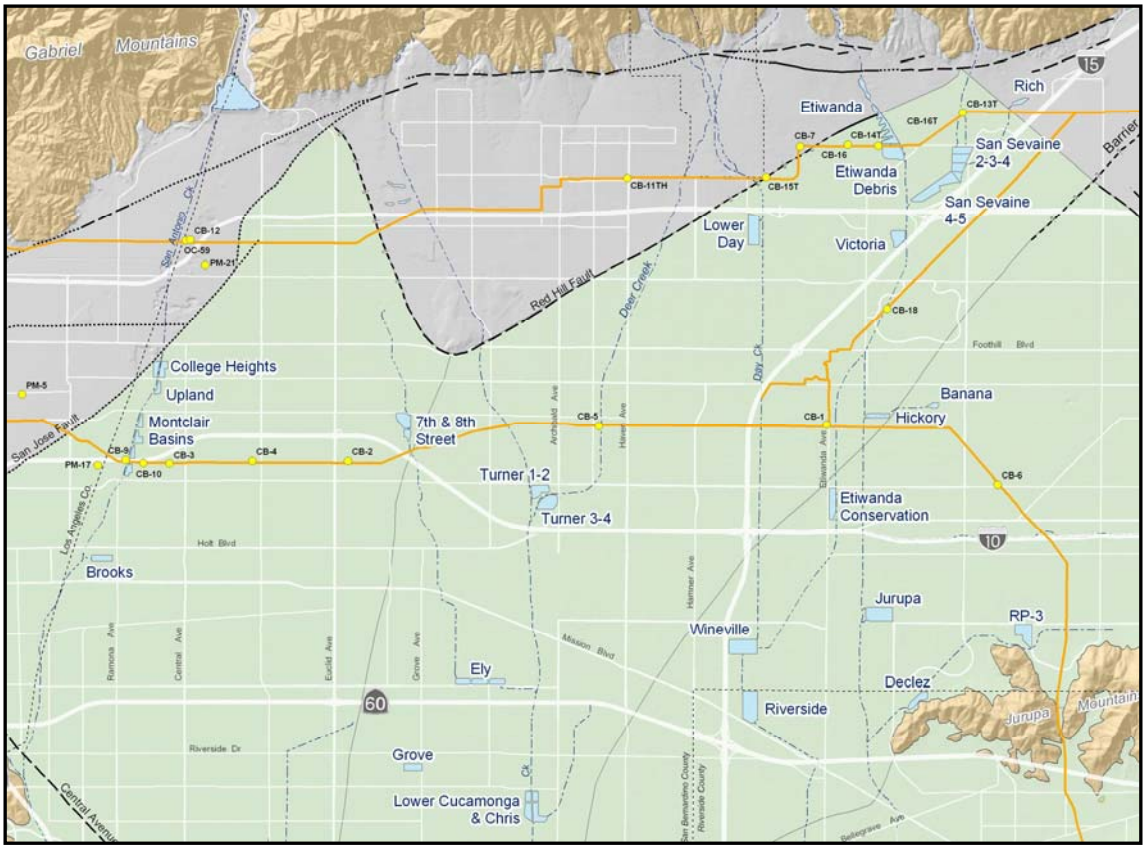
Chino Basin Recycled Water Groundwater Recharge Program

Quarterly Monitoring Report

April through June 2006



Prepared by:

Inland Empire Utilities Agency

and

Wildermuth Environmental Inc.

August 15, 2006

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Inland Empire
UTILITIES AGENCY

CHINO BASIN WATERMASTER
Partners in Basin Management

Patrick O. Sheilds
Executive Manager of Operations

Kenneth Manning
CEO

August 15, 2006

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
Transmittal of the Quarterly Monitoring Report for April through June 2006

Dear Mr. Thibeault,

The Inland Empire Utilities Agency (IEUA) and the Chino Basin Watermaster (Watermaster) hereby submit the *Quarterly Monitoring Report* for the Second quarter of 2006 (2Q06) – April through June 2006 for the *Recycled Water Groundwater Recharge Program* being implemented by IEUA and Watermaster. This document is submitted pursuant to requirements in Order No. R8-2005-0033 and Monitoring and Reporting Program No. R8-2005-0033:

- California Regional Water Quality Control Board, Santa Ana Region. Order No. R8-2005-0033. Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County. Draft Order: April 2005.
- California Regional Water Quality Control Board, Santa Ana Region. Monitoring and Reporting Program No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.

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 August 2006 at IEUA's office in Chino, California

Patrick O. Sheilds
Executive Manager of Operations

Kenneth Manning
Chief Executive Officer

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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 jointly sponsor 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).

1.1 Requirements of Order No. R8-2005-0033

The Recycled Water Groundwater Recharge Program being implemented by IEUA and Watermaster is subject to the following requirements:

- California Regional Water Quality Control Board, Santa Ana Region (RWQCB). Order No. R8-2005-0033 (Order). Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.
- RWQCB, Santa Ana Region. Monitoring and Reporting Program (M&RP) No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.

The M&RP (RWQCB, 2005b) describes the requirements for the quarterly monitoring reports. This document is the Quarterly Report for Second Quarter 2006 (2Q06). The following is an excerpt of Section VI of the M&RP detailing requirements of quarterly monitoring reports:

> VI. REPORTING REQUIREMENTS
>
> A. Quarterly Monitoring Reports
>
> 1. Quarterly monitoring reports shall be submitted in accordance with following schedule:
>
> | Reporting Period | Report Due Date |
> |---|---|
> | January – March | May 15th |
> | April – June | August 15th |
> | July – September | November 15th |
> | October – December | February 15th |
>
> 2. If no reclaimed water was delivered for spreading during the quarter, the report shall so state.
>
> 3. Each quarterly monitoring report shall include, at a minimum, the following:
>
> a. All monitoring results for recycled water produced from the RWRP-1 and RWRP-4 facilities, diluents, recharged water with or without blending with diluents prior to recharge, and groundwater.
>
> b. A tabular form report showing the amount of recharged recycled water and diluent water recharge[d] into each recharge basin including any non-compliance events, which occurred at the individual recharge sites during the reporting period. A summary of these data shall be included in the annual report.

c. 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.

d. All corrective or preventive action(s) taken.

e. A certification by the users 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.

f. The Regional Board may request supporting documentation, such as daily logs of operations.

1.2 Basin Operations

During 2Q06, IEUA recharged recycled water at Banana Basin. During 2Q06, recycled water was not recharged in the other Phase 1 basins, namely Hickory, RP3, Declez, and Turner Basins.

This quarterly report contains monitoring results for Banana Basin operations through the completion of 2Q06. Because the compliance monitoring points have not yet been established for Banana Basin, all sampling data are presented in this report. In quarterly reports following the completion of basin Start-Up Period reports, quarterly monitoring and reporting will be limited to sampling points that are selected as compliance monitoring points as determined through the Start-Up Protocols.

1.3 Outline of the Quarterly Report

Section 2 of this quarterly report discusses the monitoring results for recycled water, diluent water, basin surface water and lysimeter samples, and groundwater monitoring well water samples. Section 3 provides an overview of recharge operations, including the volume of diluent water and recycled water recharged. Sections 4 and 5 list any operational problems encountered and any preventive and/or corrective actions taken. Finally, Section 6 is the certification of non-pumping in the 500-foot buffer zones.

2. Monitoring Results

2.1 Recycled Water: RP-1 and RP-4

The monitoring requirements for recycled water monitoring are provided in the M&RP (RWQCB, 2005b). Tables 2-1 through 2-9 summarize all the requisite 2Q06 data results. Many of the limits defined in the Order are based on moving averages. For example, compliance with Recycled Water Specifications A.1 and A.2 (Tables I and II in the Order) "shall be based on the running-quarterly average concentration, calculated each quarter using the previous consecutive four quarterly data for the specific constituent." Running-quarterly average concentration data for 3Q05 through 2Q06 are summarized in Table 2-4 of this report.

For analytes with a limit specified in Tables I through III in the Order (RWQCB, 2005a), the compliance limit is included next to the result for that analyte in Tables 2-6, 2-7, and 2-9 to facilitate a comparison. IEUA is in the process of selecting a recycled water sampling location that will be representative of the system blend of recycled water recharged. IEUA has conducted sampling from the distribution pipeline at the turnout to IEUA's recycled water customer Reliant Energy. For most constituents this sampling location has been suitable. However, it is not suitable for parameters than can change upon leaving the reclamation plants. Such parameters include Total Trihalomethanes (THMs) and Total Haloacetic Acids (HAA5). Over the past 12 months THMs have ranged between 26 and 241 mg/L from RP1, and have averaged approximately 126 mg/L. Rather than provide inconsistent values for these parameters, IEUA conducted sampling of the surface water and pore water in the 25-foot lysimeters at Banana Basin. The samples at the basin should provide more consistent and representative samples of the recharged water.

Of the numerous parameters tested at the distribution system location and the basins, only odor exceeded limits in the Order during 2Q06. Additional sampling of stormwater from the basin and lysimeters indicates a slight odor may be common to the formation.

Samples for THMs and HAA5 were collected from the 15 and 25 foot lysimeters on June 30th at Banana Basin; the 25-foot lysimeter is considered the compliance point for these constituents. The results for THMs from the 15 and 25-foot lysimeter samples were 2.5 µg/L and 1 µg/L, respectively, and the results for HAA5 in the samples collected from the 15 and 25-foot lysimeters were <1 µg/L for all samples. A summary of this data can be found in Table 2-13.

In Table 2-6, the total trihalomethane result was based on a blend of RP-1 and RP-4 effluents, which is not the compliance point. Representative samples for 2Q06 were obtained from the 25-foot depth compliance point lysimeter from Banana Basin. Running average values will be initiated as additional data are obtained from a consistent representative sampling location.

Representative samples collected from the basins for THMs were within permitted limits. Thus compliance for THMs was achieved prior to delivered recycled water reaching the groundwater table.

In addition to the limits listed in Tables I, II, and III in the Order, the following "narrative" limits also apply to recycled water quality (A.4 through A.8 in RWQCB, 2005a):

> 4. Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:
>
> a. The turbidity of the filter effluent shall not exceed any of the following:
>
> (1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;

(2) 5 NTU more than 5 percent of the time in any 24-hour period; and
(3) 10 NTU at any time.

b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).

c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.

d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

5. The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively from the combined effluent of all IEUA treatment plants (see also Provisions H.4. and H.5.).

6. The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

a. A total nitrogen concentration of 10 mg/L;

b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and

c. The nitrite level shall not exceed 1 mg/L as nitrogen.

7. The pH of recycled water used for recharge shall at all times be within the range of 6 to 9 pH units.

8. The total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L for more than two consecutive readings.

None of these limits were exceeded in 2Q06, as summarized in Tables 2-1 through 2-3.

2.2 Diluent Water

In 2Q06, State Water Project (SWP) water was delivered to Hickory Basin on June 29th and 30th; no SWP water was delivered to Banana Basin during 2Q06. Table 2-10 lists the water quality of the SWP water. These data are reported by the LaVerne laboratory of Metropolitan Water District of Southern California.

As shown in Table 3-1, some local runoff from rainfall was collected in both Hickory and Banana Basins.

2.3 Basin and Lysimeter Samples

The M&RP schedule for basin and lysimeter sampling is the following (RWQCB, 2005b):

- TOC: Grab, Weekly
- Nitrate-Nitrogen: Grab, Twice per Week
- Nitrate-Nitrogen: Grab, Twice per Week
- Nitrite-Nitrogen: Grab, Twice per Week
- Ammonia: Grab, Twice per Week
- Organic Nitrogen: Grab, Twice per Week
- Total Inorganic Nitrogen (TIN) – by Addition: Grab, Twice per Week
- Total Nitrogen (TN) – by Addition: Grab, Twice per Week

These data are summarized in Tables 2-11 and 2-12. The tables include data for Banana Basin and are organized by analyte group (TOC, Nitrogen Species). Each table lists the result by lysimeter name, depth and date. Hickory Basin lysimeter data are not included as part of the 2Q06 report as no recycled water was recharged there during this quarter; hence no surface water or lysimeter samples were collected.

2.4 Groundwater Monitoring Wells

Groundwater quality within the vicinity of the Banana and Hickory Basins is monitored by sampling a network of six wells, including one nested monitoring well, BH-1, down gradient of Hickory Basin (Figure 2-1). BH-1 is screened in two zones: BH-1/1 from 366 – 406 feet below top of casing, and BH-1/2 from 437 – 477 feet below top of casing. BH-1/1 was constructed above the regional groundwater table in anticipation of future water level rise, and is not sampled at this time. Should the regional water table rise, sampling within BH-1/1 will begin.

Groundwater monitoring results are presented in Table 2-13. Based on estimated travel times in the Title 22 Engineering Report (CH2M-Hill, 2003), the travel times to well BH-1/2 is approximately six months. IEUA began recharging recycled water in Banana Basin in July 2005. 4Q05 EC results indicated BH-1 may have received recycled water recharge. However, 1Q06 EC data for BH-1 do not continue to indicate recycled water at the well. Groundwater quality results for 2Q06 at BH-1/2 show a background condition for EC as do the other monitoring area wells. All other constituents analyzed from the monitoring wells during 2Q06 remained below the MCL.

3. Recharge Operations

IEUA's Groundwater Recharge Coordinator recorded the daily volumes of water delivered to or captured at Banana and Hickory Basins. Banana Basin was the only Phase 1 recharge basin to received recycled water this quarter. Storm occurred on April 1st, 4th, and 14, and May 21st and 22nd during the quarter and some storm water was recharged. In the days prior to a forecast storm, IEUA stops the delivery of recycled water and/or import water to allow basin storage to infiltrate, thus allowing the recharge basins to function as flood control basins. The volumes of storm water captured were calculated from a combination of infiltration rates and change in storage in the basin. Outflow of stormwater from the basin also occurred, but is not measured or estimated as these waters do not recharge. On May 11th 18.3 AF of storm water was pumped from Hickory Basin and delivered to Banana Basin in preparation to perform maintenance on Hickory Basin. The volumes of recycled water delivered or storm water captured are listed in Table 3-1.

Banana Basin
Recycled water was delivered periodically from the Whittram force main. No imported water was delivered to Banana Basin. As Banana Basin is a flow-through type basin, storm water did enter the basin from West Fontana Channel and did in part recharge at the basin.

Hickory Basin
Recycled water was not delivered during 2Q06 to Hickory Basin. Perennial local runoff was captured in Hickory Basin from San Sevaine Channel during 2Q06. As Hickory Basin is a flow-through type basin, storm water did enter the basin from West Fontana Channel and did in part recharge at the basin.

4. Operational Problems Encountered

4.1 Regional Plants RP-1 and RP-4

No operational problems encountered this quarter.

4.2 Recharge Operations

No operational problems encountered this quarter.

4.3 Lysimeter Sampling

No operational problems encountered this quarter.

4.4 Monitoring Well Sampling

A sample was unable to be collected from California Speedway Well 1, due to a malfunctioning pump.

5. Preventive and/or Corrective Actions

5.1 Regional Plants RP-1 and RP-4

As no operational problems encountered this quarter, no corrective actions were necessary.

5.2 Recharge Operations

As no operational problems encountered this quarter, no corrective actions were necessary.

5.3 Lysimeter Sampling

As no operational problems encountered this quarter, no corrective actions were necessary.

5.4 Monitoring Well Sampling

WEI and IEUA have identified California Speedway 2 Well (CBWM ID 3601365) as an alternative monitoring well to replace the inoperable well California Speedway 1. Investigation of this well and the status of California Speedway 1 were conducted during the 2Q06, and will continue during the third quarter of 2006.

6. Certification of Non-Pumping in the Buffer Zones

The Watermaster has certified that there was no reported pumping of groundwater for domestic or municipal use from the zones that extend 500 feet and 6 months underground travel time from both Hickory and Banana Basins in 2Q06. In fact, there are no production wells within the buffer zones of these two basins. Appendix A is a letter from Watermaster certifying 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. Following is proposed text for a letter from SBCDEHS to IEUA, DHS, and the RWQCB.

> San Bernardino County Department of Environmental Health Services (SBCDEHS) has reviewed the recycled water use permit conditions placed on Inland Empire Utilities Agency (IEUA) by California Department of Health Services (DHS) and the Santa Ana Regional Water Quality Control Board (RWQCB). IEUA's use permit contains conditions that IEUA act to prevent the permitting of new drinking water wells within 500 feet of its recharge basin that will use recycled water. As the agency responsible for reviewing and issuing permits for construction of drinking water wells in San Bernardino County, SBCDEHS agrees to decline new well permits within 500 feet of IEUA recharge basins that will utilize recycled water for groundwater recharge.
>
> SBCDEHS will add a review procedure for new well permit applications that will include checking the proposed location of a new drinking water well against a list of parcels that abut IEUA recharge basins and their 500-foot buffers. If a well falls within an abutting parcel, SBCDEHS will review the proposed well location using maps of the basins and buffers. SBCDEHS will not issue permits for wells falling inside the buffer. 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 review of the proposed well location utilizing a field review. 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 the IEUA Groundwater Recharge Coordinator with a copy of the well permit application and a time line for completion of IEUA's review. Following its review, IEUA will notify SBCDEHS in writing of its findings. As desired by these agencies, IEUA will notify CDHS and RWQCB of well permit applications that it recommends be decline due to their location being determined to fall with a 500-foot buffer.
>
> SBCDEHS will incorporate these outlined procedures upon receipt from IEUA of a list of parcels abutting each recharge basin and a series of the maps showing the recharge basins, buffers, and township / range / section parcels adjacent the basins and buffers.

Although this letter has not been finalized, SBCDEHS has initiated control over production well permitting within the buffer zones of all Phase 1 basins through the use of buffer zone maps that utilize the same land coordinate system (Township/Range-Section) used in the permitting process.

7. References

California Regional Water Quality Control Board, Santa Ana Region. 2005a. Order No. R8-2005-0033. *Water Recycling Requirements for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County*. Draft Order: April 2005.

California Regional Water Quality Control Board, Santa Ana Region. 2005b. *Monitoring and Reporting Program No. R8-2005-0033 for Inland Empire Utilities Agency and Chino Basin Watermaster. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project, San Bernardino County.*

CH2M-Hill. 2003. *Title 22 Engineering Report. Phase 1 Chino Basin Recycled Water Groundwater Recharge Project. Final Report*. Prepared for the Inland Empire Utilities Agency. November 2003.

Metropolitan Water District of Southern California. 2006. *Table D. Monthly Analyses of the District Water Supplies – April 2006.*

Metropolitan Water District of Southern California. 2006. *Table D. Monthly Analyses of the District Water Supplies – May 2006.*

Metropolitan Water District of Southern California. 2006. *Table D. Monthly Analyses of the District Water Supplies – June 2006.*

Wildermuth Environmental, Inc. 1999, *Chino Basin Optimum Basin Management Plan, Phase I Report*. Prepared for Chino Basin Watermaster. August 19, 1999.

Table 2-1
Results of Daily Recycled Water Monitoring for April 2006: Tubidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent												
	Turbidity[1]	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_2-N	TIN	pH[1]	EC	TDS	Hardness	Coliform	Turbidity[1]	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_2-N	TIN	pH[1]	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN
Order Limit	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240
4/1/2006	0.9	6.2								7.56	730			<2	0.8	7.2	0.2	0.2	<0.01				0.4	6.90	725			<2
4/2/2006	0.8	6.4	0.1	9.5	0.05	1.7	11.2	1.7	9.6	7.61	715			QC	0.7	7.6	0.1	<0.1	<0.01	1.1	1.1	1.1	0.1	7.00	725			QC
4/3/2006	0.8	6.4								7.63	705			<2	0.9	7.9	0.1	0.2	<0.01				0.3	7.00	725			<2
4/4/2006	0.8	6.7	0.1	8.9	<0.01				9.0	7.63	690	442	125	<2	0.8	7.5	0.1	0.7	<0.01				0.8	7.00	710	414	121	<2
4/5/2006	0.8	6.2								7.55	650			<2	0.9	6.7	0.1	0.7	<0.01				0.8	7.00	645			<2
4/6/2006	0.8	6.6	0.1	8.9	<0.01				9.0	7.53	680			<2	0.6	6.9	0.1	0.3	<0.01	1.2	1.5	1.2	0.4	6.90	680			<2
4/7/2006	0.8	6.7								7.61	710			<2	0.6	7.0	0.8	0.7	<0.01				1.5	7.00	720			<2
4/8/2006	0.7	6.6								7.66	720			<2	0.6	7.4	0.1	1.4	<0.01				1.5	7.00	725			<2
4/9/2006	0.7	8.5	0.1	8.2	<0.01	1.2	9.4	1.2	8.3	7.67	690			<2	0.7	8.8	0.1	0.9	<0.01	1.2	2.1	1.2	1.0	7.00	710			<2
4/10/2006	0.7	6.6								7.67	710			2	0.8	8.2	0.1	0.7	<0.01				0.8	7.00	700			<2
4/11/2006	0.8	6.5	0.1	11.3	<0.01				11.4	7.63	710	452		<2	0.9	8.0	0.1	4.3	<0.01				4.4	7.00	680	412		<2
4/12/2006	0.9	6.5								7.63	700			<2	1.0	8.4	0.1	9.0	<0.01				9.1	7.10	685			<2
4/13/2006	0.9	6.7	0.1	10.2	<0.01	1.5	11.7	1.5	10.3	7.67	700			<2	0.9	8.4	0.1	9.8	<0.01	1.8	11.6	1.8	9.9	7.00	685			<2
4/14/2006	0.9	6.4								7.64	695			<2	0.9	8.3	0.1	8.3	<0.01				8.4	7.00	700			<2
4/15/2006	0.8	6.2								7.63	700			<2	0.7	8.3	0.1	7.5	<0.01				7.6	7.10	705			<2
4/16/2006	0.8	7.0	0.1	8.0	<0.01	1.5	9.5	1.5	8.1	7.71	690			2	0.6	9.0	0.1	5.4	<0.01	1.3	6.7	1.3	5.5	7.10	705			<2
4/17/2006	0.8	9.1								7.72	695			2	0.6	8.1	0.1	3.9	<0.01				4.0	7.10	705			<2
4/18/2006	0.8	6.6	0.1	7.9	<0.01				8.0	7.73	690	440		2	0.5	8.0	0.1	4.3	<0.01				4.4	7.10	690	446		<2
4/19/2006	0.8	6.2	0.1	7.5	<0.01				7.6	7.74	695			2	0.5	7.9	0.1	4.1	<0.01				4.2	7.10	680			2
4/20/2006	1.0	6.5	0.2	8.3	<0.01	1.8	10.1	1.8	8.5	7.69	705			<2	0.4	7.8	<0.1	4.5	<0.01	1.7	6.2	1.7	4.5	7.10	675			<2
4/21/2006	0.8	6.3								7.71	695			<2	0.4	7.7	0.1	4.9	<0.01				5.0	7.10	685			<2
4/22/2006	0.8	6.7								7.74	695			2	0.4	7.9	0.1	5.8	<0.01				5.9	7.10	685			<2
4/23/2006	0.8	6.9	0.1	1.2	<0.01	1.8	3.0	1.8	1.3	7.76	715			<2	0.5	7.6	0.1	5.6	<0.01	1.4	7.0	1.4	5.7	7.10	705			<2
4/24/2006	0.7	6.6								7.73	705			<2	0.5	7.8	0.1	5.6	<0.01				5.7	7.10	705			2
4/25/2006	0.7	6.1	0.1	8.8	<0.01					7.75	705	452		<2	0.4	7.4	0.1	5.7	<0.01				5.8	7.10	700	436		<2
4/26/2006	0.8	6.1								7.69	705			2	0.4	7.6	0.1	5.5	<0.01				5.6	7.10	690			<2
4/27/2006	0.9	5.8	0.1	10.3	<0.01	1.6	11.9	1.6	10.4	7.70	705			<2	0.4	6.9	0.1	5.5	<0.01	1.5	7.0	1.5	5.6	7.10	695			<2
4/28/2006	0.9	6.0								7.69	705			<2	0.6	6.9	0.1	5.8	<0.01				5.9	7.10	695			<2
4/29/2006	1.0	6.1								7.71	705			2	0.5	6.9	0.1	8.0	<0.01				8.1	7.10	695			<2
4/30/2006	1.0	6.1	0.1	8.6	<0.01	1.1	9.7	1.1	8.7	7.72	705			<2	0.5	7.5	0.1	9.1	<0.01	1.1	10.3	1.1	9.2	7.10	700			<2
Average	0.8	6.6	0.1	8.4	<0.01	1.5	9.6	1.5	8.5	7.7	701	447	125	<2	0.6	7.7	0.1	4.4	<0.01	1.37	5.9	1.4	4.4	7.1	698	427	121	<2
Min	0.7	5.8	0.1	1.2	<0.01	1.1	3.0	1.1	1.3	7.5	650	440	125	<2	0.4	6.7	<0.1	<0.1	<0.01	1.10	1.1	1.1	0.1	6.9	645	412	121	<2
Max	1.0	9.1	0.2	11.3	0.05	1.8	11.9	1.8	11.4	7.8	730	452	125	2	1.0	9.0	0.8	9.8	<0.01	1.80	11.6	1.1	9.9	7.1	725	446	121	2

[1]Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

a. The turbidity of the filter effluent shall not exceed any of the following:
   1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
   2) 5 NTU more than 5 percent of the time in any 24-hour period; and
   3) 10 NTU at any time.
b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.
The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

a. A total nitrogen concentration of 10 mg/L;
b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
c. The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.
For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.
QC: Quality Control Failure, no data reported.
Bold signifies an exceedance of a limit in the Order.

Table 2-2
Results of Daily Recycled Water Monitoring for May 2006: Tubidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent												
	Turbidity	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_2-N	TIN	pH[1]	EC	TDS	Hardness	Coliform	Turbidity[1]	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_2-N	TIN	pH[1]	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN
Order Limit	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240
5/1/2006	0.9	6.4								7.72	705			4	0.5	8.1	0.1	7.3	<0.01				7.4	7.10	710			<2
5/2/2006	0.9	6.5	0.2	8.8	<0.01		8.8		9.0	7.74	695	448	123	<2	0.6	8.2	0.1	6.3	<0.01				6.4	7.10	690	446	112	<2
5/3/2006	0.9	5.9								7.76	700			2	0.6									7.10				<2
5/4/2006	0.9	6.2	0.1	9.6	<0.01	0.7	10.4	0.7	9.7	7.74	699			2														ns
5/5/2006	1.0	6.6								7.72	710			2	0.9	9.4	0.1	4.4	<0.01				4.5	7.10	700			<2
5/6/2006	1.1	6.7								7.77	710			2	1.1	9.1	0.1	10.7	<0.01				10.8	7.20	710			<2
5/7/2006	1.1	6.8	0.1	10.0		0.9			10.1	7.77	705			4	1.4	9.4	0.1	16.3		0.9	17.2			7.00	755			<2
5/8/2006	1.1	6.6								7.73	705			<2	2.3	10.5	0.1	17.2	<0.01				17.3	6.90	760			<2
5/9/2006	1.1	6.6	0.1	9.4	<0.01				9.5	7.73	708	432		2	1.7	10.3	0.1	12.9	<0.01				13.0	6.80	766	484		<2
5/10/2006	1.2	6.7								7.74	705			<2	1.3	10.7	0.1	7.0	<0.01				7.1	6.90	730			ns
5/11/2006	1.2	6.4	0.1	12.7	<0.01					7.69	710			<2	1.5	10.2	0.3	3.3	<0.01				3.5	6.90	705			<2
5/12/2006	1.2	6.2								7.70	700			<2	2.0	9.2	0.1	2.7	<0.01				2.8	7.10	700			<2
5/13/2006	1.3	6.4								7.73	700			<2	1.1	10.2	0.1	4.4	<0.01				4.5	7.10	710			2
5/14/2006	1.4	6.4	0.1	9.3	<0.01	1.2	10.5	1.2	9.4	7.74	715			<2	2.2	11.2	0.1	5.3	<0.01	1.6	6.9	1.6	5.4	6.90	740			<2
5/15/2006	1.4	7.2								7.70	740			2	2.7	11.6	0.1	3.0	<0.01				3.1	6.90	775			<2
5/16/2006	1.3	7.3	0.1	9.5	<0.01	0.3	9.8	0.3	9.6	7.66	725	458		4	1.8	11.7	0.1	2.6	<0.01	0.5	3.1	0.5	2.7	7.00	705	432		<2
5/17/2006	1.2	5.3								7.69	705			<2	1.2	10.5	<0.1	1.5	<0.01				1.5	7.00	690			<2
5/18/2006	1.1	6.6	0.2	8.6	<0.01	0.9	9.6	0.9	8.8	7.73	715			<2	1.2	8.7	0.1	1.6	<0.01	<0.01	1.6	<0.01	1.7	7.00	685			ns
5/19/2006	1.0	6.6								7.72	705			<2	1.0	8.1	0.1	1.6	<0.01				1.7	7.00	685			ns
5/20/2006	1.0	6.2								7.76	705			2	1.0	8.0	0.1	2.6	<0.01				2.7	7.10	695			<2
5/21/2006	1.0	6.4	0.1	8.6	<0.01	1.2	9.8	1.2	8.7	7.77	710			<2	1.1	7.9	0.1	2.6	<0.01	0.1	2.8	0.1	2.7	7.30	710			<2
5/22/2006	0.9	6.6								7.74	695			<2	0.9	7.7	0.1	2.4	<0.01				2.5	7.30	700			<2
5/23/2006	0.9	6.4	<0.1	9.1	<0.01				9.1	7.77	685	432		<2	0.5	7.2	0.1	3.7	<0.01				3.8	7.20	685	404		<2
5/24/2006	1.0	6.2								7.77	675			<2	0.5	7.7	<0.1	6.1	<0.01				6.1	7.20	670			<2
5/25/2006	1.0	6.1	0.4	8.5	<0.01	0.6	9.2	0.6	8.9	7.79	685			2	0.9	9.2	0.1	7.4	<0.01	1.2	8.5	1.2	7.5	7.10	715			<2
5/26/2006	0.9	6.2								7.82	680			<2	0.6	8.8	0.1	7.2	<0.01				7.3	7.10	705			<2
5/27/2006	0.9	6.0								7.83	690			2	0.4	8.2	0.1	8.5	<0.01				8.6	7.10	710			<2
5/28/2006	0.9	6.0				1.0				7.82	680			2	0.5	7.9	0.1	9.1	<0.01	0.7	9.8	0.7	9.2	7.10	705			<2
5/29/2006	0.8	6.2								7.80	665			<2	0.7	8.2	0.1	9.5	<0.01					7.10	700			<2
5/30/2006	0.9	6.3	0.1	8.7	0.03		8.8		8.9	7.78	699	438		<2	1.0	7.9	0.1	7.5	<0.01					7.20	716	444		<2
5/31/2006	1.0	6.3								7.78	690			7	0.9	7.7	<0.1	7.5	<0.01					7.20	700			<2
Average	1.0	6.4	0.1	9.4	<0.01	0.9	9.6	0.8	9.2	7.75	701	442	123	<2	1.1	9.1	<0.1	6.3	<0.01	0.8	7.1	0.8	5.7	7.1	711.28	442	112	<2
Min	0.8	5.3	<0.1	8.5	<0.01	0.3	8.8	0.3	8.7	7.66	665	432	123	<2	0.4	7.2	<0.1	1.5	<0.01	<0.01	1.6	<0.01	1.5	6.8	670.00	404	112	<2
Max	1.4	7.3	0.4	12.7	0.03	1.2	10.5	1.2	10.1	7.83	740	458	123	7	2.7	11.7	0.3	17.2	<0.01	1.6	17.2	1.6	17.3	7.3	775.00	484	112	2

[1]Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

a. The turbidity of the filter effluent shall not exceed any of the following:
   1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
   2) 5 NTU more than 5 percent of the time in any 24-hour period; and
   3) 10 NTU at any time.
b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

a. A total nitrogen concentration of 10 mg/L;
b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
c. The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.
For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.
Bold signifies an exceedance of a limit in the Order.

Table 2-3
Results of Daily Recycled Water Monitoring for June 2006: Tubidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent												
	Turbidity	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_3-N	TIN	pH[1]	EC	TDS	Hardness	Coliform	Turbidity[1]	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-NO_3-N	TIN	pH[1]	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN
Order Limit	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240
6/1/2006	1.0	6.1	0.1	7.8	<0.01	0.4	8.1	0.4	7.9	7.8	675			<2	1.0	8	0.1	3.1	<0.01	1.0	4.1	1.0	3.2	7.2	670			<2
6/2/2006	0.9	5.9								7.8	695			<2	0.7	7	0.1	1.1	<0.01				1.2	7.2	670			13
6/3/2006	0.9	5.8								7.8	695			<2	0.7	7	0.1	1.0	<0.01				1.1	7.0	680			<2
6/4/2006	0.9	5.9	0.1	6.8	<0.01	0.1	6.9	0.1	7.0	7.8	685			2	0.5	7	0.1	0.9	<0.01	0.6	1.5	0.6	1.0	7.1	690			4
6/5/2006	0.9	5.7								7.8	680			<2	0.8	6	0.2	1.4	<0.01				1.6	7.1	695			2
6/6/2006	0.9	6.2	<0.1	6.8	<0.01				6.8	7.8	700	444	122	<2	0.5	6	0.5	1.6	<0.01				2.0	7.1	680	410		<2
6/7/2006	0.8	5.8								7.8	720			<2	0.3	6	<0.1	3.3	<0.01				3.3	7.1	685			<2
6/8/2006	0.9	5.8	0.2	7.9	<0.01	0.9	8.7	0.9	8.1	7.8	715			<2	0.4	6	0.2	2.8	<0.01	1.1	3.9	1.1	3.0	7.2	695		104	2
6/9/2006	0.9	5.4								7.8	720			<2	0.3	6	0.2	3.3	<0.01				3.5	7.2	695			<2
6/10/2006	0.9	5.8								7.9	735			<2	0.5	6	0.1	2.6	<0.01				2.7	7.2	680			<2
6/11/2006	0.8	5.5	0.1	5.7	<0.01	0.3	5.9	0.3	5.8	7.9	710			<2	0.4	6	0.1	3.5	<0.01	0.7	4.2	0.7	3.6	7.2	680			2
6/12/2006	0.8	5.7								7.9	705			<2	0.5	7	0.2	2.2	<0.01				2.4	7.1	699			<2
6/13/2006	0.8	6.2	0.2	7.3	<0.01				7.5	7.8	715	450		<2	0.6	8	0.1	2.0	<0.01				2.1	7.2	700	788		<2
6/14/2006	0.8	5.4								7.8	705			<2	0.6	7	<0.1	2.9	<0.01				2.9	7.2	690			<2
6/15/2006	0.9	5.6	<0.1	7.9	<0.01	0.8	8.8	0.8	7.9	7.9	730			<2	0.5	7	0.1	3.4	<0.01	0.7	4.1	0.7	3.5	7.2	685			<2
6/16/2006	1.0	6.0								7.9	735			<2	0.5	7	<0.1	4.6	<0.01				4.6	7.2	775			<2
6/17/2006	1.0	6.1								7.8	720			<2	0.5	6	0.1	4.7	<0.01				4.8	7.2	680			<2
6/18/2006	0.9	6.1	0.2	6.4	<0.01	0.2	6.5	0.2	6.6	7.9	705			<2	0.6	6	0.1	3.5	<0.01	1.2	4.7	1.2	3.6	7.1	675			<2
6/19/2006	0.9	5.9								7.9	715			<2	0.7	7	<0.1	2.8	<0.01				2.8	7.2	690			<2
6/20/2006	0.8	5.8	<0.1	6.4	<0.01				6.4	7.9	725	460		<2	0.5	7	<0.1	4.7	<0.01				4.7	7.2	705	426		<2
6/21/2006	0.8	5.6								7.9	705			<2	0.5	8	<0.1	4.6	<0.01				4.6	7.2	725			<2
6/22/2006	0.9	6.0	<0.1	5.5	<0.01	0.6	6.1	0.6	5.5	7.9	720			<2	0.4	8	<0.1	5.2	<0.01	1.6	6.7	1.6	5.2	7.0	725			<2
6/23/2006	1.0	6.2								7.9	710			<2	0.4	8	<0.1	5.0	<0.01				5.0	6.9	710			ns
6/24/2006	0.9	6.2								7.9	720			<2	0.4	7	<0.1	4.6	<0.01				4.6	7.0	700			ns
6/25/2006	0.9	6.7	<0.1	7.9	0.05	0.8	8.8	0.8	8.0	7.8	715			<2	0.4	7	<0.1	4.8	<0.01	0.5	5.3	0.5	4.8	7.0	700			ns
6/26/2006	1.0									7.5				<2	0.4	7	<0.1	5.7	<0.01				5.7	7.0	715			ns
6/27/2006	0.8									7.2				<2	0.4	8	<0.1	7.1	<0.01	0.8	7.9	0.8	7.1	7.0	735	462		ns
6/28/2006	0.8									7.2				<2	0.3	7	0.1	5.3	<0.01				5.43	7.0	725			ns
6/29/2006	0.8													<2	0.3	7	<0.1	3.2	<0.01	1.6	4.7	1.6	3.17	7.1	720			ns
6/30/2006	0.8													QC	0.3	7	<0.1	1.9	<0.01				0.5	7.1	705			ns
Average	0.9	5.9	0.2	6.9	<0.01	0.5	7.5	0.5	7.0	7.8	710	451	122	<2	0.5	6.8	<0.1	3.4	<0.01	1.0	4.7	1.0	3.46	7.1	699	522	104	<2
Min	0.8	5.4	<0.1	5.5	<0.01	0.1	5.9	0.1	5.5	7.2	675	444	122	<2	0.3	6.0	<0.1	0.9	<0.01	0.5	1.5	0.5	0.47	6.9	670	410	104	<2
Max	1.0	6.7	0.2	7.9	0.05	0.9	8.8	0.9	8.1	7.9	735	460	122	2	1.0	8.2	0.5	7.1	<0.01	1.6	7.9	1.6	7.12	7.2	775	788	104	13

[1]Turbidity and pH are 24 Hour averages of continuous monitoring

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

a. The turbidity of the filter effluent shall not exceed any of the following:
    1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
    2) 5 NTU more than 5 percent of the time in any 24-hour period; and
    3) 10 NTU at any time.
b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.
The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

a. A total nitrogen concentration of 10 mg/L;
b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
c. The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.
For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.
ND: Not detected above method reporting limit
Bold signifies an exceedance of a limit in the Order.

Table 2-4
Results of Running Quarterly Average Concentration from Each Quarter:
Tubidity, TOC, Ammonia-N, Nitrate-N, TKN, TN, TKN+Nitrate, TIN, pH, EC, TDS, Hardness, and Coliform

Date	RP1 Effluent														RP4 Effluent													
	Turbidity	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-N 0_2-N	TIN	pH	EC	TDS	Hardness	Coliform	Turbidity	TOC	NH_3-N	NO_3-N	NO_2-N	TKN	TN	TKN-N 0_2-N	TIN	pH	EC	TDS	Hardness	Coliform
	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		µmho/cm	mg/L	mg/L	MPN
Order Limit	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240	2; 5; 10	16			1		10	5	8	6<pH<9		550		2.2; 23; 240
Average 3Q05	0.77	7.19	0.13	5.86	0.03	0.89	6.86	0.93	6.02	7.21	711.14	454.15	133.00	2.00	0.96	10.20	0.19	1.14	0.04	1.01	2.11	1.01	1.24	7.06	742.14	456.77	119.00	2.00
Min	0.28	5.80	0.10	4.40	0.01	0.80	5.43	0.80	4.53	6.69	670.00	436.00	127.00	2.00	0.44	8.70	0.10	0.10	0.02	0.70	0.70	0.70	0.00	6.90	675.00	438.00	113.00	2.00
Max	1.14	8.60	0.30	8.64	0.12	1.10	9.70	1.12	8.90	7.39	785.00	490.00	137.00	2.00	1.90	18.60	6.60	6.46	0.05	1.25	7.56	1.25	6.86	7.20	790.00	488.00	122.00	2.00
Average 4Q05	0.91	7.60	0.17	6.69	0.02	1.06	6.89	1.09	7.11	7.42	718.10	458.92	133.00	2.19	0.99	10.37	0.11	0.82	0.23	1.14	1.94	1.15	1.01	7.09	752.93	463.54	128.00	2.15
Min	0.64	5.60	0.10	4.56	0.01	0.50	5.08	0.52	4.71	7.29	680.00	436.00	131.00	2.00	0.40	7.00	0.10	0.10	0.02	0.20	1.05	0.20	0.00	7.00	700.00	442.00	124.00	2.00
Max	1.52	11.00	1.00	12.00	0.06	1.90	9.34	1.92	12.02	7.63	755.00	478.00	136.00	4.00	1.90	15.70	0.40	2.63	1.00	2.00	3.35	2.00	3.35	7.20	830.00	492.00	130.00	4.00
Average 1Q06	0.96	8.20	0.13	10.68	0.04	1.53	12.43	1.57	10.83	7.52	730.46	464.77	134.00	2.37	0.57	9.54	0.24	0.97	0.09	1.13	2.09	1.13	1.10	6.88	773.94	455.54	129.00	2.00
Min	0.62	4.10	0.10	7.84	0.01	1.10	10.04	1.10	7.96	7.33	180.00	424.00	127.00	2.00	0.11	4.50	0.10	0.10	0.01	0.64	0.82	0.64	0.00	6.70	670.00	400.00	120.00	2.00
Max	1.34	11.30	0.40	12.89	0.12	2.00	14.89	2.00	13.03	7.65	800.00	494.00	145.00	4.00	1.60	15.30	2.10	3.20	0.16	2.90	4.57	2.90	5.07	7.00	900.00	512.00	140.00	2.00
Average 2Q06	0.91	6.31	0.13	8.26	0.04	0.97	8.85	0.97	8.24	7.73	703.58	446.13	123.40	2.27	0.75	7.86	0.13	4.65	<0.01	1.09	5.76	1.10	4.45	7.08	702.59	463.50	112.40	3.63
Min	0.70	5.31	0.10	1.17	0.03	0.12	2.97	0.12	1.27	7.20	650.00	432.00	122.00	2.00	0.30	6.01	0.10	0.18	<0.01	0.14	1.10	0.14	0.10	6.80	645.00	404.00	104.00	2.00
Max	1.41	9.07	0.35	12.66	0.05	1.80	11.90	1.80	11.40	7.90	740.00	460.00	125.00	4.00	2.70	11.72	0.80	17.18	<0.01	1.80	17.24	1.80	17.28	7.30	775.00	788.00	121.00	13.00
Running Average	0.89	7.32	0.14	7.87	0.03	1.11	8.76	1.14	8.05	7.47	715.82	455.99	130.85	2.21	0.82	9.49	0.17	1.89	0.12	1.09	2.97	1.10	1.95	7.02	742.90	459.84	122.10	2.44
Min	0.28	4.10	0.10	4.40	0.01	0.80	5.43	0.80	4.53	6.69	180.00	424.00	123.40	2.00	0.11	4.50	0.10	0.10	0.01	0.64	0.70	0.64	0.00	6.70	670.00	400.00	112.40	2.00
Max	1.52	11.30	1.00	12.89	0.12	2.00	14.89	2.00	13.03	7.90	800.00	494.00	145.00	4.00	2.70	18.60	6.60	17.18	1.00	2.90	17.24	2.90	17.28	7.30	900.00	788.00	140.00	13.00

Recycled water produced by RP-1 and RP-4 for recharge shall at all times, be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

a. The turbidity of the filter effluent shall not exceed any of the following:
   1) Average of 2 Nephelometric Turbidity Unit (NTU) within any 24-hour period;
   2) 5 NTU more than 5 percent of the time in any 24-hour period; and
   3) 10 NTU at any time.
b. The 7-day median number of total coliform shall not exceed a Most Probable Number (MPN) of 2.2 total coliform bacteria per 100 milliliters (ml).
c. The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period prior to spreading.
d. No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.

The Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.
The recycled water used for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall not contain constituent concentrations that exceed the following limitations:

a. A total nitrogen concentration of 10 mg/L;
b. The sum of nitrite, organic, and ammonia nitrogen shall not exceed 5 mg/L as nitrogen; and
c. The nitrite level shall not exceed 1 mg/L as nitrogen.

The pH of recycled water for recharge, or if supplemented with diluent water, the blend of the two, prior to reaching the regional groundwater table shall at all times be within the range of 6 to 9 pH units.
For the first year of operation after project start-up, the weekly average total organic carbon (TOC) concentration of the filtered wastewater shall not exceed 16 mg/L.
Bold signifies an exceedance of a limit in the Order.

Table 2-5
IEUA's Agency-Wide Distribution System
TDS and TIN Analysis

	Agency-Wide Effluent TDS Flow-weighted Average	Agency-wide TIN			
		Discharge		Discharge Limit	
	12-Month Running Average	Flow wt.	Total	Flow wt.	Total
Mo-Yr	mg/L	mg/L	lbs/day	mg/L	lbs/day
Jan-05	492	7.3	3,780	12.2	6,260
Feb-05	493	8.4	4,020	12.3	5,870
Mar-05	495	7.5	3,260	12.5	5,410
Apr-05	500	6.9	2,820	12.5	5,120
May-05	500	6.7	2,980	12.3	5,520
Jun-05	501	7.0	3,080	12.3	5,450
Jul-05	498	5.4	2,370	12.4	5,410
Aug-05	495	5.9	2,350	12.6	5,030
Sep-05	494	5.4	2,240	12.5	5,160
Oct-05	493	5.5	2,430	12.3	5,470
Nov-05	491	5.5	2,470	12.3	5,500
Dec-05	488	8.4	3,830	12.3	5,640
Jan-06	488	10.0	4,650	12.3	5,670
Feb-06	486	9.1	3,970	12.4	5,400
Mar-06	482	8.9	4,370	12.2	5,970
Apr-06	476	7.8	3,550	12.4	5,610
May-06	471	8.3	3,470	12.5	5,210
Jun-06	468	6.5	2,450	12.5	4,700
12-Month Average	486	7.2	3,179	12.4	5,398
Minimum	468	5.4	2,240	12.2	4,700
Maximum	498	10.0	4,650	12.6	5,970

Notes:

The TDS and TIN concentration of the recycled water used for recharge shall not exceed a 12-month running average concentration limit of 550 mg/l and 8 mg/l, respectively.

The RP1/RP4 limit is as follows: “The 12-month average total inorganic nitrogen concentration for flows up to 34.4 mgd shall not exceed 13 mg/L and for flows exceeding 34.4 mgd shall not exceed 10 mg/L”

Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs, Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result[1]	4Q05 Result[1]	1Q06 Result[1]	2Q06 Result[1]	4-Quarter Running Average	Units	Method
Oil & Grease (Total)		<1	<2	<2	<2	<2	mg/L	EPA 1664
Aluminum[2]	1000	156	<70	<25	39	<73	µg/L	EPA 200.7
Antimony	6	<1	<1	<0.5	<0.5	<0.8	µg/L	EPA 200.8
Arsenic	10	<1	<1	<2	<2	<1.5	µg/L	EPA 200.8
Asbestos by TEM - >10 microns	7	<4.94	<1.98	<1	<0.8	<2.18	MFL	ML/EPA 100.2
Barium	1000	13	16	18	13	15.0	µg/L	EPA 200.7
Beryllium	4	<1	<1	<0.5	<0.5	<0.8	µg/L	EPA 200.7
Cadmium	5	<1	<1	<0.25	<0.25	<0.7	µg/L	EPA 200.7
Chromium	50	<1	1	8.8	0.6	<2.9	µg/L	EPA 200.7
Cyanide	0.15	<0.005	<0.005	0.003	<0.005	<0.005	mg/L	SM 4500-CN E
Fluoride	2	0.2	0.2	0.2	0.3	0.2	mg/L	SM 4500-F C
Mercury	2	0.2	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 245.2
Nickel	100	2	2	2	2	2.0	µg/L	EPA 200.7
Selenium	50	<5	<5	2	<2	<4	µg/L	EPA 200.8
Thallium	2	<1	<1	<1	<1	<1	µg/L	EPA 200.8
Volatile Organic Compounds								
Benzene	1	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Carbon tetrachloride	0.5	<0.3	<0.3	<0.5	<0.5	<0.4	µg/L	EPA 524.2
1,2-Dichlorobenzene	600	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,4-Dichlorobenzene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1-Dichloroethane	5	<0.5	<1	<0.5	<0.5	<0.7	µg/L	EPA 524.2
1,2-Dichloroethane	0.5	<0.3	<0.3	<0.5	<0.5	<0.4	µg/L	EPA 524.2
1,1-Dichloroethylene	6	<1	<1	<0.5	<0.5	<0.8	µg/L	EPA 524.2
cis-1,2-Dichloroethylene	6	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
trans-1,2-Dichloroethylene	10	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dichloromethane	5	<0.5	<0.5	<0.5	2.1	<1	µg/L	EPA 524.2
1,2-Dichloropropane	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,3-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Ethylbenzene	300	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Monochlorobenzene	70	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Methyl tert-butyl ether (MTBE)	13	<0.5	<0.5	<1	<0.5	<0.7	µg/L	EPA 524.2
Styrene	100	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,2,2-Tetrachloroethane	1	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Tetrachloroethylene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Toluene	150	<0.5	<0.5	<0.5	1.1	<0.7	µg/L	EPA 524.2
1,2,4-Trichlorobenzene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,1-Trichloroethane	200	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
1,1,2-Trichloroethane	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichloroethylene	5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichlorofluoromethane	150	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Trichlorotrifluoroethane	1200	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Vinyl chloride	0.5	<0.3	<0.3	<0.3	<0.3	<0.3	µg/L	EPA 524.2
m,p-Xylene[3]	1750	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
o-Xylene[3]	1750	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2

Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs, Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result[1]	4Q05 Result[1]	1Q06 Result[1]	2Q06 Result[1]	4-Quarter Running Average	Units	Method
Non-Volatile Synthetic Organic Chemicals (SOCs)								
Alachlor (Alanex)	2	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Atrazine	1	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 525.2
Bentazon	18	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 515.4
Benzo(a)pyrene	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	µg/L	EPA 525.2
Carbofuran (Furadan)	18	<0.5	<0.5	<0.5	<0.5	<0.5	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	70	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 515.4
Dalapon	200	<1	<1	<1	<1	<1	µg/L	EPA 515.4
Dibromochloropropane (DBCP)	0.2	<0.01	0.029	<0.01	<0.01	<0.015	µg/L	ML/EPA 504.1
Di-(2-Ethylhexyl)adipate	400	<0.6	<0.6	<0.6	<0.6	<0.6	µg/L	ML/EPA 525.2
Di(2-Ethylhexyl)phthalate	4	1.2	<0.6	<0.6	<0.6	<0.75	µg/L	ML/EPA 525.2
Dinoseb	7	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 515.4
Diquat	20	<0.4	<0.4	<0.4	<0.4	<0.4	µg/L	ML/EPA 549.2
Endothall	100	<20	<5	<20	<5	<12.5	µg/L	ML/EPA 548.1
Endrin	2	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Ethylene Dibromide (EDB)	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 504.1
Glyphosate	700	<6	<6	<6	<6	<6	µg/L	ML/EPA 547
Heptachlor	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Heptachlor Epoxide	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	ML/EPA 505
Hexachlorobenzene	1	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	ML/EPA 525.2
Hexachlorocyclopentadiene	50	0.22	<0.085	<0.05	<0.05	<0.11	µg/L	ML/EPA 525.2
Lindane (gamma-BHC)	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	µg/L	EPA 505
Methoxychlor	30	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	EPA 505
Molinate	20	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	ML/EPA 525.2
Oxamyl (Vydate)	50	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	ML/EPA 531.2
Pentachlorophenol	1	<0.04	<0.04	<0.04	<0.04	<0.04	µg/L	ML/EPA 515.4
Picloram	500	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	ML/EPA 515.4
PCB 1016	0.5	<0.07	<0.07	<0.07	<0.07	<0.07	µg/L	EPA 505
PCB 1221	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1232	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1242	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1248	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCB 1254	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
PCP 1260	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	µg/L	EPA 505
Simazine	4	<0.05	<0.05	<0.05	<0.05	<0.05	µg/L	ML/EPA 525.2
Thiobencarb	70	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 525.2
Toxaphene	3	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 505
2,3,7,8-TCDD 1613 DW (subbed)	30	<5	<5	<5	<5	<5	pg/l	EPA 1613
2,4,5-TP (Silvex)	50	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	ML/EPA 515.4
Disinfection By-products								
Total Trihalomethanes	80	**241**	26 [4]	**105** [4]	**134** [4]	RA	µg/L	EPA 524.2
Total Haloacetic Acids (HAA5)	60	**200**	<1 [4]	**135** [4]	**156** [4]	RA	µg/L	ML/S6251B
Bromate	10	<5	<5	<5	<5	<5	µg/L	EPA 300.1
Chlorite by IC	1000	<0.04	<0.02	<0.02	<0.01	<0.025	mg/l	EPA 300.1

Table 2-6
Recycled Water Monitoring Results: Oil and Grease, Inorganic Chemicals, VOCs, SOCs, Disinfection By-Products, Notification Levels, and Radionuclides

Chemical	Order Limit	3Q05 Result[1]	4Q05 Result[1]	1Q06 Result[1]	2Q06 Result[1]	4-Quarter Running Average	Units	Method
Notification Levels								
Copper	1300	5	9	12.1	5	7.8	µg/L	EPA 200.7
Lead	15	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 200.8
Radionuclides								
Combined Radium-226 and Radium 228	5	<0.753	<1.04	<0.486	<0.453	<0.7	pCi/l	EPA 903.0
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium	15	<3	<3	<3	<3	<3	pCi/l	EPA 900.0
Tritium (Sub)	20,000	<294	<317	<379	<202	<298	pCi/l	EPA 906
Strontium 90	8	<0.590	<0.397	<0.807	<0.871	<0.666	pCi/l	EPA 905
Gross Beta particle activity	50	9.5	9.4	<3	7.1	<7.25	pCi/l	EPA 900.0
Uranium	20	<0.7	<0.7	<0.7	<0.7	<0.7	pCi/l	EPA 200.8

[1] Recycled water sample is a blend of RP1 and RP4 Effluents

[2] Aluminum was reanalyzed in November. 156 value is from 3Q05 and <70 is from 4Q05.

[3] Limit is either for a single isomer or the sum of the isomers.

[4] Results are from a blend for RP-1 and RP-4, which is not the compliance point for TTHM and HAA5. The compliance point for TTHM and HAA5 is the 25-foot Lysimeter the results for the compliance point are summarized in Table 2-13.

IS: Insufficient Sample for Analytical Test

RA: Running average will be initiated as more data is obtained.

Averages are calculated when a detection above the method reporting limit occurs in one or more samples. The reporting limit is used for other samples not detected above the method reporting limit. As an example: 1+(<0.5)= <0.8

Bold signifies an exceedance of a limit in the Order.

Table 2-7

Recycled Water[(1)] Monitoring Results: Remaining Priority Pollutants

Chemical	3Q05 Result	4Q05 Result	1Q06 Result	2Q06 Result	4-Quarter Running Average	Units	Method
Metals							
Trivalent Chromium	1	1	0.23	<0.1	<0.58	ug/L	EPA 200.7
Volatile Organics							
Acrolein	<2	<2	<2	4	<2	µg/L	EPA 624
Acrylonitrile	<2	<2	<2	<2	<2	µg/L	EPA 624
Bromoform	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Dibromochloromethane	5.6	5.0	3.7	4.1	4.6	µg/L	EPA 524.2
Chloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
2-Chloroethyl Vinyl Ether	<1	<1	<1	<1	<1	µg/L	EPA 624
Chloroform	199	150	78	87	128.5	µg/L	EPA 524.2
Bromodichloromethane	36.6	31	23	25	28.9	µg/L	EPA 524.2
Bromomethane	<1	<1	<0.5	<0.5	<0.75	µg/L	EPA 524.2
Chloromethane	0.7	<0.5	<0.5	<0.5	<0.55	µg/L	EPA 524.2
Acid Extractibles							
2-Chlorophenol	<100	<1	<1	<1	<26	µg/L	EPA 625
2,4-Dichlorophenol	<100	<2	<2	<2	<27	µg/L	EPA 625
2,4-Dimethylphenol	<100	<1	<1	<1	<26	µg/L	EPA 625
2-Methyl-4,6-Dinitrophenol	<100	<2	<2	<2	<27	µg/L	EPA 625
2,4-Dinitrophenol	<100	<3	<3	<3	<28	µg/L	EPA 625
2-Nitrophenol	<100	<1	<1	<1	<26	µg/L	EPA 625
4-Nitrophenol	<100	<3	<3	<3	<36	µg/L	EPA 625
4-Chloro-3-methylphenol	<100	<1	<1	<1	<26	µg/L	EPA 625
Phenol	<100	<1	<1	<1	<26	µg/L	EPA 625
2,4,6-Trichlorophenol	<100	<1	<1	<1	<26	µg/L	EPA 625
Base/Neutral Extractibles							
Acenaphthene	<100	<1	<1	<1	<26	µg/L	EPA 625
Acenaphthylene	<100	<1	<1	<1	<26	µg/L	EPA 625
Anthracene	<100	<1	<1	<1	<26	µg/L	EPA 625
Benzidine	<100	<5	<5	<5	<29	µg/L	EPA 625
Benzo(a)anthracene	<100	<5	<5	<5	<29	µg/L	EPA 625
Benzo(b)fluoranthene	<100	<1	<1	<1	<26	µg/L	EPA 625
Benzo(g,h,i)perylene	<100	<2	<2	<2	<27	µg/L	EPA 625
Benzo(k)fluoranthene	<100	<1	<1	<1	<26	µg/L	EPA 625
Bis (2-Chloroethoxy) Methane	<100	<2	<2	<2	<27	µg/L	EPA 625
Bis(2-Chloroethyl)ether	<100	<1	<1	<1	<26	µg/L	EPA 625
Bis (2-Chloroisopropyl) Ether	<100	<1	<1	<1	<26	µg/L	EPA 625
4-Bromophenyl Phenyl Ether	<100	<1	<1	<1	<26	µg/L	EPA 625
Butylbenzyl Phthalate	<100	<1	<1	<1	<26	µg/L	EPA 625
2-Chloronaphthalene	<100	<1	<1	<1	<26	µg/L	EPA 625
4-Chlorophenyl Phenyl Ether	<100	<1	<1	<1	<26	µg/L	EPA 625
Chrysene	<100	<1	<1	<1	<26	µg/L	EPA 625
Dibenzo(a,h)anthracene	<100	<1	<1	<1	<26	µg/L	EPA 625
1,3-Dichlorobenzene	<100	<1	<1	<1	<26	µg/L	EPA 625
3,3-Dichlorobenzidine	<100	<5	<5	<5	<29	µg/L	EPA 625
Diethyl phthalate	<100	<2	<2	<2	<27	µg/L	EPA 625
Dimethyl Phthalate	<100	<1	<1	<1	<26	µg/L	EPA 625
Di-n-butyl phthalate	<100	<1	<1	<1	<26	µg/L	EPA 625
2,4-Dinitrotoluene	<100	<1	<1	<1	<26	µg/L	EPA 625
2,6-Dinitrotoluene	<100	<2	<2	<2	<27	µg/L	EPA 625
Di-n-octyl phthalate	<100	<1	<1	<1	<26	µg/L	EPA 625
1,2-Diphenylhydrazine	<100	<1	<1	<1	<26	µg/L	EPA 625
Fluoranthene	<100	<1	<1	<1	<26	µg/L	EPA 625

Table 2-7
Recycled Water[1] Monitoring Results: Remaining Priority Pollutants

Chemical	3Q05 Result	4Q05 Result	1Q06 Result	2Q06 Result	4-Quarter Running Average	Units	Method
Fluorene	<100	<1	<1	<1	<26	µg/L	EPA 625
Hexachlorobutadiene	<100	<1	<1	<1	<26	µg/L	EPA 625
Hexachlorocyclopentadiene	<100	<5	<5	<5	<29	µg/L	EPA 625
Hexachloroethane	<100	<1	<1	<1	<26	µg/L	EPA 625
Indeno(1,2,3-cd)pyrene	<100	<2	<2	<2	<27	µg/L	EPA 625
Isophorone	<100	<1	<1	<1	<26	µg/L	EPA 625
Naphthalene	<100	<1	<1	<1	<26	µg/L	EPA 625
Nitrobenzene	<100	<1	<1	<1	<26	µg/L	EPA 625
N-Nitrosodi-N-Proplylamine	<100	<1	<1	<1	<26	µg/L	EPA 625
N-Nitrosodiphenylamine	<100	<1	<1	<1	<26	µg/L	EPA 625
Phenanthrene	<100	<1	<1	<1	<26	µg/L	EPA 625
Pyrene	<100	<1	<1	<1	<26	µg/L	EPA 625
Pesticides							
Aldrin	<1	<0.005	<0.005	<0.005	<0.337	µg/L	EPA 608
Alpha-BHC	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Beta-BHC	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Delta-BHC	<1	<0.011	<0.011	<0.011	<0.341	µg/L	EPA 608
4,4' - DDT	<1	<0.02	<0.02	<0.02	<0.347	µg/L	EPA 608
4,4' - DDE	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
4,4' - DDD	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Dieldrin	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Endosulfan I	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Endosulfan II	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Endosulfan Sulfate	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Endrin Aldehyde	<1	<0.01	<0.01	<0.01	<0.26	µg/L	EPA 608
Unregulated Chemicals							
Boron	0.3[2]	0.31	0.3	0.2	0.2	mg/L	EPA 200.7
Chromium-6	0.7	0.6	0.23	<0.1	<0.4	µg/L	EPA 218.6
Dichlorodifluoromethane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2
Ethyl tert-butyl ether (ETBE)	<0.5	<0.5	<3	<3	<2	µg/L	EPA 524.2
N-Nitroso dimethylamine (NDMA)[3]	8.8	7.3	4.8	5.8	6.7	ng/l	1625MOD
Perchlorate	6.1	<8	<4	<4	<5.5	µg/L	EPA 314
tert-Amyl methyl ether (TAME)	<0.5	<0.5	<3	<3	<2	µg/L	EPA 524.2
tert-Butyl alcohol (TBA)	<2	<2	<2	<2	<2	µg/L	524.2MOD
Vanadium	3.9	3.7	4.3	5.3	4.3	µg/L	EPA 200.8
1,4-Dioxane	<2	<2	<2	<2	<2	µg/L	8270MOD
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L	EPA 524.2

[1] Recycled water sample is a blend of RP1 and RP4 Effluents

[2] Boron value is an average of July, August & September samples

[3] NDMA is an average of 6 sample results collected monthly from both RP1 and RP4

ND: When analytical results are below method reporting limits for all samples in an average.

DNR: Have not received laboratory data as of the date of this report.

Samples collected during the Third Quarter of 2005 for Acid Extractibles and Base/Nuetral Extractables were analyzed by an outside laboratory, which use a high detection limit within the EPA method 625.

Averages are calculated when a detection above the method reporting limit occurs in one or more samples. The reporting limit is used for other samples not detected above the method reporting limit. As an example: 1+(<0.5)=<0.8

Bold signifies an exceedance of a limit in the Order.

Table 2-8

Recycled Water* Monitoring Results: Endocrine Disrupting Chemicals & Pharmaceuticals Analyzed on an Annual Basis

Chemicals	Date	RP-1/RP-4 Blend	RP-1 Effluent	RP-4 Effluent	Units	Method
Chemicals with State Notification Levels [1]						
N-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
sec-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
tert-butylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
Carbon disulfide	6/7/2006		--	--	µg/L	524.2
Chlorate	6/7/2006	1150	--	--	µg/L	300.0
2-chlorotoluene	6/7/2006	<0.5	--	--	µg/L	524.2
Diazinon			To be analyzed in August			
1,4-Dioxane	6/7/2006	<2	--	--	µg/L	Purge and Trap-GC/MS
Formaldehyde	6/7/2006	75	--	--	µg/L	8315
Isopropylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
N-propylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
1,2,4-trimethylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
1,3,5-trimethylbenzene	6/7/2006	<0.5	--	--	µg/L	524.2
Nitrosoamines [1]						
N-Nitrosodiethylamine (NDEA)	6/7/2006	<4	--	--	ng/L	525
N-Nitrosopyrrolidine	6/7/2006	5.3	--	--	ng/L	525
Hormones						
Ethinyl estradiol	5/3/2006	--	4.5	2.8	ng/L	HPLC/MS-SEDC
17-B estradiol	5/3/2006	--	<2	10	ng/L	HPLC/MS-SEDC
Estrone	5/3/2006	--	<1	1.3	ng/L	HPLC/MS-SEDC
"Industrial" Endocrine Disruptors						
Bisphenol A	5/3/2006	--	<10	<10	ng/L	HPLC/MS-SEDC
Nonylphenol and nonylphenol polyethoxylate	5/3/2006	--	810	5.1	ng/L	HPLC/MS-SEDC
Octylphenol and octylphenol polyethoxylate	5/3/2006	--	150	<1.5	ng/L	HPLC/MS-SEDC
PolybromiNA	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 28	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 71	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 47	5/3/2006	--	4	3.1	ng/L	8270C SIM
PBDE 66	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 100	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 99	5/3/2006	--	3	2.2	ng/L	8270C SIM
PBDE 85	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 154	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 153	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 138	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 128	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 183	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 190	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 203	5/3/2006	--	<0.97	<0.96	ng/L	8270C SIM
PBDE 206	5/3/2006	--	<97	<96	ng/L	8270C SIM
PBDE 209	5/3/2006	--	<97	<96	ng/L	8270C SIM

Table 2-8

Recycled Water* Monitoring Results: Endocrine Disrupting Chemicals & Pharmaceuticals Analyzed on an Annual Basis

Chemicals	Date	RP-1/RP-4 Blend	RP-1 Effluent	RP-4 Effluent	Units	Method
Pharmaceuticals and Other Substances						
Acetaminophen	38840	--	1400	300	ng/L	HPLC/MS-SEDC
Amoxicillin			To be analyzed in August			
Azithromycin			To be analyzed in August			
Caffeine	5/3/2006	--	67	<5	ng/L	HPLC/MS-SEDC
Carbamazepine	5/3/2006	--	480	<0.5	ng/L	HPLC/MS-SEDC
Ciprofloxacin			To be analyzed in August			
Ethylenediamine tetra-acetic acid (EDTA)		--	NA	NA		
Gemfibrozil	5/3/2006	--	18	<0.5	ng/L	HPLC/MS-SEDC
Ibuprofen	38840	--	<10	170	ng/L	HPLC/MS-SEDC
Iodinated contrast media	5/3/2006	--	460	110	ng/L	HPLC/MS-SEDC
Lipitor			To be analyzed in August			
Methadone	38840	--	<0.5	<0.5	ng/L	HPLC/MS-SEDC
Morphine			To be analyzed in August			
Salicylic acid	38840	--	27	35	ng/L	HPLC/MS-SEDC
Triclosan	5/3/2006	--	14	54.0	ng/L	HPLC/MS-SEDC

(1) Results are a blend from the Effluent of RP-1 and RP-4

NA = Not Analyzed at this time, method development in process.

Bold signifies an exceedance of a limit in the Order.

Table 2-9

Recycled Water[1] Monitoring Results: Miscellaneous Compounds

Chemical	Order Limit [3]	3Q05 Results	4Q05 Results	1Q06 Results	2Q06 Results	4-Quarter Running Average	Units	Method
Aluminum[2]	200	156	<70	<25	39	<73	µg/L	EPA 200.7
Corrosivity Index	Non-corrosive	-0.6	0	-0.4	DNR	-0.3	SI	SM 2330B
Surfactants (MBAS)	0.5	0.12	0.13	0.12	0.16	0.13	mg/L	S 5540C/E425.1
Fe	300	236	224	123	DNR	194	µg/L	EPA 200.7
Mn	50	10	4	5	6	6	µg/L	EPA 200.7
Odor	3 Units	**8**	**4**	**4**	**8**	**6.00**	TON	ML/S2150B
Ag	100	<2	<2	<0.25	<0.25	<1.42	µg/L	EPA 200.7
Thiobencarb	1	<0.2	<0.2	<0.2	<0.2	<0.2	µg/L	EPA 525.2
Zn	5000	53	60	72	29	54	µg/L	EPA 200.7

[1] Recycled water sample is a blend of RP1 and RP4 Effluents

[2] Aluminum was reanalyzed in November. 156 value is from 3Q05 and <70 is from 4Q05.

[3] Refers to Permit Table 3, Compliance Determination B.3

DNR: Have not received laboratory data as of the date of this report.

detected above the method reporting limit. As an example: 1+(<0.5)=<0.8

Bold signifies an exceedance of a limit in the Order.

Table 2-13
Compliance Point Lysimeter Water Monitoring Results for Banana Basin:
Trihalomethanes and Haloacetic Acids(ug/L)

Station ID	Depth	Sample Date	TOTAL TRIHALOMETHANES (µg/L)	BROMODICHLOROMETHANE (THM) (µg/L)	BROMOFORM (THM) (µg/L)	CHLORODIBROMOMETHANE (µg/L)	CHLOROFORM (THM) (µg/L)	TOTAL HALOACETIC ACIDS (µg/L)	BROMOCHLOROACETIC ACID (µg/L)	DCAA (µg/L)	DIBROMOACETIC ACID (µg/L)	MONOBROMOACETIC ACID (µg/L)	MONOCHLOROACETIC ACID (µg/L)	TRICHLOROACETIC ACID (µg/L)
B-25	25 ft	20-Dec-05	18	<0.5	<0.5	<0.5	18	<1	<1	<1	<1	<1	<2	<1
B-25	25 ft	17-Feb-06	9.3	<0.5	<0.5	<0.5	9.3	<1	<1	<1	<1	<1	<2	<1
B-15	15 ft	30-Jun-06	2.5	<0.5	<0.5	<0.5	2.5	<1	<1	<1	<1	<1	<2	<1
B-25	25 ft	30-Jun-06	1	<0.5	<0.5	<0.5	1	<1	<1	<1	<1	<1	<2	<1

ft: feet below the bottom of the basin
ug/L: micrograms per liter

Table 3-1

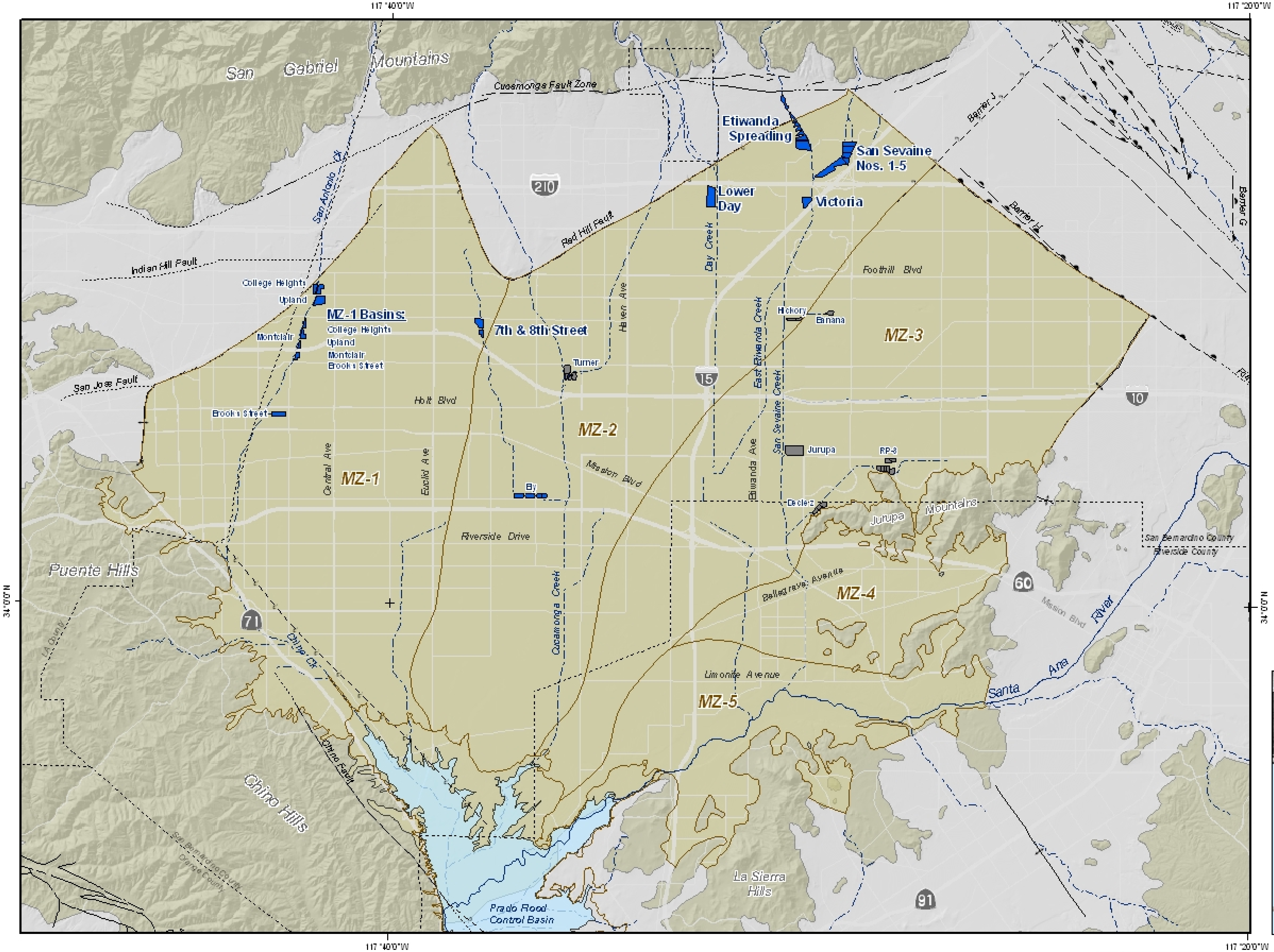
Volume of Diluent and Recycled Water Recharged

Date	Imported Water	MWD CB18 Water Routing		Local Runoff / Storm Flow		Recycled Water	
	MWD CB-18 (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)
04/01/06	0.0	0.0	0.0	0.0	7.2	0.0	0.0
04/02/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/03/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/04/06	0.0	0.0	0.0	4.0	10.4	0.0	0.0
04/05/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/06/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/07/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
04/08/06	0.0	0.0	0.0	2.5	0.0	0.0	0.0
04/09/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/10/06	0.0	0.0	0.0	2.3	0.0	0.0	0.0
04/11/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/12/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/13/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/14/06	0.0	0.0	0.0	4.9	18.1	0.0	0.0
04/15/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/16/06	0.0	0.0	0.0	2.0	0.0	0.0	0.0
04/17/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/18/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/19/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/20/06	0.0	0.0	0.0	2.1	0.0	0.0	0.0
04/21/06	0.0	0.0	0.0	1.8	0.0	0.0	0.0
04/22/06	0.0	0.0	0.0	1.4	0.0	0.0	0.0
04/23/06	0.0	0.0	0.0	1.4	0.0	0.0	0.0
04/24/06	0.0	0.0	0.0	1.4	0.0	0.0	0.0
04/25/06	0.0	0.0	0.0	1.4	0.0	0.0	0.0
04/26/06	0.0	0.0	0.0	1.4	0.0	0.0	0.0
04/27/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/28/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/29/06	0.0	0.0	0.0	3.0	0.0	0.0	0.0
04/30/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/01/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/02/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/03/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/04/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/05/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/06/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/07/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/08/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/09/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/10/06	0.0	0.0	0.0	1.2	0.0	0.0	0.0
05/11/06	0.0	0.0	0.0	-18.3	18.3	0.0	0.0
05/12/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/13/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/14/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/15/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/16/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/17/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/18/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/19/06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/20/06	0.0	0.0	0.0	0.6	0.0	0.0	0.0
05/21/06	0.0	0.0	0.0	10.0	5.0	0.0	0.0
05/22/06	0.0	0.0	0.0	65.5	30.7	0.0	0.0
05/23/06	0.0	0.0	0.0	1.5	3.0	0.0	0.0
05/24/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0

Table 3-1

Volume of Diluent and Recycled Water Recharged

Date	Imported Water	MWD CB18 Water Routing		Local Runoff / Storm Flow		Recycled Water	
	MWD CB-18 (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)	Hickory (AF)	Banana (AF)
05/25/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/26/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/27/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/28/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/29/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/30/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
05/31/06	0.0	0.0	0.0	1.5	0.0	0.0	0.0
06/01/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
06/02/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
06/03/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
06/04/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
06/05/06	0.0	0.0	0.0	1.0	0.0	0.0	6.7
06/06/06	0.0	0.0	0.0	1.0	0.0	0.0	9.0
06/07/06	0.0	0.0	0.0	1.0	0.0	0.0	7.0
06/08/06	0.0	0.0	0.0	1.0	0.0	0.0	5.3
06/09/06	0.0	0.0	0.0	1.0	0.0	0.0	3.2
06/10/06	0.0	0.0	0.0	1.0	0.0	0.0	3.2
06/11/06	0.0	0.0	0.0	1.0	0.0	0.0	3.2
06/12/06	0.0	0.0	0.0	1.0	0.0	0.0	4.8
06/13/06	0.0	0.0	0.0	1.0	0.0	0.0	3.6
06/14/06	0.0	0.0	0.0	1.0	0.0	0.0	0.0
06/15/06	0.0	0.0	0.0	1.0	0.0	0.0	3.1
06/16/06	0.0	0.0	0.0	1.0	0.0	0.0	3.9
06/17/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/18/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/19/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/20/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/21/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/22/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/23/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/24/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/25/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/26/06	0.0	0.0	0.0	1.0	0.0	0.0	2.6
06/27/06	0.0	0.0	0.0	1.0	0.0	0.0	2.8
06/28/06	0.0	0.0	0.0	1.0	0.0	0.0	4.0
06/29/06	3.8	3.8	0.0	1.0	0.0	0.0	4.6
06/30/06	9.9	9.9	0.0	1.0	0.0	0.0	5.2
2Q06 Totals	**13.7**	**13.7**	**0.0**	**156.7**	**92.7**	**0.0**	**95.5**



Main Features

- Phase II Recharge Basin
- Phase I Recharge Basin

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

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

Faults & Groundwater Divides

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

Other Features

- Chino Basin Hydrologic Boundary
- Management Zone Boundary
- Rivers and Streams

Miles 0 2 4

Kilometers 0 4 8

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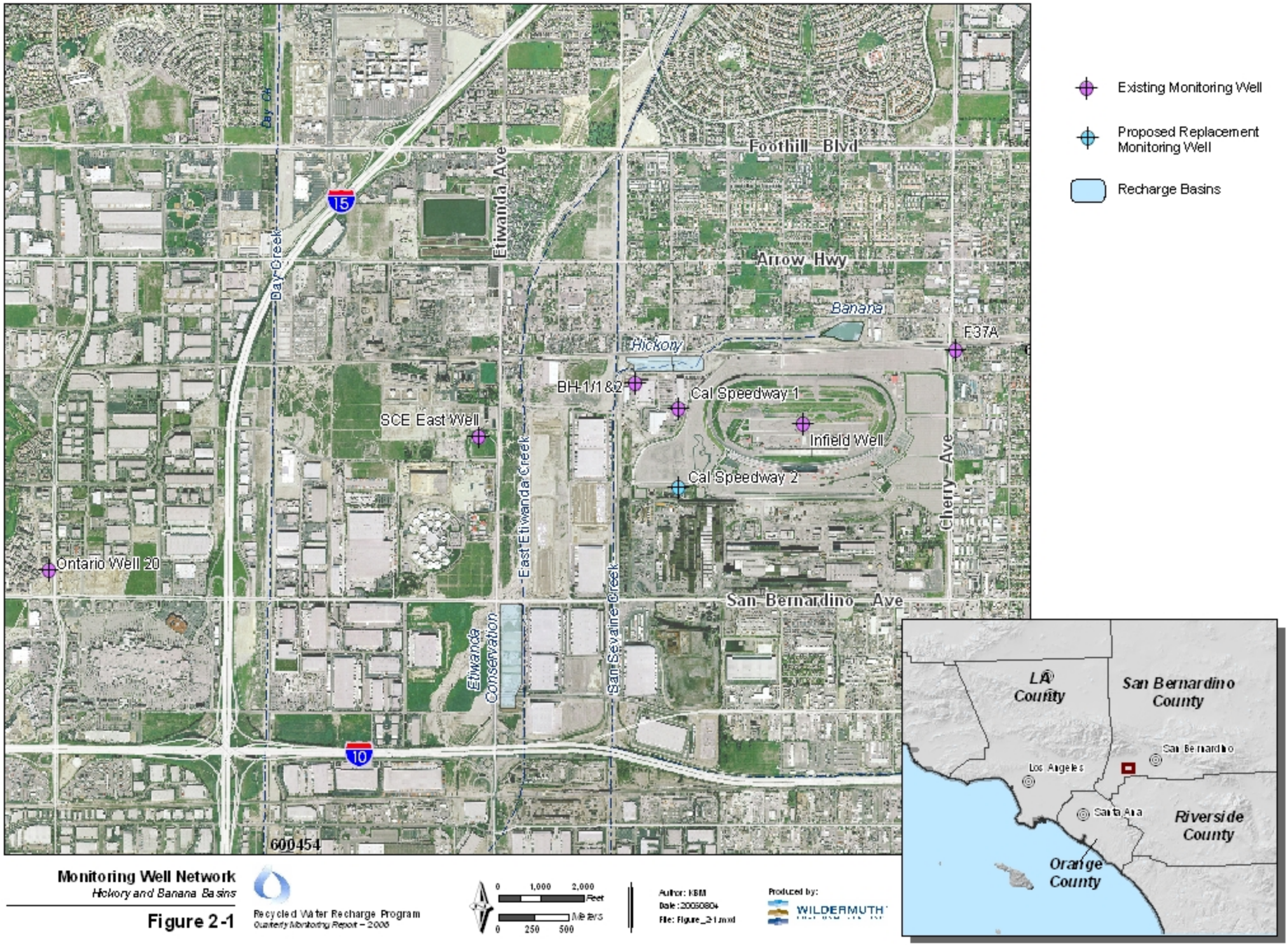
Inland Empire Utilities Agency

Recycled Water Recharge Program
Quarterly Monitoring Report - 2Q06

Chino Basin Recycled Water Groundwater Recharge Program

Recycled Water Recharge Basins

Figure 1-1



Monitoring Well Network

Hickory and Banana Basins

Figure 2-1

Recycled Water Recharge Program

Quarterly Monitoring Report – 2005

Appendix A.
Watermaster Certification of Non-Pumping in the Buffer Zones

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730-4665
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

Kenneth Manning
CEO

August 15, 2006

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
Certification of Non-Pumping in the Buffer Zones of Banana and Hickory Basins

Dear Mr. Thibeault,

The Chino Basin Watermaster hereby certifies that, during the period April 2006 through June 2006, there has been no reported pumping for drinking water purposes in the buffer zones of Banana and Hickory Basins – 500 feet and 6 months underground travel time. In point of fact, there are no production wells in the buffer zones of these two basins.

If you have any questions, please do not hesitate to call me.

Best regards,

Kenneth Manning
Chief Executive Officer