



## COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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JAMES F. STAHL  
Chief Engineer and General Manager

March 18, 2004  
File No.: 31-370.40-4A

*Via Electronic Mail*

Ms. Amy King  
Tetra Tech, Inc.  
402 West Broadway, Suite 400  
San Diego, CA 92101

Dear Ms. King:

### **Preliminary Data Submission for 2004 Water Quality Assessment and Update of the Clean Water Act Section 303(d) List of Impaired Waters**

In response to the request of the Regional Water Quality Control Board, Los Angeles Region (Regional Board), the County Sanitation Districts of Los Angeles County (Districts) are providing the enclosed surface water quality monitoring data to be used by the State Water Resources Control Board (State Board) and U.S. EPA in conducting the 2004 Water Quality Assessment and Update of the Clean Water Act Section 303(d) List of Impaired Waters.

The following water quality data are included in this submittal: 1) Toxicity data for the San Gabriel River, Reach 1; 2) Nitrogen data for the Santa Clara River, Reaches 7 and 8; and 3) Chloride data for Piru Creek in the Santa Clara River watershed.

#### ***Toxicity Data for San Gabriel River, Reach 1***

Tables 1, 2, and 3 show toxicity results for samples taken at Districts' receiving water stations R-4, R-9W, and R-3-1, respectively, all located in Reach 1 of the San Gabriel River (please refer to Figure 1 for the location of these receiving water stations). The tables provide toxicity results for June 2003 through January 2004. In June 2003, the Districts completed conversion of water reclamation plants in the San Gabriel River watershed to nitrification/denitrification (NDN) mode. The toxicity results presented in Tables 1, 2, and 3 are therefore reflective of current water quality conditions in Reach 1.

Reach 1 of the San Gabriel River is currently listed as impaired for toxicity (the reach was originally listed in 1998). Since the water reclamation plants have been operating in NDN mode, 24 receiving water samples have been collected. As shown in Tables 1, 2 and 3, out of the 24 samples analyzed from Reach 1 (8 monthly samples for each of the 3 receiving water stations in the reach), none of the samples showed evidence of toxicity. The Basin Plan includes a narrative objective for toxicity which states "[a]ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life."

#### ***Nitrogen Data for Santa Clara River, U.S. EPA Reaches 7 and 8 (Regional Board Reaches 5 and 6)***

Nitrate, nitrite, and nitrate+nitrite data from Districts' receiving water stations in Reaches 7 and 8 (please refer to Figure 2 for reach segments) of the Santa Clara River are provided in Tables 4 through

8. Table 9 presents nitrate and nitrite data obtained from the United Water Conservation District (UWCD) for their receiving water sampling station located near the Los Angeles/Ventura County Line, at the end of Reach 7 of the Santa Clara River.

Table 4 shows nitrogen data from Districts' receiving water station RB, located in Reach 8 of the Santa Clara River. Figure 3 summarizes these data. The data presented are reflective of water quality conditions since the conversion to NDN mode of Districts' water reclamation plants discharging to the Santa Clara River. The Saugus Water Reclamation Plant, which is located in Reach 8, was fully converted to NDN mode on September 11, 2003. Nitrate+nitrite concentrations at station RB ranged from 2.1 mg/L N to 7.1 mg/L N. The Basin Plan's nitrate+nitrite water quality objective for Reach 8 (Regional Board Reach 6) is 10 mg/L, and therefore, the data appear to show attainment of the water quality objective. Nitrite concentrations at station RB ranged from 0.02 mg/L to 0.77 mg/L for this period. None of the samples exceeded the applicable water quality objective for nitrite (1.0 mg/L), and therefore, the nitrite data also appear to show attainment of the Basin Plan's water quality objective of 1 mg/L for Reach 8.

Tables 5 through 9 show nitrogen data for Reach 7 of the Santa Clara River. Data from Districts' receiving water stations RC, RD, RE and RB01, and UWCD's receiving water station located near the Los Angeles/Ventura County Line, appear to show attainment of the applicable water quality objective for nitrate+nitrite (5 mg/L N) for the reach. The nitrogen data for Reach 7 (Regional Board Reach 5) are summarized in Figure 4. Once again, the data presented are reflective of conditions in the reach since the implementation of NDN at the Districts' water reclamation plants, which discharge to the Santa Clara River, and therefore characterize current water quality. The Districts' Valencia Water Reclamation Plant, which is located in Reach 7, was partially converted to NDN mode starting May 12, 2003, and was fully converted to NDN mode on June 18, 2003.

#### ***Chloride Data for Piru Creek***

Figure 5 and Table 10 show chloride data for Piru Creek from March 1997 through January 2004. Chloride levels in Piru Creek for this time period ranged from 31 mg/L to 77 mg/L, with 7 out of 26 samples, or 27% of the measurements, exceeding the chloride water quality objective for Piru Creek (60 mg/L). These data were obtained from UWCD ([www.unitedwater.org](http://www.unitedwater.org)). Information regarding the status of quality assurance procedures related to this data should be obtained directly from that agency.

The Districts appreciate the opportunity to respond to the Regional Board's preliminary request for data. If you have any questions regarding this submittal, please contact Heather Lamberson, extension 2828, or Martha Rincón, extension 2830, at (562) 699-7411.

Very truly yours,

James F. Stahl



Victoria O. Conway

Head, Monitoring Section

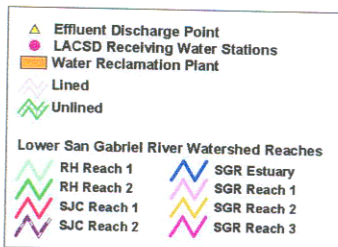
Technical Services Department

VOC:HL:drs

Enclosures

Cc: Cindy Lin, U.S. EPA Region IX

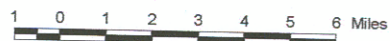
**Figure 1: Lower San Gabriel River Watershed**



COUNTY SANITATION DISTRICTS  
 OF LOS ANGELES COUNTY, CALIF.  
 OFFICE OF CHIEF ENGINEER AND GENERAL MANAGER  
 GENERAL MAP OF

Lower San Gabriel River Watershed

JAMES F. STAHL - CHIEF ENGINEER & GENERAL MANAGER  
 WHITTIER, CALIF. MAY 2002



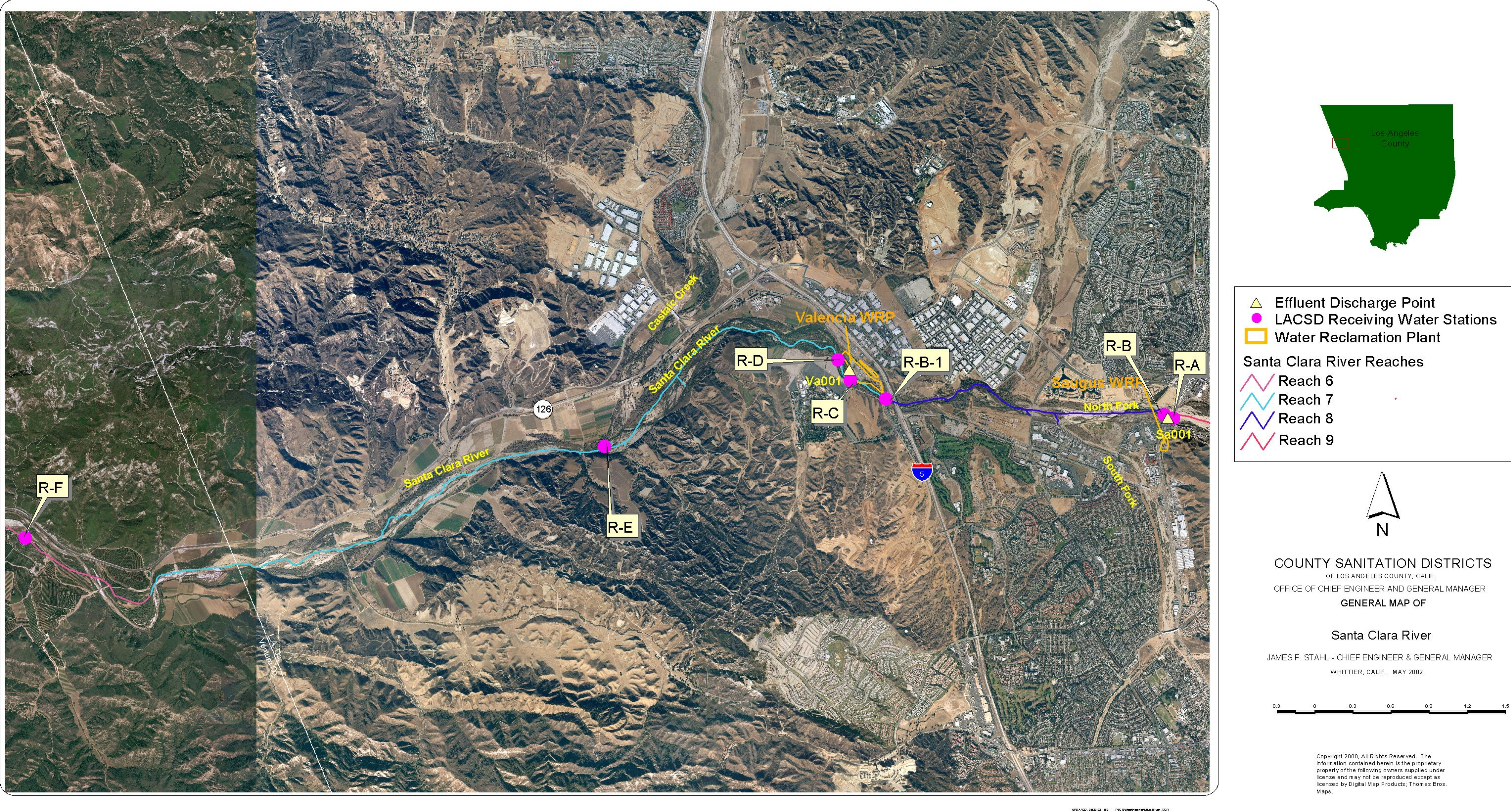
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Figure 2: Santa Clara River





**Table 1. RECEIVING WATER STATION R4 CHRONIC BIOASSAY TESTING SUMMARY**

| TEST SPECIES<br>ENDPOINT   | NOEC <sup>a</sup> | TUc <sup>a</sup><br>(NOEC) | EC/IC25 <sup>b</sup><br>(95% CI) | % EFFECT IN<br>100% SAMPLE <sup>c</sup> |
|----------------------------|-------------------|----------------------------|----------------------------------|---|
| <i>Pimephales promelas</i> | JUNE 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 5.0 (-0.7 to 10.7)                      |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 1.1 (-13.8 to 16.0)                     |
| <i>Pimephales promelas</i> | JULY 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -5.4 (-10.7 to -0.1)                    |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -21.1 (-29.3 to -13.1)                  |
| <i>Pimephales promelas</i> | AUGUST 2003       |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -2.6 (N/A)                              |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -34.3 (-44.1 to -24.6)                  |
| <i>Pimephales promelas</i> | SEPTEMBER 2003    |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 2.5 (-2.4 to 7.4)                       |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -19.0 (-24.5 to -13.4)                  |
| <i>Pimephales promelas</i> | OCTOBER 2003      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -24.4 (-35.3 to -13.4)                  |
| <i>Pimephales promelas</i> | NOVEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -2.7 (-8.8 to 3.4)                      |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -2.1 (-12.7 to 8.4)                     |
| <i>Pimephales promelas</i> | DECEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 2.7 (-11.2 to 16.5)                     |
| <i>Pimephales promelas</i> | JANUARY 2004      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 7.5 (-1.9 to 16.9)                      |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 7.0 (3.5 to 10.6)                       |

**Table 2. RECEIVING WATER STATION R9-W CHRONIC BIOASSAY TESTING SUMMARY**

| TEST SPECIES<br>ENDPOINT   | NOEC <sup>a</sup> | TUc <sup>a</sup><br>(NOEC) | EC/IC25 <sup>b</sup><br>(95% CI) | % EFFECT IN<br>100% SAMPLE <sup>c</sup> |
|----------------------------|-------------------|----------------------------|----------------------------------|---|
| <i>Pimephales promelas</i> | JUNE 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 0.8 (-6.1 to 7.8)                       |
| <i>Pimephales promelas</i> | JULY 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 2.5 (-2.4 to 7.4)                       |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -9.0 (-12.0 to -6.1)                    |
| <i>Pimephales promelas</i> | AUGUST 2003       |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 2.6 (-3.2 to 8.4)                       |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -23.3 (-38.6 to -8.0)                   |
| <i>Pimephales promelas</i> | SEPTEMBER 2003    |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -0.8 (-10.0 to -8.5)                    |
| <i>Pimephales promelas</i> | OCTOBER 2003      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -2.6 (N/A)                              |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -15.9 (-21.2 to -10.6)                  |
| <i>Pimephales promelas</i> | NOVEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -2.3 (-8.1 to 3.4)                      |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -6.8 (-11.7 to -1.9)                    |
| <i>Pimephales promelas</i> | DECEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -5.3 (N/A)                              |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -6.6 (-11.4 to -1.8)                    |
| <i>Pimephales promelas</i> | JANUARY 2004      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -17.7 (-25.3 to -10.1)                  |

**Table 3. RECEIVING WATER STATION R3-1 CHRONIC BIOASSAY TESTING SUMMARY**

| TEST SPECIES<br>ENDPOINT   | NOEC <sup>a</sup> | TUc <sup>a</sup><br>(NOEC) | EC/IC25 <sup>b</sup><br>(95% CI) | % EFFECT IN<br>100% SAMPLE <sup>c</sup> |
|----------------------------|-------------------|----------------------------|----------------------------------|---|
| <i>Pimephales promelas</i> | JUNE 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | -5.3 (N/A)                              |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 6.0 (3.1 to 8.9)                        |
| <i>Pimephales promelas</i> | JULY 2003         |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (-10.1 to 10.1)                       |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -12.2 (-19.8 to -4.7)                   |
| <i>Pimephales promelas</i> | AUGUST 2003       |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 2.5 (-2.4 to 7.4)                       |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -23.9 (-33.1 to -14.8)                  |
| <i>Pimephales promelas</i> | SEPTEMBER 2003    |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (-5.0 to 5.0)                         |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -5.4 (-14.6 to 3.8)                     |
| <i>Pimephales promelas</i> | OCTOBER 2003      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 0 (N/A)                                 |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | -24.7 (-29.8 to -19.5)                  |
| <i>Pimephales promelas</i> | NOVEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | > 100(N/A)                       | -5.4 (-10.7 to -0.1)                    |
| Growth                     | 100               | 1.0                        | > 100(N/A)                       | -9.5 (-18.5 to -0.6)                    |
| <i>Pimephales promelas</i> | DECEMBER 2003     |                            |                                  |   |
| Survival                   | 100               | 1.0                        | > 100(N/A)                       | 0 (-5.0 to 5.0)                         |
| Growth                     | 100               | 1.0                        | > 100(N/A)                       | -0.5 (-6.0 to 5.0)                      |
| <i>Pimephales promelas</i> | JANUARY 2004      |                            |                                  |   |
| Survival                   | 100               | 1.0                        | >100 (N/A)                       | 5.0 (-4.8 to 14.8)                      |
| Growth                     | 100               | 1.0                        | >100 (N/A)                       | 9.4 (0.1 to 18.7)                       |

a- NOEC (No Observed Effect Concentration) calculated using flow charts contained in the U.S. EPA method (EPA/600/4-91/002). TUc (NOEC) calculated as 100 / NOEC. The NOEC and associated TUc provides an incomplete and, in some cases, inaccurate estimate of toxicity, and results should not be averaged or used for evaluating multiple tests or samples.

b- EC/IC25 and associated 95% confidence intervals (95% CI) calculated using flow charts contained in the U.S. EPA method (EPA/600/4-91/002). TUc - (EC/IC25) calculated as 100 / EC/IC25. Provided that the estimates do not exceed the highest concentration tested (100%), the result is amicable to averaging and for evaluation of multiple tests and samples.

c- % effect in 100% sample calculated as the mean effect in 100% sample relative to the control using the formula;  $\text{effect} = [(\text{mean}_{\text{control}} - \text{mean}_{100\% \text{ sample}}) / \text{mean}_{\text{control}}] \times 100$ . A negative result (-) indicates an enhancement relative to the control. This measurement is most useful for evaluating multiple tests and samples, particularly when point estimate results exceed the highest concentration tested.

N/A: Not applicable

**Figure 3. Nitrogen Concentrations at Station RB in the SCR (Reach 8)**

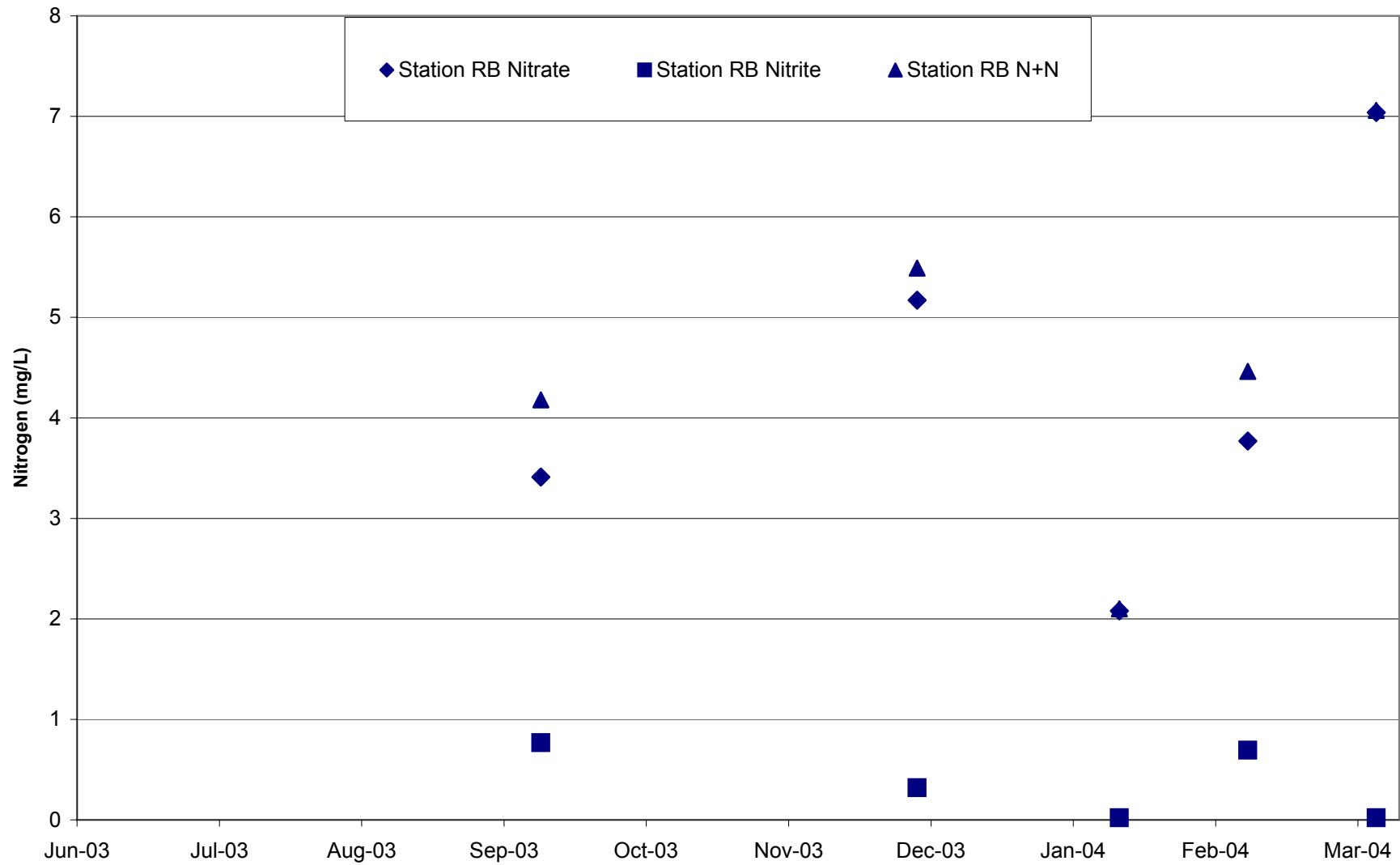




Table 4. Nitrogen Data for Station RB, Reach 8 of the SCR

| SDATE     | Location | SAMPLE DISCRIPTION   | TEST DESC        | G | NITRATE UOM1 | NITRITE NN+N |       |
|-----------|----------|----------------------|------------------|---|--------------|--------------|-------|
| 9/10/2003 | SCR-RB   | SANTA CLARA RIVER: Q | NITRATE NITROGEN |   | 3.41 MG/L    | 0.768        | 4.178 |
| 12/1/2003 | SCR-RB   | SANTA CLARA RIVER: Q | NITRATE NITROGEN |   | 5.17 MG/L    | 0.32         | 5.49  |
| 1/14/2004 |          |                      |                  |   | 2.08         | 0.021        | 2.101 |
| 2/11/2004 |          |                      |                  |   | 3.77         | 0.692        | 4.462 |
| 3/10/2004 |          |                      |                  |   | 7.04         | < 0.02       | 7.06  |



Figure 4. Nitrogen Concentrations in Reach 7 of the SCR

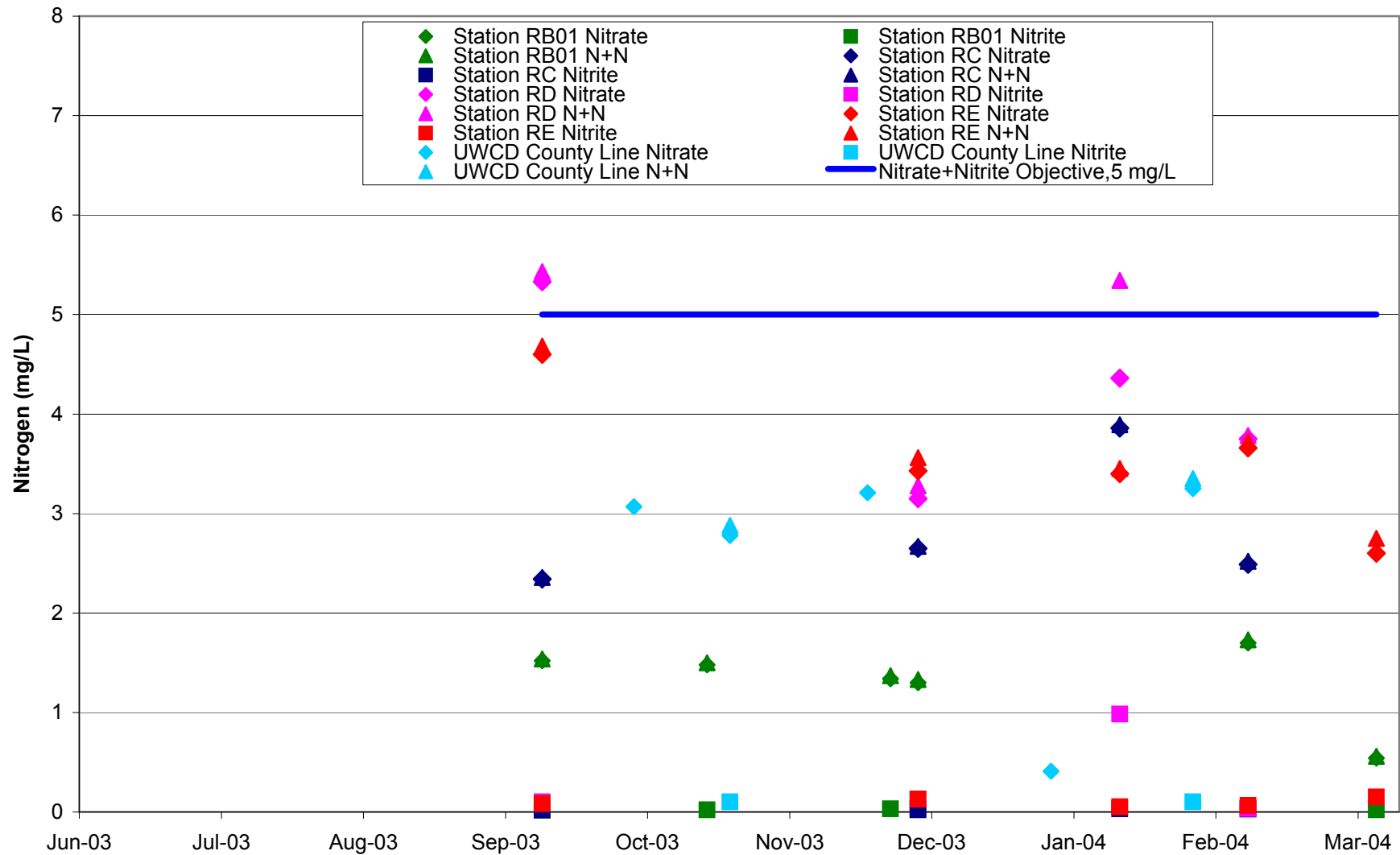




Table 5. Nitrogen Data for Station RC, Reach 7 of the SCR

| SDATE     | Location | TEST DESC        | G NITRAT | UOM1 | NITRITE | NN+N  |
|-----------|----------|------------------|----------|------|---------|-------|
| 9/10/2003 | SCR-RC   | NITRATE NITROGEN | 2.34     | MG/L | 0.018   | 2.358 |
| 12/1/2003 | SCR-RC   | NITRATE NITROGEN | 2.65     | MG/L | 0.02    | 2.67  |
| 1/14/2004 |          |                  | 3.86     |      | 0.032   | 3.892 |
| 2/11/2004 |          |                  | 2.49     |      | 0.029   | 2.519 |



Table 6. Nitrogen Data for Station RD, Reach 7 of the SCR

| SDATE     | Location | TEST DESC        | G NITRAT | UOM1 | NITRITE | NN+N  |
|-----------|----------|------------------|----------|------|---------|-------|
| 9/10/2003 | SCR-RD   | NITRATE NITROGEN | 5.33     | MG/L | 0.101   | 5.431 |
| 12/1/2003 | SCR-RD   | NITRATE NITROGEN | 3.15     | MG/L | 0.13    | 3.28  |
| 1/14/2004 |          |                  | 4.36     |      | 0.984   | 5.344 |
| 2/11/2004 |          |                  | 3.75     |      | 0.033   | 3.783 |



Table 7. Nitrogen Data for Station RE, Reach 7 of the SCR

| SDATE     | Location | TEST DESC        | G NITRAT UOM1 | NITRITE NN+N |       |
|-----------|----------|------------------|---------------|--------------|-------|
| 9/10/2003 | SCR-RE   | NITRATE NITROGEN | 4.6 MG/L      | 0.082        | 4.682 |
| 12/1/2003 | SCR-RE   | NITRATE NITROGEN | 3.43 MG/L     | 0.13         | 3.56  |
| 1/14/2004 |          |                  | 3.4           | 0.053        | 3.453 |
| 2/11/2004 |          |                  | 3.66          | 0.064        | 3.724 |
| 3/10/2004 |          |                  | 2.6           | 0.15         | 2.75  |



Table 8. Nitrogen Data for Station RB01, Reach 7 of the SCR

| SDate      | Location | TEST DESC        | G NITRATE UOM1 | NITRITE N | N+N   | N+N Objective, mg/L |
|------------|----------|------------------|----------------|-----------|-------|---------------------|
| 9/10/2003  | SCR-RB01 | NITRATE NITROGEN | 1.52 MG/L      | 0.018     | 1.538 | 5                   |
| 10/16/2003 | SCR-RB01 | NITRATE NITROGEN | 1.48 MG/L      | 0.02      | 1.5   | 5                   |
| 11/25/2003 | SCR-RB01 | NITRATE NITROGEN | 1.34 MG/L      | 0.03      | 1.37  | 5                   |
| 12/1/2003  | SCR-RB01 | NITRATE NITROGEN | 1.3 MG/L       | 0.03      | 1.33  | 5                   |
| 2/11/2004  |          |                  | 1.7            | 0.031     | 1.731 | 5                   |
| 3/10/2004  |          |                  | 0.54           | 0.02      | 0.56  | 5                   |



Table 9. Nitrogen Data for County Line, Reach 7 of the SCR (Data Source: UCWD)

| WELLID      | Owner Well ID                  | Sample Date | Nitrate_as_N_mgl | Nitrite_as_N_mgl | N+N  | Source of Data      |
|-------------|--------------------------------|-------------|------------------|------------------|------|---------------------|
| 04N17W29SW1 | SCR at Blue Cut (near Co line) | 9/30/2003   | 3.07             |                  |      | FGL 110303 import   |
| 04N17W29SW1 | SCR at Blue Cut (near Co line) | 10/21/2003  | 2.78 <           | 0.1              | 2.88 | FGL import 120103   |
| 04N17W29SW1 | SCR at Blue Cut (near Co line) | 11/20/2003  | 3.21             |                  |      | FGL import 011204   |
| 04N17W29SW1 | SCR at Blue Cut (near Co line) | 12/30/2003  | 0.41             |                  |      | FGL import 020204   |
| 04N17W29SW1 | SCR at Blue Cut (near Co line) | 1/30/2004   | 3.25 <           | 0.1              | 3.35 | UWCD_Electdata02/04 |



Table 9. Nitrogen Data for County Line, Reach 7 of the SCR (Data Source: UCWD)

Notes



**Figure 5. Chloride Concentrations for Piru Creek Below Santa Felicia Dam**

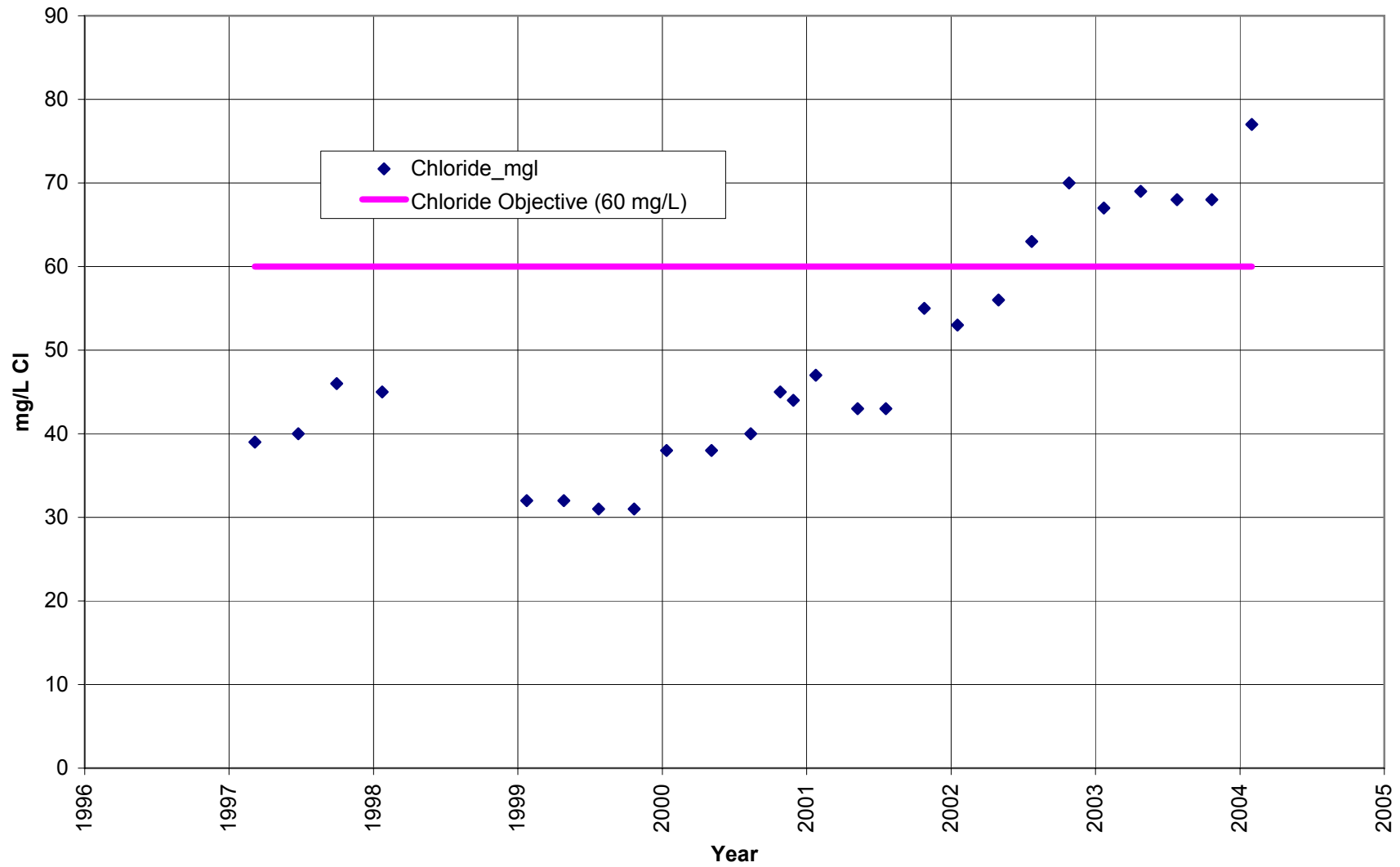




Table 10. Chloride Concentrations in Piru Creek, 1997 through Present

| WELLID      | Owner Well ID                    | Sample Date | Decimal Year | Chloride_mgl | Source of Data         | Flow  | Chloride Objective (60 |
|-------------|----------------------------------|-------------|--------------|--------------|------------------------|---|------------------------|
| 04N18W03SW2 | Piru Creek below SF Dam          | 3/6/1997    | 1997.178082  | 39           |                        |   | 60                     |
| 04N18W03SW2 | Piru Creek below SF Dam          | 6/24/1997   | 1997.479452  | 40           | UWCD Electdata.7/97    |   | 60                     |
| 04N18W03SW2 | Piru Creek below SF Dam          | 9/29/1997   | 1997.745205  | 46           | UWCD_Electdata.10/97   |   | 60                     |
| 04N18W03SW2 | Piru Creek below SF Dam          | 1/22/1998   | 1998.060274  | 45           | UWCD_Electdata.02/98   |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/22/1999   | 1999.060274  | 32           | UWCD_Electdata03/99    | USGS Gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 4/26/1999   | 1999.317808  | 32           | UWCD_Electdata05/99    | USGS Gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 7/23/1999   | 1999.558904  | 31           | UWCD_Electdata08/99    | USGS Gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 10/21/1999  | 1999.805479  | 31           | UWCD_Electdata11/99    | estimated flow  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/11/2000   | 2000.030055  | 38           | UWCD-FGL transfer 2-00 | USGS gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 5/4/2000    | 2000.34153   | 38           | 7-6-00_FGL_import      | USGS gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 8/11/2000   | 2000.612022  | 40           | UWCD_Electdata09/00    | USGS gauge  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 10/25/2000  | 2000.81694   | 45           | UWCD FGL 120500        | USGS gauge  | 60                     |
| 04N18W03SW2 | PIRU C BL SANTA FELICIA DM       | 11/27/2000  | 2000.907104  | 44           | DWR 2-01               | Station Z2324000, field DO                                      | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/23/2001   | 2001.063014  | 47           | UWCD_Electdata 7/3/01  | fgl fix1/01_6/01, USGS gauge                                    | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia     | 5/9/2001    | 2001.353425  | 43           | UWCD_Electdata 7/3/01  | fgl fix1/01_6/01, USGS gauge, temp in degree C                  | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 7/19/2001   | 2001.547945  | 43           | UWCD FGL 082201        | HC corrected, sample location WAS Piru at dam, temp in degree C | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia     | 10/24/2001  | 2001.813699  | 55           | FGL import 010202      |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/16/2002   | 2002.043836  | 53           | UWCD FGL import 021102 |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 4/30/2002   | 2002.328767  | 56           | FGL import 060302      |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 7/23/2002   | 2002.558904  | 63           | FGL import 093002      |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 10/25/2002  | 2002.816438  | 70           | FGL 120202             |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/21/2003   | 2003.057534  | 67           | FGL download 030303    |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 4/24/2003   | 2003.312329  | 69           | FGL 060203             |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 7/25/2003   | 2003.564384  | 68           | FGL import 120103      |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 7/25/2003   | 2003.564384  |              | FGL import 120103      | FERC sample, amended report                                     | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 10/21/2003  | 2003.805479  | 68           | FGL import 120103      |   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 10/21/2003  | 2003.805479  |              | FGL import 120103      | FERC sample   | 60                     |
| 04N18W03SW2 | Piru Creek below San Felicia Dam | 1/30/2004   | 2004.081967  | 77           | UWCD_Electdata02/04    |   | 60                     |



Table 10. Chloride Concentrations in Piru Creek, 1997 through Present

mg/L)