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Executive Manager of Operations

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November 12, 2009

Regional Water Quality Control Board, Santa Ana Region

**Attention: Mr. Gerard Thibeault**

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

**Subject: Chino Basin Recycled Water Groundwater Recharge Program  
Quarterly Monitoring Report for July through September 2009**

Dear Mr. Thibeault,

Inland Empire Utilities Agency and Chino Basin Watermaster hereby submit the *Quarterly Monitoring Report* for the third quarter of 2009 (3Q09), July 1 through September 30, 2009, for the *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 3Q09, the Groundwater Recharge Program was in compliance with all monitoring and reporting requirements as specified in the Order.

Chino Basin Watermaster hereby certifies that, during the period of July 1 through September 30, 2009, there was no reported pumping for drinking water purposes in the buffer zones extending 500 feet laterally and 6 months underground travel time of the recharge sites using recycled water, namely 7th & 8th Street, Banana, Brooks, Ely, Hickory, RP-3, and Turner Basins. In point of fact, there are no production wells in the buffer zones of the aforementioned recharge sites.

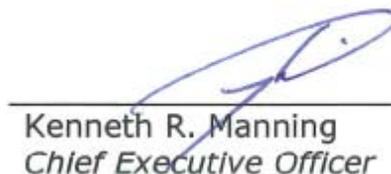
#### **DECLARATION**

*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 12<sup>th</sup> day of November 2009 in the Cities of Chino and Rancho Cucamonga.



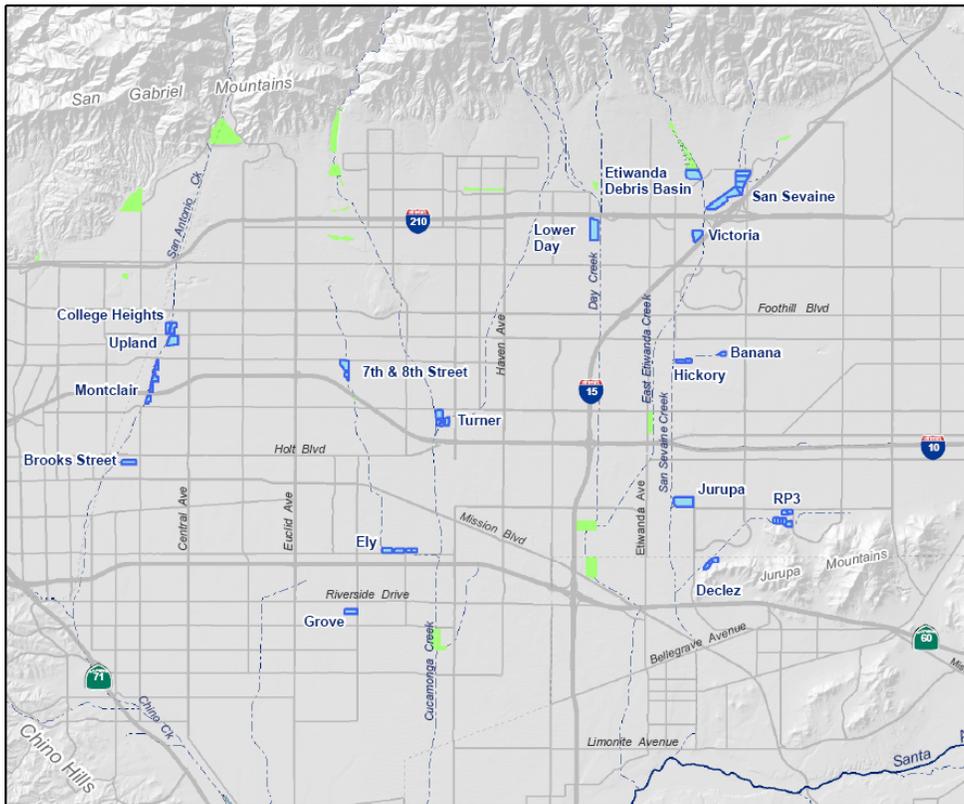
Patrick O. Sheilds  
Executive Manager of Operations



Kenneth R. Manning  
Chief Executive Officer

# Chino Basin Recycled Water Groundwater Recharge Program

## Quarterly Monitoring Report July 1 through September 30, 2009



*Prepared by:*



November 15, 2009

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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 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 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 (M&RP).

The M&RP 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 Third Quarter of 2009 (3Q09).

The quarterly report includes the following elements as prescribed in the M&RP:

- 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 from the zone that extends 500 feet and 6-months underground travel time from the recharge basin(s) where recycled water is applied for domestic water supply use.

### B. 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 M&RP. Tables 2-1 through 2-4 include all of the requisite 3Q09 data.

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Recycled Water Specifications A.5 through A.9 are narrative limits in the permit and corresponding monitoring data are presented in Tables 2-1 and 2-2. None of these limits were exceeded in 3Q09.

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 4Q08 through 3Q09 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 3Q09, the maximum contaminant levels for inorganic chemicals, organic chemicals, radionuclides, and disinfection byproducts; action levels for lead and copper; secondary MCLs; and Oil & Grease were not exceeded.

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 Reliant Energy (an IEUA recycled water customer) 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 (DBP), more specifically, Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5). For TTHMs and HAA5, samples collected at the 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. For the 3Q09 sampling for DBPs, IEUA chose the 25-foot below ground surface lysimeter at the RP-3 Basin as the compliance point, in accordance with Recycled Water Quality Specification A.2.

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. Electrical conductivity is also measured and reported to assist in identifying the presence of recycled water at various depths in the vadose zone. The basin and lysimeter water quality results are summarized in Table 2-5a. The table includes lysimeter data for RP-3, Brooks, 7<sup>th</sup> & 8<sup>th</sup> Street, Hickory, and Ely Basins.

Turner and Ely Basins have implemented alternative monitoring plans that include pipeline sampling of recycled water and application of a correction factor for Soil-Aquifer Treatment determined from each basin's start-up period. The correction factors reduce the TOC results by 70 percent for recycled water delivered to Turner cells 1 & 2, 85 percent for recycled water delivered to Turner cells 3 & 4, and 76 percent for recycled water delivered to Ely Basin 3 East. The correction factors reduce TN results by 87 percent for recycled water delivered to all four cells and 52 percent for recycled water delivered to Ely Basin 3 East. Turner and Ely Basins TOC and TN values calculated based on the correction factors provided in the alternative monitoring plan are summarized in Table 2-5b.

## **C. Diluent Water**

For 3Q09, diluent water sampling of local runoff was conducted on August 27, 2009 at Turner Basin. 7th & 8th Street Basin was not sampled during 3Q09, but will be sampled in 4Q09 in addition to other diluent water samples. State Water Project water was not delivered to any basins during the monitoring period. Table 2-6 lists the results of the local runoff sampling and analyses. Details on the methods used to measure daily diluent water flow can be found in the CDPH-approved Diluent Water Monitoring Plan.

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## D. Groundwater Monitoring Wells

During 3Q09, 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 the Turner Basins was monitored by sampling a network of six wells. The groundwater quality within the vicinity of the 7<sup>th</sup> & 8<sup>th</sup> Street Basins is monitored by sampling a network of five 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 Brooks Basin was monitored by sampling a network of seven wells. The groundwater quality within the vicinity of the RP-3 Basins was monitored by sampling a network of six wells. The wells in the monitoring well networks for Hickory and Banana Basins, Turner Basin, 7<sup>th</sup> & 8<sup>th</sup> Street Basins, Ely Basins, Brooks, and RP-3 Basins are summarized in Table 2-7, and presented on Figures 2-1 through 2-5, respectively.

The groundwater constituents analyzed from the monitoring wells during 3Q09 are 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 the impact recharged recycled water has on downgradient water supplies. Any 3Q09 analyses results which exceeded primary or secondary standards are shown in bold. Of note are the analyses for monitoring wells RP3-1, BRK-1, DCZ-1 and 8TH-2/2. RP3-1 and 8TH-2 wells are located in areas with historically high NO<sub>3</sub>-N (10-30 mg/L). The RP3-1 wells are located in an area with historically high EC levels (>1,000 µmhos/cm). Monitoring wells BRK-1/1, RP3-1/1, and DCZ-1/1 have anomalous 3Q09 results for aluminum, iron, and turbidity which can be considered artifacts of their shallow construction at the water table.

## 3. Recharge Operations

IEUA's Groundwater Recharge Coordinator recorded the daily volumes of water routed to all basins. The 7<sup>th</sup> & 8<sup>th</sup> Street, Brooks, Ely, Hickory, RP-3, and Turner Basins receive recycled water this quarter. No imported water was delivered to any of the aforementioned recharge basins during 3Q09. Table 3-1 lists the volumes of diluent water, recycled water, and/or local runoff and stormwater captured during 3Q09 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 Plants RP-1 & RP-4, recharge operations, and monitoring well sampling.

## 5. Certification of Non-Pumping in the Buffer Zones

Watermaster has certified that there was no reported pumping of groundwater in 3Q09 for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from the 7<sup>th</sup> & 8<sup>th</sup> Street, Banana, Brooks, Ely, Hickory, RP-3, and Turner Basins. In fact, there are no production wells within the buffer zones of these aforementioned recharge sites. In the cover letter of this report, Watermaster certifies non-pumping in the buffer zones.

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 a list of 40-acre parcels that abut recharge basins and their 500-foot buffers. IEUA has provided SBCDEHS with a list of parcels abutting each recharge basin and a series of maps showing the recharge basins, buffers, and township/range/section parcels adjacent the basins and buffers.

If a well falls within an abutting parcel, SBCDEHS will review the proposed well location using maps of the basins and buffers. If the well falls too near the buffer 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 to 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 that are determined to fall within a 500-foot buffer.

## **6. MVWD ASR Project**

The Regional Board has allowed the Monte Vista Water District (MVWD) Aquifer Storage and Recovery (ASR) project 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. Effective May 1, 2008, MVWD discontinued groundwater injection at the ASR Wells until further notice. 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 July 2009  
 (Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent									RP-4 Effluent									
	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC µhmo/cm	TDS <sup>3</sup> mg/L	Coliform <sup>1,2,4</sup> mpn/100mL	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC <sup>6</sup> µhmo/cm	TDS <sup>3</sup> mg/L	Hardness mg/L	Coliform <sup>1,2,4</sup> mpn/100mL
Limits	2;5;10	16		5 <sup>5</sup>		6<pH<9			2.2;23;240	2;5;10	16		5 <sup>5</sup>		6<pH<9				2.2;23;240
07/01/09	0.7	9.5				7.3	750		<2	0.3	4.5	8.2		8.2	7.1	840			<2
07/02/09	0.8	9.9				7.3	780		<2	0.4	4.4	7.8		7.8	7.0	845			<2
07/03/09	0.8	8.8				7.2	780		<2	0.5	4.4	6.8		6.8	7.0	815			<2
07/04/09	0.8	8.8				7.2	790		<2	0.7	4.3	4.9		4.9	7.1	820			<2
07/05/09	0.8	8.4	7.5		7.5	7.2	765		<2	0.7	4.2	4.3		4.3	7.1	780			<2
07/06/09	0.8	8.3				7.2	765		<2	0.6	4.2	4.0		4.0	7.1	780			<2
07/07/09	0.8	9.6	7.2	8.8	7.2	7.2	770	474	<2	0.5	4.1	3.7	4.6	3.7	7.1	780	467	142	<2
07/08/09	0.8	9.1				7.2	800		<2	0.5	4.2	3.8		3.8	7.2	775			<2
07/09/09	0.8	9.2	6.2		6.2	7.2	790		2	0.5	4.2	3.3		3.3	7.3	775			<2
07/10/09	0.7	8.3				7.2	780		<2	0.5	4.0	3.5		3.5	7.3	775			<2
07/11/09	0.7	8.0				7.2	775		<2	0.6	3.9	3.1		3.1	7.3	770			<2
07/12/09	0.7	7.9	5.4		5.4	7.2	760		<2	0.7	4.0	2.8		2.8	7.3	760			<2
07/13/09	0.6	8.1				7.3	795		<2	0.5	3.9	2.7		2.7	7.2	765			<2
07/14/09	0.6	8.8	4.9	4.9	4.9	7.3	790		<2	0.4	3.8	2.9	4.0	2.9	7.2	770	456		<2
07/15/09	0.6	8.4				7.2	790		<2	0.4	3.7	3.3		3.3	7.2	760			<2
07/16/09	0.6	9.2	4.9		4.9	7.3	695		<2	0.4	3.7	3.6		3.6	7.2	765			<2
07/17/09	0.6	8.7				7.3	1237		<2	0.4	3.6	3.1		3.1	7.2	775			<2
07/18/09	0.6	8.6				7.3	1236		<2	0.5	3.6	2.6		2.6	7.2	770			<2
07/19/09	0.6	8.6	4.7		4.7	7.4	1226		<2	0.6	3.7	2.0		2.0	7.2	760			<2
07/20/09	0.6	9.1				7.3	1209		<2	0.5	3.9	2.0		2.0	7.2	770			<2
07/21/09	0.5	8.5	6.1	8.1	6.1	7.3	1239		<2	0.5	3.7	2.2	3.1	2.2	7.2	775	458		<2
07/22/09	0.5	7.7				7.1	1169		<2	0.4	3.7	3.7		3.7	7.3	785			<2
07/23/09	0.5	8.0	5.8		5.8	7.1	1152		<2	0.5	3.6	4.0		4.0	7.3	780			<2
07/24/09	0.4	7.6				7.1	1148		<2	0.4	3.5	4.1		4.1	7.3	785			<2
07/25/09	0.5	7.4				7.1	1146		<2	0.4	3.5	4.0		4.0	7.3	780			<2
07/26/09	0.5	7.2	6.3		6.3	7.1	1134		<2	0.4	3.6	3.6		3.6	7.4	760			<2
07/27/09	0.5	7.9		1.0		7.1	1119		<2	0.4	3.7	3.4		3.4	7.4	760			<2
07/28/09	0.5	8.1	4.2		4.2	7.1	1147		<2	0.3	3.6	3.7	4.8	3.7	7.0	760	471		<2
07/29/09	0.6	8.2				7.1	1155		<2	0.4	3.6	4.0		4.0	6.6	760			<2
07/30/09	0.6	8.4	2.7		2.7	7.1	1156		<2	0.3	3.6	4.4		4.4	6.7	755			<2
07/31/09	0.4	6.9				7.1	1136		<2	0.3	3.5	4.5		4.5	6.7	755			<2
Avg	0.6	8.4	5.5	5.7	5.5	7.2	967	474	<2	0.5	3.9	3.9	4.1	3.9	7.1	778	463	142	<2
Min	0.4	6.9	2.7	1.0	2.7	7.1	695	474	<2	0.3	3.5	2.0	3.1	2.0	6.6	755	456	142	<2
Max	0.8	9.9	7.5	8.8	7.5	7.4	1239	474	2	0.7	4.5	8.2	4.8	8.2	7.4	845	471	142	<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.

<sup>1</sup> Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA0105279, Order No. R8-2006-0010.

<sup>2</sup> Turbidity limits: 2 NTU average daily; 5 NTU no more than 5% of day; 10 NTU at any time.

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

<sup>4</sup> 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.

<sup>5</sup> TN compliance can be met at a point prior to the regional groundwater, including lysimeters.

<sup>6</sup> RP-4 Effluent EC values from IEUA lab data, not continuous monitoring data

Table 2-1b  
 Recycled Water Monitoring: RP-1 & RP-4 Effluent Water Quality for August 2009  
 (Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent									RP-4 Effluent									
	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC µhmo/cm	TDS <sup>3</sup> mg/L	Coliform <sup>1,2,4</sup> mpn/100mL	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC <sup>6</sup> µhmo/cm	TDS <sup>3</sup> mg/L	Hardness mg/L	Coliform <sup>1,2,4</sup> mpn/100mL
Limits	2;5;10	16		5 <sup>5</sup>		6<pH<9			2.2;23;240	2;5;10	16		5 <sup>5</sup>		6<pH<9				2.2;23;240
08/01/09	0.3	5.0			7.1	1143		<2	0.3	3.5	4.6		4.6	6.7	750			<2	
08/02/09	0.4	5.6	1.9		1.9	7.1	1138	<2	0.3	3.6	3.7		3.7	6.7	735			<2	
08/03/09	0.4	6.0				7.1	1150	<2	0.3	3.7	3.3		3.4	6.7	735			<2	
08/04/09	0.4	5.8	2.2	2.2	2.2	7.2	1122	478	<2	0.3	3.7	3.8	4.3	3.9	6.7	740	445	146	<2
08/05/09	0.4	5.7				7.3	1068	2	0.3	3.6	3.7		3.8	6.7	725			<2	
08/06/09	0.3	5.0	3.4		3.4	7.1	1159	<2	0.3	3.4	3.8		3.8	6.7	730			<2	
08/07/09	0.3	4.7				7.2	1136	<2	0.2	3.5	4.1		4.1	6.7	750			<2	
08/08/09	0.4	4.7				7.2	1131	<2	0.3	3.4	4.3		4.3	6.7	745			<2	
08/09/09	0.4	4.7	4.8		4.8	7.2	1118	<2	0.3	3.5	3.8		3.9	6.7	730			<2	
08/10/09	0.5	4.7				7.1	1109	<2	0.3	3.6	2.8		2.9	6.7	720			<2	
08/11/09	0.5	5.0	3.7	3.7	3.7	7.2	1132	<2	0.2	3.6	2.9	3.6	3.0	6.7	725	445		<2	
08/12/09	0.6	4.9				7.2	1127	<2	0.2	3.4	3.8		3.8	6.7	715			<2	
08/13/09	0.6	5.0	4.4		4.5	7.2	1126	<2	0.3	3.3	3.9		3.9	6.7	730			<2	
08/14/09	0.6	4.8				7.2	1120	<2	0.3	3.3	4.4		4.4	6.7	735			<2	
08/15/09	0.7	4.7				7.2	1130	<2	0.4	3.3	4.9		5.0	6.7	740			<2	
08/16/09	0.7	4.9	4.8		4.9	7.2	1120	2	0.3	3.5	3.9		4.0	6.7	715			<2	
08/17/09	0.7	5.1				7.2	1110	<2	0.3	3.4	3.3		3.3	6.7	715			<2	
08/18/09	0.7	5.3	5.6	5.6	5.6	7.2	1129	<2	0.2	3.6	3.7	5.0	3.7	6.7	720	446		<2	
08/19/09	0.7	5.2				7.1	1142	<2	0.2	3.4	4.5		4.5	6.8	725			<2	
08/20/09	0.7	5.0	6.4		6.4	7.1	1147	<2	0.2	3.3	4.8		4.9	6.8	725			<2	
08/21/09	0.7	4.8				7.2	1128	<2	0.2	3.3	4.5		4.5	6.8	720			<2	
08/22/09	0.7	4.7				7.2	1161	<2	0.2	3.3	3.6		3.7	6.8	725			<2	
08/23/09	0.7	4.8	6.4		6.6	7.2	1127	<2	0.6	3.5	2.7		2.8	6.8	700			<2	
08/24/09	0.7	5.0				7.2	1109	<2	0.2	3.4	2.1		2.1	6.8	705			<2	
08/25/09	0.7	4.9	4.8	4.8	4.8	7.2	1131	<2	0.2	3.2	2.1	3.6	2.1	6.8	710	436		<2	
08/26/09	0.6	4.6				7.2	1126	<2	0.2	3.3	2.4		2.4	6.8	710			<2	
08/27/09	0.6	4.7	3.9		3.9	7.2	1134	<2	0.2	3.2	2.8		2.8	6.8	715			<2	
08/28/09	0.4	4.5				7.2	1137	<2	0.2	3.1	3.6		3.6	6.8	725			<2	
08/29/09	0.3	4.4	2.5		2.6	7.2	1151	<2	0.2	3.2	3.8		3.8	6.8	720			<2	
08/30/09	0.3	4.8				7.2	1125	2	0.3	3.3	3.0		3.1	6.8	720			<2	
08/31/09	0.3	4.4				7.2	1126	<2	0.2	3.3	2.6		2.7	6.8	720			<2	
Avg	0.5	5.0	4.2	4.1	4.3	7.2	1129	478	<2	0.3	3.4	3.6	4.1	3.6	6.7	725	443	146	<2
Min	0.3	4.4	1.9	2.2	1.9	7.1	1068	478	<2	0.2	3.1	2.1	3.6	2.1	6.7	700	436	146	<2
Max	0.7	6.0	6.4	5.6	6.6	7.3	1161	478	2	0.6	3.7	4.9	5.0	5.0	6.8	750	446	146	<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.  
<sup>1</sup> Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA0105279, Order No. R8-2006-0010.  
<sup>2</sup> Turbidity limits: 2 NTU average daily; 5 NTU no more than 5% of day; 10 NTU at any time.  
<sup>3</sup> TDS and TIN limits are based on a 12-month running average values which are presented in Table 2-2  
<sup>4</sup> 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.  
<sup>5</sup> TN compliance can be met at a point prior to the regional groundwater, including lysimeters.  
<sup>6</sup> RP-4 Effluent EC values from IEUA lab data, not continuous monitoring data

Table 2-1c  
 Recycled Water Monitoring: RP-1 & RP-4 Effluent Water Quality for September 2009  
 (Recycled Water Quality Specifications A.5, A.7, A.8, & A.9)

Unit	RP-1 Effluent									RP-4 Effluent									
	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC µhmo/cm	TDS <sup>3</sup> mg/L	Coliform <sup>1,2,4</sup> mpn/100mL	Turbidity <sup>1,2</sup> NTU	TOC mg/L	NO <sub>3</sub> -N mg/L	TN mg/L	TIN <sup>3</sup> mg/L	pH unit	EC <sup>6</sup> µhmo/cm	TDS <sup>3</sup> mg/L	Hardness mg/L	Coliform <sup>1,2,4</sup> mpn/100mL
Limits	2;5;10	16		5 <sup>5</sup>		6<pH<9			2.2;23;240	2;5;10	16		5 <sup>5</sup>		6<pH<9			2.2;23;240	
09/01/09	0.4	5.0	2.7	2.8	2.8	7.2	1165	476	<2	0.3	3.2	3.2	3.2	3.2	6.8	725	442	140	<2
09/02/09	0.4	5.1				7.2	1186		<2	0.3	3.2	3.7		3.8	6.8	720			<2
09/03/09	0.4	5.0	2.4		2.4	7.2	1201	2		0.3	3.1	4.3		4.3	6.8	720			<2
09/04/09	0.4	5.2				7.2	1200		<2	0.3	3.0	4.5		4.5	6.9	740			<2
09/05/09	0.5	5.1				7.2	1211		<2	0.3	3.1	4.3		4.3	6.9	735			<2
09/06/09	0.6	5.1				7.2	1180		<2	0.3	3.1	3.4		3.4	6.9	740			<2
09/07/09	0.5	4.7				7.1	1162		<2	0.3	3.2	3.8		3.8	6.9	745			<2
09/08/09	0.4	4.9	4.0	4.0	4.0	7.2	1153		<2	0.4	3.3	2.8	2.8	2.8	6.8	745	456		<2
09/09/09	0.5	5.1				7.2	1183		<2	0.3	3.2	3.9		3.9	6.8	750			<2
09/10/09	0.5	5.2	3.0		3.0	7.2	1208	2		0.3	3.2	5.0		5.0	6.8	740			<2
09/11/09	0.5	4.7				7.2	1181		<2	0.4	3.0	5.4		5.4	6.8	755			<2
09/12/09	0.5	4.4				7.2	1191		<2	0.4	3.0	5.8		5.8	6.7	750			<2
09/13/09	0.5	4.4	3.9		3.9	7.2	1167		<2	0.3	3.1	4.8		4.8	6.8	735			<2
09/14/09	0.4	4.7				7.2	1170		<2	0.2	3.1	3.9		3.9	6.8	730			<2
09/15/09	0.4	4.8	3.6	3.6	3.6	7.2	1126		<2	0.2	3.0	4.4	4.6	4.4	6.8	730	434		<2
09/16/09	0.4	4.7				7.4	919		<2	0.2	3.1	4.0		4.0	6.8	720			<2
09/17/09	0.4	4.7	2.5		2.5	7.3	1023	2		0.2	3.1	3.9		3.9	6.8	720			<2
09/18/09	0.3	4.6				7.3	1103		<2	0.2	3.1	3.6		3.6	6.8	725			<2
09/19/09	0.4	4.8				7.2	1129		<2	0.2	3.1	3.4		3.4	6.8	730			<2
09/20/09	0.4	5.0	4.3		4.3	7.2	1124		<2	0.2	3.3	2.8		2.8	6.8	710			<2
09/21/09	0.4	5.2				7.2	1121		<2	0.5	3.3	2.3		2.3	6.9	720			<2
09/22/09	0.5	5.1	3.9	3.9	3.9	7.0	1134		<2	0.6	3.4	2.7	4.1	2.8	6.9	725	434		<2
09/23/09	0.5	5.1				7.1	1131		<2	0.6	3.4	3.3		3.4	6.9	710			<2
09/24/09	0.6	5.0	3.2		3.2	7.2	1142		<2	0.6	3.2	3.7		3.7	6.8	740			<2
09/25/09	0.6	4.9				7.2	1152		<2	0.6	3.2	3.5		3.5	6.8	745			<2
09/26/09	0.6	4.9				7.2	1160	2		0.6	3.3	3.3		3.4	6.8	740			<2
09/27/09	0.6	5.1	4.6		4.8	7.2	1139		<2	0.6	3.4	2.7		2.7	6.8	720			<2
09/28/09	0.7	5.1				7.2	1132		<2	0.6	3.4	2.4		2.4	6.8	720			<2
09/29/09	0.7	5.2	4.4	4.4	4.4	7.2	1144	2		0.6	3.4	2.6		2.6	6.8	725			<2
09/30/09	0.6	5.0				7.0	1088	2		0.6	3.4	3.1	4.6	3.1	6.8	728	440		<2
Avg	0.5	4.9	3.5	3.7	3.6	7.2	1144	476	<2	0.4	3.2	3.7	3.9	3.7	6.8	731	441	140	<2
Min	0.3	4.4	2.4	2.8	2.4	7.0	919	476	<2	0.2	3.0	2.3	2.8	2.3	6.7	710	434	140	<2
Max	0.7	5.2	4.6	4.4	4.8	7.4	1211	476	2	0.6	3.4	5.8	4.6	5.8	6.9	755	456	140	<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.

<sup>1</sup> Turbidity and coliform must meet water quality standards for disinfected tertiary treated recycled water, as specified in NPDES No. CA0105279, Order No. R8-2006-0010.

<sup>2</sup> Turbidity limits: 2 NTU average daily; 5 NTU no more than 5% of day; 10 NTU at any time.

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

<sup>4</sup> 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.

<sup>5</sup> TN compliance can be met at a point prior to the regional groundwater, including lysimeters.

<sup>6</sup> RP-4 Effluent EC values from IEUA lab data, not continuous monitoring data

QC: Quality Control test failure

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

Date	TIN		TDS	
	Monthly	12-Mo. Run Avg.	Monthly	12-Mo. Run Avg.
Oct-08	7.0	6.9	503	508
Nov-08	5.7	6.7	496	506
Dec-08	6.3	6.7	495	504
Jan-09	6.5	6.6	497	503
Feb-09	7.8	6.7	463	500
Mar-09	6.9	6.8	496	499
Apr-09	6.6	6.8	509	498
May-09	5.8	6.6	501	498
Jun-09	5.4	6.5	505	499
Jul-09	5.0	6.4	512	499
Aug-09	4.5	6.3	499	497
Sep-09	4.0	6.0	498	497
Avg	6.0	6.6	498	501
Min	4.0	6.0	463	497
Max	7.8	6.9	512	508
Limit		8.0		550

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: Recycled Water Quality Specifications A.1, A.2, A.3, & A.15

Constituent	4Q08	1Q09	2Q09	3Q09	4Q Run.	Limit	Unit	Method
					Avg. <sup>1</sup>			
Inorganic Chemicals								
Aluminum	<25	32	26	30	25	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	<0.2	<1.9	<0.8	<0.2	<0.8	7	MFL	EPA 100.2
Barium	5	9	13	4	8	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	1.3	1.8	1.2	1.6	1.5	50	µg/L	EPA 200.8
Cyanide	<5	<5	<5	<5	<5	150	µg/L	SM 4500-CN E
Fluoride	0.1	0.1	0.1	0.2	0.1	2	mg/L	SM 4500-F C
Mercury	<0.2	<0.2	<0.2	<0.2	<0.2	2	µg/L	EPA 245.2
Nickel	2	2	2	2	2	100	µg/L	EPA 200.8
Perchlorate	<4	<4	<4	<4	<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	<1	<0.5	<0.5	<0.5	<1	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	4.3	<0.5	<0.5	<0.5	<1.3	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
1,1,2,2-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	<0.3	<0.3	<0.3	<0.5	0.5	µg/L	EPA 524.2
m,p-Xylene	<0.5	<0.5	<0.5	0.5	<0.5	1750 <sup>2</sup>	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	EPA531.2
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	4	4	4	4	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	<20	<20	<5	<5	<20	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: Recycled Water Quality Specifications A.1, A.2, A.3, & A.15

Constituent	4Q08	1Q09	2Q09	3Q09	4Q Run.		Unit	Method
					Avg. <sup>1</sup>	Limit		
Ethylene Dibromide	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	µg/L	EPA 504.1
Glyphosate	<6	<6	<6	<6	<6	700	µg/L	EPA 547
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	µg/L	EPA 505
Heptachlor Epoxide	<0.01	<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	0.10	<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	9.5	3.9	5.8	4.5	5.9	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	<0.54	<0.48	0.860	<0.61	0.53	5	pCi/L	EPA 903.0
Gross Alpha Particle Activity	7.1	4.4	<3.0	<3	6.0	15	pCi/L	EPA 900.0
Tritium	<240	<224	<210	<220	<224	20,000	pCi/L	EPA 906
Strontium-90	1.65	<0.61	<1.07	<0.54	<0.99	8	pCi/L	EPA 905
Gross Beta Particle Activity	13	7	6	8	8	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	<25	32	26	30	21	200	µg/L	EPA 200.8
Copper	9.5	3.9	5.8	4.5	5.9	1000	µg/L	EPA 200.8
Corrosivity <sup>3</sup>	-0.5 (Non-Cor.)	0.1 (Non-Cor.)	0.1 (Non-Cor.)	-0.1 (Non-Cor.)	-0.1	Non-Cor.	SI	SM 2330B
Foaming Agents (MBAS) <sup>3</sup>	NR	0.166	<0.05	<0.05	0.06	0.5	mg/L	S5540C/EPA 425.1
Iron <sup>3</sup>	NR	NR	44	NR	75	300	µg/L	EPA 200.7
Manganese	1	7	4	11	6	50	µg/L	EPA 200.8
Methyl-tert-butyl ether (MTBE) <sup>3</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	5	µg/L	EPA 524.2
Odor--Threshold <sup>3</sup>	NR	3	3	3	3	3	TON	SM 2150B
Silver	<0.25	<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	24	24	40	17	26	5000	µg/L	EPA 200.8
Miscellaneous Regulated Constituents								
Oil & Grease <sup>4</sup>	<1	<1	2	<1		1	mg/L	EPA 1664
Disinfection Byproducts								
Bromate	<5	<5	<5	7.2	<6	10	µg/L	EPA 300.1
Chlorite	<0.01	<0.01	<0.01	<0.01	<0.01	1	mg/L	EPA 300.0
Lysimeter Compliance Point Data								
Total Trihalomethanes (TTHMs)	BRK-25	BRK-25	BRK-25	RP3-25				
Total Haloacetic Acids (HAA5)	<0.5	<0.5	<0.5	4.8	<1.1	80	µg/L	EPA 524.2/624
	<1	<1	<1	<1	<1	60	µg/L	S6251B

NA: Not Analyzed this quarter

<sup>1</sup> 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.

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

<sup>3</sup> 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.

<sup>4</sup> 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: Table II. Remaining Priority Pollutants, EDCs & Pharmaceuticals, and Unregulated Chemicals  
 (Monitoring & Reporting Program)

Constituent	3Q09	Unit	Method
Metals			
Chromium (III) <sup>1</sup>	1.6	µg/L	EPA 200.8
Volatile Organic Chemicals (VOCs)			
Acrolein	NR	µg/L	EPA 624
Acrylonitrile	NR	µg/L	EPA 624
Bromoform	<0.5	µg/L	EPA 524.2
Chlorodibromomethane	5	µg/L	EPA 524.2
Chloroethane	<0.5	µg/L	EPA 524.2
2-Chloroethylvinylether	NR	µg/L	EPA 624
Chloroform	76	mg/L	EPA 524.2
Dichlorobromomethane	24	µg/L	EPA 524.2
Methyl Bromide	<0.5	µg/L	EPA 524.2
Methyl Chloride	<0.5	µg/L	EPA 524.2
Acid Extractibles			
2-Chlorophenol	NR	µg/L	EPA 625
2,4-Dichlorophenol	NR	µg/L	EPA 625
2,4-Dimethylphenol	NR	µg/L	EPA 625
2-Methyl-4,6-dinitrophenol	NR	µg/L	EPA 625
2,4-Dinitrophenol	NR	µg/L	EPA 625
2-Nitrophenol	NR	µg/L	EPA 625
4-Nitrophenol	NR	µg/L	EPA 625
4-Chloro-3-methylphenol	NR	µg/L	EPA 625
Phenol	NR	µg/L	EPA 625
2,4,6-Trichlorophenol	NR	µg/L	EPA 625
Base/Neutral Extractibles			
Acenaphthene	NR	µg/L	EPA 625
Acenaphthylene	NR	µg/L	EPA 625
Anthracene	NR	µg/L	EPA 625
Benzidine	NR	µg/L	EPA 625
Benzo(a)anthracene	NR	µg/L	EPA 625
Benzo(b)fluoranthene	NR	µg/L	EPA 625
Benzo(g,h,i)perylene	NR	µg/L	EPA 625
Benzo(k)fluoranthene	NR	µg/L	EPA 625
Bis(2-chloroethoxy)methane	NR	µg/L	EPA 625
Bis(2-chloroethyl)ether	NR	µg/L	EPA 625
Bis(2-chloroisopropyl)ether	NR	µg/L	EPA 625
4-Bromophenyl phenyl ether	NR	µg/L	EPA 625
Butyl benzyl phthalate	NR	µg/L	EPA 625
2-Chloronaphthalene	NR	µg/L	EPA 625
4-Chlorophenyl phenyl ether	NR	µg/L	EPA 625
Chrysene	NR	µg/L	EPA 625
Dibenzo(a,h)anthracene	NR	µg/L	EPA 625
1,3-Dichlorobenzene	NR	µg/L	EPA 625
3,3-Dichlorobenzidine	NR	µg/L	EPA 625
Diethyl phthalate	NR	µg/L	EPA 625
Dimethyl phthalate	NR	µg/L	EPA 625
Di-n-butyl phthalate	NR	µg/L	EPA 625
2,4-Dinitrotoluene	NR	µg/L	EPA 625
2,6-Dinitrotoluene	NR	µg/L	EPA 625
Di-n-octyl phthalate	NR	µg/L	EPA 625
Azobenzene	NR	µg/L	EPA 625
Fluoranthene	NR	µg/L	EPA 625
Fluorene	NR	µg/L	EPA 625
Hexachlorobutadiene	NR	µg/L	EPA 625
Hexachlorocyclopentadiene	NR	µg/L	EPA 625
Hexachloroethane	NR	µg/L	EPA 625
Indeno(1,2,3-cd)pyrene	NR	µg/L	EPA 625
Isophorone	NR	µg/L	EPA 625
Naphthalene	NR	µg/L	EPA 625
Nitrobenzene	NR	µg/L	EPA 625
N-Nitroso-di-n-propylamine	NR	µg/L	EPA 625
N-Nitrosodiphenylamine	NR	µg/L	EPA 625
Phenanthrene	NR	µg/L	EPA 625
Pyrene	NR	µg/L	EPA 625
Pesticides			
Aldrin	<0.01	µg/L	EPA 505
BHC, alpha isomer	NR	µg/L	EPA 608
BHC, beta isomer	NR	µg/L	EPA 608
BHC, delta isomer	NR	µg/L	EPA 608
4,4'-DDT	NR	µg/L	EPA 608
4,4'-DDE	NR	µg/L	EPA 608
4,4'-DDD	NR	µg/L	EPA 608
Dieldrin	NR	µg/L	EPA 608
Endosulfan I	NR	µg/L	EPA 608
Endosulfan II	NR	µg/L	EPA 608
Endosulfan Sulfate	NR	µg/L	EPA 608
Endrin Aldehyde	NR	µg/L	EPA 608

Constituent	3Q09	Unit	Method
Unregulated Chemicals			
Chromium VI	0.13	µg/L	EPA 218.6
Ethyl tertiary butyl ether	<3	µg/L	EPA 524.2
Tertiary amyl methyl ether	<3	µg/L	EPA 524.2
Chemicals w/ State Notification Levels <sup>2</sup>			
Boron	0.3	mg/L	EPA 200.7
n-butylbenzene	<0.5	µg/L	EPA 524.2
sec-butylbenzene	<0.5	µg/L	EPA 524.2
tert-butylbenzene	<0.5	µg/L	EPA 524.2
Carbon disulfide	NR	µg/L	EPA 524.2
Chlorate	NR	µg/L	EPA 300.0
2-Chlorotoluene	<0.5	µg/L	EPA 524.2
4-Chlorotoluene	<0.5	µg/L	EPA 524.2
Dichlorodifluoromethane (Freon 12)	<0.5	µg/L	EPA 524.2
1,4 - Dioxane	<2	µg/L	EPA 522
Formaldehyde	NR	µg/L	SM 6252/EPA 8315
Isopropylbenzene	<0.5	µg/L	EPA 524.2
Methyl isobutyl ketone (MIBK)	<5	µg/L	EPA 524.2
N-Nitrosodiethylamine (NDEA)	NR	µg/L	EPA 521
N-nitrosodimethylamine (NDMA)	2.1	ng/L	EPA 521
N-propylbenzene	<0.5	µg/L	EPA 524.2
Tertiary butyl alcohol	2.3	µg/L	542.2 MOD
1,2,3-Trichloropropane (1,2,3-TCP)	<0.5	µg/L	EPA 524.2
1,2,4 -trimethylbenzene	<0.5	µg/L	EPA 524.2
1,3,5-trimethylbenzene	<0.5	µg/L	EPA 524.2
Vanadium	4.0	µg/L	EPA 200.8
Endocrine Disrupting Chemicals, Pharmaceuticals and Other Chemicals <sup>2</sup>			
<u>Hormones</u>			
Ethinyl estradiol	NR	ng/L	HPLC/MS-SEDC
17-B estradiol	NR	ng/L	HPLC/MS-SEDC
Estrone	NR	ng/L	HPLC/MS-SEDC
<u>"Industrial" Endocrine Disruptors</u>			
Bisphenol A	NR	ng/L	HPLC/MS-SEDC
Nonylphenol and nonylphenol polyethoxylate	NR	ng/L	HPLC/MS-SEDC
Octylphenol and octylphenol polyethoxylate	NR	ng/L	HPLC/MS-SEDC
PBDE 17	NR	ng/L	8270C SIM
PBDE 28	NR	ng/L	8270C SIM
PBDE 71	NR	ng/L	8270C SIM
PBDE 47	NR	ng/L	8270C SIM
PBDE 66	NR	ng/L	8270C SIM
PBDE 100	NR	ng/L	8270C SIM
PBDE 99	NR	ng/L	8270C SIM
PBDE 85	NR	ng/L	8270C SIM
PBDE 154	NR	ng/L	8270C SIM
PBDE 153	NR	ng/L	8270C SIM
PBDE 138	NR	ng/L	8270C SIM
PBDE 128	NR	ng/L	8270C SIM
PBDE 183	NR	ng/L	8270C SIM
PBDE 190	NR	ng/L	8270C SIM
PBDE 203	NR	ng/L	8270C SIM
PBDE 206	NR	ng/L	8270C SIM
PBDE 209	NR	ng/L	8270C SIM
<u>Pharmaceuticals &amp; Other Substances</u>			
Acetaminopen	NR	ng/L	HPLC/MS-SEDC
Amoxicillin	NR		Not Available <sup>3</sup>
Azithromycin	NR		Not Available <sup>3</sup>
Caffeine	NR	ng/L	HPLC/MS-SEDC
Carbamazepine	NR	ng/L	HPLC/MS-SEDC
Ciprofloxacin	NR		Not Available <sup>3</sup>
Ethylenediamine tetra-acetic acid (EDTA)	NR	mg/L	EPA 300.0MOD
Gemfibrozil	NR	ng/L	HPLC/MS-SEDC
Ibuprofen	NR	ng/L	HPLC/MS-SEDC
Iodinated contrast media	NR	ng/L	HPLC/MS-SEDC
Lipitor	NR		Not Available <sup>3</sup>
Methadone	NR	ng/L	HPLC/MS-SEDC
Morphine	NR		Not Available <sup>3</sup>
Salicylic acid	NR	ng/L	HPLC/MS-SEDC
Triclosan	NR	ng/L	HPLC/MS-SEDC

NR: Not Required (Annual Requirement)

<sup>1</sup> Trivalent chromium is measured as total chromium

<sup>2</sup> Chemicals w/ State Notification Levels, Nitrosamines, and EDC, Pharmaceuticals & Other Chemicals (Attachment B, MRP No. R8 2007-0039) were sampled during 2Q09 for the annual requirement.

<sup>3</sup> Analytical Method is not available for this constituent

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

RP-3 Basin										
Site	Depth, bgs	Date	TOC	TN	TIN	NO <sub>3</sub> -N	TKN+NO <sub>2</sub> -N	NO <sub>2</sub> -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	07/08/09	7.49	3.4	1.6	1.1	2.3	0.19	790	
RP31-LYS-00	0	07/21/09	6.90	0.6	0.6	0.4	<0.5	0.09	770	
RP31-LYS-00	0	07/28/09	8.14	2.6	<0.2	<0.1	2.5	0.11	800	
RP31-LYS-00	0	08/04/09	13.50	4.1	1.2	<0.1	4.0	0.07	800	
RP31-LYS-00	0	08/11/09	8.60	2.1	0.8	0.4	1.7	0.14	720	
RP31-LYS-00	0	08/18/09	11.98	2.5	0.5	0.2	2.2	0.11	620	
RP31-LYS-00	0	08/26/09	6.68	2.4	0.7	0.4	2.0	0.09	710	
RP31-LYS-00	0	09/01/09	13.40	3.1	<0.2	<0.1	3.1	0.04	660	
RP31-LYS-00	0	09/09/09	8.73	2.4	1.4	0.5	1.9	0.21	760	
RP31-LYS-00	0	09/15/09	7.88	1.9	0.7	0.5	1.4	0.04	700	
RP31-LYS-00	0	09/22/09	7.95	2.5	0.4	0.1	2.4	0.02	705	
RP31-LYS-00	0	09/29/09	10.06	3.6	0.6	0.3	3.3	0.08	690	
RP31-LYS-05	5	07/08/09	2.98	8.2	6.7	6.7	1.5	0.07	970	
RP31-LYS-05	5	07/14/09	2.60	3.1	2.5	2.4	0.7	0.04	780	
RP31-LYS-05	5	07/21/09	2.97	3.5	1.4	1.4	2.1	0.05	775	
RP31-LYS-05	5	07/28/09	3.06	3.3	2.4	2.3	1.0	0.08	820	
RP31-LYS-05	5	08/04/09	2.52	5.5	4.3	4.1	1.3	0.07	920	
RP31-LYS-05	5	08/11/09	2.87	3.0	2.5	2.4	0.6	0.07	785	
RP31-LYS-05	5	08/18/09	2.72	3.4	2.6	2.5	0.9	0.06	740	
RP31-LYS-05	5	08/26/09	4.25	1.7	1.0	0.9	0.8	0.12	670	
RP31-LYS-05	5	09/01/09	2.95						725	
RP31-LYS-05	5	09/09/09	3.02			2.0		0.06	745	
RP31-LYS-05	5	09/15/09	2.80						755	
RP31-LYS-05	5	09/22/09	2.73	2.9	1.8	1.7	1.2	<0.01	705	
RP31-LYS-05	5	09/29/09	2.87						730	
RP31-LYS-10	10	07/08/09	3.02	7.5	6.4	6.3	1.2	0.06	950	
RP31-LYS-10	10	07/14/09	2.92	3.6	3.2	3.1	<0.5	0.06	870	
RP31-LYS-10	10	07/21/09	2.69	2.8	2.2	2.1	0.7	0.05	835	
RP31-LYS-10	10	07/28/09	2.64	2.0	1.8	1.8	<0.5	0.07	820	
RP31-LYS-10	10	08/04/09	3.19	3.7	3.0	2.9	0.8	0.06	875	
RP31-LYS-10	10	08/11/09	2.63	2.8	2.8	2.6	<0.5	0.07	820	
RP31-LYS-10	10	08/18/09	2.91	2.1	2.1	2.1	<0.5	0.05	780	
RP31-LYS-10	10	08/26/09	3.49	2.5	1.3	1.3	1.3	0.06	695	
RP31-LYS-10	10	09/01/09	2.53	1.6	1.6	1.6	<0.5	<0.01	780	
RP31-LYS-10	10	09/09/09	2.26	1.9	1.9	1.8	<0.5	0.05	755	
RP31-LYS-10	10	09/15/09	2.54	2.8	2.4	2.4	<0.5	<0.01	800	
RP31-LYS-10	10	09/22/09	2.61	3.3	2.4	2.4	0.9	<0.01	750	
RP31-LYS-10	10	09/29/09	2.40	3.6	2.4	2.4	1.2	<0.01	750	
RP31-LYS-15	15	07/08/09	2.31	4.7	4.1	4.0	0.7	0.07	830	
RP31-LYS-15	15	07/14/09	2.40	6.1	5.5	5.4	0.7	0.07	875	
RP31-LYS-15	15	07/21/09	1.95	4.7	4.0	3.9	0.8	0.06	900	
RP31-LYS-15	15	07/28/09	2.21	2.6	2.6	2.5	<0.5	0.08	880	
RP31-LYS-15	15	08/04/09	2.63	2.3	2.3	2.2	<0.5	0.07	890	
RP31-LYS-15	15	08/11/09	1.67	2.4	2.0	2.0	<0.5	0.07	915	
RP31-LYS-15	15	08/18/09	1.96	2.6	2.6	2.5	<0.5	0.05	910	
RP31-LYS-15	15	08/26/09	2.00	3.2	2.7	2.2	1.0	0.08	865	
RP31-LYS-15	15	09/01/09	1.77	1.8	1.9	1.8	<0.5	0.06	820	
RP31-LYS-15	15	09/09/09	1.76	1.7	1.7	1.7	<0.5	<0.01	825	
RP31-LYS-15	15	09/15/09	1.82	1.8	1.8	1.8	<0.5	<0.01	830	
RP31-LYS-15	15	09/22/09	2.09	3.1	2.1	2.0	1.0	<0.01	760	
RP31-LYS-15	15	09/29/09	2.13	2.7	1.8	1.8	0.9	<0.01	770	
RP31-LYS-25	25	07/08/09	1.65	4.9	4.7	4.6	<0.5	0.07	780	
RP31-LYS-25	25	07/14/09	1.48	7.5	5.6	5.5	2.0	0.07	800	
RP31-LYS-25	25	07/21/09	1.37	6.2	5.8	5.7	0.5	0.04	815	
RP31-LYS-25	25	07/28/09	1.59	4.4	4.3	4.2	<0.5	0.06	815	
RP31-LYS-25	25	08/04/09	2.35	3.5	3.5	3.4	<0.5	0.06	835	
RP31-LYS-25	25	08/11/09	1.32	2.4	2.4	2.3	<0.5	0.06	775	
RP31-LYS-25	25	08/18/09	1.38	2.6	2.5	2.4	<0.5	0.05	780	
RP31-LYS-25	25	08/26/09	1.34	2.6	2.6	2.5	<0.5	0.06	795	
RP31-LYS-25	25	09/01/09	1.30	2.2	2.2	2.2	<0.5	0.04	770	
RP31-LYS-25	25	09/09/09	1.28	2.0	2.1	2.0	<0.5	<0.01	765	
RP31-LYS-25	25	09/15/09	1.25	1.8	1.8	1.8	<0.5	<0.01	770	
RP31-LYS-25	25	09/22/09	1.36	2.8	2.2	2.1	0.6	<0.01	765	
RP31-LYS-25	25	09/29/09	1.31	2.9	2.0	2.0	0.8	<0.01	740	
RP31-LYS-35	35	07/08/09	0.99	7.4	7.2	7.1	<0.5	0.06	565	
RP31-LYS-35	35	07/14/09	0.90	8.2	7.3	7.3	0.9	0.06	580	
RP31-LYS-35	35	07/21/09	0.83	6.8	6.5	6.5	<0.5	0.04	590	
RP31-LYS-35	35	07/28/09	0.98	6.5	6.0	6.0	0.6	0.05	615	
RP31-LYS-35	35	08/04/09	1.63	6.4	6.4	6.3	<0.5	0.06	625	
RP31-LYS-35	35	08/11/09	0.85	5.5	5.3	5.3	<0.5	0.06	650	
RP31-LYS-35	35	08/18/09	0.96	5.1	4.9	4.8	<0.5	0.05	675	
RP31-LYS-35	35	08/26/09	0.89	4.8	4.8	4.8	<0.5	0.06	690	
RP31-LYS-35	35	09/01/09	0.86	4.9	4.7	4.6	<0.5	0.04	710	
RP31-LYS-35	35	09/09/09	0.82	5.0	4.6	4.4	0.5	0.03	705	
RP31-LYS-35	35	09/15/09	0.91	4.0	4.0	4.0	<0.5	<0.01	715	
RP31-LYS-35	35	09/22/09	0.86	4.4	3.9	3.8	0.6	<0.01	710	
RP31-LYS-35	35	09/29/09	0.89	4.5	3.6	3.5	0.9	0.03	710	

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

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

Brooks Basin									
Site	Depth, bgs	Date	TOC	TN	TIN	NO <sub>3</sub> -N	TKN+NO <sub>2</sub> -N	NO <sub>2</sub> -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	07/07/09	7.81	5.4	1.6	1.5	4.0	0.13	765
BRK-LYS-00	0	07/14/09	6.51	3.3	0.3	0.2	3.1	0.10	800
BRK-LYS-00	0	07/21/09	7.18	3.2	<0.2	<0.1	3.1	<0.01	780
BRK-LYS-00	0	07/28/09	8.23	1.2	<0.2	<0.1	1.2	0.02	785
BRK-LYS-00	0	08/04/09	7.29	2.5	1.7	1.4	1.1	0.07	790
BRK-LYS-00	0	08/11/09	8.87	2.6	0.3	0.1	2.4	0.06	770
BRK-LYS-05	5	07/07/09	6.42	2.8	1.8	0.1	2.7	0.08	790
BRK-LYS-05	5	07/14/09	7.71	2.8	1.9	0.1	2.6	0.10	860
BRK-LYS-05	5	07/21/09	7.74	2.3	2.1	0.1	2.2	0.09	940
BRK-LYS-05	5	07/28/09	8.90	1.6	2.0	<0.1	1.5	0.09	1010
BRK-LYS-05	5	08/04/09	7.46	1.9	2.4	0.4	1.4	0.07	1090
BRK-LYS-05	5	08/11/09	5.98	5.2	4.6	3.6	1.6	0.16	1140
BRK-LYS-10	10	07/07/09	4.48						565
BRK-LYS-10	10	07/14/09	4.28						650
BRK-LYS-10	10	07/28/09	5.11						780
BRK-LYS-10	10	08/04/09	4.98						860
BRK-LYS-10	10	08/11/09	4.96						910
BRK-LYS-25	25	07/07/09	3.10	0.7	0.3	<0.1	0.6	0.08	620
BRK-LYS-25	25	07/14/09	3.02	1.0	0.4	0.2	0.8	0.07	730
BRK-LYS-25	25	07/21/09	2.76	<0.6	<0.2	<0.1	<0.5	0.05	740
BRK-LYS-25	25	07/28/09	2.95	<0.6	<0.2	<0.1	<0.5	0.07	750
BRK-LYS-25	25	08/04/09	3.78	1.0	<0.2	<0.1	1.0	0.05	680
BRK-LYS-25	25	08/11/09	11.15	<0.6	0.4	0.2	<0.5	0.11	800
BRK-LYS-35	35	07/07/09	3.49	<0.6	<0.2	<0.1	<0.5	0.07	525
BRK-LYS-35	35	07/14/09	4.24	<0.6	<0.2	<0.1	<0.5	0.03	600
BRK-LYS-35	35	07/21/09	2.66	<0.6	<0.2	<0.1	<0.5	0.04	605
BRK-LYS-35	35	07/28/09	8.25	0.7	<0.2	<0.1	0.6	0.06	550
BRK-LYS-35	35	08/04/09	11.15						530
BRK-LYS-35	35	08/11/09	3.16						520

8th Street Basin									
Site	Depth, bgs	Date	TOC	TN	TIN	NO <sub>3</sub> -N	TKN+NO <sub>2</sub> -N	NO <sub>2</sub> -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	08/04/09	9.72	4.9	3.5	2.7	2.2	0.22	780
8TH-LYS-00	0	08/11/09	6.40	2.6	1.1	0.8	1.8	0.21	430
8TH-LYS-00	0	08/18/09	2.16	4.8	4.8	4.6	<0.5	0.15	430
8TH-LYS-05	5	07/28/09	3.36	7.4	7.3	7.3	<0.5	0.08	905
8TH-LYS-05	5	08/04/09	3.66	8.5	8.0	7.9	0.6	0.07	970
8TH-LYS-05	5	08/11/09	1.24	6.0	5.8	5.7	<0.5	0.11	490
8TH-LYS-05	5	08/18/09	0.57	5.3	5.1	5.0	<0.5	0.11	435
8TH-LYS-15	15	07/28/09	2.54	6.0	6.0	5.9	<0.5	0.07	590
8TH-LYS-15	15	08/04/09	2.57						720
8TH-LYS-15	15	08/11/09	1.29	5.7	5.7	5.6	<0.5	0.10	565
8TH-LYS-15	15	08/18/09	1.00	5.2	5.2	5.1	<0.5	0.11	450
8TH-LYS-25	25	07/28/09	3.60	9.5	9.4	9.3	<0.5	0.09	540
8TH-LYS-25	25	08/04/09	2.31	15.6	14.3	14.2	1.3	0.09	600
8TH-LYS-25	25	08/11/09	2.01	6.3	5.6	5.4	0.9	0.15	600
8TH-LYS-25	25	08/18/09	1.10	5.0	5.0	4.9	<0.5	0.16	485
8TH-LYS-35	35	07/28/09	4.67	0.9	0.4	0.4	<0.5	0.08	995
8TH-LYS-35	35	08/04/09	4.81	<0.6	0.4	0.3	<0.5	0.08	1070
8TH-LYS-35	35	08/11/09	4.60	1.0	0.9	0.8	<0.5	0.06	1050
8TH-LYS-35	35	08/18/09	3.56	2.5	2.4	2.3	<0.5	0.07	950

Hickory East Basin									
Site	Depth, bgs	Date	TOC	TN	TIN	NO <sub>3</sub> -N	TKN+NO <sub>2</sub> -N	NO <sub>2</sub> -N	EC
Unit=>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
HKYE-LYS-00	0	09/10/09	8.05	0.9	<0.2	0.1	0.8	<0.01	720
HKYE-LYS-00	0	09/15/09	20.14	3.1	0.2	0.2	2.9	<0.01	910
HKYE-LYS-25	25	09/10/09	0.65			6.3		<0.01	810
HKYE-LYS-25	25	09/15/09	0.88						670
HKYE-LYS-25	25	09/22/09	0.21						1560

Ely Basin No. 3									
Site	Depth, bgs	Date	TOC	TN	TIN	NO <sub>3</sub> -N	TKN+NO <sub>2</sub> -N	NO <sub>2</sub> -N	EC
Unit=>	feet	mm/dd/yy	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µmho/cm
ELY3E-LYS-00	0	09/22/09	10.67	5.1	0.4	0.3	4.8	0.06	355
ELY3E-LYS-10	10	09/22/09	3.75	3.7	2.3	2.3	1.4	0.06	370
ELY3E-LYS-25	25	09/22/09	1.86						285

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

Table 2-5b  
 Alternative Monitoring Plan for TOC and TN (mg/L)

Turner Basin					
Date	Recycled Water*	Recycled Water*	Turner 1 & 2	Turner 3 & 4	Turner 1 & 2 Turner 3 & 4
	TOC	TN	TOC (70% reduction)	TOC (85% reduction)	TN (87% reduction)
08/05/09	3.24	5.3	0.97	0.49	0.7
08/12/09	3.34	7.6	1.00	0.50	1.0
09/15/09	3.01	5.4	0.90	0.45	0.7
09/22/09	3.34	5.5	1.00	0.50	0.7
09/28/09	3.36	5.1	1.01	0.50	0.7

Ely Basin				
Date	Recycled Water*	Recycled Water*	Ely 3 East	Ely 3 East
	TOC	TN	TOC (76% reduction)	TN (52% reduction)
09/15/09	3.01	5.4	0.72	2.6
09/22/09	3.34	5.5	0.80	2.6
09/28/09	3.36	5.1	0.81	2.5

\*Recycled water sampled at Reliant

Table 2-6  
Diluent Water Monitoring Results

Cucamonga Creek @ Turner			
Local Runoff			
Constituent	August 27, 2009	Unit	Method
NO <sub>2</sub> -N	0.032	mg/L	EPA 300.0
NO <sub>3</sub> -N	0.2	mg/L	EPA 300.0
TDS	292	mg/L	SM 2540C
Total Coliform	>2300	mpn/100ml	SM 9221B
Oil & Grease	<2	mg/L	EPA 1664A
Inorganic Chemicals			
Aluminum	100	µg/L	EPA 200.7
Antimony	1.1	µg/L	EPA 200.8
Arsenic	<2	µg/L	EPA 200.8
Asbestos	<3.7	MFL	EPA 100.2
Barium	38	µg/L	EPA 200.7
Beryllium	<0.5	µg/L	EPA 200.7
Cadmium	1.1	µg/L	EPA 200.7
Chromium	1.8	µg/L	EPA 200.7
Cyanide	<0.006	mg/L	SM 4500-CN E
Fluoride	1.2	mg/L	SM 4500-F C
Mercury	<0.2	µg/L	EPA 245.2
Nickel	4	µg/L	EPA 200.7
Perchlorate	<4	µg/L	EPA 314
Selenium	<2	µg/L	EPA 200.8
Thallium	<1	µg/L	EPA 200.8
Volatile Organic Chemicals (VOCs)			
Benzene	<0.5	µg/L	EPA 524.2
Carbon Tetrachloride	<0.5	µg/L	EPA 524.2
1,2-Dichlorobenzene	<0.5	µg/L	EPA 524.2
1,4-Dichlorobenzene	<0.5	µg/L	EPA 524.2
1,1-Dichloroethane	<0.5	µg/L	EPA 524.2
1,2-Dichloroethane	<0.5	µg/L	EPA 524.2
1,1-Dichloroethylene	<0.5	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	<0.5	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	<0.5	µg/L	EPA 524.2
Dichloromethane	<0.5	µg/L	EPA 524.2
1,2-Dichloropropane	<0.5	µg/L	EPA 524.2
1,3-Dichloropropene	<0.5	µg/L	EPA 524.2
Ethylbenzene	<0.5	µg/L	EPA 524.2
Chlorobenzene	<0.5	µg/L	EPA 524.2
Methyl Tert-butyl ether (MTBE)	<0.5	µg/L	EPA 524.2
Styrene	<0.5	µg/L	EPA 524.2
1,1,1,2-Tetrachloroethane	<0.5	µg/L	EPA 524.2
Tetrachloroethylene	<0.5	µg/L	EPA 524.2
Toluene	<0.5	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	<0.5	µg/L	EPA 524.2
1,1,1-Trichloroethane	<0.5	µg/L	EPA 524.2
1,1,2-Trichloroethane	<0.5	µg/L	EPA 524.2
Trichloroethylene	<0.5	µg/L	EPA 524.2
Trichlorofluoromethane	<0.5	µg/L	EPA 524.2
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.5	µg/L	EPA 524.2
Vinyl Chloride	<0.3	µg/L	EPA 524.2
Total Xylenes	<1	µg/L	EPA 524.2
Non-Volatile Synthetic Organic Chemicals (SOCs)			
Alachlor (Alanex)	<0.1	µg/L	EPA 505
Atrazine	<0.05	µg/L	EPA 525.2
Bentazon	<0.5	µg/L	EPA 515.4
Benzo(a)pyrene	<0.02	µg/L	EPA 525.2
Carbofuran	<0.5	µg/L	EPAS31.2
Chlordane	<0.1	µg/L	EPA 505
2,4-D	0.47	µg/L	EPA 515.4
Dalapon	<1	µg/L	EPA 515.4
Dibromochloropropane	<0.01	µg/L	EPA 504.1
Di(2-ethylhexyl)adipate	<0.6	µg/L	EPA 525.2
Di(2-ethylhexyl)phthalate	<0.6	µg/L	EPA 525.2
Dinoseb	<0.2	µg/L	EPA 515.4
Diquat	<0.4	µg/L	EPA 549.2
Endothall	<5	µg/L	EPA 548.1

Table 2-6  
Diluent Water Monitoring Results

Cucamonga Creek @ Turner			
Local Runoff			
Constituent	August 27, 2009	Unit	Method
Endrin	<0.01	µg/L	EPA 505
Ethylene Dibromide	<0.01	µg/L	EPA 504.1
Glyphosate	7.3	µg/L	EPA 547
Heptachlor	<0.01	µg/L	EPA 505
Heptachlor Epoxide	<0.01	µg/L	EPA 505
Hexachlorobenzene	<0.05	µg/L	EPA 525.2
Hexachlorocyclopentadiene	<0.05	µg/L	EPA 525.2
Lindane	<0.01	µg/L	EPA 505
Methoxychlor	<0.05	µg/L	EPA 505
Molinate	<0.1	µg/L	EPA 525.2
Oxamyl	<0.5	µg/L	EPA 531.2
Pentachlorophenol	<0.04	µg/L	EPA 515.4
Picloram	<0.1	µg/L	EPA 515.4
PCB 1016	<0.08	µg/L	EPA 505
PCB 1221	<0.1	µg/L	EPA 505
PCB 1232	<0.1	µg/L	EPA 505
PCB 1242	<0.1	µg/L	EPA 505
PCB 1248	<0.1	µg/L	EPA 505
PCB 1254	<0.1	µg/L	EPA 505
PCB 1260	<0.1	µg/L	EPA 505
Simazine	<0.05	µg/L	EPA 525.2
Thiobencarb	<0.2	µg/L	EPA 525.2
Toxaphene	<0.5	µg/L	EPA 505
2,3,7,8-TCDD (Dioxin)	<5	pg/L	EPA 1613
2,4,5-TP (Silvex)	<0.2	µg/L	EPA 515.4
Disinfection Byproducts			
Total Trihalomethanes (TTHMs)	<0.5	µg/L	EPA 524.2/624
Total Haloacetic Acids (HAA5)	10	µg/L	S6251B
Bromate	<5	µg/L	EPA 300.1
Chlorite	<0.01	mg/L	EPA 300.0
Action Level Chemicals			
Copper	12.4	µg/L	EPA 200.7
Lead	<0.5	µg/L	EPA 200.8
Radionuclides			
Combined Radium-226 and Radium 228	<0.48	pCi/L	EPA 903.0
Gross Alpha Particle Activity	<3	pCi/L	EPA 900.0
Tritium	<230	pCi/L	EPA 906
Strontium-90	<0.68	pCi/L	EPA 905
Gross Beta Particle Activity	4.8	pCi/L	EPA 900.0
Uranium	0.73	pCi/L	EPA 200.8
Unregulated Chemicals			
Chromium VI	2.5	µg/L	EPA 218.6
Ethyl tertiary butyl ether	<3	µg/L	EPA 524.2
Tertiary amyl methyl ether	<3	µg/L	EPA 524.2
Chemicals w/ State Notification Levels			
Boron	<0.1	mg/L	EPA 200.7
n-butylbenzene	<0.5	ug/L	EPA 524.2
sec-butylbenzene	<0.5	ug/L	EPA 524.2
tert-butylbenzene	<0.5	ug/L	EPA 524.2
2-Chlorotoluene	<0.5	ug/L	EPA 524.2
4-Chlorotoluene	<0.5	ug/L	EPA 524.2
Dichlorodifluoromethane (Freon 12)	<0.5	ug/L	EPA 524.2
1,4 - Dioxane	<2	ug/L	EPA 522
Isopropylbenzene	<0.5	ug/L	EPA 524.2
Methyl isobutyl ketone (MIBK)	<5	ug/L	EPA 524.2
N-nitrosodimethylamine (NDMA)	<2	ng/l	EPA 521
N-propylbenzene	<0.5	ug/L	EPA 524.2
Tertiary butyl alcohol	<2	ug/L	EPA 524.2 SIM
1,2,3-Trichloropropane (1,2,3-TCP)	<0.5	ug/L	EPA 524.2
1,2,4 -trimethylbenzene	<0.5	ug/L	EPA 524.2
1,3,5-trimethylbenzene	<0.5	ug/L	EPA 524.2
Vanadium	18	µg/L	EPA 200.8

Table 2-6  
Diluent Water Monitoring Results

Cucamonga Creek @ Turner			
Local Runoff			
August 27, 2009			
Constituent		Unit	Method
Secondary Maximum Contaminant Level Chemicals			
Aluminum	100	µg/L	EPA 200.7
Corrosivity	2.4	SI	SM 2330B
Foaming Agents (MBAS)	0.08	mg/L	S5540C/EPA 425.1
Iron	81	µg/L	EPA 200.7
Manganese	5	µg/L	EPA 200.7
Odor--Threshold	8	TON	SM 2150B
Silver	<0.25	µg/L	EPA 200.7
Thiobencarb	<0.2	µg/L	EPA 525.2
Zinc	15	µg/L	EPA 200.7

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	3601065	City Of Ontario - 19	2200 upgradient	NA	16	Inactive	Municipal
	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	--	Inland Empire Utilities Agency - DCZ-1	50 downgradient	155-175	4	Active	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	Municipal
	600848	Alcoa - Offsite Mw1	9480 downgradient	NA	NA	Active	Monitoring
	600850	Alcoa - Offsite Mw3	4725 downgradient	NA	NA	Active	Monitoring
	--	Inland Empire Utilities Agency - RP3-1/1	100 downgradient	215-235	4	NA	Monitoring
	--	Inland Empire Utilities Agency - RP3-1/2	100 downgradient	265-285	4	NA	Monitoring
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
	--	Inland Empire Utilities Agency - 8th-1/1	150 downgradient	495-535	4	Active	Monitoring
	--	Inland Empire Utilities Agency - 8th-1/2	150 downgradient	595-645	4	Active	Monitoring
	--	Inland Empire Utilities Agency - 8th-2/1	2460 downgradient	465-505	4	Active	Monitoring
--	Inland Empire Utilities Agency - 8th-2/2	2460 downgradient	576-616	4	Active	Monitoring	
Brooks Basins	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
	--	Inland Empire Utilities Agency - BRK-1/1	144 downgradient	310-350	4	Active	Monitoring
	--	Inland Empire Utilities Agency - BRK-1/2	144 downgradient	520-560	4	Active	Monitoring
	--	Inland Empire Utilities Agency - BRK-2/1	1305 downgradient	320-360	4	NA	Monitoring
	--	Inland Empire Utilities Agency - BRK-2/2	1305 downgradient	560-600	4	NA	Monitoring
Ely Basin	601003	Ely Basin MW-1, Philadelphia Well (Casing 3)	100 downgradient	280 - 300	2	NA	Monitoring
	601004	Ely Basin MW-2, Walnut Well (Casing 2)	3050 downgradient	290 - 310	4	NA	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 has taken the place of Ontario Well No. 19, which is inactive

Table 2-8  
Groundwater Monitoring Results (Quarterly)

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)	Thiobacarb (µg/L)	Turbidity (NTU)	Zn (µg/L)	Cl (mg/L)	Hardness (mg CaCO <sub>3</sub> /L)	Na (mg/L)	SO <sub>4</sub> (mg/L)	NH <sub>4</sub> -N (mg/L)	NO <sub>2</sub> -N (mg/L)	NO <sub>3</sub> -N (mg/L)	Nitrogen, Total (mg/L)	TKN (mg/L)	Alkalinity (mg CaCO <sub>3</sub> /L)	Dissolved Oxygen (mg/L)	
Banana & Hickory	Fontana Water Company F37a	7/15/09	0.9	<1.1	7.5	470	306	<25	<3	166	0.4	<0.05	10	3	<0.5	1	<0.25	<0.2	0.8	16	17	215	19	16	<0.1	<0.01	10.0	12.8	2.8	170	9.1	
	California Speedway Infield Well	7/15/09	<0.1	<1.1	7.5	480	316	<25	<3	0.8	0.3	0.06	38	<1	<0.5	2	<0.25	<0.2	0.2	1	15	207	18	40	<0.1	<0.01	7.1	7.1	<0.5	157	9.1	
	California Speedway 2	7/15/09	0.7	<1.1	7.8	385	252	<25	<3	8.0	0.2	0.05	14	<1	<0.5	2	<0.25	<0.2	1.5	17	10	161	18	13	<0.1	<0.01	4.2	4.2	<0.5	155	7.9	
	Reliant Energy East Well	7/15/09	<0.1	<1.1	7.6	360	242	50	<3	15	-0.1	0.06	72	8	<0.5	2	<0.25	<0.2	2.7	8	13	146	18	19	<0.1	<0.01	6.7	6.7	<0.5	116	8.8	
	Ontario Well No. 20	7/20/09	<0.1	<1.1	7.7	350	227	<25	<3	5.9	0.4	0.06	6	<1	<0.5	1	<0.25	<0.2	0.2	<1	5	154	15	4	<0.1	0.08	1.4	1.5	<0.5	159	7.8	
BH-1/2	7/14/09	0.3	<1.1	7.6	520	350	<25	5	0.5	0.2	0.17	283	3	<0.5	1	<0.25	<0.2	2.8	<1	69	210	21	31	<0.1	0.05	2.3	2.3	<0.5	111	7.2		
Turner	Ontario Well No. 25	7/20/09	0.2	<1.1	7.7	415	269	<25	<3	1.1	0.4	<0.05	6	<1	<0.5	2	<0.25	<0.2	0.3	<1	12	171	20	15	<0.1	0.10	3.4	3.5	<0.5	171	6.9	
	Ontario Well No. 29	7/20/09	<0.1	<1.1	7.6	375	247	<25	<3	2.3	0.3	<0.05	2	<1	<0.5	2	<0.25	<0.2	0.1	<1	10	147	22	19	<0.1	0.09	3.4	3.5	<0.5	148	6.9	
	Ontario Well No. 38	7/20/09	<0.1	<1.1	7.9	315	202	<25	<3	<0.5	0.5	<0.05	3	<1	<0.5	1	<0.25	<0.2	0.2	<1	3	124	20	5	<0.1	0.07	0.7	0.8	<0.5	160	6.9	
	T-1/2	7/27/09	0.5	<1.1	7.4	370	242	<25	<3	<0.5	-0.1	0.06	22	<1	<0.5	1	<0.25	<0.2	0.4	<1	35	148	19	9	<0.1	<0.01	-0.1	0.2	<0.5	130	6.1	
	T-2/1	7/27/09	0.5	<1.1	7.4	495	292	<25	5	2.4	0.1	<0.05	422	5	<0.5	1	<0.25	<0.2	4.9	4	59	190	29	24	<0.1	<0.01	1.0	1.0	<0.5	134	6.7	
T-2/2	7/27/09	0.4	<1.1	7.4	480	301	<25	<3	<0.5	0.0	0.05	43	2	<0.5	1	<0.25	<0.2	0.8	<1	49	195	23	33	<0.1	<0.01	1.3	1.9	0.6	127	7.2		
RP-3	Southridge JHS	9/17/09	0.4	<1.1	6.6	1010	648	401	25	1.4	0.2	<0.05	11700	355	<0.5	1	<0.25	<0.2	46.8	7	134	394	60	81	<0.1	<0.01	16.6	17.1	<0.5	190	6.3	
	Fontana Water Company F23a	9/10/09	<0.1	<1.1		390	262	<25	<3	18.3	0.0	<0.05	0	<1	<0.5	1	<0.25	<0.2	0.1	2	19	169	22	19	<0.1	0.05	6.0	6.4	<0.5	133		
	Alcoa Offsite MW1	9/30/09	0.3	<1.1		585	404	2360	10	4.4	0.4	<0.05	3370	65	<0.5	2	0.26	<0.2	44.7	19	27	270	30	33	<0.1	<0.08	19.1	19.8	0.6	163		
	Alcoa Offsite MW3	9/30/09	0.5	<1.1		590	396	203	<3	1.9	0.3	<0.05	325	6	<0.5	1	<0.25	<0.2	2.2	13	23	254	36	53	<0.1	0.09	14.5	15.3	0.7	174		
	RP3-1/1	7/8/09	6.6			1340																										
	RP3-1/1	7/14/09	6.5	<1.1	7.1	1260	859	328	5	3.5	0.4	<0.05	441	233	<0.5	4	<0.25	<0.2	8.9	5	28	204	217	129	<0.1	0.23	11.5	12.1	<0.5	476	0.5	
	RP3-1/1	7/22/09	5.0			1170																										
	RP3-1/1	7/28/09	5.3			1120																										
	RP3-1/1	8/11/09	4.1			1050																										
	RP3-1/1	8/25/09	3.7			1030																										
	RP3-1/1	9/8/09	3.4			980																										
	RP3-1/1	9/22/09	3.2			995																										
	RP3-1/2	7/8/09	2.1			990																										
	RP3-1/2	7/14/09	2.5	<1.1	6.9	975	670	<25	3	0.5	0.4	<0.05	1	3	<0.5	3	<0.25	<0.2	2.1	<1	23	361	77	69	<0.1	0.21	26.0	26.4	<0.5	320	0.7	
	RP3-1/2	7/22/09	1.5			990																										
	RP3-1/2	7/28/09	1.6			990																										
	RP3-1/2	8/11/09	1.5			990																										
RP3-1/2	8/25/09	1.5			1000																											
RP3-1/2	9/8/09	1.4			960																											
RP3-1/2	9/22/09	1.7			950																											
7th & 8th St.	Ontario Well No. 35	7/28/09	<0.1	<1.1	7.7	345	268	<25	<3	2.7	0.2	<0.05	1	<1	<0.5	2	<0.25	<0.2	0.8	2	7	139	25	20	<0.1	0.10	2.3	2.5	<0.5	142	7.6	
	8TH-1/1	7/13/09	1.4	5.1	8.0	200	138	<25	<3	<0.5	0.0	<0.05	11	<1	<0.5	1	<0.25	<0.2	0.2	<1	15	78	10	4	<0.1	0.06	0.7	1.3	0.5	71	7.4	
	8TH-1/2	7/13/09	0.5	<1.1	7.2	315	212	<25	<3	<0.5	-0.2	<0.05	3	5	<0.5	1	<0.25	<0.2	0.1	<1	12	137	15	12	0.1	0.09	5.1	5.2	<0.5	113	6.4	
	8TH-2/1	7/13/09	0.3	2.2	7.4	425	273	31	<3	<0.5	0.1	<0.05	38	1	<0.5	1	<0.25	<0.2	0.1	<1	12	191	15	19	<0.1	0.11	8.4	8.5	<0.5	149	7.4	
	8TH-2/2	7/13/09	0.1	2.2	7.2	650	471	<25	<3	<0.5	0.0	0.10	22	2	<0.5	1	<0.25	<0.2	0.8	1	30	282	20	27	<0.1	0.10	29.7	29.8	<0.5	145	8.1	
Brooks	Pomona Well No. 2	7/21/09	<0.1	<1.1	6.9	605	386	<25	<3	3.3	0.5	<0.05	1	<1	<0.5	1	<0.25	<0.2	0.1	3	41	276	12	54	<0.1	0.07	11.1	11.5	<0.5	152	6.9	
	Pomona Well No. 10	7/21/09	0.1	<1.1	7.1	600	374	<25	3	11	0.4	<0.05	158	7	<0.5	1	<0.25	<0.2	0.8	18	45	285	12	50	<0.1	0.07	8.9	9.0	<0.5	153	5.8	
	Pomona Well No. 34	7/21/09	<0.1	<1.1	6.8	560	350	<25	<3	1.4	0.5	<0.05	3	<1	<0.5	1	<0.25	<0.2	0.1	2	30	264	12	43	<0.1	0.08	13.0	13.1	<0.5	151	6.5	
	BRK-1/1	7/6/09	1.2			535																										
	BRK-1/1	7/20/09	0.7	<1.1	8.0	540	335	1010	5	1.7	0.3	<0.05	554	18	<0.5	1	<0.25	<0.2	20.5	3	18	102	74	9	<0.1	0.03	0.4	0.5	<0.5	142	1.2	
	BRK-1/1	8/3/09	1.5			545																										
	BRK-1/1	8/17/09	0.9			515																										
	BRK-1/1	8/31/09	0.5			475																										
	BRK-1/1	9/14/09	0.5			430																										
	BRK-1/1	9/28/09	0.6			420		</																								

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

Date	Diluent Water																				
	Imported Water							Local Runoff / Storm Flow							Recycled Water						
	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP-3	Turner	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP-3	Turner	7th & 8th St.	Banana	Brooks	Ely	Hickory	RP-3	Turner
Oct-08	0	0	0	0	0	0	0	16	36	0	85	3	13	117	0	0	166	135	0	0	94
Nov-08	0	0	0	0	0	0	0	137	50	23	198	3	27	117	0	0	103	88	0	0	38
Dec-08	0	0	0	0	0	0	0	352	87	162	287	35	155	394	0	0	88	0	0	0	0
<b>4Q08 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>505</b>	<b>173</b>	<b>184</b>	<b>571</b>	<b>41</b>	<b>195</b>	<b>628</b>	<b>0</b>	<b>0</b>	<b>356</b>	<b>223</b>	<b>0</b>	<b>0</b>	<b>131</b>
Jan-09	0	0	0	0	0	0	0	35	5	25	38	0	12	39	0	40	277	39	0	0	0
Feb-09	0	0	0	0	0	0	0	458	95	208	399	63	272	413	0	0	20	9	23	0	0
Mar-09	0	0	0	0	0	0	0	21	0	30	32	31	46	57	0	0	159	0	23	0	0
<b>1Q09 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>514</b>	<b>100</b>	<b>263</b>	<b>469</b>	<b>94</b>	<b>330</b>	<b>509</b>	<b>0</b>	<b>40</b>	<b>456</b>	<b>48</b>	<b>46</b>	<b>0</b>	<b>0</b>
Apr-09	0	0	0	0	0	0	0	15	0	1	78	8	18	13	0	0	296	15	0	0	0
May-09	0	0	0	0	0	0	0	16	0	17	38	18	6	19	0	0	115	11	0	0	30
Jun-09	0	0	0	0	0	0	0	30	0	0	14	11	21	62	0	0	178	0	0	106	9
<b>2Q09 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>18</b>	<b>130</b>	<b>36</b>	<b>45</b>	<b>94</b>	<b>0</b>	<b>0</b>	<b>589</b>	<b>27</b>	<b>0</b>	<b>106</b>	<b>39</b>
Jul-09	0	0	0	0	0	0	0	19	0	1	0	9	22	32	0	0	6	0	0	84	0
Aug-09	0	0	0	0	0	0	0	33	0	0	21	4	30	19	24	0	8	0	0	148	20
Sep-09	0	0	0	0	0	0	0	18	0	0	202	3	36	28	0	0	0	24	34	220	18
<b>3Q09 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>0</b>	<b>2</b>	<b>223</b>	<b>16</b>	<b>88</b>	<b>78</b>	<b>24</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>34</b>	<b>452</b>	<b>38</b>

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

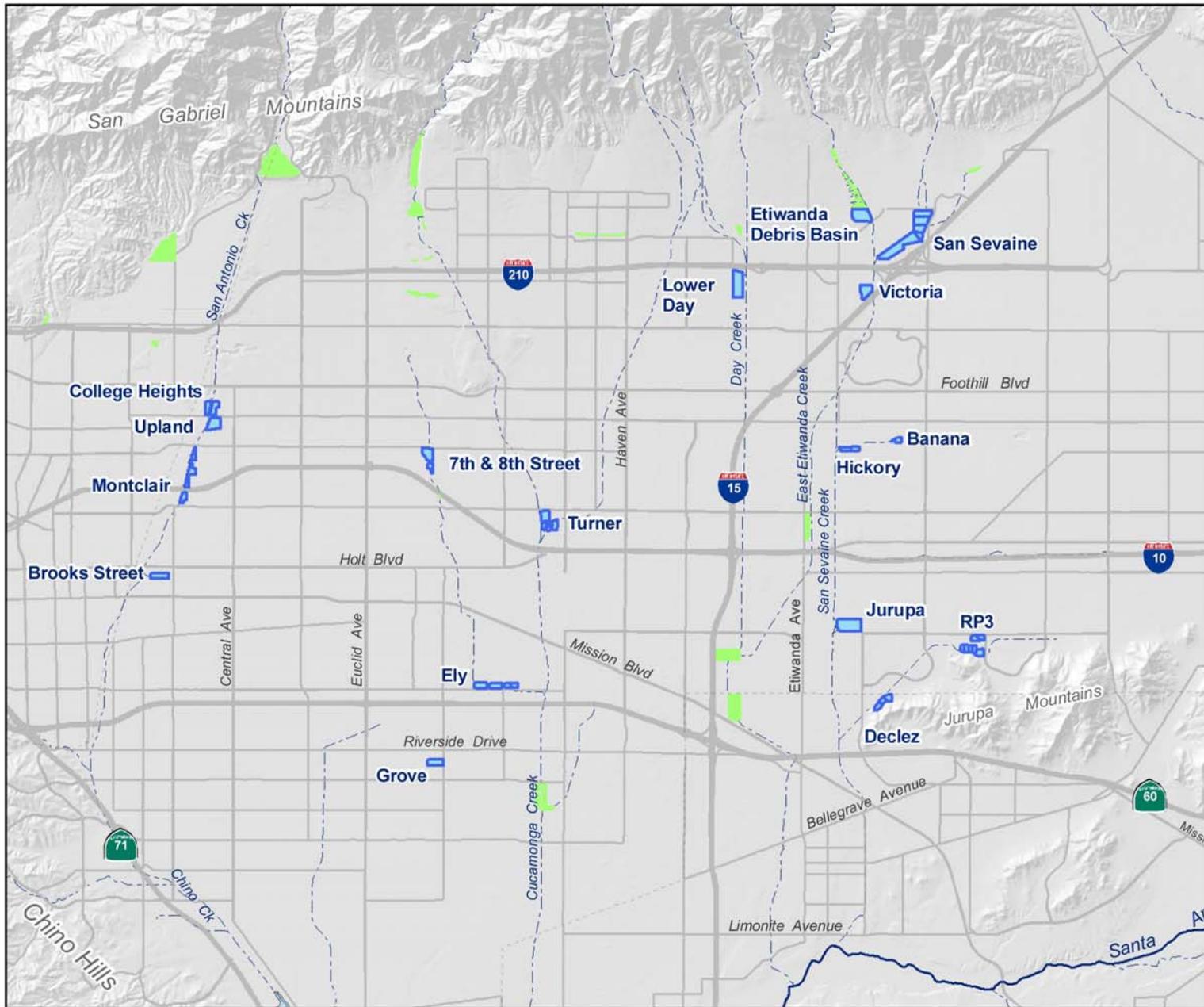
ASR Well No. 4									
Date	Injection			Recovery			Mass Balance		
	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Volume (AF)	TIN (mg/L)	TDS (mg/L)	Storage (AF)	TIN (kg)	TDS (kg)
1Q08	Jan-08	0		0			0	0	0
	Feb-08	0		0			0	0	0
	Mar-08	40	0.87	290	0		40	43	14,307
2Q08	Apr-08	42	1.10	350	0		82	99	32,273
	May-08	0	1.10	350	98	7.5*	(16)	(805)	(12,728)
	Jun-08	0	1.10	350	107	14	(123)	(2,645)	(60,049)
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)
3Q08	Jul-08	0		67	3.5*	310*	612	(722)	213,038
	Aug-08	0		0			612	(722)	213,038
	Sep-08	0		0			612	(722)	213,038
4Q08	Oct-08	0		0			612	(722)	213,038
	Nov-08	0		0			612	(722)	213,038
	Dec-08	0		0			612	(722)	213,038
1Q09	Jan-09	0		0			612	(722)	213,038
	Feb-09	0		0			612	(722)	213,038
	Mar-09	0		0			612	(722)	213,038
2Q09	Apr-09	0		0			612	(722)	213,038
	May-09	0		0			612	(722)	213,038
	Jun-09	0		0			612	(722)	213,038
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)
3Q08	Jul-08	0		67	No Data	No Data	167	No Data	No Data
	Aug-08	0		0			167		
	Sep-08	0		0			167		
4Q08	Oct-08	0		0			167		
	Nov-08	0		0			167		
	Dec-08	0		0			167		
1Q09	Jan-09	0		0			167		
	Feb-09	0		0			167		
	Mar-09	0		0			167		
2Q09	Apr-09	0		0			167		
	May-09	0		0			167		
	Jun-09	0		56	No Data	No Data	111	No Data	No Data

The injected water is WFA-treated water, which meets CCR Title 22 drinking water standards.  
 During 2Q08, WFA-treated water was sampled for TDS and TIN (NO<sub>3</sub>-N + NO<sub>2</sub>-N, assuming no NH<sub>3</sub>-N in drinking water) on 04/15/08.  
 MVWD discontinued groundwater injection at ASR Wells 4, 30, and 32, effective May 1, 2008, until further notice.  
 All wells were placed into production (extraction) mode during 2Q08.

\* Wells w/ 2+ sampling events for the month show an avg. of those values. Individual values are at the bottom of the page.

Total Project (All Wells)							
Date				Mass Balance			
	Storage (AF)	TIN (kg)	TDS (kg)				
3Q08	Jul-08	657	(3,367)	152,989			
	Aug-08	657	(3,367)	152,989			
	Sep-08	657	(3,367)	152,989			
4Q08	Oct-08	657	(3,367)	152,989			
	Nov-08	657	(3,367)	152,989			
	Dec-08	657	(3,367)	152,989			
1Q09	Jan-09	657	(3,367)	152,989			
	Feb-09	657	(3,367)	152,989			
	Mar-09	657	(3,367)	152,989			
2Q09	Apr-09	657	(3,367)	152,989			
	May-09	657	(3,367)	152,989			
	Jun-09	601	(3,367)	152,989			

Well	TIN	TDS	Est. Prod	Well	TIN	TDS	Est. Prod
5/7/08	4.1	360	20%	6/5/08	2.0	310	20%
5/9/08	6.9	370	40%	6/26/08	4.9	310	40%
5/12/08	6.9	370	60%				
5/27/08	12	390	80%				
6/6/08	14	360	100%				

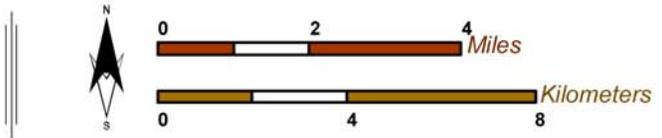


**Explanation**

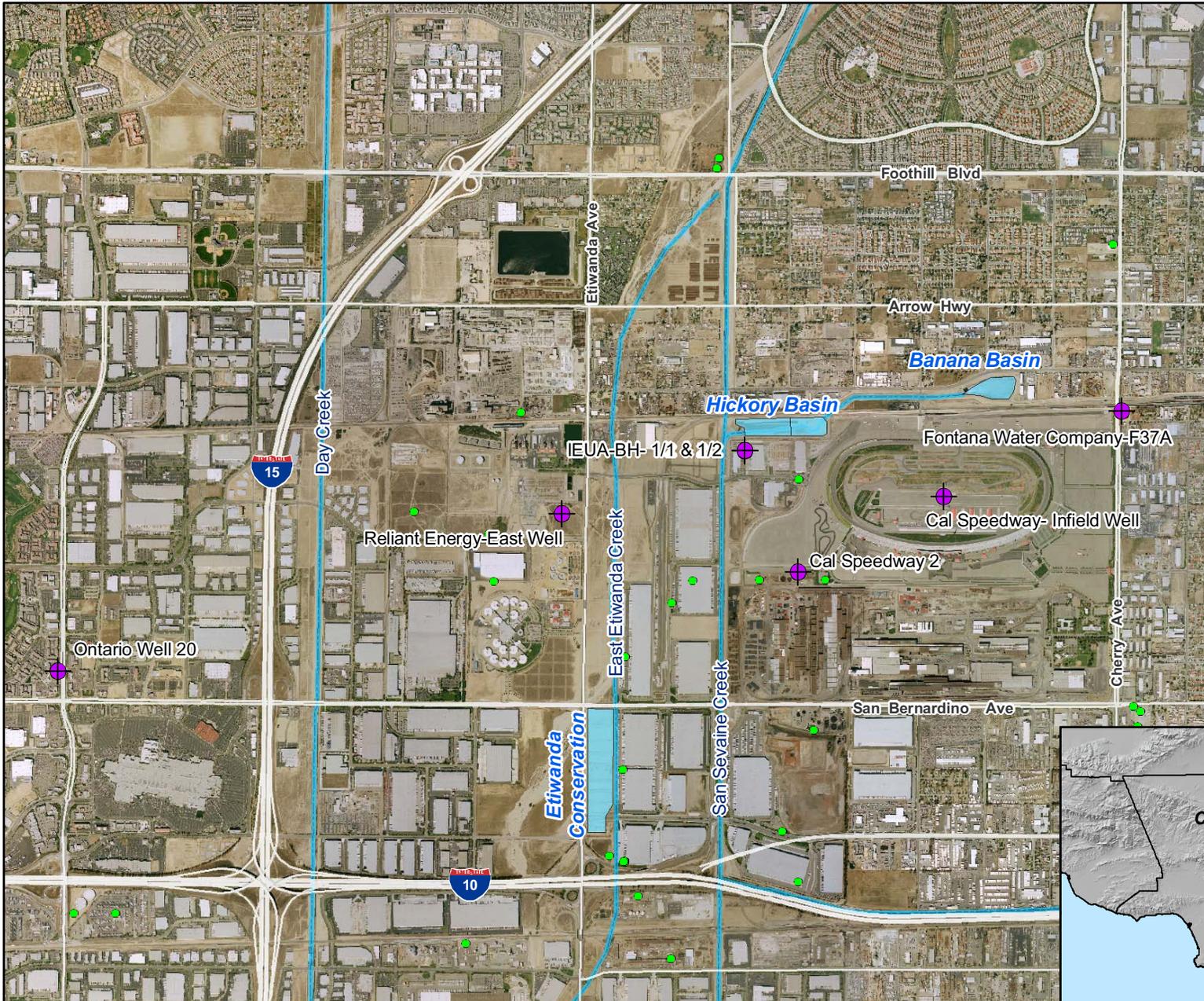
-  Recharge Basins in the Recycled Water Groundwater Recharge Program
-  Non-program basins
-  Rivers and Streams



**Chino Basin Recycled Water Groundwater Recharge Program**  
Basin Locations



**Figure 1-1**



### Main Map Features

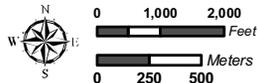
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

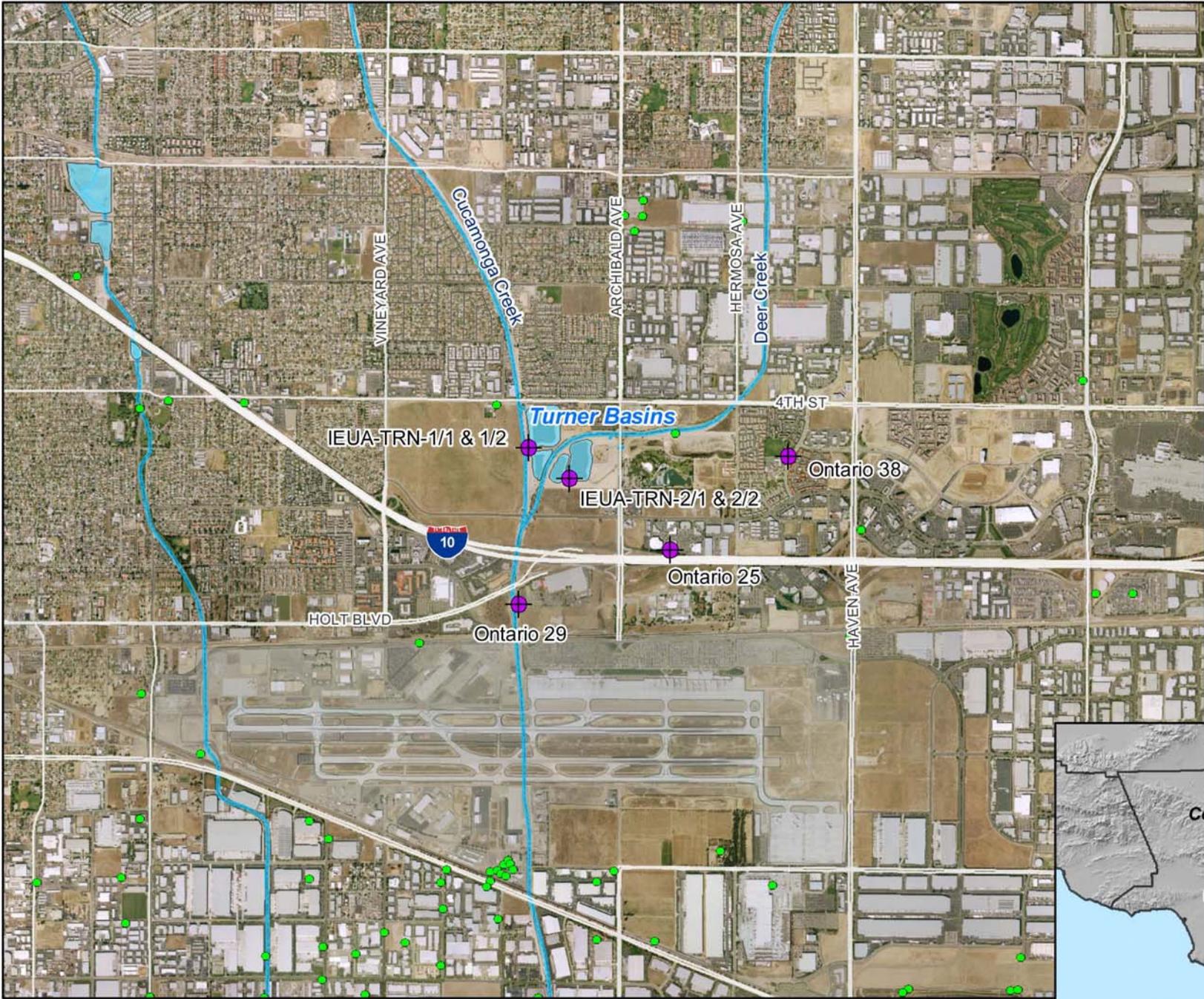


**Monitoring Well Network**  
Hickory and Banana Basins

**Figure 2-1**

Recycled Water Recharge Program





### Main Map Features

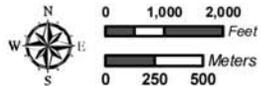
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

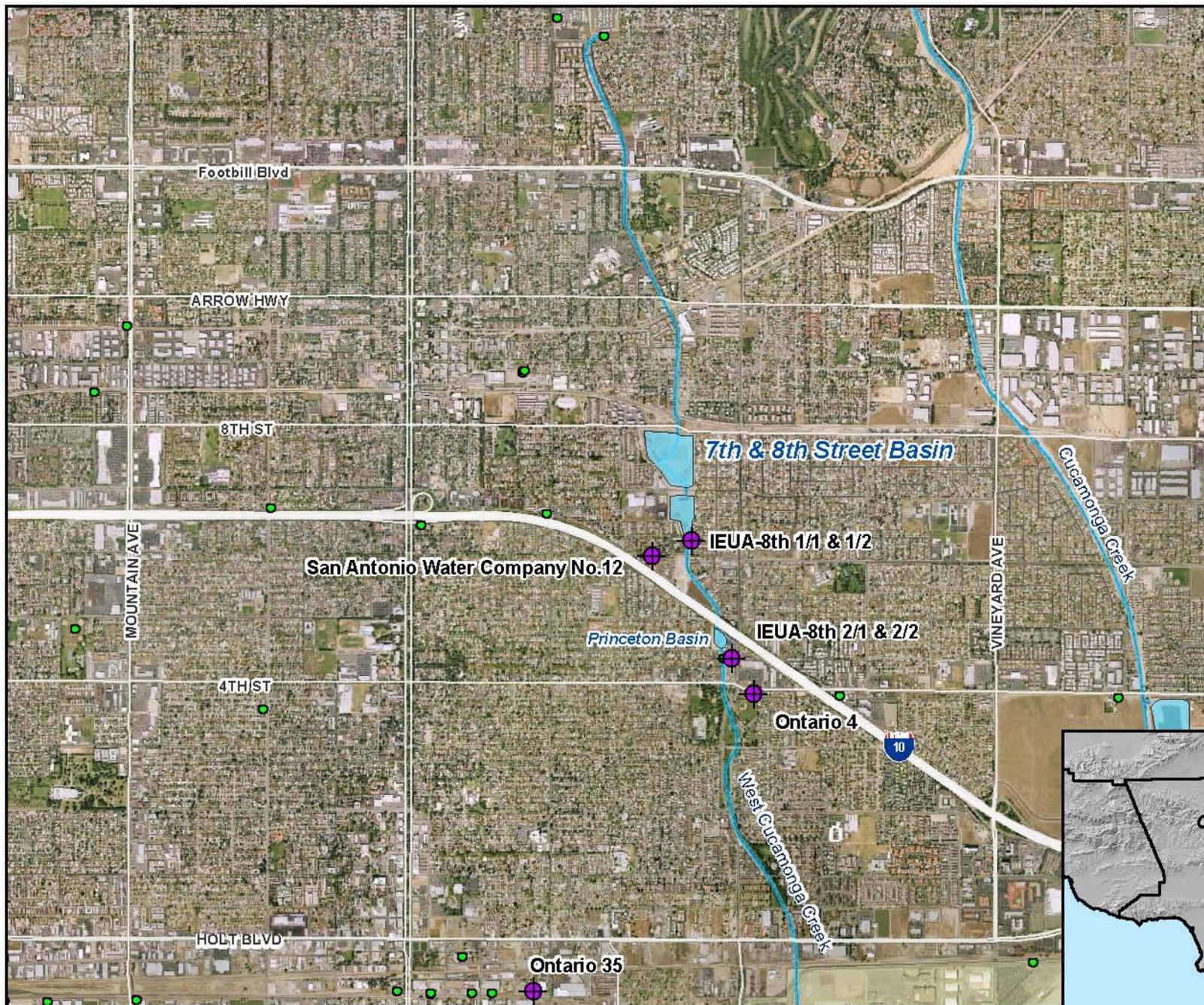


Monitoring Well Network  
Turner Basins

Figure 2-2

Recycled Water Recharge Program





### Main Map Features

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

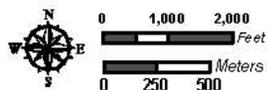


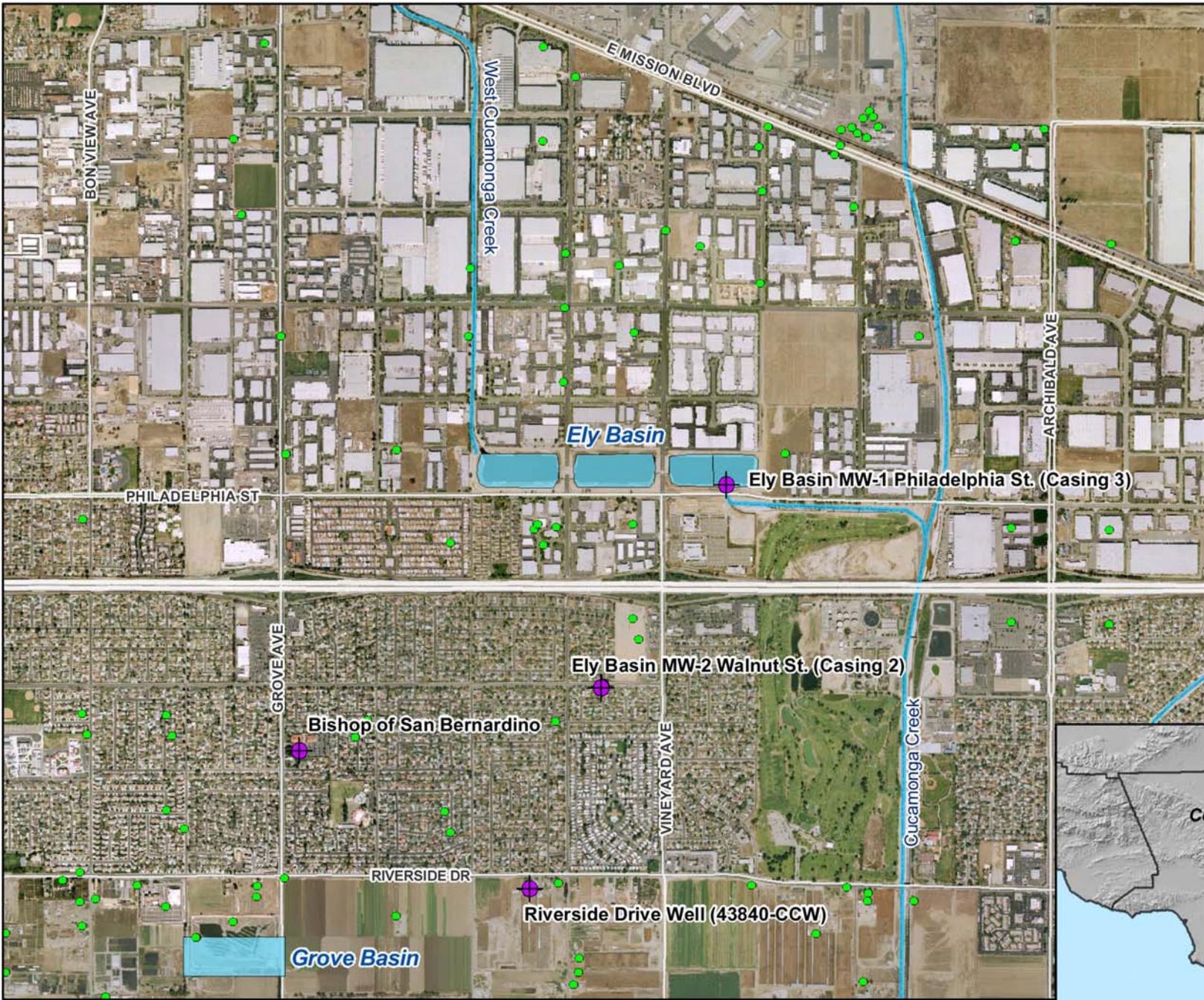
### Monitoring Well Network

7th and 8th Street Basin

Figure 2-3

Recycled Water Recharge Program





**Main Map Features**

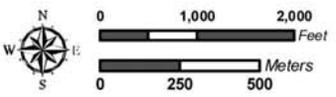
-  Existing Monitoring Well
-  "Other Wells"
-  Rivers/Streams/Creeks
-  Recharge Basins

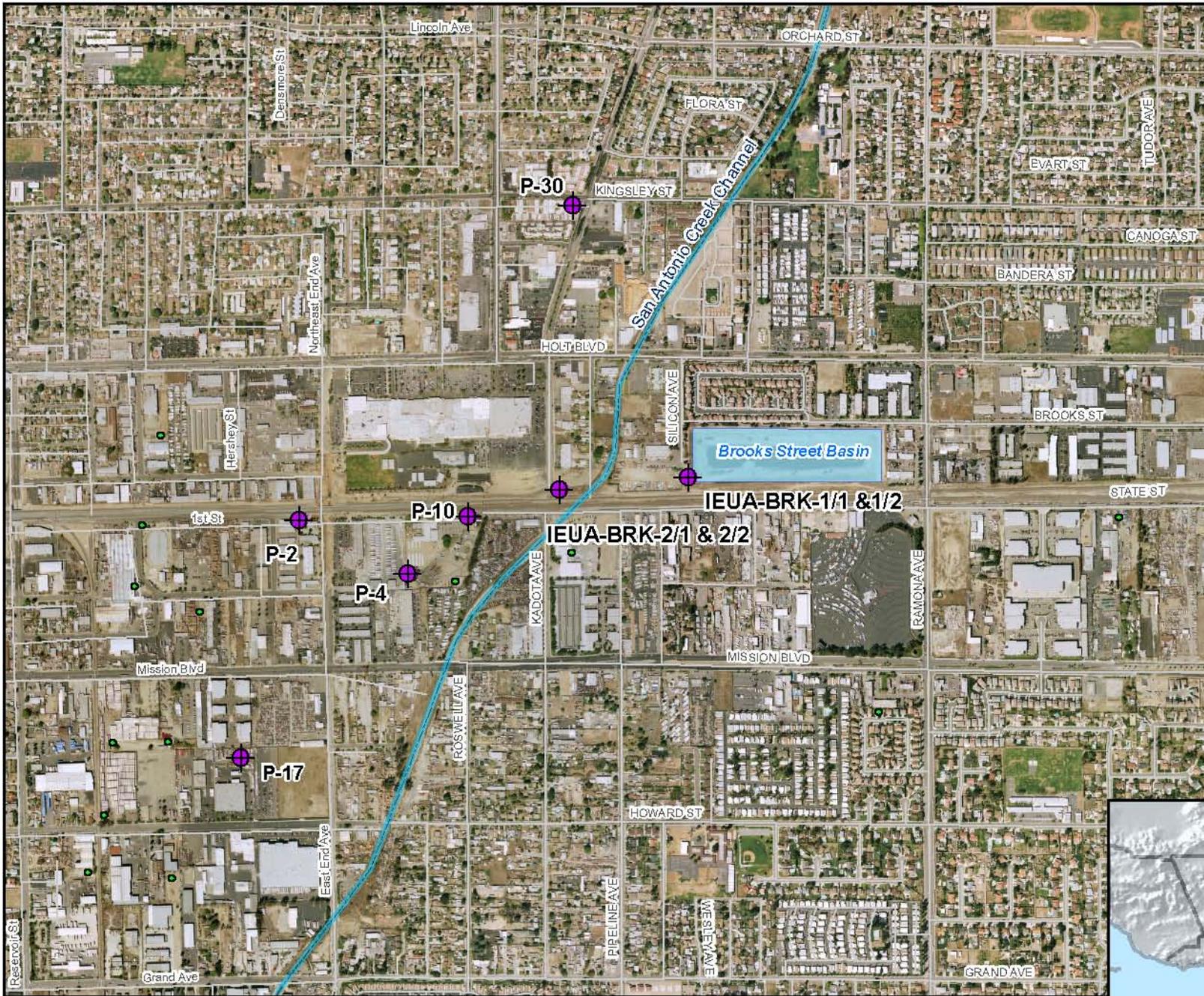


**Monitoring Well Network**  
Ely Basins

**Figure 2-4**

Recycled Water Recharge Program

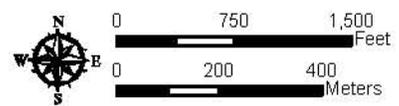


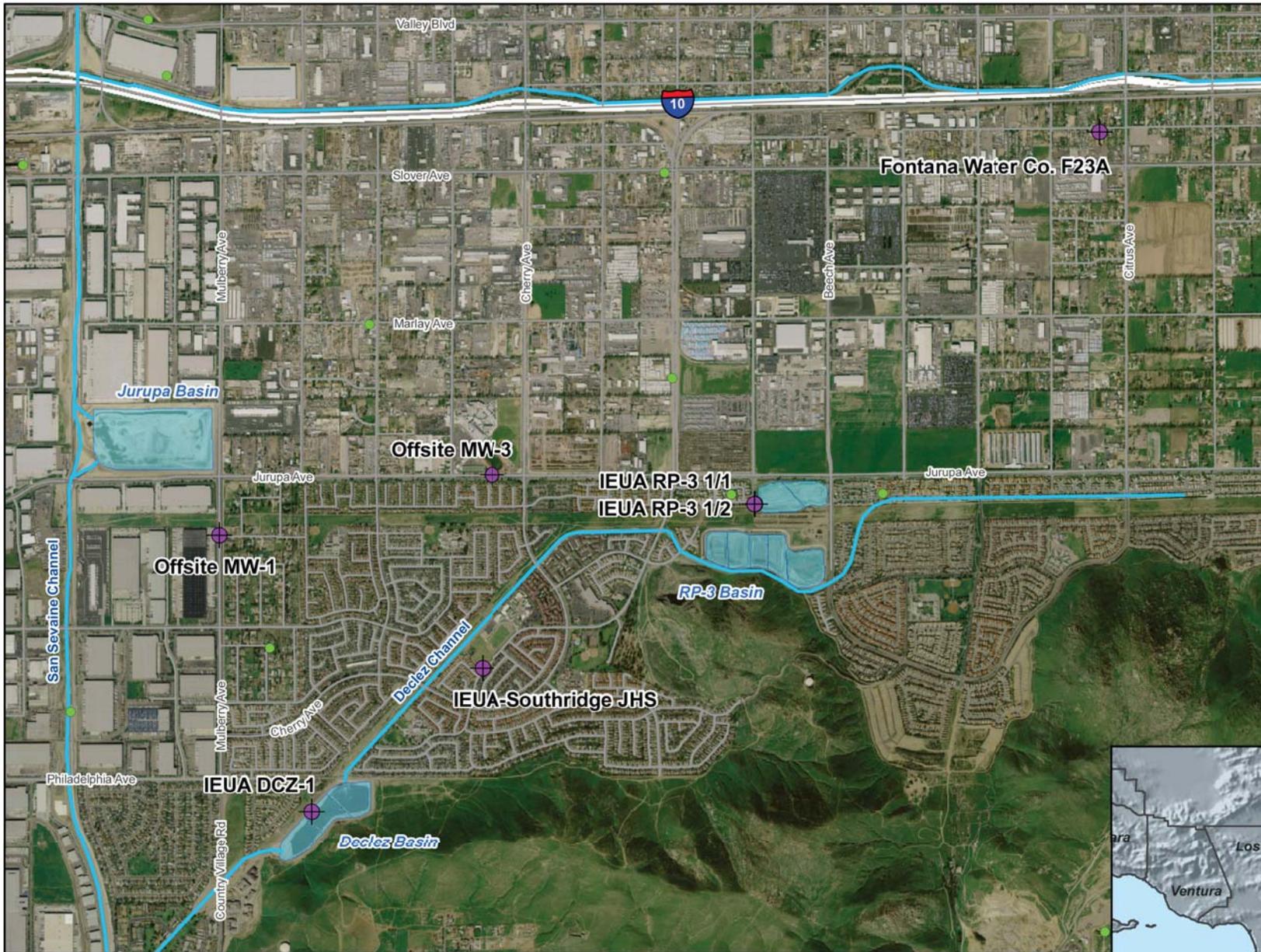


- ### Main Map Features
- Existing Monitoring Wells
  - "Other" Wells
  - Rivers/Streams/Creeks
  - Recharge Basins

**Monitoring Well Network**  
*Brooks Street Basin*  
**Figure 2-5**

Recycled Water Recharge Program



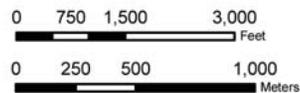


**Main Map Features**

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

**Monitoring Well Network**  
RP-3 Basin

**Figure 2-6**



**Recycled Water Recharge Program**

