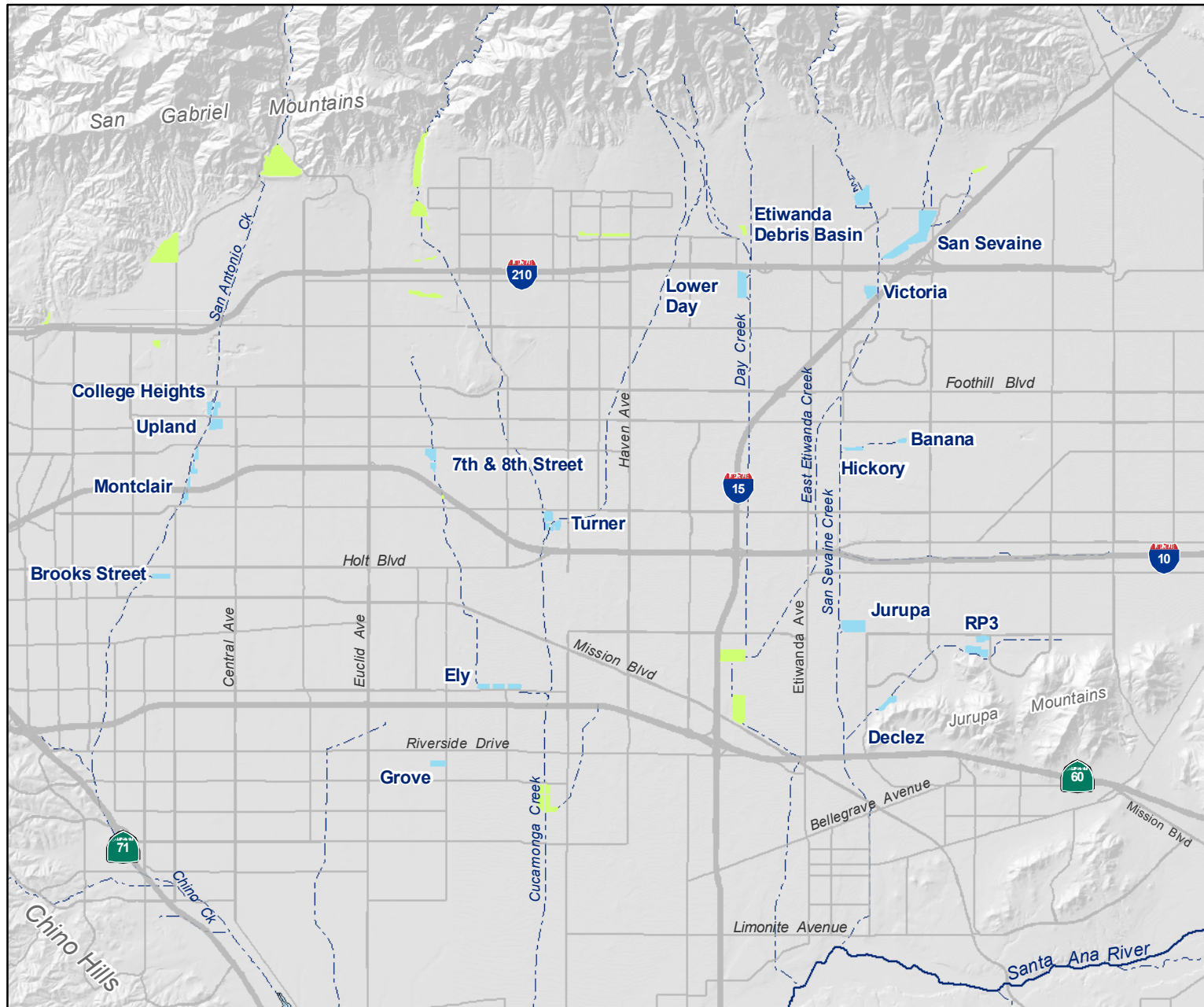
ASR Well No. 33										
	Date	Injection			Recovery			Mass Balance		
		Volume (AF)	TIN (mg/L)	TDS (mg/L)	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Storage (AF)	TIN (kg)	TDS (kg)
2Q12	Apr-12	0.0	0.40	140	23	3.5	370	(41)	(310)	(31,244)
	May-12	0.0	0.40	140	204	3.5	370	(245)	(1,191)	(124,332)
	Jun-12	0.0	0.40	140	0	3.5	370	(245)	(1,191)	(124,332)
3Q12	Jul-12	0.0	0.40	140	0	3.5	370	(245)	(1,191)	(124,332)
	Aug-12	0.0	0.40	140	9	3.5	370	(254)	(1,228)	(128,299)
	Sep-12	0.0	0.40	140	123	3.5	370	(377)	(1,761)	(184,583)
4Q12	Oct-12	0.0	0.40	140	146	3.5	370	(523)	(2,392)	(251,261)
	Nov-12	0.0	0.40	140	79	3.5	370	(603)	(2,735)	(287,535)
	Dec-12	0.0	0.40	140	37	3.5	370	(640)	(2,895)	(304,511)
1Q13	Jan-13	0.0	0.40	140	0	3.5	370	(640)	(2,895)	(304,511)
	Feb-13	0.0	0.40	140	0	3.5	370	(640)	(2,895)	(304,511)
	Mar-13	0.0	0.40	140	0	3.5	370	(640)	(2,895)	(304,511)

The injected water is WFA-treated water, which meets CCR Title 22 drinking water standards.

During 2Q11, WFA-treated water was sampled for TDS and TIN (NO₃-N + NO₂-N, assuming no NH₃-N in drinking water) on 04/19/11.

Table 6-1
MVWD ASR Project - TIN/TDS Mass Balance

Total Project (All Wells)					
	Date		Mass Balance		
			Storage (AF)	TIN (kg)	TDS (kg)
2Q12	Apr-12		(924)	(11,382)	(75,942)
	May-12		(1,153)	(12,693)	(180,391)
	Jun-12		(1,154)	(12,700)	(180,881)
3Q12	Jul-12		(1,156)	(12,710)	(181,703)
	Aug-12		(1,166)	(12,761)	(186,098)
	Sep-12		(1,374)	(13,663)	(278,177)
4Q12	Oct-12		(1,568)	(14,931)	(365,529)
	Nov-12		(1,849)	(16,233)	(479,992)
	Dec-12		(1,895)	(16,433)	(500,650)
1Q13	Jan-13		(1,895)	(16,433)	(500,650)
	Feb-13		(1,902)	(16,563)	(504,087)
	Mar-13		(1,959)	(17,539)	(529,895)



Main Map Features

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



Chino Basin Recycled Water Groundwater Recharge Program

Basin Locations

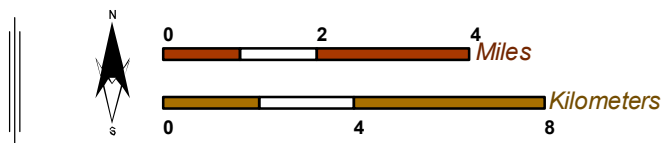
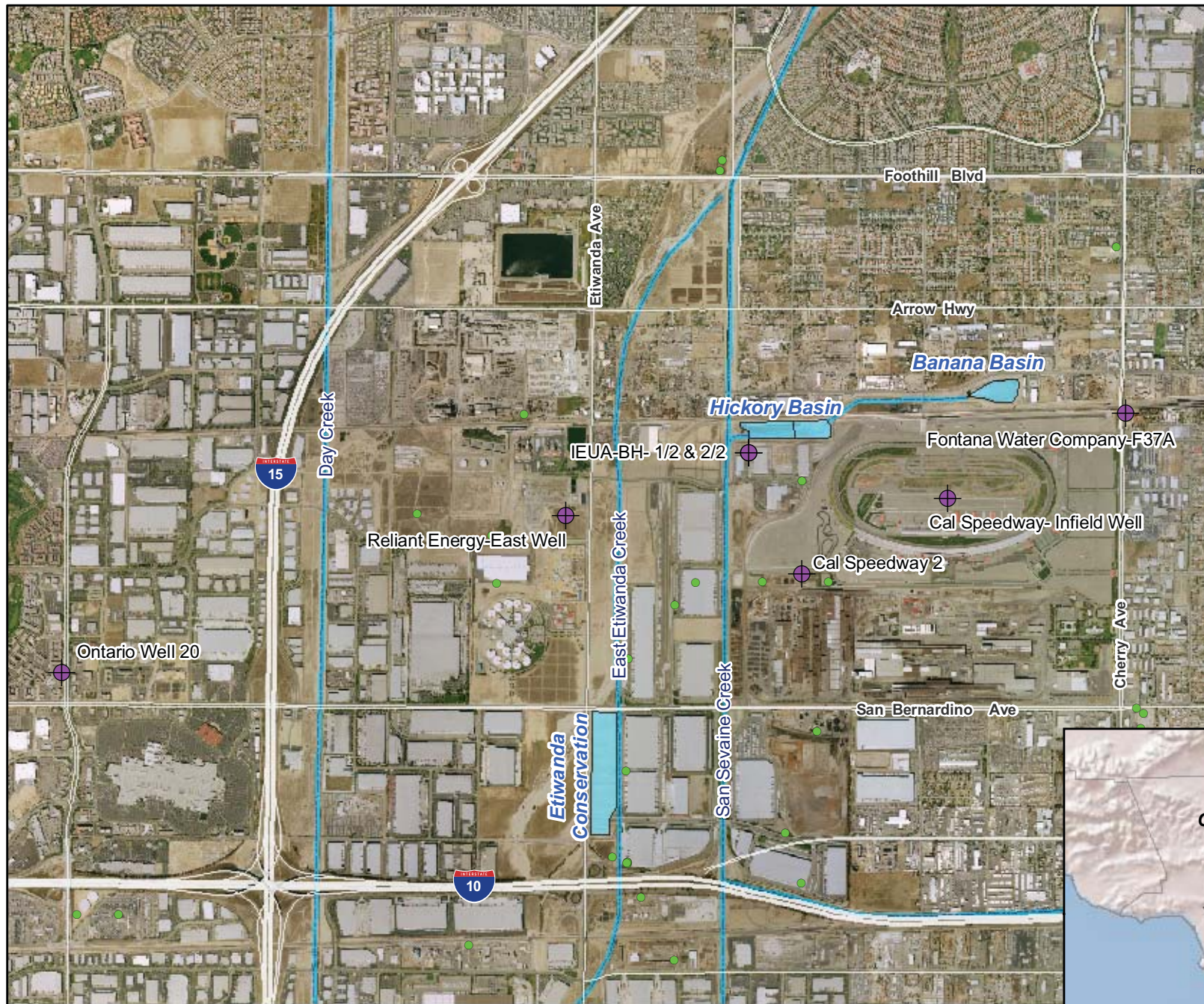


Figure 1-1



Main Map Features

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

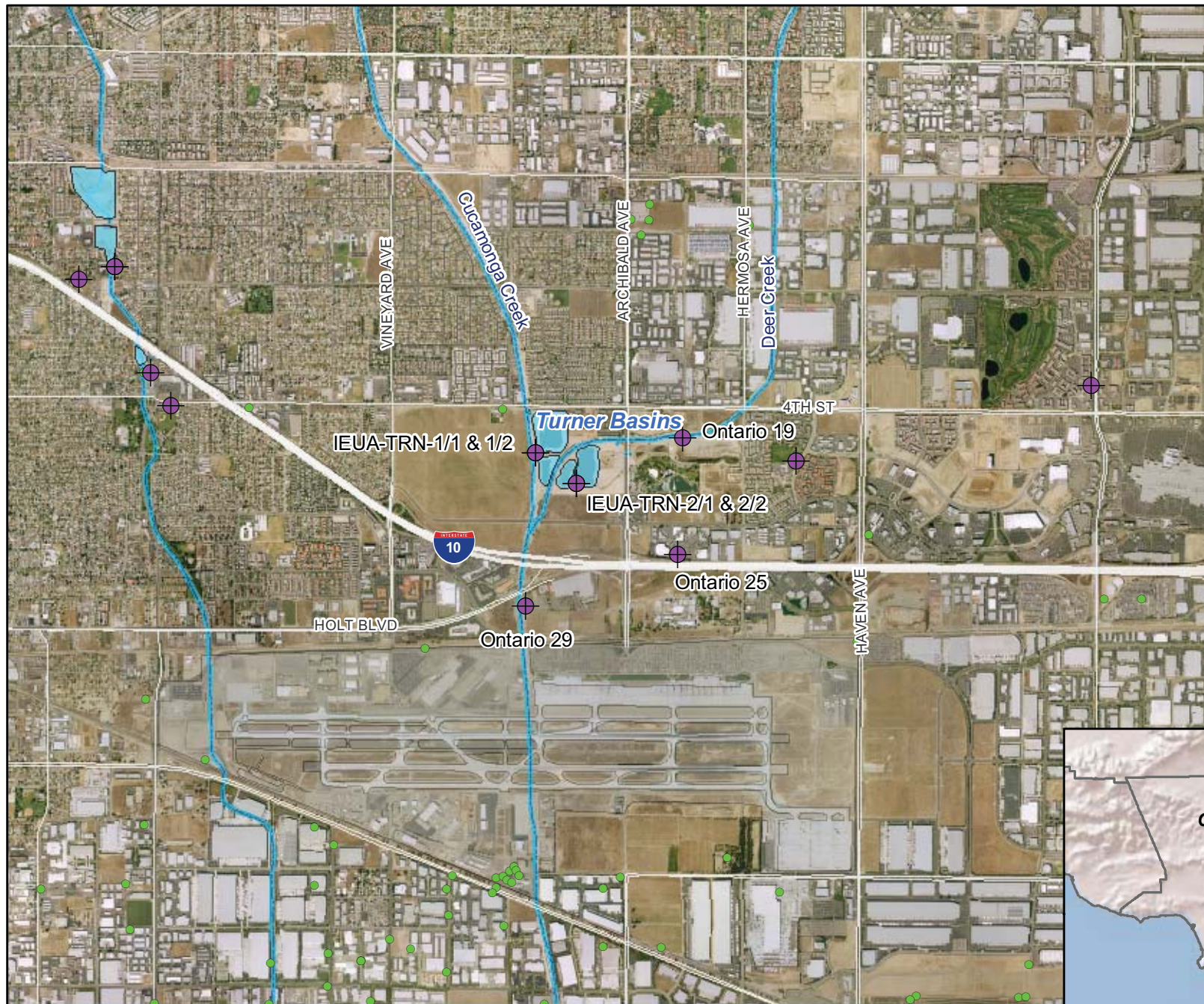


Monitoring Well Network
Hickory and Banana Basins

Figure 2-1

Recycled Water Recharge Program





Main Map Features

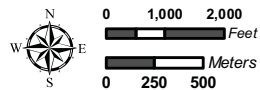
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

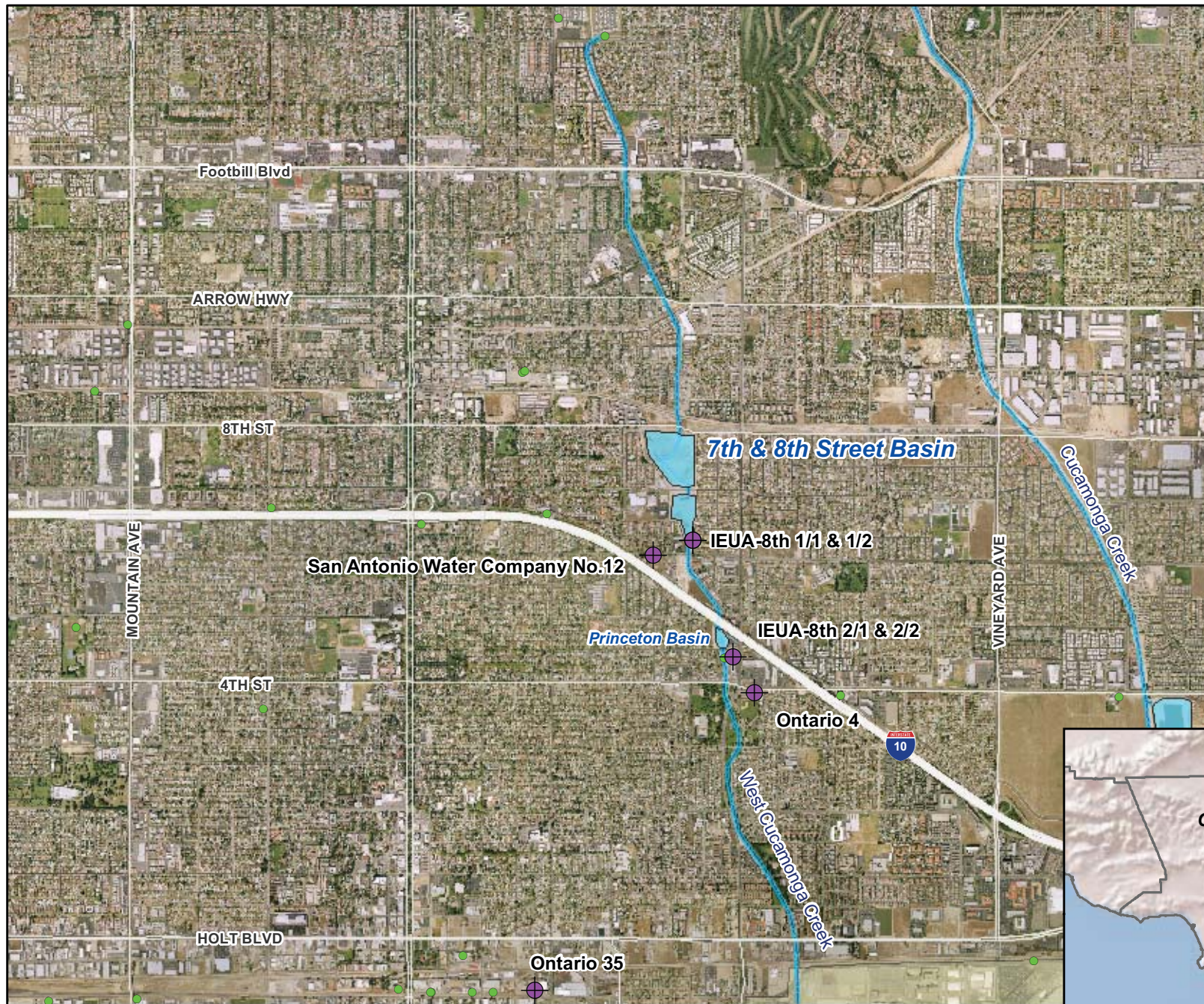


Monitoring Well Network
Turner Basins

Figure 2-2

Recycled Water Recharge Program





Main Map Features

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

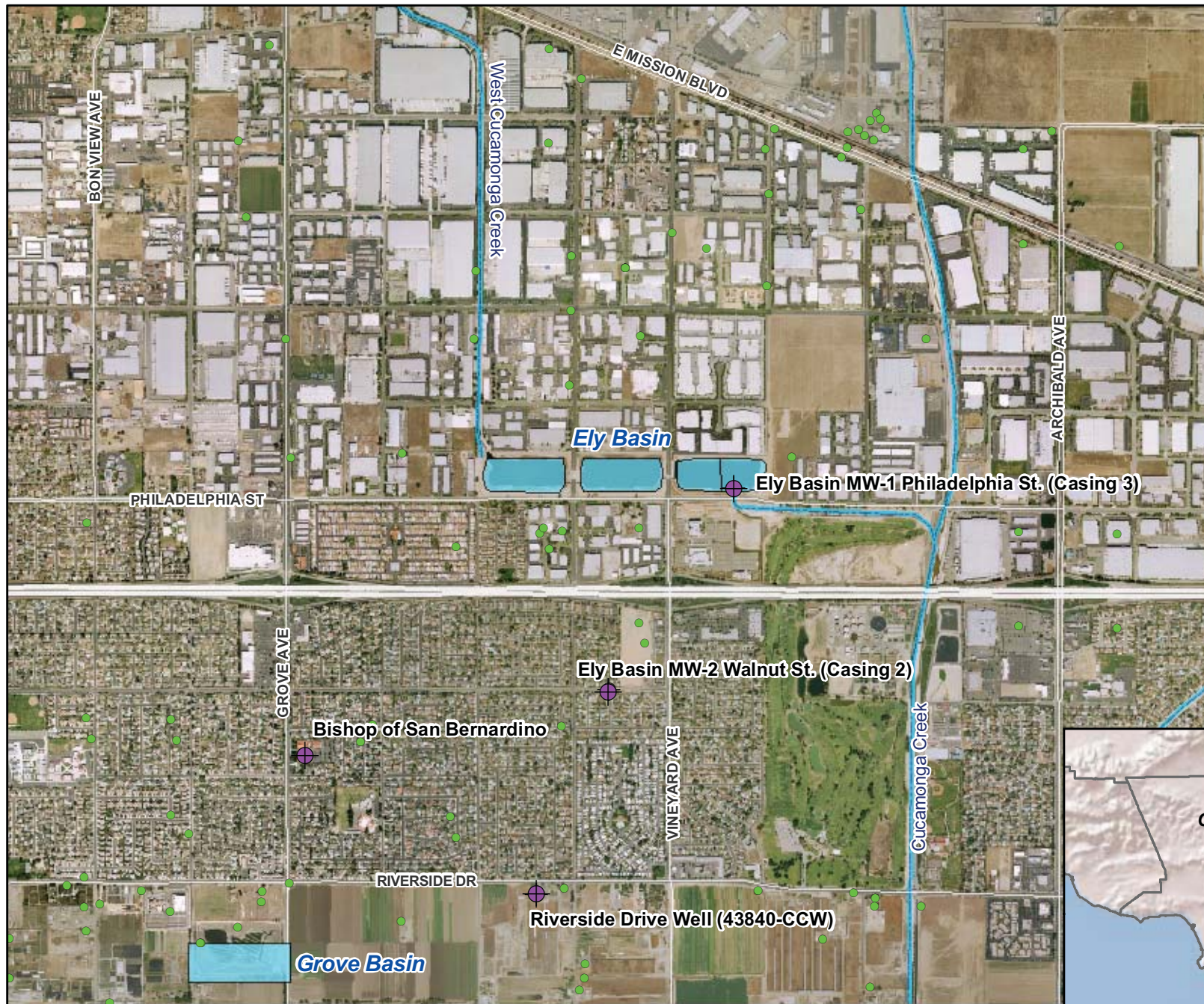


Monitoring Well Network
7th and 8th Street Basin

Figure 2-3

Recycled Water Recharge Program





Main Map Features

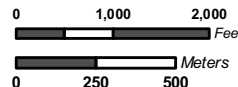
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

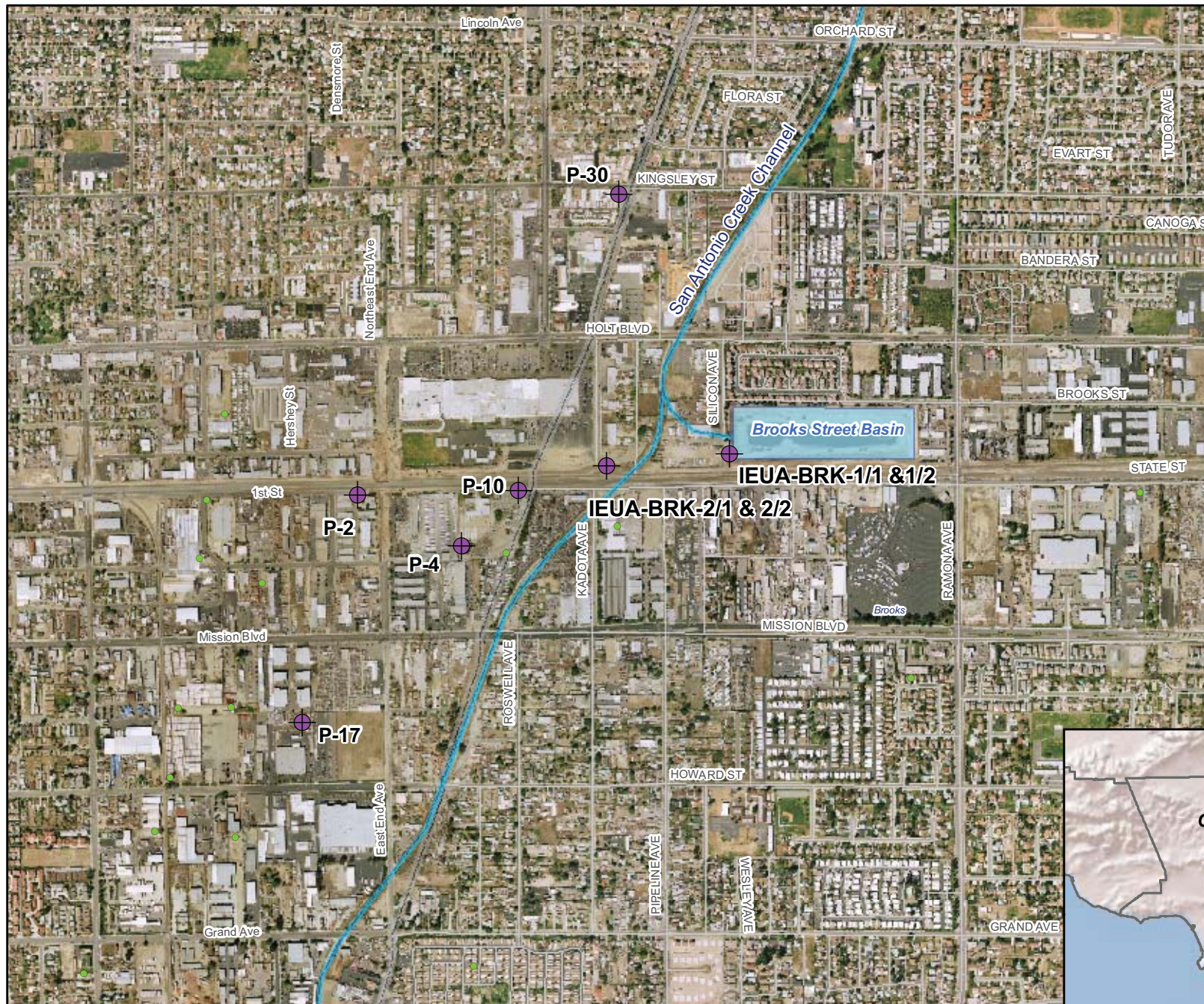


Monitoring Well Network
Ely Basins

Figure 2-4

Recycled Water Recharge Program





Main Map Features

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

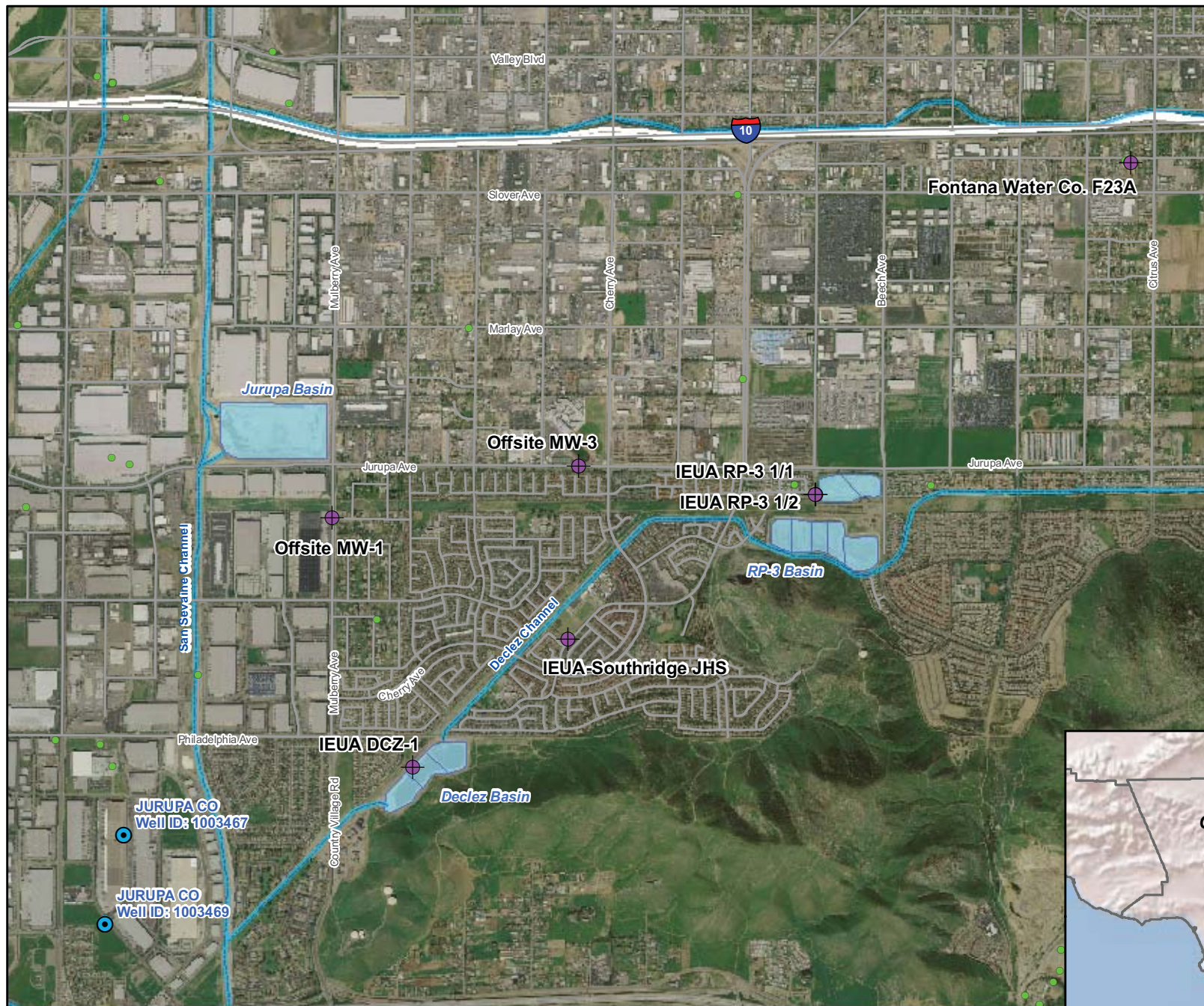


Monitoring Well Network
Brooks Street Basin

Figure 2-5

Recycled Water Recharge Program





Main Map Features

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

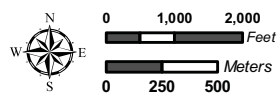


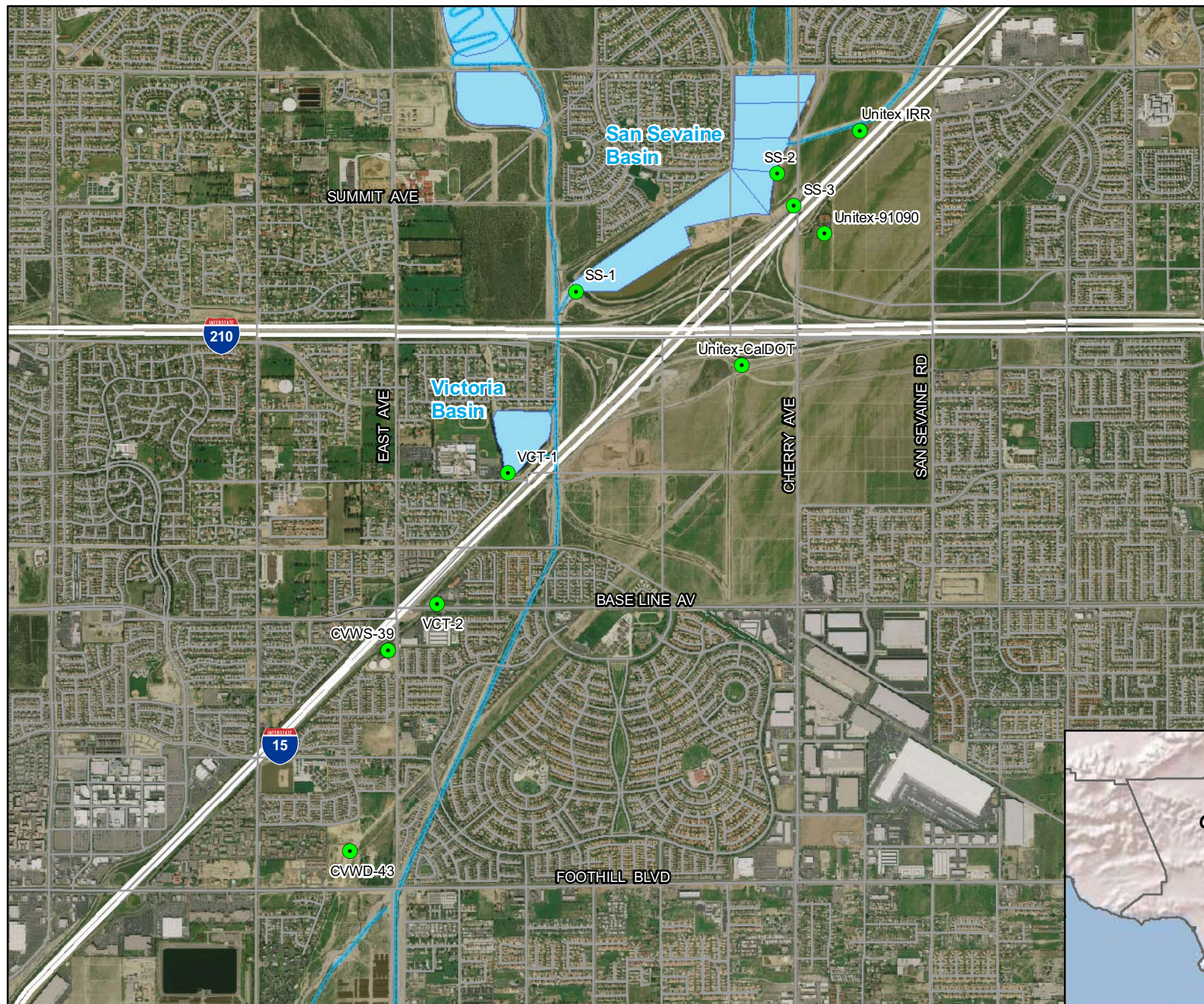
Monitoring Well Network

RP-3 Basin

Figure 2-6

Recycled Water Recharge Program





Main Map Features

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



Monitoring Well Network
San Sevaime and Victoria Basin

Figure 2-7

Recycled Water Recharge Program

